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**Approach to Learning of students in  
teachers' training institutions in Israel and its  
relation to their cultural dimensions, career  
choice motives, and academic experience**

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## Abstract

The aim of the present study is to characterize Israeli students' approach to learning. Students' approach to learning conceptualizes their learning intentions and the context in which learning takes place. Focusing on students in teachers training institutions, it is suggested that cultural dimensions play a significant role in their approach to learning as well as their motives for choosing to become teachers, and their perceived academic experience during their studies. The presented study may be regarded as multidisciplinary as it is located in pedagogy (e.g., teachers' training, students' Approach to Learning, and academic experience) while also considering theories and concepts from sociology (e.g., Hofstede's cultural dimensions, socio-cultural career choice motives).

There are three distinguished approaches to learning. *Surface Approach to Learning* (Surface ATL) refers to passive learning, unengaged and unreflective, and in which strategies to minimize effort, such as rote learning, isolated task completion with little real interest in content, are used. *Deep Approach to Learning* (Deep ATL) is motivated by real personal interest, desire to understand, and vocational relevance in which deep strategy (i.e., relate ideas to evidence, integration of ideas and concepts across tasks and courses, identifying general principles) is used. *Achieving Approach to Learning* (Achieving ATL) is motivated by a desire to be successful, achieving high grades, and competing with others in which students' strategy is to use any technique that achieves these goals, even with patchy and variable level of understanding. To this end, students' approach to learning serves as a proxy for their subsequent learning quality and academic achievements, as well as a means for better understanding the teachers training process.

Better understanding of Israeli teaching students and teachers' training process can shed light on some of the salient characteristics of future teachers in Israel, the nature of Israeli education system and Israeli society as a whole. Such an understanding is required in light of the socio-cultural challenges Israel is expected to face.

Israel's culturally diverse society, both nationally, ethnically, and religiously, is unsustainable and foreboding for Israel's future with lower labor force participation rates, widening socio-economical gaps, and increased poverty. Disparities in Israel's education are already evident with the existence of separate education systems, some of which are almost unregulated by the state and most of which lag behind the official education systems in their education quality and performance.

To successfully mitigate its social challenges, and since culture and education are interrelated, Israel must improve its education to improve its human capital. Thus, it holds that to better understand Israel's education system and its ability to support the future needs of Israeli society, one must better understand the agents of the education system – i.e., its teachers – their training process and learning quality. It is argued that students' approach to learning cannot ignore the experiential context in which their studies take place, and similarly that their cultural orientation and personal preferences influence this experience.

For this purpose, a quantitative research approach, based on validated questionnaires and correlational statistical inference was used. The sample consists of 314 students from three pluralistic and secular students' training institutions in northern Israel, which are representative of sampling students in teachers' training institutions in Israel.

Descriptive analysis of students' approach to learning scores suggests a hierarchy between the three approaches. Students scored high on the Achieving approach to learning, slightly lower on Deep ATL and medium on Surface ATL. Furthermore, while no significant correlation was documented between Deep ATL and Surface ATL, students' Achieving ATL is positively correlated with Deep ATL and, conversely, negatively correlated with Surface ATL. These findings place Achieving ATL as a pivotal approach to learning, as it embodies some of Deep ATL's most desirable aspects and diminishes undesirable aspects associated with Surface ATL.

Multiple regression analyses suggest that students with Achieving and Deep ATLs are similar in that both positively associated with learning environments that promote critical thinking. Thus, critical thinking is the main experiential academic learning aspect to promote desirable aspects of learning such as high levels of thinking and the ability to connect concepts and build new knowledge.

However, the analyses also suggest that students scoring Deep ATL embody an intrinsic motivation to learn, Deep ATL is not associated with any other experiential academic learning aspect and instead is associated with students' perceived innate ability as a motivator for choosing a teaching career, and negatively associated with cultural orientations associated with masculinity (e.g., materialism and competitiveness). Conversely, as Achieving ATL is associated with cultural long-term orientation and perceived academic learning experience promoting professional alignment (but not with any subjective motive to become teachers), Achieving ATL should be better viewed as long-term, strategic oriented learning designed to promote professional alignment.

Students' Surface ATL was found to be associated with their personal utility motives for choosing teaching career (i.e., a career which will enable them to allocate more time and resources to personal needs and wants). However, supportive teaching may help in diminishing some of the negative aspects attributed to Surface ATL.

Additional findings suggest that students find it hard to maintain high levels of Deep ATL as they progress with their studies and that some of the variation in students' Surface ATL can be attributed to students' ethnic and religious background characteristics (i.e., Muslims and Jewish ultra-Orthodox students), but not to their cultural orientation.

## Abstrakt

Celem niniejszej pracy doktorskiej jest scharakteryzowanie podejścia izraelskich studentów do uczenia się (approach to learning). Podejście studentów do uczenia się konceptualizuje ich sposoby uczenia się oraz kontekst, w którym odbywa się kształcenie. Koncentrując się na studentach z instytucji kształcących nauczycieli zauważono, że wymiary kulturowe odgrywają znaczącą rolę w ich podejściu do uczenia się, nakreślając motywację wyboru kierunku nauczycielskiego oraz postrzeganie ich doświadczeń akademickich w trakcie studiowania. Prezentowane badanie wpisuje się w kontekst interdyscyplinarny, ponieważ oparte zostało na teoriach pedagogicznych (np. szkolenie nauczycieli, podejście studentów do uczenia się i doświadczenia edukacyjne/akademickie), a także uwzględnia teorie i koncepcje socjologiczne (np. wymiary kulturowe Hofstede, społeczno-kulturowe motywacje wyboru kariery).

Istnieją trzy wyróżniające się podejścia do uczenia się. *Surface Approach to Learning* (Surface ATL) odnosi się do biernego/pobieżnego uczenia się, niezaangażowanego i bezrefleksyjnego, w którym stosowane są strategie minimalizujące wysiłek, takie jak uczenie się na pamięć, wybiórcze wykonywanie zadań, niewielkie zainteresowanie treścią przedmiotów. *Deep Approach to Learning* (Deep ATL) - drugie analizowane podejście do uczenia się, charakteryzuje się osobistym zaangażowaniem, chęcią zrozumienia zagadnień i znaczeniem zawodowym, w którym stosuje się głęboką strategię (tj. wyjaśnienie zjawisk za pomocą nauki, integrację pomysłów i koncepcji w ramach zadań i kursów, określanie ogólnych zasad). *Achieving Approach to Learning* (Achieving ATL) jest motywowane chęcią odniesienia sukcesu, osiągnięcia wysokich ocen i konkurowania z innymi. Strategia polega na użyciu dowolnej techniki, która prowadzi do osiągnięcia celów, nawet przy

nierównym i zmiennym poziomie zrozumienia zagadnień. Ten typ podejścia do uczenia się służy jako wskaźnik późniejszej jakości uczenia się i osiągnięć akademickich, a także środek do lepszego zrozumienia procesu kształcenia nauczycieli.

Zrozumienie izraelskiej edukacji oraz procesu kształcenia nauczycieli pozwala wskazać na istotne cechy przyszłych nauczycieli w Izraelu, kształt i charakter izraelskiego systemu edukacji oraz izraelskiego społeczeństwa jako całości. Takie zrozumienie jest konieczne w świetle wyzwań społeczno-kulturowych, przed którymi stoi Izrael współcześnie.

Zróznicowane kulturowo społeczeństwo Izraela (narodowo, etnicznie, jak i religijnie), może być czynnikiem przyczyniającym się do niestabilności przyszłości społeczeństwa, co wyraża się także niższymi wskaźnikami aktywności zawodowej, pogłębiającymi się różnicami społeczno-ekonomicznymi i zwiększonym ubóstwem. Różnice w edukacji Izraela odzwierciedlają się w istnieniu odrębnych systemów edukacji, z których niektóre są w mniejszym stopniu regulowane przez państwo, a wiele z nich odstaje w stosunku do oficjalnego systemu edukacji, głównie pod względem jakości i wyników edukacji.

W celu złagodzenia wspomnianych wyzwań społecznych, Izrael musi dołożyć wszelkich starań, aby poprawić jakość edukacji, która przyczyni się do podniesienia jakości kapitału ludzkiego. Jestem przekonany, że aby lepiej zrozumieć izraelski system edukacji i jego zdolność do wspierania przyszłych potrzeb społeczeństwa izraelskiego, należy lepiej zrozumieć aktorów systemu edukacji – tj. nauczycieli – ich proces kształcenia i jakość uczenia się. Podejście studentów do uczenia się nie może ignorować empirycznego



kontekstu, w którym odbywa się ich kształcenie, jak również, ich orientacja kulturowa i osobiste preferencje.

W tym celu zastosowano ilościowe podejście badawcze, oparte na sprawdzonych kwestionariuszach i korelacyjnym wnioskowaniu statystycznym. Zbadano opinie 314 studentów z trzech pluralistycznych i świeckich instytucji kształcenia z północnego Izraela, które są reprezentatywne dla studentów w instytucjach kształcących nauczycieli w Izraelu.

Opisowa analiza podejścia studentów do wyników uczenia się sugeruje hierarchię między trzema podejściami. Badani uzyskali wysokie wyniki w podejściu Achieving ATL, nieco niższe w Deep ATL i średnie w Surface ATL. Ponadto, chociaż nie udokumentowano istotnej korelacji między Deep ATL i Surface ATL, Achieving ATL przez studentów, są one dodatnio skorelowane z Deep ATL i odwrotnie, natomiast negatywnie skorelowane z Surface ATL. Wyniki badań stawiają (Achieving ATL) jako kluczowe podejście do uczenia się, ponieważ ucieleśnia niektóre z najbardziej pożądanых aspektów Deep ATL i zmniejsza niepożądane aspekty związane z Surface ATL.

Wielokrotne analizy regresji liniowej sugerują, że studenci z Achieving i Deep ATL są podobni pod tym względem, że oba pozytywnie kojarzą się ze środowiskami uczenia się, które promują krytyczne myślenie. Tak więc krytyczne myślenie jest głównym empirycznym aspektem uczenia się akademickiego w celu promowania pożądanых aspektów uczenia się, takich jak wysoki poziom myślenia i umiejętność łączenia pojęć oraz budowania nowej wiedzy.

Jednakże analizy sugerują również, że studenci zdobywający Deep ATL pokazują wewnętrzną motywację do nauki, Deep ATL nie jest związany z żadnym innym

empirycznym aspektem uczenia się akademickiego, a zamiast tego wiąże się z postrzeganą wrodzoną zdolnością studentów jako motywatorem do wyboru kariery nauczycielskiej i negatywnie wiąże się z orientacjami kulturowymi związanymi z męskością (np. materializm i konkurencyjność). Ponieważ osiągnięcie ATL wiąże się z długoterminową orientacją kulturową i postrzeganym doświadczeniem akademickim promującym dostosowanie zawodowe (ale nie z żadnym subiektywnym motywem zostania nauczycielami), Achieving ATL powinno być postrzegane jako długoterminowe, strategiczne uczenie się, mające na celu promowanie dopasowania zawodowego.

Badania pokazały, że Surface ATL studentów jest związany z ich osobistymi motywami przy wyborze kariery nauczycielskiej (tj. kariery, która pozwoli im przeznaczyć więcej czasu i zasobów na osobiste potrzeby oraz pragnienia). Jednak wspomaganie nauczania może pomóc w zmniejszeniu niektórych negatywnych aspektów przypisywanych Surface ATL.

Wnioski z badania sugerują, że studentom trudno jest utrzymać wysoki poziom Deep ATL w miarę postępów w nauce i że niektóre różnice w Surface ATL można przypisać cechom etnicznym i religijnym badanych studentów (tj. muzułmanom i żydowskim ultraortodoksyjnym studentom), ale nie ich orientacji kulturowej.

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## **Introduction**

Culture can be viewed as an expression of individuals' behavior and beliefs, which accordingly allow them to differentiate themselves from one another (Hofstede, 2001, as cited in Manikutty et al., 2007). Thus, culture can be viewed as a phenomenon which enables the prediction of individuals' patterns of behavior (Ng et al., 2009), and can therefore be used as a differentiative description (for example according to ethnicity, nationality, linguistically, religiously, socio-economically, etc.) – e.g. multiculturalism (Holm & Zilliacus, 2009). Some of the salient characteristics of multicultural frameworks emphasize respecting others' lifestyles, other values and traditions and viewing all society members as equals (Rokach, 2016). According to Lev Ari & Laron (2008, p. 102), the concept of multiculturalism in education is an approach that tries to assimilate the idea of the plurality of cultural elements in society through the education system. In defining the concept of multiculturalism in education, it is customary to refer to conceptual aspects and to reformative-process aspects. Conceptually, the definition aims for every student, regardless of gender, social status and ethnic, racial and cultural characteristics, to have an equal chance to study at school. In the reformative-processual aspect, the definition refers to the fact that structural aspects in education frameworks (e.g., schools, kindergartens, etc.) disadvantage certain populations compared to others. Thus, the purpose of multiculturalism reform in education is to create a change in the education system, so that the different groups in terms of ethnic and cultural affiliation will have an equal chance to succeed in school (Lev Ari & Laron, 2008).

These insights regarding culture and multiculturalism should also be reflected in students in elementary school, as well as in students in higher education institutions. Studies, for example Holtbrügge & Mohr (2010), Mohr et al. (2012) and Dennehy (2015),



show that higher education students from different socio-cultural background value different cultural dimensions, and that these different cultural values have impact on their learning processes and learning styles. However, only little is known about how culture affects Students' Approach to Learning (ATL) as a proxy for subsequent quality of their learning outcomes and academic achievements (Artlet et al., 2003; Biggs, 1987; Burton et al., 2009; Teoh et al., 2014). Students' ATL refers to meta-cognitive processes and personal characteristics that mediate students' motivation to learn and their learning strategies (Biggs, 1988; de la Fuente et al., 2020). In other words, our understanding of the role of students' background and cultural orientation on their learning processes and outcomes is limited.

This view considers higher education system as a means for social mobility (Brezis & Hellier, 2018; Haveman & Smeeding, 2006; Mok & Wu, 2016), serving as social investment aimed at increasing individuals' human capital. In general, the concept of human capital refer to individuals' natural skills (age, sex, etc.) and acquired skills (education, experience, physical fitness, etc.) in a manner that determines their employability, quality of employment, as well as other benefits that are related to the labor market (Angrist et al., 2019; Asadullah & Zafar Ullah, 2018; Marginson, 2019). Human capital, in this sense, refers also to non-material non-economic benefits and advantages, in what can be conceptualized as cultural capital (Bourdieu, 1979, 1999, 2005) and social capital (Putnam, 1993, 2000). As social and cultural capital are more important to individuals' prosperity than economic capital (Coleman, 1988; Helliwell & Putnam, 2004; Putnam, 1993, 2016; Stiglitz, 2012), higher education can be viewed as a means for individuals to contribute to their behaviors, habits, skills, inclinations, and preferences (i.e. habitus) and improve their prospects of success in society (Bourdieu, 1979, 1999, 2005; Regev, 2011).

Accordingly, social investment, in general, refers to policies directed to shift welfare and social support spending from an immediate ex-post compensation-oriented expenditure to an ex-ante risk prevention medium and long-term economic investment, in which individuals are provided with means (not money) to better mitigate social risks and improve their employability throughout their life course, for instance by increasing their human capital through better education and vocational training (Gal et al., 2020; Hemerijck, 2018; Plavgo & Hemerijck, 2020). As higher education can be viewed as a mean of social investment aimed at increasing social and cultural capital through the empowerment of the deprived socio-cultural groups, it is especially important to examine how culture affects approach to learning of students in teachers' training institutions as they are the agents of tomorrow's socio-cultural change (Pantić & Florian, 2015).

My research problem concerns the approach to learning of students in Israel. Israel is an ideal and fertile ground for research on cultural diversification because it is considered a divided society (Hertz-Lazarowitz et al., 2010; Kharanbeh, 2018; Lev Ari & Laron, 2014; Lev Ari & Mula, 2017). Since its' foundation, the state of Israel has been considered nationally, ethnically, religiously, and socially divided and segmented, with each population group having its' own myths and ethos, and as a result also its' own behavioral practices, customs, and cultural systems (Al-Haj, 2002; Asbah, 2018).

Israeli society is a culturally diverse society, whether as a result of the division into a Jewish majority that lives alongside a large Arab minority or whether as a result of the distribution of the Jewish majority into different sectors, for example, according to the level of the religious belief (for instance between Ultra-Orthodox Jews and secular Jews) or according to ethnic and cultural affiliation that derives from the fact that Israeli

is a country that absorbs immigration (Negev & Garb, 2014). The formation of different cultures in Israeli society have led to a de facto multiculturalism in Israel even without succeeding in forming and establishing a legitimate multicultural ideology (Jamal, 2007).

As the dominant culture in Israel is the secular-Jewish culture, multicultural complexities may arise regarding economic resource allocation and oversight (Al-Haj, 2002; Negev & Garb, 2014). For example, an illustration of such complexity is reviewed by Negev & Garb (2014) regarding the obvious culturally different groups of the Arab and the Ultraorthodox-Jews. According to Negev & Garb (2014), despite the religious differences, both groups are also very similar in many cultural aspects: in both groups households are patriarchal, significantly larger than the average secular families, with close extended family structures, both groups are also spatially segregated (mainly by choice), opposing the Jewish-Zionist agenda with relatively low participation in the labor market, lower attendance in higher education studies, and lower achievements in elementary and high school. These similarities of the two minority groups have gained considerable public and academic attention in view of large government investments, as these two populations will constitute 50% of the Israeli population within a span of a generation (Negev & Garb, 2014; Soffer, 2016; Winkler, 2015).

Another example of multicultural complexities in Israel relate to its' higher education system, as documented by the Israeli Council of Higher Education (2019). According to its' yearly report, and despite extensive reforms, spanning across more than two decades, Israeli higher education system did not succeed in reducing inequalities in the Israeli society – e.g. representation of several socio-cultural groups, such as Ultra-

Orthodox religious Jews, Arabs<sup>1</sup>, and immigrant Jews from Ethiopia, in the labor market as well as in higher education institutions is significantly lower than their percentage in the general population, as was the case even before the reforms (Israeli Council of Higher Education, 2019, 2021). This under-representation of population groups continues despite support and attempts by the state to encourage and enable individuals from lower socio-economic strata and individuals from marginalized groups to acquire higher education. Moreover, as I will show below, although socio-economic status overlap socio-cultural and sectoral characteristics, under-representation of these groups in Israeli higher education institutions can be attributed to cultural preferences and characteristics of these population groups (Even, 2021; Soffer, 2016).

Moreover, although during the last two decades the number of students has tripled, the fact that socio-economical inequalities in Israeli society did not change might suggest that culture plays a much greater role in higher education than had previously believed. Thus, following the concepts of cultural capital (Bourdieu, 1979, 1999, 2005) and social capital (Putnam, 1993, 2000) which are reviewed in chapter 1.3.1 (p. 131), it might also suggest that the quality of learning as well as learning outcomes of these deprived socio-cultural students are "poorer" or that such students experience their studies differently than other (e.g., "mainstream") students.

Not addressing this drift at the present might indicate a bleak future for Israeli society, with more of its' population pushed away from desirable jobs (and even away from the labor market altogether) and doomed to remain at the bottom of socio-

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<sup>1</sup> As will be discussed below, this generalization regarding the Arab sector in Israel is a common practice (for example, Abu-Saad, 2016; Asbah, 2018; Eshel et al., 2007; Hertz-Lazarowitz et al., 2010; Lev Ari & Hassissi-Sabel, 2016). In practice, Arab society in Israel consists of various groups that include Christians, Muslims, the Druse and Circassian students (Central Bureau of Statistics, n.d.; Winkler, 2015).

economical strata, increasing inequality and threatening economic and social stability. To address the challenges presented by this dismal outlook, a socio-cultural evolution is needed, which means some alteration in the social order of society including changes in social institutions, social behaviors, and social relations (Karim, 2017). As social change can be viewed as "*The process of shifting attitudes, values, and actions to address social problems in a positive way. ... The psychological change of a society that has been affected the development of a society*" (Karim, 2017), significant agents of such change are teachers in the education system, among other things, by shaping social identity and being influenced by the perceptions of society's educational goals and perspectives (Ochieng'Ong'ondo, 2017). Therefore, teachers training, and teaching-learning processes are social processes that affect the lives of young people (and sometimes adults), prepare them for careers, and cultivate cultural and social awareness in them. Thus, it is impossible to overlook socio-cultural aspects of teacher work and the impact of society on teaching, and vice versa (Ochieng'Ong'ondo, 2017, p. 147).

This calls for a better understating of Approach to Learning, cultural dimensions, career choice motives, as well as academic experience among students in teachers' training institutions, first because students in teachers' training institutions are students much like other students in the Israeli higher education system, but mainly because these students are the future teachers in Israeli schools – they will be responsible for educating young pupils in schools and will serve as future socio-cultural change agents. Hence, the main research problem of the thesis is: **Students' in teachers' training institutions in Israel approach to learning in view of their cultural dimensions, career choice motives and perceived academic learning experience.**

As a lecturer in higher education institutes as well as teachers' training institutions in Israel, the most prominent students I meet are the ones with Deep Approach to

Learning – i.e., the ones who are interested in what they learn and wish to deepen their understanding of the content. At the same time, I am also committed to encouraging other students as well, whether their Approach to Learning is Surface (i.e., little real interest in content, rote learning of facts and ideas, focusing on task components in isolation from "the big picture") or Achieving (i.e., interested in achieving high grades, competing with others, with varied level of understanding). As these students come from different socio-cultural backgrounds, their reasons for choosing to become teachers differ and so is their academic experience during their training. Thus, my main interest is not multiculturalism of Israeli society or multiculturalism education practices in teachers' training institutions. Rather, my focus is on students in such institutions, how they approach their learning and how these approaches are related to their cultural dimensions, career choice motives and academic experience. Hence, the main research question is: **How Approach to Learning of students in teachers' training institutions in Israel is related to their cultural dimensions, career choice motives and perceived academic experience?**

The importance of research on the subject is straightforward, as improving accessibility to higher education in Israel did not change deprived socio-cultural groups' representation in higher education institutions and labor participation (Israeli Council of Higher Education, 2019, 2021). Specifically, the increase in the number of students and increase in tertiary education in Israel does not necessarily imply better education or any indication of Israeli education quality, and in particular it does not translate into equality in the population and in the context of labor productivity in Israeli society (Bank of Israel, 2016, 2019). This might imply that Israeli education system, thorough its' teachers, failed in instilling multicultural values as means for social mobility (Lev Ari & Laron, 2014). And, as stated above, it might also suggest that students from low socio-economic strata

or unprivileged socio-cultural and ethnic groups experience their studies differently and receive "poorer" education. The present study argues that these insights are especially true with students in teachers' training institutions, as these students will later serve as agents of socio-cultural change.

To the best of my knowledge, the literature regarding these issues is scant. Therefore, there is a need to better understand the extent to which cultural dimensions affect students in teachers' training institutions' Approach to Learning and perceived academic learning experience. Such understanding is necessary for conforming teachers' training programs with future needs of society and the job market, as well as a mean to improve teachers' training programs and better accommodate higher education system as means for social mobility.

From a personal point of view, as a lecturer in higher education institutes as well as teachers' training institutions in Israel, my intuition is that cultural dimensions play a key role in students' learning approaches, and hence affect teaching and teaching outcomes. For example, as students' cultural dimensions differences are very noticeable, class composition (for example, to which extent it is culturally homogeneous or heterogenous) have a direct influence on the learning climate and on the course of the lectures. Differences of students' cultural dimensions might be expressed through their attitude to the lecturer or their interactions with other students in the class, it might be expressed by the way they listen, participate, and behave during lectures, their attitude toward preparing homework or completing their assignments, their general interest in the taught subjects and their desire to deepen their knowledge in the subject and might also be expressed through their attitude toward exams and grades.

As such, I believe that better understating how cultural dimensions might reflect on students' Approach to Learning and learning experience might help lecturers and policy makers improve educational programs and teaching practices contributing to a better higher education system, especially regarding teacher' training institutions.

The presented PhD thesis may be regarded as multidisciplinary as it is located in pedagogy (e.g., teachers' training, students' Approach to Learning, and academic experience) while also considering theories and concepts from sociology (e.g., Hofstede's cultural dimensions socio-cultural career choice motives).

The current study focuses on pedagogical aspects of Israeli students in teachers' training institutions. The first section of the literary review presents a theoretical review of the research variables, starting with students' Approach to Learning as the key concept of interest to this study. As it is argued that students' Approach to Learning is related to their cultural dimensions, career choice motives and academic experience, the literature review continue by reviewing these research concepts.

However, as the current study also concerns with socio-cultural inclinations of Israeli students in teachers' training institutions, it should take a broader multidisciplinary perspective. Specifically, it is first essential to provide the reader with an overview of Israeli society and the Israeli education system, including some key characteristics of Israeli teachers, as well as Israeli higher education system and institutions for teacher training in Israel. Accordingly, the second section of the literary review covers key socio-economic elements of the Israeli society, along with key milestones and projections to its' development. This section also addresses social investment in Israel as a means of mitigating its socio-cultural challenges. The third



section of the literary review, present the reader with a short review of the Israeli education system, its' structure, some key characteristics of Israeli teaching staff and the Israeli higher education system and Israeli teachers' training institutions.

# Chapter 1: Theoretical background

## 1.1 Approaches to Learning of students in higher education

*Education systems aim to enable students not just to acquire knowledge but also to become capable, confident, and enthusiastic learners. ... Thus, an overall assessment of the outcomes of schooling needs to consider not only students' knowledge and understanding but also their approaches to learning.*

(Apfelthaler et al., 2005, p. 8)

In general, students' Approach to Learning (ATL) refers to a grounded theory validated by wide empirical evidence of meta-cognitive processes and other personal characteristics as learning processes that mediate students' intention and motivation to learn and their learning strategies (Biggs, 1988; de la Fuente et al., 2020, p. 3).

As will be reviewed below, there are three distinguished approaches to learning (Entwistle, 2018; Fox et al., 2001; Manikutty et al., 2007): *Surface Approach to Learning* (Surface ATL) which is motivated by fear of failure and a conception by which learning assignments (as well as the whole studies) should be completed with minimum effort and in which strategies, such as rote learning, isolated task completion with little real interest in content, are used, *Deep Approach to Learning* (Deep ATL) which is motivated by real personal interest, desire to understand, and vocational relevance in which deep strategy (i.e., relate ideas to evidence, integration of ideas and concepts across tasks and courses, identifying general principles) is used, *Achieving Approach to Learning* (Achieving ATL) which is motivated by a desire to be successful, achieving high grades, and

competing with others in which students' strategy is the use of any technique that achieves these goals with patchy and variable level of understanding.

Following Dennehy (2015), and in order to avoid confusion, it is necessary to differentiate between the concepts of students' Learning Style and students' Approach to Learning (ATL)<sup>2</sup>. A student's learning style refers to the preferred way in which the student chooses to experience the process of knowledge acquisition and understanding (for instance, through experience, observation, or theoretical learning), while students' ATL embodies the learning intentions and the context in which learning takes place, from the student's perspective (Dennehy, 2015). Hence, students' ATL characterizes how students are generally referring to their studies, and specifically it addresses students' desire to learn and the extent to which they are willing to continuously and consistently direct their abilities and resources to cope with their studies requirements (Entwistle et al., 1979, as cited in Manikutty et al., 2007).

Researchers' attempts to offer a conceptual framework for defining the context in which learning occurs as well as for identifying efficient allocation of learners' resources are not new. Among these attempts, for instance, are the principles of the Confucian philosophy and belief and the philosophical framework of Socrates which were formulated more than 2000 years ago (Apfelthaler et al., 2005; Dennehy, 2015). The Confucian view sees learning as a means of maintaining social order, and hence learning expresses a collectivist view in which learners should be seen in the context of how they promote respect and obedience to parents, to the elderly, to teachers, and to and other significant individuals and officials in the community. Unlike it, Socrates' philosophy

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<sup>2</sup> See also chapter 1.1.1 below

advocates the questioning and construction of knowledge independently in the process of inquiry, and therefore expresses a conception of an individualistic nature. Both examples express an attempt to propose a theoretical framework in which the learning process and pedagogy take place and are examined from an external (somewhat ideally) point of view in a way that serves some social or philosophical purpose (Apfelthaler et al., 2005; Dennehy, 2015). However, both the Confucian and the Socrates, as well as many other philosophical and theoretical models, did not explicitly refer to intrinsic processes or subjective motivation of the individual learner (Apfelthaler et al., 2005; Dennehy, 2015).

A turning point in reference to the learning process from a more subjective point of view occurred during the 1970s, with the advancement of research in the field of psychology<sup>3</sup>. During these years and the following decades, an understanding of learning processes had emerged, and with it the formulation of the way in which knowledge is constructed as well as the identification of cognitive processing levels of learning materials, which were conceptualized as students' learning preferences (Richardson, 2015).

According to Manikutty et al. (2007, p. 74), students' learning preferences are usually associated with two major research approaches, both formulated almost simultaneously during the 1970s. The first study stream focused on students' Learning Styles, while the second stream focused on students' ATL. As it is important to

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<sup>3</sup> For instance, the work of Marton (1976a, 1976b), Marton & Säljö (1976a, 1976b), and Kolb (1976, 1984, 1985, as cited in Manikutty et al., 2007) which will be reviewed below

distinguish between the two theoretical frameworks (Dennehy, 2015), and since the focus of the present study is the latter, the following review will address students' Learning Styles first, and in particular on its limitations in examining student preferences, followed by an elaborate review of students' Approach to Learning, which are the focus of the present work.

### **1.1.1 Students' Learning Styles**

As stated above, the focus of the present study is students' Approach to Learning. However, before a detailed presentation of the constructs of students' Approach to Learning, there is a need to address students' Learning Styles, firstly because many confuse the two research approaches, but in particular because students' learning styles was found to be limited in measuring and estimating students' learning preferences and, thus, is less appropriate for describing students' learning development or for promoting learning and improving objective learning outcomes (Dennehy, 2015; Manikutty et al., 2007).

Learning styles are an expression of researchers' attempt to characterize learners according to two main foci: the emphasis that learners place on different stages in the learning processes and the way in which learning is expressed through the application of learning content (LeBlanc, 2018).

The conceptual foundation for students' learning styles was laid in Kolb's works (1976, 1984, 1985, as cited in Manikutty et al., 2007). The conceptualization of learning styles considers learning process as a generic process, i.e., that there is a limited amount of learning processes and that any such learning process can be described with reference to specific generic stages. In addition, as learning is not a one-time occasion, learning

process are continuous, so that the generic learning stages are carried out in a repetitive circular process over time in many diverse tasks and situations. This conceptualization provides the infrastructure for outlining different learning stages and examining how students experience these different stages during learning, thus in effect enabling to characterize different learning styles and classify different students according to the different nature of emphasis they place on different stages in the learning process (Manikutty et al., 2007).

The framework of learning styles was initially developed by Kolb (1976, 1981, 1984, 1985). This initial conceptualization proposed four types of learning. The different types differ from each other in their point of reference to the source of knowledge (i.e., whether ideas are the result of experience or whether ideas are products of thought and abstract conceptual thinking) and the way ideas are crystallized and constructed to knowledge. The following is a summary of the main characteristics of these four styles (Manikutty et al., 2007, p. 75):

- *Converging learning style*, characterized by a combination of Abstract Conceptualization (AC) and Active Experimentation (AE) in which learners tend to solve specific problems, and predominantly employ a hypothetical deductive reasoning. This learning style is characterized by a logical and emotionally biased approach to problem solving, based on deductive thinking. Its main advantages are its ability to promote practical application of ideas, learning by doing and thinking, as well as its ability to formulate logical hypotheses in a deductive way.
- *Diverging learning style*, combining Concrete Experience (CE) and Reflective Observation (RO) in which learners tend to solve problems by reviewing situations from many perspectives and rely upon generation of new ideas through techniques such as brain storming. Students with preference to diverging learning style solve problems by presenting a wealth of ideas and examining many possible solutions. Students who employ such learning style

use a well-developed imagination that allows them to analyze a problem from different and varied angles and aspects, which are then organized into coherent insights.

- *Assimilating learning style* combines Abstract Conceptualization (AC) and Reflective Observation (RO), according to which learners tend to solve problems through an inductive process and develop theories to fit their observations. Students who are characterized by this learning style will deal with problems through observation and reflection, followed by an inductive construction of ideas and concepts. The significant advantages of students who employ such learning style are in the formulation of theoretical models and in the aggregation of separate and different observations into an orderly explanation.
- *Accommodating learning style*, which combines Concrete Experience (CE) and Active Experimentation (AE), as learners tend to solve problems through empirical experiments validated through data and observations. Students who employ this learning style will tend to face problems through an intuitive trial and error repetitive process. Such students will be open to new ideas and experiences and will not object to implementing or participating in experiments, and they will adapt best to new and unexpected situations.

Over the years and with the development of the research literature on learning styles, alternative definitions were suggested for appropriate perspectives through which learning styles should be considered (Willingham et al., 2015).

For instance, An & Carr (2017) argued that students' learning styles were regarded as a representation of learners' sensory intake and their choice of using verbal, visual, concrete or abstract means to express their distinctions. According to another definition (Bretz, 2017; Willingham et al., 2015), students learning styles differentiated learners according to their best learning practices - by viewing (visual learners), by listening (auditory learners), or through movement (kinesthetic learners), as illustrated by Willingham et al. (2015)'s simple example (see Illustration 1).

Consider a class of students – for instance high school students in a science class, teachers training college students participating in a pedagogical class, or first graders studying the basic arithmetic operations.

In this class there may be students for whom a visual presentations (e.g., writing on the board, PowerPoint presentations, video clips) are optimal for learning, while others might prefer listening to the teacher, others will insist on reviewing multiple examples and solving as many exercises as possible until they feel they gained understanding and master the subject at hand, and others might prefer the teacher to initially emphasize the abstract conceptual framework and logic from which they can (themselves) derive practical consequences and applications (for instance for solving exercises).

***Illustration 1: students' diverse learning style preferences (Willingham et al., 2015)***

According to Willingham et al. (2015), there are two important issues worth addressing in this context. The first is that students' learning styles, as presented above, naturally focuses on its applications in education, and specifically in higher education. Although it would not be reviewed here, it is important to note that research has extensively addressed learning styles in the context of other fields of practice and other disciplines (such as behavioral therapy, nursing, or public health management)<sup>4</sup>. In the educational context, learning styles focus on learners' preference for processing certain types of information or, alternatively, on their (different) preferred way to process the same information (Willingham et al., 2015).

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<sup>4</sup> For example see Davies-Kabir & Aitken (2021); Gerdesköld et al. (2017); Stander et al. (2019)



The second issue concerns with the (mostly implicit) assumption that, as different students may prefer to learn differently (i.e., use different learning styles), learners can choose, adapt, and be trained to use a variety of learning styles to achieve optimal learning. This means that learning is circumstantial, “technical”, and changeable, so that students' learning can be enhanced and promoted through adaptation of learning styles (Willingham et al., 2015).

As will discussed below, in the context of current research these two issues are problematic in two aspects. The first is that with the variety of circumstances and disciplines and the multiplicity of learning styles, a researchers' ability to effectively characterize the appropriate learning style for each student decreases significantly. Consider, for example, Illustration 1, where any teacher's attempt to please all student groups by trying to apply to their learning styled preference will prove to be very complex, difficult to implement, and, hence, futile.

The second aspect is that students' learning styles represent situation-related learner-specific preferences and as such it necessarily ignores other student characteristics (such as students' background, motivation to learn, and perception of the studies themselves) and their possible influence on students' learning preferences. As such, students' learning styles are less suitable for examining the conduct of students during their studies and for examining the cultural impact on this experience.

Moreover, the conceptual framework of learning styles emphasizes convenience and intuitiveness, which researchers have used to characterize the preferences of different learners regarding learning (An & Carr, 2017). However, An & Carr (2017) also note that this characterization does not purport to claim that one learning style is better or more desirable than other styles. Rather, this characterization is supposed to help

educators identify different learning style among their students with the assumption that such identification could lead to a better adjustment of the learning process (and teaching) to different learners, and hence improve their learning (An & Carr, 2017).

In practice, both this premise and its outcomes have been widely criticized in the research literature. First, the effectiveness of learning styles in improving learning and learning outcomes was criticized as many studies have failed to provide evidence that *"instruction designed in response to students' learning styles has resulted in improved achievement"* (Bretz, 2017, p. 825). Similar empirical evidence emerges from the reviews of An & Carr (2017), Kirschner (2017), LeBlanc (2018), and Willingham et al. (2015). Specifically, Knoll et al. (2017) showed that there is no indication of any association between learning styles and different measures of recall of newly learned learning materials. That is, empirical research was not successful at illustrating how the use of learning styles might contribute to improving meta-cognitive processes responsible for the quality of learning and the cognitive effort involved.

Moreover, it became clear that in the context of learning, a distinction between ability and preference should be considered. According to Willingham et al. (2015), ability refers to a learner's cognition as a multifaceted concept pertaining to a variety of aspects of human perception and thinking. Conversely, style, or preference, do not represent a measure of success to perform (or potentially perform) an action ("how well"), but rather focus on the manner the action is performed ("how") (Willingham et al., 2015).

Indeed, such distinction might put to question the extent to which style and preference contribute to learning. An & Carr (2017) addressed this issue. According to them, *"One of the critical problems with learning styles theory is the lack of clear,*

*explanatory framework*" (An & Carr, 2017, p. 410). They also argue that the theory of learning styles fails to explain the cognitive processes and mechanisms underlying the choice of different learning styles. Especially since the theory focuses on the ad hoc or circumstantial choice of learning style by the learner it fails to define and explain the learning process and with it the process of student development.

Additionally, An & Carr (2017) argue that learning style theories describe the behavior, and do not explain the motives or processes that led students to this behavior. This insight led them to argue that constructs, or measures, used to characterize learning styles are, in fact, metrics borrowed from other theories, more established and appropriate for describing learners' behavior. Thus, for example, impulsivity or perseverance better represent character or personality trait than a student's learning preference (An & Carr, 2017).

Accordingly, An & Carr (2017) argue that some aspects of learning styles theory contradict other theories, and sometimes even each other. For example, trying to distinguish between learners who prefer visual learning style and learners who prefer verbal learning style ignores the fact that verbal and visual ability are intertwined, and that both contribute to one's learning and improvement. In another example, the researchers illustrate how the attempt to distinguish between students who prefer an abstract learning style and students who prefer tangible and concrete learning style is, in fact, a distinction between students who are in a different developmental learning stage - advanced students have a better understanding of the subject, hence they are more open to and interested in an abstract expansion and general application of concepts. In this example, students learning style that purports to characterize learner's preference is merely an identification of students learning progress (An & Carr, 2017).

Another aspect in which learning style theory was criticized concerns the validity of its measures. Since its introduction, the conceptual framework of learning styles has been adopted by many researchers, mainly because it had offered a convenient and straightforward means for characterizing different learners in different contexts. As a result, however, according to Pashler et al. (2008), to date more than 71 different schemes and learning styles have been documented in an effort to characterize the way in which learners prefer to receive new information and process it.

Similarly, LeBlanc (2018) comprehensive review refers to 23 learning styles mapped by Cassidy (2004, as cited in LeBlanc, 2018) as well as to an abundance of research tools that have gained much traction in research literature on their own account – for instance "Gregorc Style Delineator; Kolb's Experiential Learning Model (ELM); Hanger Learning Styles Inventory (LSI); Honey and Mumford Learning Style Questionnaire (LSQ); Entwistle and Tait Approaches to Inventory Research (ASI) approaches (LeBlanc, 2018, pp. 34–35).

The issue of learning style measurement tool validity and variety was also discussed in Coffield et al. (2004). They examined 13 learning styles (selected or based on more than 70 other styles) and documented significant gaps in the reliability and validity of these tools, and particularly that they do not converge to a consistent definition of learning styles.

Similarly, Kirschner (2017) critical review refers, inter alia, to Parshing's (2005, as cited in Kirschner, 2017) attempt to characterize 49 different learning styles based on the degree of flexibility they provide to learners with different need, and to the obvious conclusion that this multiplicity of measures is, in effect, inapplicable and cannot be used to characterize learners learning styles or at least not through a single learning style.

Consequently, Kirschner (2017, p. 167) argues that referring to learning styles as valid constructs that differentiate learners is in practice only a method of grouping them based on their different characteristics - a concept he termed as pigeon-holing.

Overall, as some learning styles measurement tools have low reliability and others are poorly validated, distinguishing between the variety of learning styles becomes very difficult and inefficient (An & Carr, 2017; LeBlanc, 2018).

Another critique of the learning tools of measurement styles holds that these styles are based, by their very definition, on ordinal scales. For a particular learner to be characterized by a particular learning style and not by another, it is required that, for the learner, the measurement scale of the first style be higher than the measurement scale of the second style. This results in a one-dimensional "narrow" perspective of learners instead of contextual multi-dimensional characterization (An & Carr, 2017).

Furthermore, students' learning styles is based on the assumption that learners' preference represents an exchange between their abilities - in simple words, it is assumed that traits in which students are more able can be further used to compensated for weakness in other abilities. Obviously, such approach is very limited – for instance, improving mathematical abilities will not necessarily help a student to improve their musical abilities, and accordingly abstract learning style that promotes mathematical thinking will not necessarily suit tangible learning preferences when studying music (Willingham et al., 2015).

Some researchers, for instance LeBlanc (2018) and Manikutty et al. (2007), point to a practical issue related to the application of students' learning styles in the field of education. Specifically, they argue that it is not clear whether a learning style is a personal, innate trait, which, therefore, does not change throughout life and cannot be

changed and adjusted in the learning context, or is it a behavioral situation-dependent choice (i.e., it changes across different situations and over time) so that it can be adjusted and perfected, or even internalized and assimilated to be a kind of second nature.

Attempts to address this issue have prompted alternative models for describing learning styles, based, among other things, on learners' behavior, their personality, the way students prefer to absorb information (e.g., visually, through hearing or touching), styles adapted to different types of assignments (e.g., different study subjects), or corresponding to different study situations (lecture in class, personal guidance, or self-learning as examples) (LeBlanc, 2018). It has also become clear that learning styles are not the only prism by which learning and learning preferences can be described, and that there are other, rather useful, ways by which students learn, such as through memorization or assimilation of information (Dennehy, 2015).

In conclusion, students' learning styles offered education practitioners (teachers, coaches, counselors, experts responsible for curriculum development, etc.) relatively simple and intuitive tools to facilitate and improve students' learning process. Simply put, all they had to do was adopt the learning style or learning tool that was appropriate (and preferred) by each type of student - such an optimal match of students' preferences and appropriate learning and teaching styles was expected to lead to optimal outcomes and optimal learning development (Kirschner, 2017). This simplicity and straightforward nature of the concept of learning styles gained much popularity in the public, and especially among educators, and as a result it is applied in many teaching institutions as part of teachers training (Willingham et al., 2015).

In practice, however, researchers of students' learning styles have failed to prove a real contribution of the learning styles approach to promoting students' learning and performance. Furthermore, research of students learning styles also failed in establishing theoretical rationale and to develop valid and reliable research tools for its application. Thus, recent years have witnessed increasing opposition against the use of learning styles approach in teaching with many calling for neglecting this approach for promoting learning altogether (An & Carr, 2017; Bretz, 2017; LeBlanc, 2018).

In this context, it is interesting to return to Knoll et al. (2017) findings regarding the concept of Judgment of Learning (JOL) as a particular type of metacognitive judgment that aims to assess the likelihood of future correct recall of information just learned. They documented an association between the use of learning styles and the subjective assessment of learners about their learning outcomes, however they were unable to point to a similar association between the use of learning styles and the objective measurement of students' JOL. In other words, these findings showed that students' subjective preference or perception of what is right for them in the context of learning is not necessarily accurate in identifying the right approach for them to promote their learning (Knoll et al., 2017).

A similar insight regarding whether learners actually “know” what is best for them can also be found in Kirschner (2017) who offered an amusing illustration of the issue:

*"To put it in a different context, while most people prefer sweet, salty, and/or fatty foods, I think we can all agree that this is not the most effective diet to follow, except if the goal is to become unhealthy and overweight." (p. 168)*

Thus, learning styles may express students' subjective preferences regarding learning, but these preferences fail to provide an appropriate objective indication to assess the quality of learning or to promote their learning.

Despite the criticism, it is important to note that learning styles are not altogether useless. Although the research literature tends to disregard learning styles as a valuable educational tool, and especially considering the difficulty of showing significant contribution to adjusting teaching with preferred learning style or to understand how students' learning style improve learning, the ability of educators to characterize and raise their students' awareness of the strategies they use while learning may empower them and help improve their self-efficacy. Particularly, such an awareness may contribute to learners' recognition that learning is a complex and multifaceted process (LeBlanc, 2018, pp. 38–39):

*"Teaching students the cognitive processes and skills involved in learning—those strategies that help learners think, solve problems, and create meaning—can similarly empower students, not with a false sense that one can learn only one or two ways, but with an understanding that learning is multifaceted, reflecting different combinations of learning abilities that make us effective in different ways".*

In summary, as noted above regarding the context of the present study, the concepts of students' learning styles express a subjective and circumstantial preference of learners expressed through a particular behavior. As these preferences also stem from individual personality characteristics or traits, they do not give expression to the background and factors that motivated the learners to learn in the first place, nor do they



give expression to the motivation and perception of the goals that the learning is supposed to serve for the learner. Specifically, following Manikutty et al. (2007), it can be concluded that research on learning styles has failed to present effective and valid research tools for estimating students' learning preferences, and particularly it failed to present learning styles as a means for promoting learning and improving objective learning outcomes. As a result, learning styles are not appropriate for describing learning development in general, and specifically in the context of the ability to understand and characterize learning of future teachers in training institutions or in the socio-cultural context.

### **1.1.2 Students' Approaches to Learning (ATL)**

As noted above, students' ATL is another research approach concerned with students' learning preferences (the former is students' learning styles, which was reviewed above). This school of thought distinguishes students with an in-depth, superficial, or achieving goal-oriented approach to learning (Entwistle, 2018; Manikutty et al., 2007; Stover & Holland, 2021). Students' ATL addresses students' intentions regarding their studies and learning, as well as the learning processes they implement to achieve their learning goals (Lindblom-Ylänne et al., 2019).

Students' ATL research has evolved in recognizing that the learning environment, or the context in which learning take place, serves as a layout into which students' life experience and personal preferences drain. That is, how students approach their studies depends on both their personality, their background and motifs for learning, as well as the context in which learning takes place (Manikutty et al., 2007).

This allows for a broader interpretation of learning and learning tasks (certainly compared to the relatively "narrow" aspect of learning outcomes), which considers learning as an holistic, continual, developing process that, accordingly, has implications for other aspects of learning such as the importance attached to assessment tasks (e.g., their weight in the final grade), the nature of assessment, the essence and emphasis placed on memorization, skill demonstration or originality, and even to other circumstantial aspects such as the identity of the teacher and of teaching style (Asikainen et al., 2014; Asikainen & Gijbels, 2017; Manikutty et al., 2007).

It is customary to attribute the significant development in research in the field of students' ATL to a series of studies conducted during the 1970s (Marton, 1976a, 1976b; Marton & Säljö, 1976a, 1976b). In those studies, the researchers first examined the ways in which educational psychology students process information, and later tried to characterize the relationship between the different processing manners and the students' learning outcomes. For this purpose, the researchers examined how the students coped with an assignment of reading an academic paper, and later the extent to which the students understood the content of the article and what was implied from it. The researchers identified two main approaches to learning: (1) Surface ATL in which students focused only on (partial) information required for completing their assignments, primarily by memorizing and reproducing the text as presented, and (2) Deep ATL in which students sought an in-depth understanding of the subject, primarily by focusing on meanings in the text and on the main message it wished to convey (Entwistle, 2018).

Here it is worth noting that Marton (1976a, 1976b) and Marton & Säljö (1976a, 1976b) were not the only researchers who addressed the issue in these years. As noted above, during these years psychological research progressed in understanding how information is processed, in identifying levels of processing, in understanding how

knowledge is constructed, and from that to attempts to formulate different approach to learning (Richardson, 2015). Other studies conducted in these years have documented similar characteristics to the two approaches to learning. Thus, for example, Svenson's study (1977, as cited in Asikainen & Gijbels, 2017) distinguished between holistic learners focused on the intention and meaning and atomistic learners who focused only on remembering passages of text, while Pask's (1976, as cited in Asikainen & Gijbels, 2017) study distinguished between serial and linear learning in which the subjects are studied one after the other as opposed to holistic learning in which the learner tries to understand the connections between the concepts in an attempt to promote understanding of the subject in general.

With the development of research in this field in the following years, Marton (1976a, 1976b) and Marton & Säljö (1976a, 1976b) terminology gained more popularity and the understanding and distinction between the two approaches to learning became clearer (Entwistle, 2018, pp. 70–72):

- *Deep ATL*: An approach to learning in which learners strive to integrate assignments' requirements, goals, and meanings mainly through the adoption of a broader perspective of learning. Thus, learning of ideas, concepts, and practices transcends beyond the boundaries of an assignment or even of a single course. This approach revolves around finding and connecting ideas and formulating them into a whole, both in the context of a single assignment and in the broader context of learning (e.g., bachelor's degree, teachers training stages). Thus, this approach to learning views learning and learning activities in the context of learners' personal and professional development process with the expectation of using this knowledge in the future.

- *Surface ATL*: An approach in which learning, as well as learning assignments, is viewed as external to the learner (i.e., something that others have imposed on the learner, or are expecting them to accomplish), with no intention or expectation to understand its meaning or to make significant use of it in the future. Such an approach perceives learning activities as isolated from each other, as well as from the learning process and irrelevant to learners' personal and professional development. Thus, such an approach to learning manifests as learners' tendency to focus on the learning components without considering the bigger picture, for example by referring to learning assignments as memorization exercises, in which students are required to remember and reproduce information when needed (for example, in an exam).

In these early years, students' ATL were viewed as learning processes that stem from the way in which academic assignments are perceived by the students and are influenced by their individual characteristics. Simply put, students' ATL were used to express the way students chose to approach their assignments, and in this sense students' ATL constitute yet another psychological aspect related to aspects of cognitive processing of content (Biggs, 1988; de la Fuente et al., 2020).

However, with the development of research on students' ATL, a change in the research focus could be identified - from focusing on psychological aspects, i.e., level of cognitive processing, research focus shifted to an abstract description of students' ATL that expresses a combination of intention and effort (Richardson, 2015).

As Richardson (2015) points out, the shift in research focus is largely a result of an ambiguity of the original definitions of Marton & Säljö (1976a, 1976b). This ambiguity has led to inaccurate distinction between cognitive processing level and the

recognition that this processing level reflects an earlier, more general, and daily perception of learning in the sense of "*What it takes to learn*" Marton & Säljö (1976a, 1976b).

Thus, Deep ATL had evolved into describing an intention to learn for the sake of learning, while the cognitive processing that accompanies this intention is characterized by an elaborative search for connections, associations and other aspects that can contribute to expanding the learner's perspective. Surface ATL, on the other hand, can be described as an intention to do the minimum necessary to obtain some recognition for learning, with this intention often accompanied by cognitive processing that focuses on reproduction of memorized separate isolated pieces of information (Fryer & Ginns, 2018).

Similarly, it is argued that students' ATL are better described by referring to two more general aspects of learning: the intentions that lead to learning and the strategies of learning (Uiboleht et al., 2018). According to Uiboleht et al. (2018), the strategic aspect of learning approach refers to the different learning activities, practices or processes that students perform while engaged in learning, while the intentional aspect refers to the reasons or goals that motivated the learner to adopt that strategy.

Uiboleht et al. (2018)'s distinction places the initial emphasis on understanding students' motivation to learn, allowing to characterize students' choice of a learning strategy in the right and appropriate context. In doing so, three main factors can be identified that can motivate learners to learn: intrinsic motivation to understand, assimilate and be proficient with the learned content (Deep ATL), external motivation to learn that is driven primarily by fear of failure (Surface ATL), and even a third motivational factor, a later development which will be reviewed below, which is

characterized by a strive for success, achievement, and recognition, which in turn leads to a goal-oriented, orderly and purposeful organization of studies (Entwistle, 2018; Manikutty et al., 2007).

Hence, students' ATL is fundamentally different from students' learning styles. Student learning styles refer to an ensemble of characterizations of learners' circumstance-dependent ad-hoc preference for learning (An & Carr, 2017; LeBlanc, 2018), whereas students' ATL is more of a heuristic model by which educators can adapt their teaching in order to promote their students' desired learning methods and outcomes (Tormey, 2014). As such, students' ATL should also be considered as a tool for advancing and improving teaching, which might explain why it had gained such widespread adoption in higher education and educational research (Kelly, 2019; Tormey, 2014).

Below is an overview of the research regarding the three students' ATL.

### ***Deep ATL***

It is widely accepted to refer to the Deep ATL as the "natural" approach to learning, that is, a learning in which learners seek to accumulate, expand, and deepen their knowledge, where critical thinking is demonstrated alongside the ability to filter out irrelevant information or, alternatively, identify, understand, and link relevant aspects of what is learned (Biggs, 1993). Clearly, such interpretation might explain why much of the academic research on learning approaches has focused on the Deep ATL, and especially on identifying factors that contribute to successful learning outcomes and quality learning (Entwistle, 2018).

Deep ATL expresses the degree to which students are interested in delving deeper into their studies, aspiring for a thorough and full understanding of the topics, on their various dimensions. Such an approach requires versatile and flexible thinking, which allows learners, simultaneously, to holistically integrate abstract ideas and concepts while locating and using evidence and facts to formulate and construct new ideas. Deep ATL expresses learners' interest in new ideas along with their willingness to examine those ideas critically and in depth, therefore promoting both active learning and reflective thinking (Manikutty et al., 2007).

According to Kelly (2019, p. 48), Deep ATL is characterized by an active involvement of students in the learning process, in search for meaning of and during learning, in high thinking levels and critical thinking that seeks to connect current knowledge with prior knowledge, as well as to apply current knowledge in other contexts, and in the ability to design and construct new knowledge. Students who are characterized by Deep ATL are perceived as curious and involved, they are excited and enjoy learning, have prior knowledge and are willing to learn new knowledge, analyze it, evaluate it, and create a synthesis of the new knowledge with their prior knowledge. As a result, instruction for Deep learning is designed to create new meanings and place learning in the broader context of the studies and learners' progress and development. Such teaching would focus on quality ("depth") and not necessarily on the amount ("width") of learning, by encouraging reflective and critical thinking, for instance by promoting open discussions in class, peer assessments and peer support, problem-based learning, formative curriculum design and evaluations (Kelly, 2019, p. 48).

Deepening, in this context, is seen as a strategy in which the learner is the one responsible for learning to take place, with this responsibility stemming from the learner's

own aspiration (i.e., inner motivation) to reach a high level of proficiency and understanding of the study material (Aharony, 2006; Hamm & Robertson, 2010), or, at least, as learners' means of self-actualization (Biggs, 1993).

Deep ATL are often associated with mental flexibility along with an ability to adopt diverse and multifunctional learning styles, as well as learners' awareness of the learning process and how they should adopt different strategies in different learning contexts (Evens, 2013). For instance, Sharp et al. (2018, 2020) used these insights in the context of academic boredom, i.e. the gap between learners' expectations to learn, know and understand and their disappointment with their relative performance or their perception of poor quality of their studies, all despite an interested and in-depth approach towards learning.

For students in teachers training institutions these aspects of Deep ATL are of paramount importance (Evens, 2013). As argued by Evens (2013), during their studies these students should see themselves as prospective teachers and in this context explore ways in which they can challenge their future students, provide them with stimuli and support, and especially to enable them to develop effective learning approaches – that is, to improve their abilities to manage and overcome barriers and setbacks in different contexts of learning more effectively.

According to Evens (2013), as the complex learning environment of the 21st century requires future teachers to be, among other things, open to ideas, values and beliefs, to have a broad perspective of society and culture, and to have a multidisciplinary interpretation and concluding abilities, prospect teachers must adopt Deep ATL. In this sense, students need to be more critical and reflective about their learning, be able to self-



regulate their learning and at the same time make the best use of the learning opportunities and challenges they face (Evens, 2013).

Thus, for example, many curricula set out to develop students' learning skills and competencies, often stating that their goals are to promote quality and integrated learning, such that would facilitate students with new knowledge along with complex skills, such as problem solving, project promotion, shared and reflective learning (Azer et al., 2013). However, Azer et al. (2013) argue that these goals cannot be achieved by memorizing factual knowledge alone, but instead there is a need to develop a wide range of cognitive and non-cognitive skills that promote Deep ATL. According to Azer et al. (2013) Deep ATL should be based on three aspects:

- *Apply specific techniques that foster deep learning:* Learn how to ask good questions, use analogy, construct mechanisms and concept maps, develop critical thinking skills, and use self-reflection.
- *Master active learning:* Use appropriate range of learning resources, ask for feedback.
- *Practice learning beyond the classroom:* Apply knowledge learnt to new problems, practice learning by using simulation, get involved and learn by doing.

Hence, it is clearer that adoption of Deep ATL implicitly expresses a semantic understanding of issues that are considered central and essential in the acquisition of meaningful and long-term knowledge, thus making this approach desirable (Murayama et al., 2013).

While Deep ATL had always been regarded as the "natural" and desired approach to learning, it is interesting to note that its' definition and the way it is implemented has changed over the years to suit changes in the learning and learning environment. Perhaps the best-known example in this context refers to the tremendous expansion of Information Communication Technology (ICT) applications in everyday life as well as in the field of education. Thus, among other things, a Deep ATL in an information-rich and technology-rich environment involves screening out and locating relevant and reliable information from a huge variety of sources and references, and the ability to integrate this information and produce meaningful and value-added summaries (Islamoglu & Branch, 2013).

Similarly, as demonstrated in the case of engineering students who were required to study history (Bombaerts et al., 2018), a Deep ATL embodies the nature of learners' social interactions with others in the learning environment, as well as the nature of their perceptions of other characteristics of the learning environment. For instance, Deep ATL convey better interactions of learners with their peers, their teachers, the content of the learning and learning requirements, and most of all openness to unexpected opportunities that learning might summon (Bombaerts et al., 2018).

Therefore, there is room to consider learners' approach to learning as a self-perception of themselves in a certain learning context, a perception that expresses the way in which the intention to learn and the learning process are integrated into a learning focus (Vanthournout et al., 2011). Accordingly, Deep ATL can be viewed as a coordinating concept of learning motivation, the beliefs about learning and the cognitive and emotional regulation that learners activate as part of their learning (Vermunt & Donche, 2017).

In summary, Deep ATL's motivation for learning is Intrinsic – learners are interested in understanding and are personally involved in their learning, for which learning assignments are means to an end. This approach is aimed at creating meaning and holistic understanding in a coherent manner while aiming to link prior knowledge to new knowledge (Entwistle, 2018).

In this regard, Deep ATL is perceived as the desired approach to learning, as it represents the highest hierarchical level of learning that provides learners with best understanding of the discipline, and especially the ability to apply learning outcomes in new contexts (Entwistle et al., 2001).

For example, in medicine, Deep ATL expresses better decision-making and better coping and problem-solving abilities (Joshua, 2017). In teaching, Deep ATL induces constructivist teaching style, that emphasizes the student's role in the learning process and encourages active learning, learning that takes place during a process of doing, by way of building knowledge and in a way in which the learners are responsible for their knowledge as well for constructing it (Dejene et al., 2018).

Thus, students in teachers' training institutions are expected to adopt Deep ATL as teaching profession sees their future character as a role model for their students, hence they are expected to acquire broad professional and technical knowledge, as well as to demonstrate innovation, open-mindedness, involvement, and a sincere interest and understanding of the field of knowledge (Gibbs & Coffey, 2004; Tsang, 2019).

### *Surface ATL*

Surface ATL is characterized by focusing and preoccupation with non-reflective learning strategies, such as rote memorization and reproduction of content, or simply as a learning approach intended to meet the minimal learning requirements, such as learning the minimum required to pass the course, usually while memorizing facts (Spada & Moneta, 2012, 2014). This approach to learning attributes students with inability, or at least reluctance, to consider and look for implicit connections between ideas and concepts, so acquired knowledge during learning is often inconsistent and fragmented (Lindblom-Ylänne et al., 2019).

Surface ATL is assumed to be extrinsic motivated. In this sense, learning is perceived as forced by others, and even enforced by them, so that learning is aimed at satisfying others (for instance, parents or teachers), without personal interest and real involvement in (and sometimes even alienation toward) the content or learning activities (Entwistle, 2018). Surface ATL may often express learners' fear of failure, lack of understanding, gaps in prior knowledge, or insufficient clarity regarding learning objectives (Manikutty et al., 2007).

Indeed, many have addressed Surface ATL as a passive approach to learning, manifested in a lack of interest in the study material as well as in a relatively small willingness to understand it altogether. One expression of such a reference is in trying to do the “minimum required” and generally to succeed in “surviving” the studies (García et al., 2016).

Similarly, according to Kelly (2019), Surface ATL is characterized by memorization, fear of failure and attempting to get passing grades, among other things by focusing on trying to find the "right answers" without analysis, passive un-involved

learning, learning without reflection and with no intention or ability to use new knowledge in other contexts. Students who adopt Surface ATL often express preferences to engage to non-academic priorities, as their goal in learning is meeting the, usually minimal, requirements (i.e., to earn a degree) and quickly ensure a good job. For such students, learning represents huge workload, insufficient time, and higher levels of anxiety, especially regarding exams (Kelly, 2019).

A teaching that promotes students' Surface ATL is such that focuses on the quantity and not the quality (depth) of learning, does not try to find meaning from the content, and usually consists of a collection of disconnected topics without a sequence between them. Such instruction is often characterized as stressful, for instance by stringent time allocation to assignments or the use in informative and non-transformational assessments (e.g., through short generic answers or multiple-choice questions) (Kelly, 2019).

It would not be correct to describe Surface ATL as a memorization-oriented approach, but more as an approach that strives "*to reproduce academic content rather than interacting with it*" (Entwistle, 2018, p. 73). In the context of first-year students, this approach has been described as characterized by a focus on mechanical and systematic repetition until the study material becomes automatic (Svedin et al., 2013). The purpose of learning, according to Surface ATL, is to fulfill situation-dependent requirements (e.g., submitting assignments or delivering a presentation) or to receive external reinforcements, such as praise or gifts (García et al., 2016), but it is generally acknowledged that adopting such a learning approach results in lower quality of the acquired knowledge (Murayama et al., 2013).

Additional characteristics of Surface ATL include focusing solely on the task at hand, learning relatively few parts of the content that will suffice to meet the requirements (e.g. reading very specific parts in an article or textbook), limiting learning to only compulsory curriculum (i.e., syllabus-boundedness), hence the common perception of Surface ATL is that such approach to learning usually achieves only a superficial and limited understanding of the subject (Manikutty et al., 2007).

Respectively, students who adopt Surface ATL will often find it difficult to understand new ideas, especially when asked to reproduce learned knowledge in another context. These students will have a harder time seeing the value or significance in the various courses they attend and tasks they have to perform, and later such students are prone to experience unnecessary pressure and worry about the quality of their performance and their prospects in the future (Entwistle et al., 2001).

It is interesting to note that, conceptually, the definition of Surface ATL has not changed significantly since it was formulated in the 1970s and 1980s, even though learning contents and the nature of learning have changed almost unrecognizably since (Lindblom-Ylänne et al., 2019). As mentioned above (Islamoglu & Branch, 2013), the changes that have taken place in academic settings, such as ICT applications and the abundance of information available from a variety of sources, raised the need to develop students' critical thinking, their ability to identify key themes and formulate key ideas from different sources, as well as filter less relevant information. Accordingly, this brought about greater research attention on Deep ATL, as this ATL is perceived as contributing to quality and successful learning in increasingly demanding contexts (Lindblom-Ylänne et al., 2019; Thompson, 2013).

Consequently, research of Surface ATL is relatively limited, certainly compared to scope of research of Deep ATL (Lindblom-Ylänne et al., 2019). This is somewhat surprising, as Surface ATL is quite prevalent (Asikainen & Gijbels, 2017; Joshua, 2017; Ward, 2011). Following Lindblom-Ylänne et al. (2019) conclusion that Surface ATL is not well constructed, the need arises to enrich the research on this approach. This issue is particularly important in the context of understanding student knowledge and skills by formulating more coherent measures by which students can be helped to prioritize and apply Deep ATL over Surface ATL (Bunce & Bennett, 2019; Lindblom-Ylänne et al., 2019).

In summary, although it is common to refer to Surface ATL as the least academically desirable ATL (Entwistle et al., 2001; Joshua, 2017; Richardson, 2015), still one cannot ignore that the main characteristics of Surface ATL (e.g., rote learning and reproduction of content, assignment oriented learning, external motivation to learn) are perceived by many as the pillars of learning, and in many cases may even constitute a major principal of the dominant learning approach (Zhu & Chang, 2019)<sup>5</sup>.

Surface ATL is natural for many students simply because they are accustomed to it, in some cases as early as from their early childhood. Thus, expecting students to approach their learning differently when they attend higher education may be perceived as unnatural or even as threatening by them (Zhu & Chang, 2019). One can also see how students may not be open to the possibility of adopting other approaches to learning,

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<sup>5</sup> As documented by Zhu & Chang (2019), many curricula state, explicitly, goals such as "the student will know by heart to quote the ... [anthem, periodic table, principles of professional ethics etc.]" or "students will read the... [book, chapter, article, etc.]". These common examples illustrate how Surface ATL approach is prevalent and manifested by many educators as a natural and straightforward approach to teaching, and how it encourages students to adopt a Surface ATL

despite recognizing the benefits and contribution that these approaches may offer them as learners (Joshua, 2017). Still, research regarding Surface ATL is relatively limited and scant (Bunce & Bennett, 2019; Lindblom-Ylänne et al., 2019).

The present study aims to better understand the characteristics of students', and especially students in teachers training institutions, Surface ATL and specifically examine the degree by which background and situational factors of learning influence the adoption such an approach to learning.

### *Achieving ATL*

The third approach, Achieving ATL, was conceptualize at a later stage than that of the two Deep and Surface ATL. This approach to learning is based on the organization of learning, and particularly revolves around allocating time and effort resources to learning, in a way that will lead students to achieve the best outcomes (Biggs, 1987 and Entwistle, 1992 as cited in Manikutty et al., 2007). Accordingly, this Achieving ATL is also referred to as Strategic ATL (Entwistle, 2018) or as Organized ATL (Lindblom-Ylänne et al., 2019).

The mainstays of Achieving ATL have been identified and described by (Ramsden, 1979, 2003), as means to characterize students who used Deep or Surface ATL at different circumstances in response to the perceived nature of assessments. Similar development of the conceptualization of Achieving ATL has also been reviewed in Entwistle (2018, pp. 73–74). According to them, with the growing popularity of ATL theory, it became clear that in many cases it was relatively easy to identify the two typical approaches (Deep or Surface) different students exhibited in varied situations, for instance, in the context of different disciplines, or in a more task-oriented context of



stylistic choices and conduct. Meanwhile, it also became clear that another group of students can be identified and distinguished from other students - these students exhibited similar behavioral characteristics, most often expressed in the way they referred to and prepared for their assessments (usually, exams). These students acted consciously and proactively to obtain as much information as possible about their assignments and the nature of assessments, both through conversations and communication with the teacher (the assessor) and through systematic analysis of previous assignments and assessments. At first, these students were referred to as "cue-seekers" or "cue-conscious". However, it soon became clear that these students' behavior represents a much broader approach to learning, with deeper awareness of the assessment process, in which students act strategically to direct their efforts to learning aspects that are most likely to maximize their achievements (Ramsden, 1979, 2003; Entwistle, 2018).

Achieving ATL is characterized by a set of actions that are aimed to identify relevant assessment criteria (of an assignment, of a course, or of the entire training), and, accordingly, adopt the appropriate learning approach (Deep or Surface, or any combination of them) that can lead them to maximize their achievements. In this sense, it is a goal-oriented learning approach, the motivation for which is achievement, and according to which learning is organized as needed, i.e., within a managed time frame and with continuous control over the effectiveness and purposefulness of these efforts (Manikutty et al., 2007). It is worth noting that such supervised and monitored learning may also mean persistence, focus and investment of efforts and resources that will allow to maintain concentration even when the content may seem boring (Entwistle, 2018).

Achieving ATL also mean ensuring optimal conditions for learning, locating, preparing, and focusing on the proper content of learning, as well as being alert to the

assessment requirements and the various criteria from which it is composed and performing the work in accordance with the perceived preferences of the assessor (e.g., teacher) (Entwistle et al., 2001). Some have even suggested that adopting an Achieving ATL reflect a rational and efficient decision making that aims to regulate and deal successfully with overwhelming demands, for instance of busy schedules of students (Stover & Holland, 2021).

To some extent, one can argue that Achieving ATL resembles Surface ATL in that it is very technical in its' nature and students who adopt Achieving ATL are not necessarily interested to learn or to understand. However, there are several aspects by which the two ATLs are different. First, in the context of motivation. Surface ATL is extrinsically motivated and often driven by fear of failure, whereas Achieving ATL is motivated by intrinsic motives that are distinctly different from the learner's learning goals (Ryan and Deci, 2000 as cited in Bunce & Bennett, 2019).

This distinctive intrinsic motivation is illustrated by Manikutty et al. (2007) by using an example. Their illustration relates to a business administration student whose goal is to get a job on Wall Street. The student's motivation to study, and their appropriate perception of learning and learning goals, convey their perception of their prospects of being accepted for the job. In this example, the student is not explicitly interested in learning nor are they engaged with the contents of learning – their focus lies elsewhere, in being accepted for the job. This will be manifested in their conduct during their studies, specifically with the importance they will probably attribute to their achievements (for example, aspiring to achieve the highest possible grade point average of close to 100 or to be among the top students in the class), their focus and excellence in courses that are

important for obtaining the job while investing minimal effort (e.g., to obtain a "passing" grades) in other courses (Manikutty et al., 2007).

This example also helps highlight other aspects that set Achieving ATL apart from Deep and Surface ATLs. Among other things, it illustrates the fact that the focus of this learning approach is on achievements, while understanding or learning engagement have only a secondary role. Thus, it may lead to a premise that Achieving ATL is associated with better grades, especially in courses that are strategically important, however learning, even in these strategic courses, is not deep and students' level of understanding and mastery of the material may vary and might even be fragmented (Manikutty et al., 2007). Joshua (2017), for example in her study regarding nurses, showed that predominantly choosing Achieving ATL did not necessarily reflect comprehensive understanding or ability to make correct clinical decisions.

However, as Deep ATL conceptually focuses on describing the ways in which students engage in learning, Achieving ATL is mainly concerned with ways students organize their learning (Vanthournout et al., 2013). This has led some to argue that Achieving ATL should not be considered as an approach to learning (Case & Marshall, 2009; Dennehy, 2014), or alternatively that it should be viewed as a form of learning that is motivated by competition or professional aspiration (Entwistle and Tait, 1990 in Joshua, 2017). Another criticism against Achieving ATL is that it does not address students' competence when applied in varied learning environments and situations, therefore making Achieving ATL more beneficial to educators than students (Cuthbert, 2005). Consequently, research of Achieving ATL is scant and limited, especially relative to research that has focused on the other two learning approaches (Dennehy, 2015).

Considering this, one of the aims of the present study is to contribute to the knowledge gap concerning Achieving ATL by examining the extent to which this approach is prevalent among students in teaching training institutions.

### **1.1.3 Determinants of Students Approaches to Learning**

Different approaches to learning, including the motivation, intentions, and strategies for learning they embody, are not separate concepts, or even mutually exclusive, but rather they are interconnected and interrelated constructs (Smarandache et al., 2021). This means that students may express more than one approach simultaneously. However, the intensity with which each approach is expressed may vary according to different aspects of the learning environment, students' perceptions of this environment, and the characteristics of the students themselves (Baeten et al., 2010).

Accordingly, this chapter provides an overview of the various factors that have been documented as associated with students' ATL. As noted above, the bulk of the literature on this topic has focused on the two main approaches (Deep and Surface ATL), and only a few studies have addressed the various aspects of the third Achieving ATL (Dennehy, 2015).

#### ***Students' characteristics***

Students' ATL was found to be associated with students' age. Findings suggest that Deep ATL intensifies with age, and especially for women (Kjellgren et al., 2008). Similar empirical findings were documented by Lake & Boyd (2015), who also found that the tendency to adopt a Surface ATL decreases with age, and with it the use of

practices typical of such learning, especially among women. Similar age-related findings were also documented by Salamonson et al. (2013), which suggested that older students have a greater potential to present desirable learning behavior than younger students and that the choice to study at an older age is driven by internal motivators.

Hence, motivation for learning, as well as its' implied learning strategy, as embodied through the conceptualization of students' ATL, are, inter alia, an expression of students' mental maturity, as a more realistic and focused perspective on the nature of learning and its goals (Kjellgren et al., 2008; Lake & Boyd, 2015).

As stated above, gender is also documented as being associated with students' ATL (Kjellgren et al., 2008; Lake & Boyd, 2015). However, the nature of this association is not unequivocal. For example, Ward (2011) illustrated that women exhibit a greater fear of failure relative to men, and respectively had a higher tendency to demonstrate Surface ATL, whereas Joshua (2017) reported that women were more prone to adopt the Achieving ATL. In contrast, Salamonson et al. (2013) comparative study documented larger proportions of men adopting Surface ATL and no gender differences in students' Deep ATL, whereas Baeten et al. (2016) study of teaching students found gender differences regarding students' effort management, but not in their ATL. Additionally, Nordin et al. (2018) study of trainee teachers documented higher level of Surface ATL among men than among women, but did not document any other gender differences of Deep or Achieving ATL.

Gurlen et al. (2013) study of pre-service teaching students documented higher level of Achieving ATL of men than of women. However, their findings did not document significant gender differences of pre-service teachers Surface and Deep ATL.

Still, age and gender effects are considered relatively small, as their association with students' ATL diminishes when other factors (i.e., study discipline or stage in studies) are monitored (Richardson, 2013).

Additional personal characteristics that were found to be associated with students' ATL are students' personality traits. Students with higher scores on openness to experience, extroversion, conscientiousness, pleasantness, and emotional stability tended to exhibit a greater tendency to use a Deep ATL (Baeten et al., 2010). Moreover, it has been argued that students' ATL mediates the relationships between students' personality traits and course experience and academic achievement (Diseth, 2013). Conscientiousness and metacognitive awareness personality traits were also associated with Achieving ATL, both of which largely reflect common aspects of planning, preparation, and thinking about learning in what might be called self-regulated learning preparation (Batteson et al., 2014).

Self-confidence, perception of self-efficacy, and effectiveness of learning were also found to be associated with Deep ATL (Baeten et al., 2010), and similarly, low self-esteem and perception of low self-efficacy were found to be associated with Surface ATL adoption (Lindblom-Ylänne et al., 2019). Similarly, Rozgonjuk et al. (2020) argued that Surface ATL is largely a substitute for low self-efficacy perception in mathematics, as both entail higher mathematics related anxiety, whereas Deep ATL had no effect on mathematics related anxiety.

As Surface ATL is associated with low or external motivation for learning, as well as little interest in learning (Lindblom-Ylänne et al., 2019; Smarandache et al.,

2021), it is also associated with students' perceived personal relevance of learning. According to Coertjens et al. (2016), students' ATL varies across different courses, and there is a negative association between learners' adoption of Surface ATL and the extent to which courses are perceived as more relevant to them, both in the context of personal interest and in the context the course' professional and academic contribution.

Lack of self-regulation learning skills as well as disorganized learning were reflected in relatively higher Surface ATL among students, and they were also reflected in a poor and fragmented knowledge base (Coertjens et al., 2016; Parpala et al., 2010).

In their qualitative research, Postareff et al. (2015) asserted that the most significant factors in understanding changes in Deep ATL levels relate to time and effort invested in learning, continuity and consistency of learning, students' learning skills and their personal learning regulation skills, all of which were referred to as 'individual factors' (Postareff et al., 2015).

In conclusion, students' ATL are associated with their personal characteristics, as these characteristics reflect their willingness to learn and interest in their studies. Associations of personality traits, self-efficacy, and other individual characteristics (i.e., gender and age) with students' ATL were extensively documented. However, the nature of the associations between students' ATL and their personal characteristics are inconsistent and not unequivocal. More than implicitly indicating students' ATL, personal trait express students' mental maturity and suitability to engage in learning.

More importantly, since these personal traits are innate or early acquired, subjective and individual, hence, from a practical and systemic point of view, the benefit they embody for understanding students' conduct during their studies is limited. Rather,

other, more practical, aspects of learning, such as students' perceived learning relevance and contribution, have been found to be more significant to students' ATL.

### *Discipline and studies development*

One of the early key insights regarding students' ATL was that it varied considerably across courses - some students regularly exhibited characteristics of Surface ATL, others exhibited a pronounced and continuous tendency to adopt Deep ATL, but there were also some who showed a change in their preference and in the extent to which they adopted each approach across different tasks and different periods of their studies (Entwistle, 2018).

The issue of change in students' ATL throughout the progress of their studies has been reviewed by Asikainen & Gijbels (2017). However, their findings do not provide a clear empirical inference on the subject. Of the 43 articles reviewed by them, 18 showed a positive development of Deep ATL along the progress of students' studies in higher education institutions. However, a similar number of studies did not detect any change in Deep ATL, and 8 more studies even documented a decrease in this approach. Similarly, their review refer to 11 studies that document a decrease in Surface ATL along the progress of students' studies, 9 studies that document an increase, and 20 studies that showed no change in the extent to which Surface ATL is adopted as students progressed with their studies (Asikainen & Gijbels, 2017).

A study of medical students documented high Deep ATL at the beginning of their first year. However, as the studies progressed, more and more students adopted Achieving ATL and then Surface ATL (Ward, 2011). Similar findings showed that in their first two years of study, medical students tend to adopt Deep ATL, whereas in the



third and fourth year of study their prevailing tendency is to adopt Achieving ATL (Amiri, 2019).

McDonald et al. (2017) longitudinal study of anatomy and physiology students documented a predominance of Surface ATL during students' first year and all through their studies. However, they also documented a significant increase of Deep and Achieving ATL, as well as association between third-year students' Deep and Achieving ATL and their performance on assessment. McDonald et al. (2017) conclude that as students' progress through their studies, they develop deeper and more strategic learning approaches, and that students' academic experience may promote students' ATL.

Conversely, Kjellgren et al. (2008) showed that Deep ATL of students in teachers training institutions were initially high and almost did not change throughout their studies, while Stover & Holland (2021) did not document any significant change in students' ATL throughout the course of their studies.

In a study by Gordon & Debus (2002) teaching students, initial higher level of Surface ATL were documented, as well as relatively low Deep ATL. However, as their studies progressed, students' Surface ATL decreased and their Deep ATL increased. Moreover, Gordon & Debus (2002) illustrated that by adapting training programs these trends can be intensified so that at the end of teacher training students' Deep ATL were higher than Surface ATL.

Conversely, Tanriverdi (2012) documented a decrease in pre-service teachers' Deep ATL between their first and their third and fourth year, and an increase in their Surface ATL over this period. Interestingly, they also document differences in students' ATL between different departments (i.e., Mathematics teaching, Language teaching, and English language teaching), and differences of students' ATL change between their first

and last year across departments. They argue that these differences are related to students' epistemological beliefs, that learning depends on innate ability or depends on effort, as embodied the various departments (Tanriverdi, 2012).

As students' ATL might vary over the course of their studies, researchers explored options to influence students' ATL (Joshua, 2017; Phillips & Graeff, 2014; Varunki et al., 2017; Ward, 2011). For instance, Joshua (2017) illustrated how intervention among Nursing students was successful at increasing their tendency to adopt Deep ATL and improve the quality of students' clinical decisions. Her findings also document that this intervention led to a reduction of students' tendency to adopt Surface ATL.

Both studies, of Ward (2011) and Joshua (2017), are from the field of medicine and nursing, where the expectation that students will adopt Deep ATL during their studies is quite reasonable<sup>6</sup>. However, even in these cases, it is interesting to find a significant proportion of students who adopted a non-Deep ATL – in Ward (2011) up to 10% of the students adopted Surface ATL, while in Joshua (2017) in the first stage (before the intervention) 21% of the students adopted Deep ATL, while the rest adopted Surface ATL (38%) or Achieving ATL (41%).

Phillips & Graeff (2014) also documented how students' ATL can be influenced through intervention. In their study, Phillips & Graeff (2014) illustrated that accounting students perceived their first year introductory courses as difficult to understand and abstract which led them to adopt Surface ATL. The intervention program proposed by

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<sup>6</sup> It is assumed that no one is interested in receiving medical treatment from a caretaker who has studied the subject superficially (Ward, 2011)

the researchers, in the form of a practical simulation, led the students to create a more positive attitude towards the accounting profession, which was followed by more students adopting Deep ATL. Their findings further confirm the association between the adoption of Surface ATL and their perception of irrelevance or interconnectedness of the taught content. Their findings also suggest that choosing Surface ATL is also associated with perceived difficulty in understanding and engaging with the course' content and meeting the course requirements (Phillips & Graeff, 2014).

A study among first-year pharmacy students (Varunki et al., 2017) documented that Surface ATL was more common than the other two ATLs. More importantly, the study findings showed that throughout the school year some students changed their ATL, but that most students changed the extent to which they adopted each approach (without changing their ATL) – students' Deep and Achieving ATLs decreased from the beginning of the year to its end, while Surface ATL levels increased during this period (Varunki et al., 2017).

Studies, like Baeten et al. (2010), Joshua (2017), Phillips & Graeff (2014), Varunki et al. (2017), and Ward (2011), documented changes in students' level of interest and engagement in learning throughout their studies. These studies also illustrated that students' ATL can be influenced and manipulated, so that students can be encouraged to adopt Deep ATL. However, as argued by to Kjellgren et al. (2008), such studies also represent a hierarchical view of students' ATL, according to which the three approaches of students' ATL can be described in hierarchical form - a basic level in which learning is technical and reproductive (i.e., Surface ATL), a higher level in which students are more engaged and seek for an identity and recognition (i.e., Achieving ATL), and a

reflective and transformative level that expresses involvement and interest in learning (i.e., Deep ATL).

According to this hierarchical approach, students' ATL expresses not only their intentions and strategies during their studies, but also the extent of their engagement and skill in their studies. Hence, throughout their studies students are expected to change "*their predominant ATL from the surface or strategic to the deep approach*" (Joshua, 2017, p. 5), or, at the very least, increase their adoption of Deep ATL (Asikainen et al., 2014; Baeten et al., 2010).

However, research of this hierarchical view of students' ATL, both theoretically and empirically, do not provide a clear and an unequivocal understanding of students' ATL development, especially regarding the adoption of Deep ATL over the course and years of study (Asikainen et al., 2014; Baeten et al., 2010).

Similarly, there is also evidence of an association between different study disciplines and students' ATL. Several studies have documented students in the Humanities and Social Sciences disciplines showed a greater tendency for Deep ATL, while students in the Sciences tended to exhibit higher levels of Surface ATL (Baeten et al., 2010; Lindblom-Ylänne et al., 2019; Parpala et al., 2010). Similar results were also documented by Entwistle (2018), who found significant preference for comprehension learning by Art and Humanities students, whereas Science students expressed a clear preference for operational learning.

Similarly, a comparison of Humanities and STEM<sup>7</sup> students in the U.S. found that not only did Humanities students show a clearer and more significant propensity for innovation and open-mindedness, but also that these students' learning and academic experiences significantly encouraged them to engage and be more involved in their studies, thus providing additional support for the benefits of Deep ATL (Tsang, 2019).

Regrading students in teachers training institutions, which are at the focus of the present study, the literature is not successful in identifying or establishing typical pre-service teacher ATL. For instance, according to Van Petegem et al. (2005), pre-service teachers' ATL is Surface as they are application oriented, reproductive learners, that view learning as an intake of knowledge, and rely little on self-regulation, but rather on concrete processing and external regulation. However, according to da Ponte et al. (2017), pre-service teaching students were documented to prefer their learning to be based on inquiry, reflection and collaboration between learners, a learning in which assessment tasks and open classroom discussions are more frequently and widely used. According to Van Petegem et al. (2005), despite the difficulties and challenges that such Deep ATL provides, it is perceived by students as an opportunity for learning and for professional development.

However, growing evidence documents an increasing tendency of students in teachers training institutions to adopt an Achieving ATL in what Trostek (2020) calls

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<sup>7</sup> STEM education (collectively shortened as STEM) is an education that combines four disciplines (Science, Technology, Engineering and Mathematics), with the aim of creating a holistic view of student-focused methods and learning environments and ways in which students can explore real-world practical problems and offer solutions to these problems (Florida department of education, 2020)

'learning engineering', associated with (problematic) reductive and circular reasoning. Specifically, Trostek (2020) asked Swedish pre-service teaching students to analyze articles and found that many students chose to negotiate "*the content of the course and explaining ... in terms of the course's theoretical perspectives*" rather than addressing the contents and issues of the articles (Trostek, 2020, p. 1). Furthermore, he argues that this 'learning engineering' becomes a concern regarding pre-service teachers' interest in understanding and explaining learning, which calls for more critical thinking and self-reflection in teachers' education (Trostek, 2020). Similarly, Chirikure et al. (2019)'s qualitative study also documented a combinatory pragmatic dissonant and deep ATL among pre-service teachers, and especially calls for the need to explore how to promote Deep ATL and high self-efficacy in students, especially in students with low socioeconomic status (Chirikure et al., 2019).

Gurlen et al. (2013) also documented higher levels of Achieving ATL compared to Deep ATL, and both were higher than Surface ATL. Their study of pre-service teaching students documented consistent hierarchical differences between the three students' ATL across students' major. Their findings also suggest that Achieving ATL is positively associated with Deep ATL and with students' first semester achievements (i.e., point grade) and overall academic average, as well as perceived academic success. However, nor Deep or Surface ATL were found to be statistically correlated, and both were not associated with achievements.

Pre-service teaching students' ATL were also examined by Hyytinen et al. (2018). Their findings suggest different hierarchical order, according to which highest students' ATL were Deep, following by Surface, then Achieving ATL. Their findings suggest a positive association of Deep and Achieving ATL, but not with Surface ATL. Moreover,

according to Hyytinen et al. (2018) findings, students' self-efficacy is negatively associated with Surface ATL, but is positively associated with Deep ATL.

Dejene et al. (2018) also examined pre-service teachers' ATL. According to their findings, students' Surface ATL levels at the beginning of their studies were significantly higher than their Deep ATL. These findings have been found to be consistent with respect to several teachers training institutions, leading the researchers to conclude that Surface ATL is the prevailing learning approach with which students in teachers training institutions join their training (Dejene et al., 2018).

Still, other studies document higher levels of Deep ATL and Achieving ATL among teaching students than Surface (Baeten et al., 2013; Gibbs & Coffey, 2004; Ozgur & Yilmaz, 2019), which leads, again, to an inconclusive understanding of pre-service teachers' ATL.

Interestingly, Dejene et al. (2018) also address pre-service teachers professional choices. Their finding suggest that teaching students prefer traditional teaching approaches (i.e., focusing on presenting content and information and assisting in the successful completion of formal assessment tasks) over constructivist teaching that aims at constructing new knowledge by emphasizing the student's role and engagement in learning. Moreover, their findings also documented an association between pre-service teachers' preferred ATL and their preferred approach to teaching - teaching students who are characterized by Surface ATL are more likely to adopt a traditional teaching approach while students who were characterized by Deep ATL were more likely to support teaching approaches that allow for greater students' engagement with curriculum contents and knowledge construction (Dejene et al., 2018). Similarly, Windschitl (2004)'s qualitative study among science pre-service teachers indicate only an implied

understanding "*of what it means to “do science”*", as most of his subjects shared misrepresentations of fundamental aspects of science, hence reflecting mostly Surface ATL.

In the study of Marušić et al. (2017), first-year teaching students' ATLs were compared to with final (fifth) year students. Their findings indicate final-year students as more conscientious with higher levels of self-efficacy. Moreover, their findings also document relatively lower Surface ATL levels and overall external motivation for learning of final-year students. According to Marušić et al. (2017), these differences indicate that during their studies in teachers training institutes students develop, both in the context of their mental maturity and in the context of their professional maturity - in both cases this is a result of the training process.

Students in teachers training institutions' ATL are not constant and can be influenced. For example, Gibbs & Coffey (2004) document that teaching students were initially characterized by higher levels of Deep ATL than of Surface ATL. An intervention program to improve teaching quality among these students' pedagogical instructors resulted in a decrease in Surface ATL adoption among students. However, the intervention did not change students' Deep ATL level. The authors suggested that intervention program not positively affect students' Deep ATL is a result of a ceiling effect, according to which students' Deep ATL levels were very high in the first place, so the a priori potential for improving their Deep ATLs is relatively small (Gibbs & Coffey, 2004) .

Several studies, especially in the context of pre-service teachers, suggest that students' ATL are, to a considerable extent, dependent on cultural influence. For instance, a comparative study of preservice teaching students (You & Jia, 2008) documents



cultural differences of pre-service teaching students' ATL. According to their findings, Chinese teaching students showed a more significant preference for accumulating knowledge and understanding, primarily through in-depth and extensive reading, while American teaching students focused on assessment requirements. In this study, Chinese teaching students demonstrated a higher level of Deep ATL, whereas American teaching students demonstrated a higher level of Surface ATL (You & Jia, 2008). Similar findings were documented by Chan et al. (2007) concerning pre-service teachers ATL in Singapore and Hong Kong.

Vanhournout et al. (2013) documented a decrease in Deep ATL among teaching students, and little (or no) changes in other students' ATL. Their overall conclusion was that developments in students' ATLs could be attributed to different tendencies at the subgroup level, addressing cultural influences. Similarly, Chirikure et al. (2019) argue that students' socio-economic status seemed to have the greatest effect on their ATL, as students with low socioeconomic status have to balance part-time work and studying. Since socio-cultural background is often associated with socioeconomic status, the researchers argue that it is imperative to explore how to promote Deep ATL as well as high self-efficacy and teaching efficacy in pre-service teaching students (Chirikure et al., 2019).

In summary, the research literature identifies studies disciplines as a significant factor concerning students' ATL. In more abstract disciplines, such as the Humanities, a deeper, reflective, and broader approach is required to understand the various abstract concepts and to be able to link different ideas. Therefore, students from these disciplines

usually tend to adopt Deep ATL. In contrast, in practical areas, such as engineering or accounting, learning takes on a more technical character, in which students demonstrate reproductive knowledge (e.g., in the context of skills or use of relevant tools), so students in these disciplines are likely to adopt Surface ATL. As stated above, the research literature supports these patterns (Baeten et al., 2010; Lindblom-Ylänne et al., 2019; Parpala et al., 2010).

However, the research literature regarding "mixed" disciplines, such as medicine and teaching, as in the context of the present study, are not unequivocal. Such "mixed" disciplines in which technical practice is required alongside reflective, original, in-depth, and critical thinking. In both cases, the premise is that professionals in these areas should have broad professional theoretical knowledge and skilled technical mastering, however they are also expected to be innovative, flexible, open-minded, involved, and have deep understanding about the nature of their practice (Gibbs & Coffey, 2004; Joshua, 2017; Tsang, 2019).

In practice, the research literature in this context is unclear and ambiguous. Students in teachers training institutions were often characterized as continuously following a Deep ATL, while there is an extensive documentation of a significant proportion of teaching students' preference for Surface ATL as well as inconclusive evidence of students' ATL change as their studies progress. In particular, it is important to note that research on Achieving ATL among teaching students is relatively limited and sparse compared to the other two ATLs, and its findings do not clearly clarify this approach - whether it is a kind of transitional stage in the development of students' engagement, learning and professional skills during their studies, manifested in their Surface and Deep ATLs, or whether Achieve ATL represents a coherent concept that represents students' motivations for learning and the most effective and successful

strategy they implement to achieve their learning and other goals (Manikutty et al., 2007). The present study will attempt to dispel some of the ambiguity associated with this issue.

*Students' academic learning experience: Teaching styles and learning environment*

Previous chapters have illustrated that students' characteristics, such as gender, age, and personality traits, may influence students' ATL, but this effect is inconsistent, and more importantly marginal with respect to other influences. Similarly, in disciplines involving practice and theoretical knowledge, such as medicine and teaching, research was not unequivocal regarding the development of students' ATL and its characteristics. Hence, this chapter will focus on the most meaningful aspects of learning and students' ATL, that is students' academic learning experience. This group of "experiential" factors aim to convey students' impressions, excitement, and feelings (or the lack of which) during their studies, among which are how they experience the teachers who teach them, how they interact and contributed from their peers and the institution, the contents of the various courses, the assignments and how they are evaluated, and particularly the way in which these aspects contribute to their studies in general.

Teaching styles and teachers' conduct are associated with students' ATL. More involved teachers, and especially teachers who are more dedicated to changing students' perceptions, encourage students' Deep ATL. Similarly, students' perception of teaching quality, i.e., in terms of content clarity, nature of assessments, learning and assessment load, and relevance of learning goals, also invoke students' Deep ATL (Baeten et al., 2010; Lindblom-Ylänne et al., 2019; Smarandache et al., 2021).

According to Van Petegem et al. (2005), pre-service teaching students' prefer meaningful and strategic learning environments, in which teachers are expected to connect learning content with their students' interests and in which students are expected to collect information about subjects dealt with during courses, over discovery-oriented learning environments, in which students are able to determine what they want to work on and need to decide for themselves how much time and effort they need to spend on their learning task.

Similarly, a study conducted among science teaching students in order to identify the most appropriate teaching style for them to learn scientific models – the same scientific models they are expected to teach in the future - suggested that "Science Talks" (an application that encourages simultaneous discussion between lecturer and students and between the students themselves) is the recommended means to promote both an understanding of the models and an ability to explain them explicitly and in depth (Deneroff et al., 2013).

Thus, not only teaching, but students' tendency to prefer different ATLs is also affected by the way learning is structured, learning content, and the nature of the assignments. In this manner, according to Smarandache et al. (2021), students' ATL might be viewed as an integrated expression of students' perception regarding the effort they expect to invest in learning and their interest in learning and content.

According to Smarandache et al. (2021), Surface ATL was associated with students' perception of the learning content as uninteresting and such that requires them to invest relatively little effort and time (for example, 'doing as little work as possible' and 'no need to do anything else'). Accordingly, their findings suggest that Deep ATL was associated with students' finding the course content interesting and encouraging them

to spend additional free time in learning more about the issues (Smarandache et al., 2021).

Similarly, students' perception of learning environment as encouraging and sustaining peer-support was associated with students' Deep or Achieving ATL (Coertjens et al., 2016). Specifically in the context of students in teachers training institutions, not only did peer support during reflective learning process encourages the adoption of Deep ATL, but this support is a product of experience (Kjellgren et al., 2008). Kjellgren et al. (2008) suggest that students' reflective learning and critical thinking, along with their reflective mentoring ability, develops over the progress of their studies, thus constitute a significant development in the perception and understanding of the nature of teaching profession among teaching students (Kjellgren et al., 2008).

In their qualitative study, in which students' Deep ATL changes were examined, Postareff et al. (2015) did not document a clear evidence that students' teachers-related learning experiences (i.e., the extent to which teaching and learning environment were perceived as quality) provided useful explanations to students' Deep ATL changes. However, their findings also suggest that students' experience of learning challenges were associated with changes of their Deep Approach (Postareff et al., 2015).

Others also suggested that students' perception of learning challenges plays a significant role in the context of students' ATL. For instance, Phillips & Graeff (2014) examined accounting students and found that the perceived challenge of the learning content, coupled with difficulties in completing their assignments and unclear perception of learning context (i.e., "the big picture"), led students to adopt Surface ATL.

In contrast, Coertjens et al. (2016) showed that in some cases, when learning was viewed as without challenges, or when challenges were perceived as relatively mild and

few, students were inclined to adopt Surface ATL. These students were characterized by a decrease in interest and a more passive attitude towards learning. However, they also document that in the same situation, other students adopted a Deep ATL, including through greater academic involvement, more active and meaningful participation in classroom discussions, and in search for additional course-related materials (Coertjens et al., 2016). Accordingly, they suggested the association of learning challenge and students' ATL is inconsistent and depends on learners' subjective preferences. Specifically, they argue some students are more dependent on teacher guidance in their learning, while others are better at self-regulating their learning and are more self-reliance (Coertjens et al., 2016).

Students' preference of a specific ATL is also closely related to the way they perceive assessment characteristics. Gan et al. (2017) examination of Chinese students of English as a foreign language teaching found that students tended to adopt Deep and Achieving ATL as assessment characteristics were perceived as richer in feedback (both formal teacher feedback and informal peer feedback ), as more authentic or relevant, more balanced and as helping to develop learners' independence and autonomy (Gan et al., 2017).

Empirical findings regarding the relationship between teaching styles and students' ATL are ambiguous and unclear. Baeten et al. (2013) reviewed two studies they conducted. In their first study, Baeten et al. (2013) illustrated how student-centered learning environment did not encourage students' Deep ATL, but rather pushed many to adopt a more Surface ATL. In their second study, the researchers illustrated how the nature of teaching (i.e., lectures, case-based learning, or varied teaching) was associated

with a decrease in the students' Deep and Achieving ATL. Their findings showed that only gradual application of case-based learning led to a significant change in students' ATL. Baeten et al. (2013) conclusion from both studies is that it is difficult to improve students' Deep ATL and Achieving ATL by using a particular teaching style, and that teaching styles are limited in influencing students' effort management (Baeten et al., 2013).

However, according to Kek & Huijser (2011) student-focused approach to teaching positively influences students' tendency to adopt Deep ATL, and that consequently this Deep ATL contributes to students' self-directed learning. Their study also documents how the perception of classroom control, both from the students' point of view and from the teachers' point of view, contributed to the adoption of Deep ATL self-directed learning, and that students' self-directed learning decreased as students tended to adopt Surface ATL (Kek & Huijser, 2011).

Kek & Huijser (2011) also argue that while students' Surface ATL depends mainly on their personal, individual factors, Deep ATL is influenced by both student-related and lecturer-related factors. Thus, they concluded that teachers could foster students' Deep ATL, primarily through their teaching styles.

Beausaert et al. (2013) reached similar conclusions. In their study of students of mathematics teaching in the Netherlands, teacher-focused teaching approach was found to encourage students' Surface ATL, whereas student-focused teaching approach encourages students' Deep ATL (Beausaert et al., 2013).

In summary, teachers influence students' ATLs, both in their involvement and dedication to teaching and through the quality of teaching, the clarity of content and the

coherence of assignments and assessment requirements. As students' ATL are not consistently and unequivocally influenced by teaching styles, the perceived difficulties of learning assignments and challenges play a significant role in students' ATL development. Thus, variations of students' ATL might reflect an implicit combination of students' self-efficacy, perception of learning challenges, and nature and quality of teaching. Hence, different combinations of these three factors may constitute different students' ATL.

However, as the present study adopts a broader perspective of students' ATL (i.e., focusing on students' overall experience during their studies in teachers training institutions, rather than context-specific learning), some aspects of the role of teachers, teaching, and learning environment play in students' ATL cannot be examined directly, but only indirectly and implicitly. Thus, instead of focusing on the teaching styles of certain teachers in certain courses or on a course' perceived assignments' challenges and assessment, emphasis was placed on the general overall perception of teaching in the educational institution as transformational, supportive, which aims to promote disciplinary knowledge and understanding, and especially foster students' critical thinking (Manikutty et al., 2007; Utriainen et al., 2018).

#### **1.1.4 Students' Approaches to Learning: limitations and criticism**

The extensive interest in students' ATL stems, first and foremost, from the "natural" conception of learning, as learning in which students are interested in the study content and engaged in their learning, even beyond the framework of the lesson or the course. Such learning is a learning in which students strive to discover new ideas, connect, and confront them with previous knowledge, and generally engage in an active,



critical, and reflective learning (Manikutty et al., 2007). This conceptualization and perception of learning is embodied in students' Deep ATL and is considered as a desirable study behavior of students (Salamonson et al., 2013).

Conversely, students' Surface ATL is often associated with extrinsic motivated rote learning and memorizing content for short term recall, and is often considered as less preferred, in part because it is associated with students' inability, or at least unwillingness, to learn and may lead to question the quality of knowledge students acquire during their studies (Lindblom-Ylänne et al., 2019). Similarly, evaluation-oriented and achievement-focused methodological learning that characterizes students' Achieving ATL does not guarantee unfragmented continuous knowledge or true engagement and interest in the field of knowledge and is therefore also considered less desirable (Manikutty et al., 2007).

In this sense, the conceptual framework underlying students' ATL theory is appealing because it implies that under certain conditions (e.g. adaptation of teaching approaches, intervention programs, structural change of courses, diversifying assessment methods) students can be manipulated into changing their ATL, and specifically to prefer learning approaches that are more engagement-oriented and understanding-oriented (i.e., Deep ATL), which, in turn, is expected to contribute to the quality of their learning (Tormey, 2014).

Indeed, over the years students' ATL framework has gained so much popularity and widespread use, especially in higher education teaching, to the point that some of the major studies on the subject have gained the status of 'classical theoretical works' (Amundsen Wilson, 2012 as quoted in Tormey, 2014). Given the great popularity of the theory, there is room to address its' limitations.

It is argued that the most appropriate manner to address students' ATL framework is as a simplistic, basic, quantitative heuristic tool for describing the conduct of students in the context of their studies (Tormey, 2014). Specifically, it is argued that although Deep and Achieving ATLs are associated with better academic achievements, these associations are a result of cognitive abilities and personality traits (especially metacognition-related conscientiousness), and furthermore that these individual abilities are only partially expressed by students' ATL, which mediates some of the association between these individual abilities and students' achievements (Chamorro-Premuzic & Furnham, 2008). However, as will reviewed below, empirical evidence regarding the relationship between students' ATL and learning outcomes is ambiguous and not entirely insightful.

In general, extensive empirical evidence support a positive relation between academic competence and Deep and Achieving ATL, and a negative relation between Surface ATL and academic competence (Tuononen et al., 2020). Although these relations are not necessarily complete - relatively low levels of academic competence were also documented among students who were characterized by Deep ATL, and relatively high levels of academic competence were also documented among Surface ATL learners – the overall convention is that "*approaches to learning are closely intertwined with academic competencies*" (Tuononen et al., 2020, p. 1080).

In medicine, students' Deep ATL was associated with better clinical decisions, whereas Surface ATL was associated with poorer clinical decisions (Joshua, 2017). More precisely, this view of students' ATL and quality medical decision making supported an intervention program proposed by the researcher to promote Deep ATL among students.

Similarly, previous evidence concerning medical students indicate that students who adopt Deep ATL achieve better grades, demonstrate more holistic thinking in relation to the profession, and gain priority in practicing experiences (e.g., surgery) compared to students who adopt Surface ATL (Smith and Mathias, 2010 as cited in Ward, 2011). Also, Deep ATL was associated with better learning outcomes, as students who adopted Deep ATL remembered more of the learned curricula content after one year (Ward and Walker, 2008 as cited in Ward, 2011).

However, there is also vast empirical evidence which indicate otherwise. Ward (2011) findings suggest that a priori, at the beginning of the year, achievements of students who adopted Surface or Achieving ATL were higher than average, while achievements of students who adopted Deep ATL were below average. In contrast, at the end of the school year the highest achievements were measured among students who adopted Achieving ATL, followed by students who adopted Deep ATL - in both cases their achievements were higher than average. The year-end achievements of students who adopted Surface ATL were significantly lower than average (Ward, 2011).

Also, although Achieving ATL has been found to be adopted by many medical and nursing students, at least initially in their studies (Amiri, 2019; Stover & Holland, 2021), the relationship between this ATL and academic performance was not clear (Bonsaksen et al., 2020; Bunce & Bennett, 2019; DaLomba et al., 2020).

Similar inconclusive evidence regarding the relation between students' ATL and learning outcomes were also documented regarding engineering students. Svedin et al. (2013) concluded that Surface ATL was the best predictor of first-year students' achievements, whereas Achieving ATL was found to be a negative (and somewhat worse) predictor of students' achievements and Deep ATL was not associated with

students' achievements (Svedin et al., 2013). According to Svedin et al. (2013) these findings are surprising, as they are inconsistent with previous studies in which not only was Achieving ATL positively associated with student achievement, but that it was the only ATL associated with student achievement (e.g., Asikainen et al., 2014).

Svedin et al. (2013) argue that these inconsistencies can be attributed to differences in the structure of the courses, different assessments and evaluations, and the implied importance of the achievements in terms of students' progress in their studies. For example, they argue that when students' achievements are used by the faculty to filter out weaker students or to spot and advance better students then students experience more pressure to excel leading them to adopt an Achieving ATL. In contrast, in cases where learning only requires a "pass" score and is not based on multiple assessments but on a single exam (such as the basic math courses used in their research), a more effective choice for students would be to adopt Surface ATL (Svedin et al., 2013).

Moreover, ambiguous evidence regarding the relationship between students' ATL and their learning outcomes also emerges from cultural comparisons. Thus, for example, a comparative study among students from Australia and Singapore did not document any significant relationship between their ATL and their grade point average, whereas a positive relation was documented when examined in students from Hong Kong and Norway, and, additionally, a negative relationship between Surface ATL adoption and students' average was also documented in Norwegian students (Bonsaksen et al., 2020).

The relationship between students' ATL and students' learning outcomes was also examined in the context of preservice teaching students, also providing ambiguous and unclear empirical evidence. Swee-Choo et al. (2012) documented a negative association between students' teaching efficacy perception and Surface ATL. However, they also

documented a positive association between students' teaching efficacy perception and their Deep ATL as well as their achievements. Hence, Swee-Choo et al. (2012) argued that students' Deep ATL promote their professional knowledge as future teachers as well as their subjective readiness to become teachers.

Conversely, Gurlen et al. (2013) findings suggest that the best predictor of academic achievement of preservice teaching students is Achieving ATL. In fact, their findings document a positive association between students' Achieving ATL and students' subjective perception of academic success, first-semester academic achievements, as well as overall (i.e., final-year total average) academic achievement. In their study, Deep and Surface ATL were not found to be related to students' academic achievement, both in the first semester and the entire degree, but it was found that there is a negative association between these two ATLs and students' subjective perception of their academic success (Gurlen et al., 2013).

Indications that self- and peer-assessment and feedback improved students' achievements and critical thinking skills and contributed to students' engagement with course contents were documented by Lynch et al. (2012). However, according to Hyytinen et al. (2018) no direct association between critical thinking, students' perception of self-efficacy and their ATL can be supported. Still, their findings suggest that grouping students according to their capacity for critical thinking and reasoning and ATLs can help in identifying three types of groups: Superficial thinkers who focus on details, offer fragmented pieces of knowledge as a solution, only briefly reproduced information, and did not analyze, combine different perspectives or sufficiently synthesize information, Data-oriented thinkers who demonstrated understanding of the content, but did not relate nor synthesize different sources of information, and Elaborative thinkers who evaluated

the quality of information and considered its premises, as well as provided analysis that went beyond the obvious (Hyytinen et al., 2018).

Hence, in the context of the present study, Tormey's (2014) approach to the issue of students' ATL validity is appropriate. According to him, it is not possible to point to an unequivocal relationship between students' ATL and their learning outcomes, and especially to argue that Deep and Achieving ATL are associated with better learning outcomes and that Surface ATL is associated with poor learning outcomes. As Deep ATL contributes relatively more to learning, it would be more appropriate to consider this contribution not necessarily in terms of learning outcomes, but rather in the context in which learning takes place - in learning motivation, learning engagement, use of learning resources, and the nature by which learning environment and learning experience are perceived by the students (Tormey, 2014), as well as in its contribution to foster and promote critical thinking and reasoning (Hyytinen et al., 2018). It is also evident that research of the nature of students' learning motivation and how it affects students' conduct during their studies is needed (Kelly, 2019). The present study addresses these issues empirically.

Another aspect of criticism concerning students' ATL concerns with changes that have taken place in the conceptualization and interpretation of students' ATL (Habeshaw, 2003 as cited in Joshua, 2017, p. 47) : "*...the deep approach to learning was modified to be known as deep learning which eventually has been transformed into deep learners or processors. Similarly, the term surface approach to learning has been debased into surface learning which has progressed to surface learners*".

Conceptual change has led to the inappropriate use of students' ATL as a means of describing students, and more precisely of describing their cognitive characteristics or traits. Such use of ATL for labeling students is misleading and ethically and morally unsound (Joshua, 2017).

This argument wrongly implies that students' ATL is an innate or early trait and thus cannot be changed or converted, instead of addressing it for what it is - an adaptive and responsive strategy in the context of learning (Joshua, 2017). Thus, instead of using students' ATL to describe their contextual motivational and strategic aspects of learning engagement, students' ATL is incorrectly used as a means for labeling students, and especially in the context of incorrectly describing students as Surface or Achieving. Such labeling undermines the conceptual basis of the theory because it represents a deterministic view of learners and learning, thus such labeling may discourage learners and limit teaching improvement and development (Entwistle, 2018; Joshua, 2017).

Additionally, it is argued that the success of ATL students' conceptualization has limited its further conceptual development over the years considering advances in research in psychology and education. Thus, except for the conceptualization and construct of Achieving ATL, there have been no significant changes in the constructs underlying the theory and its foundations have not been confronted with significant competing theories (Kelly, 2019; Tormey, 2014).

Similarly, in many cases the simplistic problematic dichotomous division into Deep / Surface ATL is still accepted instead of adopting a multidimensional approach (Haggis, 2003). This inappropriate distinction between Deep and Surface ATL as mutually exclusive constructs, instead of interconnected and interrelated constructs

simultaneously reflecting different aspects of learners' conduct during their studies, was also documented by others (Baeten et al., 2010; Smarandache et al., 2021).

Haggis (2003) also doubts the implicit assumption of an overlap between higher education system's goals and students' goals. On the one hand, there is the understandable aspiration of higher education institutions, faculty members and researchers that their students will understand and internalize what they teach them in the best way possible, turning them to experts and leaders in their discipline. However, on the other hand, students' point of view on studies may be radically different. As such, students' aspirations and expectations from their studies may not be interested in coping with comprehension challenges, in investing time and effort in reflective integration, or even in striving for in-depth understanding. In Haggis (2003) view, it is not clear whether the systemic institutional expectation for students' adoption of Deep ATL is realistic and achievable. And yet, this does not mean that these aspirations do not justify the pursuit of these goals (Haggis, 2003).

In conclusion, the criticisms regarding students' ATL theoretical framework cannot be overlooked, both regarding the limitations of empirical evidence of its association with students' learning outcomes and regarding the limitations of its conceptual development. Still, such a critique does not redundance the use of the theory, but rather points to the need to better calibrate its implied meanings.

Thus, it is important to remember that students' ATL conceptual framework is a metaphorical framework, meaning that it does not constitute a description of the research object (in this case, students), but aims to provide a symbolic, not necessarily verbal,



meaning. Such meaning helps us, as researchers, to draw attention to the important features in the object of study (Tormey, 2014, p. 8).

Accordingly, in my view, it is more important to focus on students' ATL theoretical framework main contribution - that is, a clear description of the three main typical student “types” that higher education lecturers meet. As described by Manikutty et al. (2007), this description emphasizes the two main elements of students in the context of learning: the motivations for learning and the strategy that characterizes student behavior in view of these motivations.

The distinction between the three types of students' ATL is anchored in the research literature (Bonsaksen et al., 2020; de la Fuente et al., 2020; Manikutty et al., 2007; Stover & Holland, 2021). Indeed, the possibility of relying on students' ATL as a means of improving and developing teaching is a worthy goal in itself, as documented by many (Joshua, 2017; Phillips & Graeff, 2014; da Ponte et al., 2017; Gibbs & Coffey, 2004; Baeten et al., 2010; Smarandache et al., 2021). In addition, one cannot overlook ATL framework's moral value. Even Haggis's (2003) argument, about an incongruity between institutional perception of students' learning and students' perception of their learning, does not diminish or hamper educators' desire to promote students' critical, reflective, diverse, and in-depth learning.

Furthermore, unlike compulsory education, higher education is voluntary - students choose to enroll to their studies, specifically picking a certain institution and discipline, out of their personal interest and in order to achieve their personal goals, for example in the context of employment, social status or self-fulfillment (Lent & Brown, 2019). This means that higher education studies are supposed to expand students' consciousness, free them from the chains of compulsory education, empower and

encourage them to open up to new worlds and concepts, while simultaneously enable and support their personal growth and professional development by improving their learning and critical thinking (Keeling and Hersh, 2012; Ren and Deakin Crick, 2013; Chan et al., 2014 all as cited in Joshua, 2017, pp. 48–49).

These aspects and contributions are especially important in teaching, as a "mixed" discipline in which technical practice is required alongside reflective, original, in-depth, and critical thinking as well as innovative, flexible, open-minded, involved, and deep understanding about the nature of their practice (Gibbs & Coffey, 2004; Joshua, 2017; Tsang, 2019).

While this is precisely the constellation in which one would expect students to adopt Deep ATL first and foremost, empirical evidence suggests otherwise, thus implying that Surface and Achieving ATL are also prevalent and that other factors involved in the process of students' ATL (Joshua, 2017).

In the present study I focus on how students' learning experience and cultural dimension are reflected in their ATL, following the insights summarized by Asikainen & Gijbels (2017, p. 206):

*"Today's higher education faces the challenge of not only having to teach students a bulk of domain-specific frameworks and disciplinary insights but also having to foster skills that will enable them to become versatile experts in their own fields and lifelong learners. In order to reach these goals, successful learning and studying in higher education is expected to involve students in deep approaches to learning and towards more meaningful and critical learning instead of just repeating knowledge"*

Surprisingly, although the concept of the ATL has been widely studied, its implementation in the cultural context is relatively sparse (Atitsogbe et al., 2018; Bowden et al., 2015; Manikutty et al., 2007; You & Jia, 2008). Moreover, to the best of my knowledge, cultural dimensions and ATL was not studied in the Israeli context nor in the context of students in teachers' training institutions. This will be the objective of the present research.

## **1.2 Culture and cultural dimensions**

### **1.2.1 Culture and cultural dimensions: definitions**

According to Birukou et al. (2013, p. 4), "*culture is a slippery and ubiquitous concept*". Indeed, according to Rathje (2009), while the concept of culture was limited in the past to contexts of ethnicity or nationality, today it is used to ascribe to common characteristics of social systems of various sizes, to what she defines as a high level of internal uniformity within a social system. Similarly, Birukou et al. (2013) review suggest the definition of the term *culture* varies across disciplines, time, and contexts, however, these definitions converge to "*a notion that culture is learned, it is associated with groups of people and its content includes a wide range of phenomena including norms, values, shared meanings, and patterned ways of behaving*" (p. 5).

This unspecific and vague definition of culture developed with the need to study other societies (Birukou et al., 2013). Thus, for instance, as was pointed by Hofstede (2011, p. 3), the term "culture" may be used by anthropologists as reference to tribes or diverse ethnic groups, used by researchers in the fields of political science and sociology to refer to different nations and nationalities or population groups, business researchers use it in the context of corporate and organizational management, and others have applied it to distinguish between different species, generations, or social classes (Hofstede, 2011, p. 3).

In this study I follow Hofstede (2011, p. 3), who views culture as "*collective traits of the mind that enables the members of one social group to differentiate and distinguish itself from other groups*" Hofstede (2011, p. 3).

According to this definition, culture is an inclusive concept or aspects that enable members of social groups to differentiate themselves from others (i.e., individuals who

do not belong to the referred social group). According to this definition, culture is a phenomenon on the group, institutional, and/or social level, which enables the prediction of patterns of behavior of individuals (Ng et al., 2009). This means that culture present a general set of common traits or features (e.g., behavior, ideas, beliefs, norms, knowledge facts) by which individual can distinguish themselves from others, and by which "others", such as researchers, policy makers, and individuals from other cultural groups, can relate to other, differentiated, social groups (Birukou et al., 2013).

Hofstede's formulation and conceptualization of culture was formed following a comparative study from the early 1970s. His work is one of the most important in the field of organizational culture research. His research was based on the results of the examination of attitudes and work values of more than 116,000 employees in more than 40 countries (Hofstede, 1980; Khastar et al., 2011; Manikutty et al., 2007). Hofstede's analysis showed that there are major dimensions that cannot be explained only by factors such as the level of work or workers or a country's economic development, and accordingly that these dimensions are reflected by factors similar to cultural characteristics. Based on these results, Hofstede's theory holds that national culture has a great influence on the attitudes and values associated with employers and workers (Khastar et al., 2011, pp. 320–321).

Since it was introduced, Hofstede's cultural dimensions model was extensively used in the field of education<sup>8</sup>, both as means for explaining cross-cultural variation in classroom behavioral norms (Cronjé, 2011; Li & Gou, 2012; Whalen, 2016) and as a means of illustrating the importance of culture in the educational context, for instance

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<sup>8</sup> שגיאה! Applications of Hofstede's cultural dimensions in education are reviewed in chapter ! מקור ההפניה לא נמצא. (p. 221)

regarding students' learning styles (Holtbrügge & Mohr, 2010; Joy & Kolb, 2009; Mohr et al., 2012), students' conduct in school and during classes (Chayakonvikom et al., 2016), such as prevention of conflicts in the classroom, especially in intercultural environments (Khukhlaeva, 2017), students' learning outcomes and learning environments (Ekwunife-Orakwue & Teng, 2014), and teachers' value orientations, collegiality, and collaboration (Ning et al., 2015). Furthermore, Hofstede's model was applied to examine individual cultural values, epistemological beliefs, and expectations in the context of Higher Education (Kragh & Bislev, 2005; Tsiligiris et al., 2021).

Currently, Hofstede's theory focuses on six dimensions (five "original" dimensions and a new dimension which was subsequently added<sup>9</sup>) (Hofstede & Minkov, 2013, p. 2). In the 2000s, the fifth dimension was re-calculated following by its split into two (fifth and sixth) differentiated dimensions (Hofstede, 2011).

These six dimensions constitute different cultural characteristics / criteria by which cultural diversity can be examined. The dimension analysis had been found to clearly help illustrate cultural paradigms and behaviors in organizations and between nations (Hofstede & Minkov, 2013; Khastar et al., 2011). Hofstede's model scale ranks grades from zero to 100 for 76 countries, with each country compared to other countries. Although the scores were originally produced in the early 1970s, and despite several complications and limitations of the original study, its' results were validated in many repeated studies since then (de Mooij & Hofstede, 2010, p. 8).

Furthermore, despite that over the years additional models were proposed for estimating the basic values that individuals hold and that constitute a main component or

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<sup>9</sup> The sixth dimension (indulgence vs. Restraint) will be reviewed theoretically, however, as will be discussed below, it would not be empirically examined

indication of the culture of society, the model of reference in this context is still the one proposed by Hofstede (as cited in Ng et al., 2009).

As stated above, the model has been changed over the years and today it includes six dimensions (Hofstede & Minkov, 2013). Below is a review of the six dimensions.

### ***Power Distance***

The first dimension, power distance, addresses a fundamental human issue concerning inequalities in human society (Hofstede, 2011, pp. 7–8). As societies and cultures differ, it follows that some individuals within a cultural or societal framework hold more power than others, which in turn lead to question how power is distributed across the members of such cultural group. In other words, as power and inequality are basic elements of society and culture. some cultures are more equal than others.

Accordingly, Power Distance addresses the degree to which individuals act upon an assumption of and expect an equal division of the power between different individuals in society, or rather it refers to the extent to which less powerful members of a (cultural) group receive and expect power to be distributed unequally (Hofstede & Minkov, 2013, p. 7; Khastar et al., 2011, p. 321).

Power Distance dimension measures inequality (i.e., "more" versus "less"), viewed from "below"(i.e., followers, subordinates, less powerful members of society) rather than from "above" (i.e., leaders, more privileged members of society). That is, power distance measures the extent to which the level of inequality in society is supported by less powerful members of society as well as it is supported by more powerful members. Lower scores of Power Distance means that the use of power must be legitimate, and subject to the criteria of good and bad. Thus, in countries with low Power Distance

scores, less powerful people (i.e., members) are expected to have a more limited dependency on more powerful individuals, which makes it easier for the first to disagree with the latter. Accordingly, in countries with high Power Distance scores less powerful individuals are more dependent on more powerful individuals, which makes it harder for the first to disagree with the latter, at times even to an extent in which a direct open questioning or challenge is not allowed (Hofstede & Minkov, 2013, p. 9; Khastar et al., 2011, p. 321).

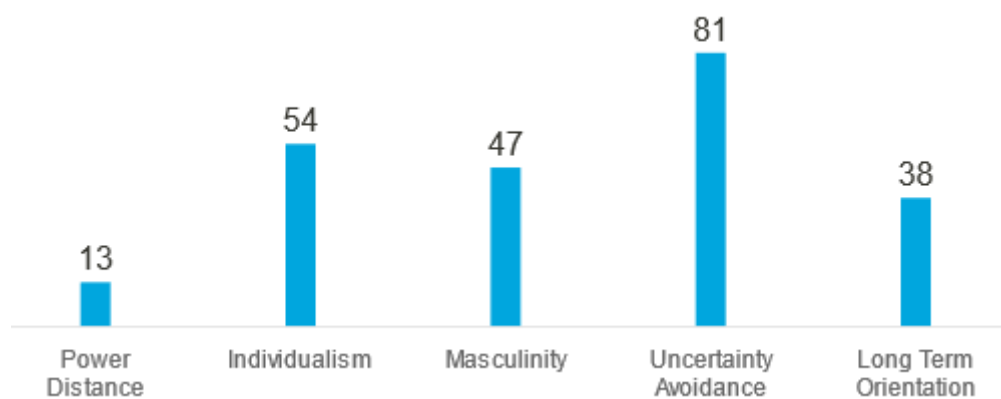
In the context of education, power inequality (i.e., high Power Distance scores) is easily illustrated by the conservative setting of a class, in which the teacher is a more powerful member of the group, and the students are less powerful members. For example, according to Li and Guo (2012, as cited in Muega et al., 2016) , in high-power distance cultures, students tend to quietly conform to most of the values and beliefs of their teachers. According to their example, such students address their teachers using formal titles (e.g., "sir", "Mr", "Ms." or "Mrs"), even if the teachers don't mind and often promote a more open approach, for instance by allowing the students to address them by their first name. Students in such high Power Distance cultures would hold still and quiet, even when they don't agree with the teacher and they are mostly described being "*... in no position to question what is being taught to them, to engage the teacher in a sustained reasoned or argumentative dialogue, or to require the teacher to clarify a lesson that seems to be difficult for them to comprehend*" (Muega et al., 2016, pp. 24–25).

In contrary, low Power Distance culture means higher tendency for members equality and democratic participation encouragement (Rinne et al., 2012). Low Power Distance cultures often have more student-centered learning environments (Damary et



al., 2017). Students in such cultures are often characterized as not accepting a hierarchical order and as demanding justification for inequalities of power, whether such injustice originates from more powerful members (e.g., teachers, principals, etc.) or not (V. López et al., 2018).

Recent studies (such as French et al., 2015) also suggests that lower Power Distance scores are negatively associated with cultures' openness to new ideas (i.e., innovation and entrepreneurship), and as higher Power Distance cultures are more unequal, French et al. (2015) have documented a negative association between Power Distance scores and public education expenditure and PISA scores.



**Figure 1: Israel Hofstede's scores (Hofstede insights<sup>10</sup>)**

In the context of the current research, Israel is repeatedly characterized as very low Power Distance (French et al., 2015; V. López et al., 2018; Rinne et al., 2012; Schwartz, 2007). As illustrated in Figure 1 above, Israel Power Distance score is 13, which, according to Hofstede Insights portal (n.d.), places Israel at the very low end of

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<sup>10</sup> Hofstede Insights portal (<https://www.hofstede-insights.com/country-comparison/israel/>) allows tracking of country and region scores. The scores are updated frequently through ongoing surveys conducted by the center

this dimension compared to other countries. According to Hofstede Insights portal, this means that Israeli society is egalitarian that facilitates and empowers independency, equal rights, and access to superiors. Power in Israel is decentralized, respect is something earned by proving hands-on expertise, and workplaces have an informal atmosphere with direct and involving communication and on a first name basis, and in which employees expect to be consulted (Hofstede Insights portal, n.d.).

Still, it is noteworthy that there are no specific studies of within-country cultural values differences in Israel (Schwartz, 2007).

***Table 1: Power Distance - summary of main characteristics***

	Low Power Distance scores	High Power Distance scores
General	Power is decentralized High human rights equality	Power is centralized High human rights inequality
Work environment	Superiors are accessible Communication is informal Respect is something you earn	Superiors are not accessible Communication is formal Importance of status symbols
Education	Students-teacher communications are informal and open Students are encouraged to question their teachers and cast doubt	Students-teacher communications are hierarchical Students are expected to conform to teachers' values and beliefs

### ***Uncertainty Avoidance***

The second dimension, Uncertainty Avoidance, addresses the way in which uncertainty is perceived by members of the society and accordingly the way in which this uncertainty is handled (Hofstede & Minkov, 2013). According to Hofstede & Minkov (2013, p. 8) the context of this perception is "negative" – it refers to high Uncertainty

Avoidance cultures as "feel threatened by uncertain, unknown, ambiguous, or unstructured situations" and, accordingly, created beliefs and institutions that try to avoid these perceived threats. As such, Uncertainty Avoidance convey the extent of cultural tension in face of an unknown future, or, conversely, cultural tolerance to ambiguity.

Uncertainty Avoidance indicates how well members of a culture feel comfortable in face of surprising, new, unfamiliar, uncertain, and misunderstood situations and, respectively, how and to what extent these members strive to minimize the possibility of such uncertain situations, for example by codes of behavior, beliefs, rules, and regulations. Thus, according to Amzaleg & Masry-Herzallah (2021), high Uncertainty Avoidance scores suggest that individuals rely heavily on accepted codes, beliefs and behaviors, they believe in absolute truths, they are intolerant of deviations from customary norms, they are easily distressed by new, unknown or unexpected situations, and tend to be emotional and demonstrate compulsiveness, intolerance, and aggression as they seek security. Workplaces rules are very important, and employees follow them to the letter (Hofstede 1980; Kaasa 2016; Kaasa and Vadi 2010, all as cited in Amzaleg & Masry-Herzallah, 2021).

In contrast, low Uncertainty Avoidance scores suggest individuals consider ambiguity as natural, they are characteristically calm, non-aggressive, and tolerant. They adhere less rigidly to rules, have a risk-taking tendency, as they think outside the box and face innovation well (Hofstede 1980; Kaasa 2016; Kaasa and Vadi 2010, all as cited in Amzaleg & Masry-Herzallah, 2021).

Low Uncertainty Avoidance scores means that inherent life uncertainty is accepted and taken as it comes. As such, it does not pose any significant threat or raise a

need to take actions to mitigate such threat or to minimize uncertainty. In contrast, high Uncertainty Avoidance scores means that inherent life uncertainty is perceived as an ongoing threat that must be mitigated, minimized, and preferably diminished altogether (Hofstede, 2011; Hofstede & Minkov, 2013).

According to Rinne et al. (2012, p. 96), Uncertainty Avoidance is concerned with the way cultures regard an unpredictable future. Accordingly, individuals in low Uncertainty Avoidance countries such as Singapore and Denmark tend to naturally tolerate uncertainty and feel relatively confident and secure in face of uncertainty. Such individuals do not need a lot of structure and predictability in their life. Conversely, individuals from countries such as France, Belgium, and Greece (high/strong Uncertainty Avoidance) will actively strive to avoid uncertainty and preserve a sense of control.

This can be illustrated by an example from the field of education (Hofstede, 2011, p. 10), as teachers from low Uncertainty Avoidance cultures will most probably feel comfortable telling their students "I do not know", while teachers from high Uncertainty Avoidance cultures are expected to "have all the answers". Similarly, students from low Uncertainty Avoidance cultures will most probably feel comfortable with ambiguity and chaos and present disapprobation for rules - written or unwritten - while students from high Uncertainty Avoidance cultures need more clarity, structure, and rules (Hofstede, 2011, p. 10). Likewise, students from high Uncertainty Avoidance cultures are expected to obey rules and avoid risky behaviors thus, for example, they are expected to be more discipline in class (Chiu & Chow, 2011, p. 520).

In general, higher Uncertainty Avoidance scores are related to error prevention, simplicity, limited choices, and smaller amounts of information (Marcus, 2000 as cited in Cronjé, 2011). Accordingly, education in lower Uncertainty Avoidance countries may

be manifested in complex tasks, avoiding over protecting of students, and maximization of their choice (Cronjé, 2011).

According to the Hofstede Insight portal<sup>11</sup>, *"Israel is among the stronger uncertainty avoidant countries (81). In these cultures there is an emotional need for rules (even if the rules never seem to work), time is money, people have an inner urge to be busy and work hard, precision and punctuality are the norm, security is an important element in individual motivation. Cultures with a high score on this dimension are often very expressive. Something the Israelis clearly show while talking with their hands, gesticulating and vocal aggressiveness"*.

In the Israeli context, this means that Israeli students will feel more natural in a simple and clear learning setting, where rules are plain and straight-forward and the teaching is concrete and unambiguous. On the negative side, Israeli students will strive to avoid uncertainty associated with, for example, tasks in which outcomes are not well defined or whose assessment is unclear. In this sense, Israeli students will prefer structured learning over learning in which the students are expected to explore, by themselves, expand their world of concepts and mind.

**Table 2: Uncertainty Avoidance - summary of main characteristics**

	Low Uncertainty Avoidance scores	High Uncertainty Avoidance scores
General	Comfortable with ambiguity Rules and structure viewed as pragmatism Calm, non-aggressive, and tolerant	Ambiguity means anxiety Emotional need for rules and structure Security is an important element in individual motivation

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<sup>11</sup><https://www.hofstede-insights.com/country/israel/>

Work environment	Predictability is not a must Adaptable and entrepreneurial Communication is dispassionate	An inner urge to be busy and work hard Workplaces rules are very important Communication is expressive (e.g., gesticulation and vocal aggressiveness)
Education	It is ok to say "I do not know" Curiosity is natural and encouraged Complex and not detailed assignments Maximization of students' choice	Teachers are expected to know everything Learning is structured Expectations are clear and straight forward Assessment should be well defined

### ***Individualism vs. Collectivism***

This cultural dimension addresses the differentiation between societies in which individuals are expected to focus on themselves, where personal goals and interests are stressed ("Individualistic"), and societies in which integration and interdependency is expected between individuals and their group of reference (such as family, community, or other social groups) as well as social order ("collectivistic") (Amzaleg & Masry-Herzallah, 2021).

As such, "On the individualist side we find cultures in which the ties between individuals are loose: everyone is expected to look after him/herself and his/her immediate family. On the collectivist side we find cultures in which people from birth onwards are integrated into strong, cohesive in-groups, ... that continue protecting them in exchange for unquestioning loyalty, and oppose other ingroups" (Hofstede, 2011, p. 11).

In this sense, Individualism and Collectivism should not be viewed as two distinguished constructs but rather as a continuum of a societal characteristic, mostly

reflecting freedom-vs-restriction differences between different cultures (Minkov et al., 2017, p. 6).

The individualism-collectivism dimension has received widespread attention from scholars in a variety of research fields<sup>12</sup>, sometimes referred to as "the most important yield of cross-cultural psychology to date" (Smith et al., 1996, p. 237 as cited in Minkov et al., 2017, p. 387).

However, over the years, it was also a source for controversy – both on the account of its vague operationalized definition and on the account of its being highly correlated with the Power-Distance dimension (see Minkov et al., 2017 for a more thorough review).

Thus, there were several attempts to update and revise the construct of individualism-collectivism dimension over the years, among which are Project GLOBE who measured an in-group cohesion or the World Values Survey (Beugelsdijk et al., 2015), as well as other more recent attempts (Minkov et al., 2017). Although slightly different, these measures often highly correlate one another, and more importantly, they indicate that "cultural differences between country pairs (i.e., cultural distances) are generally stable" (Beugelsdijk et al., 2015, p. 1).

The common ground of these tools view individuals in collectivist cultures as more closely related to each other and therefore be more "in-line" with collective norms (like considering making one's parents proud a life goal, or the extent to which one views abortion and homosexuality as justifiable) predisposed in following a collective guiding

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<sup>12</sup> Recent reviews, for example, in business management (Adobor, 2021; Kim & McLean, 2014), behavioral sciences (Morren & Grinstein, 2021), medicine (Kroska, 2016), Sociology (McFeeters, 2021; Schwab, 2013)

(such as from the collective leader) by taking its' imposed norms and duties (Beugelsdijk et al., 2015). Moreover, individuals in collectivist cultures are often characterized as interdependent and with a group orientation for joint effort, (jointly) taking actions, embracing moral values and expecting a group reward (Omar & Noordin, 2016).

One of the most prominent example for a collectivist culture is embodied in organized religion "[which] has always restricted people's choices not only in matters related to the creation and termination of life but also with respect to what is appropriate to eat and wear, what entertainment is acceptable or reprehensible, what business activities are permissible sinful (for instance usury), and what jobs pertain to men or women" (Minkov et al., 2017, p. 391). This is illustrated by Cahaner (2009) and Perelman et al. (2019) who suggest indicators of ultra-Orthodox everyday life, such as fully obeying rabbis' instructions, eating only ultra-Kosher food, not owning or using TVs or computers at home, to identify ultra-Orthodox community.

Accordingly, individuals in individualist cultures tend to stress autonomy, follow their own personal goals, are characterized by nonconformity (for example, by excepting deviations from societal norms or by following parents' expectations), disdain for obedience and low levels of interdependency (Beugelsdijk et al., 2015). Such Individualistic cultures are expected to be more "open" (rather than constrained, restricted or obedient), encourage self-reliance, open-market capitalism, and private ownership of businesses, and will be less incline to avoid conflicts (Minkov et al., 2017, p. 391).

According to Hofstede (2011, p. 12), developed and Western countries, such as USA, UK, and Netherland, are usually more individualistic while collectivism prevails in less developed countries, such as many Latin American, African, and Asian countries,



and the Middle East. Moreover, while cultural differences remain sizable, there are dramatic shifts toward greater individualism around the world (Santos et al., 2017). Interestingly, a recent cross-cultural examination showed that: "very permissive and very constrained nations exhibit worse psychosocial outcomes (lower happiness, greater dysthymia, higher suicide rates), worse health outcomes (lower life expectancy, greater mortality rates from cardiovascular disease and diabetes) and poorer economic and political outcomes (lower gross domestic product per capita, greater risk for political instability)" (Harrington et al., 2015, p. 1). Accordingly, Harrington et al. (2015) concluded that best outcomes are associated with a balance between freedom (i.e., individuality) and constraint (i.e., collectivism).

Generally, according to Hofstede (2011, p. 11), the purpose of individualism in education is learning *how to learn*, while the purpose of collectivism in education is learning *how to do*. The main goal of learning in Collectivist societies is to employ knowledge for the betterment of the community (Amzaleg & Masry-Herzallah, 2021). Much like with high Power Distance cultures, this means that in a classroom setting, teachers in Collectivist societies enjoy greater power, as they are considered as the sole source of knowledge whose main objective is the transfer of knowledge. Students in Collectivist societies are required to show respect and reverence towards their educator, discussion is not encouraged in class, and dialogue revolves around clarifying the material (Keith 2012; Signorini et al., 2009, all as cited in Amzaleg & Masry-Herzallah, 2021). As such, Collectivism in education is more "we" conscious, promoting and stressing harmony, sense of belonging, and social relationships by using shame and social sanctions against transgression of norms, where individuals' opinions and expressions are

predetermined by in-group, and "others" are classified as out-group (Perelman et al., 2019).

Accordingly, education in an Individualistic societies puts the individual at its center, thus self-fulfillment and expression are often its main themes (Kasler et al., 2021), as well as boosting and sustaining students' self-worth and self-esteem and viewing learning as an aim for personal development (Amzaleg & Masry-Herzallah, 2021). One of the surprising<sup>13</sup> expressions of this was illustrated by Kasler et al. (2021), who documented an association between students' individualism (but not collectivism) and plagiarism. As such, Individualism in education is more "I" conscious, usually by promoting individuals' rights<sup>14</sup>, encouraging and expecting students to speak their minds, while treating "others" as equal.

Shapira-Lishchinsky & Litchka (2018) use Masculinity and Femininity cultural referral in the context of educational leadership. According to them, in independent-oriented societies, leadership is less authoritative and is less interested in being involved with individuals' life, while under collectivism leaders takes on more control over their followers' lives, and generally play a significant role in social frameworks.

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<sup>13</sup> In the words of Kasler et al. (2021)

<sup>14</sup> Such as the right for privacy, the right to be heard and to address the school's officials, the right to vote and be elected to students' council. For a detailed list see Ministry of Education (n.d.b)

According to the Hofstede Insight portal<sup>15</sup>, the Israeli society is a blend of Individualist and Collectivistic cultures. With strong belief in the ideal of self-actualization, Israelis also share a sense of duty and mutual responsibility and loyalty.

**Table 3: Individualism vs. Collectivism - summary of main characteristics**

	Individualism	Collectivism
General	Personal goals and interests Autonomy and nonconformity Self-reliance	social order integration and interdependency individuals are in-line" with collective norms
Work environment	Open-market capitalism and private ownership	Conformity Shared moral values Group reward expected
Education	"I" conscious – education is for me Student is in the center Focus on students' personal development, self-worth, and self-esteem Promotion of individuals' rights	"we" conscious – education is for the betterment of society Teachers as source of knowledge Discussions and dialogue are not encouraged Sanction as means against transgression of norms

### ***Masculinity vs. Femininity***

Through the reference to emotional differences and stereotypes between men and women, this cultural dimension addresses the constellation of aspects pertaining to behaviors typical of individuals in society. It includes reference to expressions of aggressiveness (masculinity) as opposed to obedience (femininity), and it generally

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<sup>15</sup><https://www.hofstede-insights.com/country/israel/>

conveys a division of emotional, social, and functional roles between men and women (Hofstede, 2011, p. 8). Masculinity vs. Femininity dimension reflects gender inequality (Manikutty et al., 2007, p. 82), and refers to the division of values between the sexes, as a basic issue for each society.

Masculinity corresponds to cultures who value competitiveness, achievement, assertiveness, independence, career, and materialism. Accordingly, femininity correspond to cultures who value and are characterized by sensitivity, discretion, modesty, concern and caring for others, tolerance, and flexibility (Amzaleg & Masry-Herzallah, 2021; Hofstede, 2011). It is also suggested that Masculinity-Femininity dimension conveys how cultures consider Taboos, i.e., deeply rooted values, basic and often unconscious, too painful to be explicitly discussed (Hofstede, 2011, p. 13).

Masculinity vs. Femininity scores mainly reflect women standing in society - Countries where women are well integrated in society are more feminine countries, while countries which strive for a clear delineation and distinction between men and women, often referring to traditional families, are considered masculine countries (Arar and Oplatka 2013, as cited in Amzaleg & Masry-Herzallah, 2021).

The Masculinity-Femininity dimension does not distinguish between men and women in a culture. On the contrary, men in feminine cultures are said to have the same set of values (e.g., of modesty and caring) as women in these cultures, and vice-versa. Emotional-social differentiation between the sexes is minimal in feminine cultures, and work-life-family needs are more balanced. In such cultures, employees' value cooperation and security, while striving to promote and develop human interactions (Hofstede, 2011; Khastar et al., 2011).

Conversely, as masculine cultures are more assertive and competitive, they are usually characterized with an evident gap between men and women. In masculine cultures there is a clearer separation between emotional and social functioning of the two sexes, with work demands often prevailing family needs, managers expected to be decisive and assertive, status symbols (e.g., cars, watches, and technical devices) are visible and noticeable, where employees value benefits and reward, and strive for promotion, reputation, and popularity (Khastar et al., 2011, pp. 321–322; Hofstede, 2011, p. 12). Similarly, leadership in Masculine cultures is more direct, whereas in more Feminine cultures leaders are more likely to demonstrate greater consideration (Shapira-Lishchinsky & Litchka, 2018).

Masculinity and Femininity can also be applied in the educational aspect. As sensitivity, discretion, concern and caring for others, tolerance, and flexibility are considered feminine, teachers in Feminine cultures can be characterized as providing more support to weaker students, treat failure forgivingly, and as promoting an atmosphere of equality and non-competition in their classroom (Amzaleg & Masry-Herzallah, 2021; Signorini et al., 2009).

Conversely, Masculinity in education mean educators put more emphasis on assertiveness and ambition, admire the strong, and support gender differentiated emotional and social roles, for instance by expecting males (e.g., boys, fathers, male-teachers) to be better with facts and figures, not to cry and fight back, and run for political positions, while females (e.g., girls, mothers, women-teachers) are expected to be better suited to deal with feelings, they are expected to cry often, and rarely be active or elected to political positions (Hofstede, 2011, p. 12).

According to the Hofstede Insight portal<sup>16</sup>, Israel is neither a clear Masculine nor Feminine society. While some elements, such as highly valued performance, might suggest at more Masculine features, other elements, such caring for others point to a Feminine feature. According to Shapira-Lishchinsky & Litchka (2018), Israeli school principals and teachers are characterized by low levels of masculinity.

**Table 4: Masculinity vs. Femininity - summary of main characteristics**

	Masculinity	Femininity
General	Value materialism and career success Aggressive and independent Gender differentiation, traditional	Value sensitivity, discretion, tolerance, flexibility, and modesty Concern and caring for others Women are well integrated
Work environment	Competitive Values achievements, decisiveness, and assertiveness Career considerations outweigh life-family needs	Balanced work-life-family needs Cooperation, security, and human interactions are valued
Education	Assertiveness and ambition are valued Failure is a disaster Support gender differentiation in emotional and social roles	Provide support for weaker students Failure is forgivable Atmosphere of equality and non-competition in their classroom

***Future Orientation (Long-term vs. Short-Term Orientation)***

This dimension addresses the degree to which individuals in society can accept postponement of material, social, and emotional needs. Long-term orientation (LTO) refers to individuals' preference to focus their efforts or attention on the future rather than the past or the present. Long-term oriented cultures foster virtues oriented towards future

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<sup>16</sup><https://www.hofstede-insights.com/country/israel/>

rewards, in particular adaptation, perseverance and thrift, order of relation by status, and a sense of shame. Short-term oriented (STO) cultures value prefer virtues related to the past and present, and "reciprocating social obligations, respect for tradition, protecting one's 'face', and personal steadiness and stability" (Guo et al., 2018; Hofstede, 2011, p. 8; Hofstede & Minkov, 2013, p. 2).

In LTO cultures leisure time is not as important as living economically and making changes in order to achieve long-term goals, while STO cultures do not embrace change readily, are all about leisure time and freedom, and are generally more concerned with adhering to traditions and norms (Bissessar, 2018).

Moreover, individuals in LTO cultures are patient and can adapt their traditions and norms to changing conditions, while their notions of truth are flexible and context dependent (Masry-Herzallah & Da'as, 2020). Accordingly, individuals in STO cultures demonstrate a relatively small tendency to save for or invest in the future, they tend to focus on reaching results as quickly as possible, and believe in absolute truth and good (Bissessar, 2018; Masry-Herzallah & Da'as, 2020).

The LTO-STO dimension was not originally included in the seminal work of Hofstede, and it was added later as a fifth dimension following the work of Chinese scholars based on "Confucian work dynamism" who documented cultural differences which Hofstede's original model did not cover (Guo et al., 2018; Minkov et al., 2018). These earlier measures, and the later application of Hofstede's LTO-STO dimension, expressed higher levels of thrift and determination or persistence among East Asian countries (i.e. LTO cultures) at one end and of countries in Africa and Latin America (STO cultures) which are characterized by "self-stability or self-consistency (having an invariant self that does not change across situations), positive self-enhancing feelings

(such as pride), and a willingness to do favors or render services to people" at the other end (Minkov et al., 2018, pp. 310–311).

Over the years, the use and applicability of the LTO-STO dimension have been criticized by many, whether because of insufficient argumentation and rationalization (see Minkov et al., 2018 for a comprehensive review) or because of limited empirical data and poor results of replication attempts (Beugelsdijk et al., 2015; Minkov et al., 2018). However, despite this criticism, there is a wider consensus regarding the importance of the LTO-STO dimension because of its' strong association with average national educational achievements (Hofstede, 2001; Minkov & Hofstede, 2012 both as cited in Minkov et al., 2018).

According to Hofstede (2011, p. 15), STO orientation education views tradition as sacrosanct and posits that there are universal guidelines about what is good and evil, hence have a clear view of what a "good person is" (e.g., steady, stable, proud of one's country, provide service to others) and imperatives for proper family life. Such STO cultures value social spending and consumption and are often poor with low (or no) economic growth, while LTO cultures value thrift, perseverance, and appreciate savings and funds available for investment and are often show fast economic growth in the pursue of prosperity.

Some argue that LTO cultures promote a slow adaptation of novel concepts, particularly regarding consumption of new and innovative products, while STO cultures motivate individuals to keep up with trends through adopting new products to gain a higher status and recognition (Yalcinkaya, 2008 and Chandrasekaran & Tellis, 2008, both as cited in Bukowski & Rudnicki, 2019).



More importantly, regarding education, students in STO orientation cultures tend to attribute their successes and failures to luck (rather than effort). Conversely, Long-term orientation education views tradition, as well as what is good or bad or what a "good person is", as adaptable and amenable due to changing circumstances. Students in LTO orientation cultures associate success with effort (rather than luck), and accordingly they associate failure with lack of effort (Hofstede, 2011, p. 15).

According to the Hofstede Insight portal<sup>17</sup>, Israeli scores are medium-low on this dimension, thus portraying Israelis as having strong concern with establishing the absolute Truth and exhibiting great respect for traditions. Also, their propensity to save for the future is relatively small, and they focus on achieving quick results.

***Table 5: Long-term vs. Short-term orientation - summary of main characteristics***

	LTO	STO
General	Focus on future rewards Truth and norms are changing and context dependent Values adaptation, perseverance, thrift, and patience Leisure time is not important	Focus on present rewards Absolute truth and good Respect for tradition and norms Values leisure time and freedom
Work environment	Values savings and investing Relatively slow adaptation to novel concepts	Values spending and consumption Keep up with trends (innovation) to gain a higher status and recognition
Education	Success and failure are attributed to effort Education viewed as means to prepare for the future	Success and failure are attributed to luck Societal change is viewed with suspicion

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<sup>17</sup><https://www.hofstede-insights.com/country/israel/>

### ***Indulgence vs. Restraint***

The sixth dimension was only added to the model recently (Hofstede, 2011, p. 15). It aims to differentiate between cultures that permit and promote satisfaction of needs and emotions, especially in the context of leisure activities, social entertainment, spending, consumption, and sex versus the cultures that seek to control and curb these desires or cultures where the individuals more limited freedom for enjoyment of life (Hofstede & Minkov, 2013, p. 17).

Overall, cultures which values Indulgence over Restraint are "associated with increased importance of leisure time, higher levels of happiness, and higher levels of freedom of choice and control" (Beugelsdijk et al., 2015, p. 231).

The new dimension focuses on aspects that are not covered by the other (original) five dimensions and is based on what is known in the literature on happiness research. Indulgence represents cultures that openly admit relatively free satisfaction of natural-human desires related to enjoyment of life. Such countries often have higher birth rates among educated populations, with relatively more individuals declare themselves happy. Restraint, on the other hand, represents cultures who promote delayed satisfaction and needs, mainly through regulations and strict social norms. In such countries fewer people declare themselves happy, and lower birth rates among educated populations (Hofstede, 2011, pp. 15–16).

Accordingly, as opposed to restrained oriented cultures, education in indulgent oriented cultures put emphasis on freedom of speech, leisure and sports, positive emotions, and perception of the individual control of his or her personal life, specifically with regarding the outcomes of an individual's doing (Hofstede, 2011, p. 16).

In the context of the present study, however, this sixth cultural dimension is inapplicable, as it has not yet gained sufficient empirical validation (for instance, Hofstede Insight portal<sup>18</sup> has no score for Israel on this dimension). Thus, most recent publications only address the four original dimensions (Amzaleg & Masry-Herzallah, 2021; Gunkel et al., 2011; Guo et al., 2018; Kasler et al., 2021), while reference of the fifth (LTO-STO) dimension is rather scarce (Bissessar, 2018; Masry-Herzallah & Da'as, 2020). As I follow Manikutty et al. (2007) conceptual framework by using Yoo et al. (2011)'s CVSCALE instrument, and as both only address five dimensions, the sixth dimension (Indulgence vs. Restraint) will not be covered in this study.

Furthermore, although Hofstede's cultural dimensions questionnaire was used to test within-country differences (de Mooij & Beniflah, 2017), the consensus is that as a measurement instrument it is better suited for testing differences between countries and nations (Hofstede & Minkov, 2013; Khastar et al., 2011). This has led to the development of the advanced CVSCALE for measuring Hofstede's dimensions of cultural values at the individual level (Yoo et al., 2011) and will also be used in the present framework to measure (within-country) cultural dimensions of students in teachers' training institutions.

Yoo et al. (2011) applied their CVSCALE for measuring cultural dimensions at the individual level in a plethora of fields, among which are the study of consumer perception, ethical norms, market segmentation, negotiation behavior, personality traits

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<sup>18</sup><https://www.hofstede-insights.com/country/israel/>

and transformational leadership, consumer moral ideologies and consumer ethnocentrism (Yoo et al., 2011, p. 193).

Since it was introduced, the CVSCALE was validated and applied by many. Within the context of the present study, we might mention its use in measuring emotional intelligence and conflict handling styles (Gunkel et al., 2016), acculturation and homogeneity of immigrants and at region level (Mazanec et al., 2015), students' learning outcomes and learning environments (Ekwunife-Orakwue & Teng, 2014), and teachers' value orientations, collegiality, and collaboration (Ning et al., 2015).

The present study examines cultural dimensions of Israeli society, and specifically focuses on Israeli students in teachers' training institutions. As students' cultural dimensions is assumed to reflect these students' cultural variety and diversity, the aim of the study is to examine how these cultural dimensions influence students' ATL. For this purpose, at the Israeli context, Yoo et al. (2011) CVSCALE for measuring cultural dimensions at the individual level is more appropriate and will also be used in the present framework to measure cultural dimensions of students in teachers' training institutions.

### **1.2.2 Applications of Hofstede's Cultural Dimensions in sociological and business research**

In view of Hofstede's cultural model popularity, and as the model's roots are in fields sociological and business research, I begin by reviewing the model's application in these fields. Review of the model's application in education is presented immediately thereafter.

Hofstede's theory presents a relative and comparative approach for assessing cultural dimensions (Podrug et al., 2006, p. 9; Soares et al., 2007, p. 279). It synthesizes key aspects of culture, and thus contributes greatly to research and practice in a variety of fields, mostly at the international level. Hofstede's dominant dimensions conceptualize a measurement for national culture as a relatively complex, multi-dimensional structure rather than as a simple categorical variable, and as such these dimensions can be used to explain differences between two (or more) cultures as well as irregularities and particularities of specific cultures. Hofstede's reliable identification of cultural variability characterizes unique aspects of the culture and society properties and helped in formulating a quantitative framework for this end, in a manner that may explain various empirical phenomena and behaviors, while creating a basis for the hypothesis (Podrug et al., 2006, p. 9; Soares et al., 2007, p. 279).

Indeed, Hofstede's theory is not free from criticism (Beugelsdijk et al., 2015; Minkov et al., 2017, 2018), and its widespread claim is that cultural dimensions cannot capture all relevant aspects of national culture. For instance, it is argued that there were very few attempts to replicate and reconceptualize its' dimensions (van Witteloostuijn, 2016 as cited in Minkov et al., 2018), which led Minkov et al. (2018) to suggest their "flexibility – monumentalism" construct in place of the Hofstede's LTO dimension. Similarly, Minkov & Kaasa (2020) attempt to replicate Hofstede's Masculinity-Femininity and Uncertainty Avoidance indices lacked internal consistency, Gerlach & Eriksson (2021) attempt to replicate Hofstede's Indulgence, Power Distance, and Individualism dimensions using the Values Survey Module (VSM) survey tool produced poor measurements that only weakly correlated with the original Hofstede's measurements, and Minkov & Hofstede (2014) exposed some misconceptions regarding Uncertainty Avoidance dimension, although their replication was successful.

Beugelsdijk et al. (2015) study documented an overall higher score on Individualism and Indulgence and lower Power Distance scores than Hofstede's original scores. However, their findings also suggest a relatively stable cultural distances, or in other words that countries' relative scores (i.e., their rating compared to other countries) have not changed very much, so that cultural change is absolute rather than relative (Beugelsdijk et al., 2015).

Still, despite its limitations, its merits prevail, having gained many supporters (Soares et al., 2007, p. 279), as most of Hofstede's findings "have weathered the storms of time, and will continue to guide multi-national practitioners" (Jones, 2007, p. 24).

As stated above, Hofstede's cultural dimensions is based on an empirical measure (i.e., questionnaires, close-ended questions, and quantitative measurements), and its main application is for examining cultural differences between countries, especially regarding sociological, political, and economical aspects (Beugelsdijk et al., 2015; French et al., 2015; Khastar et al., 2011; Minkov et al., 2017, 2018; Rinne et al., 2012). Through cultural dimensions, researchers have documented significant associations between national cultures in many social contexts, including demographic, geographic, economic, and political (Yoo et al., 2011).

The theory and its dimensions also continue to be used today, as in recent decades, to examine cultural diversity in business related fields of research such as organizational behavior and human resources, consumer psychology and behavior, marketing, and advertising (De Mooij & Hofstede, 2010, p. 85). That is to say, the use of Hofstede's cultural dimensions is not only theoretic or "academic", but rather it can be operationalized and calibrated for practical use. Here are some examples for such

business related and sociological use. A review of Hofstede's cultural dimensions application in education is reviewed in next chapter (see page 120).

In the field of organizational behavior, for example, cultural dimensions were found to be associated with variables such as work relations, job satisfaction, job performance, and task performance (Ahammad et al., 2016; Eskildsen et al., 2010; Ng et al., 2009). For instance, job satisfaction was found to be more prominent in individualistic cultures (relative to collectivists cultures) or in cultures with a low power-distance (relative to cultures with high power-distance) (Ng et al., 2009).

In the field of corporate culture and international business, cultural dimensions are used to examine the performance of cross-border acquisition performance, international joint ventures, and the transfer of knowledge and retention of workers in multicultural contexts (Ahammad et al., 2016; Hsieh et al., 2010, p. 291). For example, differences in organizations' culture as well as countries' cultural distance were found to have a significant influence on the performance of Cross-Border Acquisitions (CBAs). Specifically, cultural differences influence post acquisition/merger effectiveness - for example, national cultural distance inhibits mutual understanding and transfer capabilities of knowledge between the merged companies. Moreover, such cultural distance limits communication between purchasers and the acquired organizations, so that it has an overall negative indirect effect on the performance ("bottom line") of the international enterprise. Furthermore, national-cultural distance hinders learners' experience-based learning ability and knowledge and impairs sales growth of the acquired organization (Ahammad et al., 2016). Furthermore, in their successful replication, Merritt (2000) study of 9,400 male commercial airline pilots in 19 countries national culture confirmed that pilots behavior was more influenced by national culture

than by their professional culture, so that “one size fits all” pilots' training is inappropriate.

In the field of marketing, branding and international advertising, cultural dimensions were found to help expedite accommodation of branding and advertising strategies to local consumers in foreign markets (De Mooij & Hofstede, 2010; Steenkamp, 2001). The rationale for these findings is that cultural dimensions provide an outline for individuals' self- and personality definition, making it easier for marketers and business strategists to understand consumers, target different segments of the new market, and consequently develop more effective campaigns (de Mooij & Hofstede, 2010).

For instance, according to de Mooij & Hofstede (2010), higher Power Distance markets were found to be highly associated with higher desire for luxury brands and status symbols, while more Masculine markets (i.e., markets in which consumers are more competitive, materialistic, and assertive) were found to be markets in which brands reflect success and achievement. Similarly, the Individualism-Collectivism dimension helps advertisers decide whether to make use of personal titles in content advertising, or, in addition, helps them to know which products will be better marketed in that market - for example, life insurance policies will be better marketed in individualistic markets, since such individualistic consumers assume they cannot rely on the extended family in case of death (de Mooij & Hofstede, 2010, p. 103).

Cultural dimensions are also extensively used for multi-cultural market segmentation based on ethnic groups. For example, certain marketing message media image or even a preferred consumer behavior may be interpreted differently by consumers from different ethnic groups, as such marketing means do not always



correspond to the same cultural values. Thus, using cultural dimensions can help associate cultural values with desired product attributes and to sharpen the distinction between competing brands and lead to better market positioning (de Mooij & Beniflah, 2017).

Several more recent examples of Hofstede's cultural dimensions use in business and everyday life reveal it can also be applied in arts – for example, cultural dimensions were found to be associated with music preferences and consumption (Ferwerda & Schedl, 2016; Liu et al., 2017), creativity and entrepreneurship (Khazma et al., 2016) and even to professional ethics (Torrescano et al., 2018). All and all, this suggests that different and diverse needs exist between cultures and such heterogeneity should be considered and could enable the creation of proxy measures for personalization (Ferwerda & Schedl, 2016).

In conclusion, Hofstad's work has established a multidisciplinary field of research in which cultural aspects, or rather cross-cultural aspects, play a central role (Annamoradnejad et al., 2019). Since its introduction in the 1970s, the model has gained great popularity not only in the academic field, but also by decision makers, opinion leaders, organizational consultants, and many communication experts. With the expansion of globalization, and with it the proliferation of multinational corporations, the expansion of many organizations into foreign markets and the movement of human capital between different regions and cultures, the understanding about the contribution and critical importance of culture to prosperity and social success expands (Merritt, 2000).

Criticism of the model focused on two key aspects. The first critical aspect focused on the relatively few attempts to replicate and reconceptualize the model's assumptions and dimensions (Beugelsdijk et al., 2015; Minkov et al., 2017, 2018). However, it turned out that in many cases where such attempts were made they acted to reinforce Hofstede's model principles (Beugelsdijk et al., 2015; French et al., 2015; Khastar et al., 2011; Rinne et al., 2012). The second critical aspect focused on the validity of the between-cultural model for examining within-country cultural aspects (Hofstede & Minkov, 2013; Khastar et al., 2011). As presented above, this led to the development of alternative research instruments for measuring within-country Hofstede's dimensions at the individual level, such as the CVSCALE (Yoo et al., 2011), which will be used for the purpose of the present study.

Finally, Hofstede's theory continues to be a major resource in cross-cultural research fields, such as international management and cross-cultural communication, and is used in as a paradigm for cross-cultural studies of values social beliefs. However, as the focus of the present study is the field of education, applications of Hofstede's model in this field of research and practice should be reviewed in detail. This review is provided in the following chapter.

### **1.2.3 Applications of Hofstede's Cultural Dimensions in education**

In the educational context, Hofstede's cultural dimensions model was used to show that culture has a direct influence on students' learning processes and learning styles (Holtbrügge & Mohr, 2010; Joy & Kolb, 2009; Manikutty et al., 2007; Mohr et al., 2012), as well as an indirect contextual influence on learners, for instance on students' learning performance and educational public spending (French et al., 2015), on youth conflicts, both in and outside the class room, and their adolescence (Khukhlaeva, 2017), and

students' multicultural learning and competence<sup>19</sup> (Kharanbeh, 2018; Laron & Lev Ari, 2013; Lev Ari & Hassissi-Sabel, 2016; Lev Ari & Laron, 2014; Lev Ari & Mula, 2017; Syring, 2016).

Learning and training processes and learning styles that are not culturally appropriate to the learner may fail and arouse dissatisfaction among learners of different backgrounds. In other words, failing to account for cultural differences while aiming to meet students' needs may impede their goal (Chang et al., 2017). Although referring to accounting students, Sikkema & Sauerwein (2015) argue that culturally diverse classrooms is associated with overloading students' short-term memory, which, in turn, call for instructors to explore the role of visual prompts in such classes.

It should be noted, in this context, that research in this domain, as well as most psychological data, is biased and dominated by Western, educated, industrialized, rich, and democratic (WEIRD) nations, and overwhelmingly, the United States (Muthukrishna et al., 2020). While non-western approaches have seldom been discussed (Chang et al., 2017), the issue of culture appropriateness in education is more prominent in non-western cultures, as illustrated, for instance, with the Arab and Confucian cultures.

Accordingly, while Arab teachers and principals were found to differ on their perception of practiced leadership, using Hofstede's cultural framework suggested that this variation may be related to cultural differences between the western orientation adapted by Arab principals and the Islamic orientation of their teachers (Litz & Scott, 2017, p. 566). Likewise, Goodall (2014) evaluated a twelve-month program for academic

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<sup>19</sup> Students' multicultural learning and competence in higher education is reviewed in chapter .שגיאה! מקור ההפניה לא נמצא. (p. 266).

staff held in a university in the Kurdistan region of Iraq. She illustrates marked cultural differences in terms of how learning is viewed and approached between Kurdish participants and British facilitator, associated mainly with collectivist vs. individualist traditions (Goodall, 2014).

Similarly, culture appropriateness in education in non-western cultures was also examined in south-east Asia, i.e., in Confucian cultures. For example, training approaches and learning processes designed by the "westerners" in the light of the Western cultural values was less suited to Thai learners and learning behavior – both the students' struggle with embracing foreign values and the training and learning approach that did not to accommodate for other learning cultures such as Thai culture negatively affect the training effectiveness (Chayakonvikom et al., 2016). Likewise, Kang & Chang (2016) examined student sojourners from Confucius culture studying in Western online learning context. Their findings point to several cultural-induced implications for such learners, among which are the need for well-defined learning objectives, detailed assignments, and schedules, the need for collaboration and mutual encouragement, and the need to incorporate everyday culture into the course content design, and the use of multiple nonverbal and visual forms of communication methods (Kang & Chang, 2016).

Cultural dimensions help assess and delineate the educational process and adapt the learning approach and style to the relevant culture (Chayakonvikom et al., 2016; Joy & Kolb, 2009; Manikutty et al., 2007). For example, as inequality in Thailand is high and so is the power distance, Thai students show respect for their superiors in exchange for the latter protection and guidance (i.e., hierarchical-paternalistic control). As a result, Thai education system is to a great deal teacher-centered – this means that Thai students are more passive and tend to accept the teacher's words without question and without questioning. These students view their teachers as experts and rely on them as the

qualified entities to pass on knowledge, and therefore teaching-learning styles in which the teacher leads the class and learners are more likely to succeed. Accordingly, it would be more difficult for students to handle and operate in a learning environment in which they would be encouraged to speak and express their opinions in class, to disagree with the teacher or to object to other students. As such students expect the teacher to shape and direct their learning experience, they are also less likely to perform well when faced with self-learning and critical thinking demands (Chayakonvikom et al., 2016).

Similar arguments can be applied to illustrate how cultural individual-collectivism dimension can help assess and delineate the educational process and adapt the learning approach and style to the relevant cultural-ethnic background (Chayakonvikom et al., 2016, pp. 80–81; Joy & Kolb, 2009, p. 74). In collectivist cultures, students are not encouraged to present new and innovative ideas, and instead are encouraged to follow tradition (i.e., they should "remember what they have been told"). The appropriate learning style for students in a collectivist culture is one in which learners need teacher support and guidance, while self-reliance is not expected and even might be criticized. Furthermore, collectivist education process will often emphasize the importance of recognizing the community-social hierarchy and the need to uphold social norms, without questions or discussion. Therefore, these students lack analytical and learning skills which adversely affect their problem-solving skills. For instance, in Thailand, as a collectivist country, students are less self-motivated to learn, and they are less likely to take responsibility for their learning outcomes. In individualistic countries, however, classrooms and learning styles emphasize personal responsibility for learning and self-direction. Students in these cultures are more likely to be intrinsically motivated to learn and more likely to feel free to participate in class discussions, ask questions, focus on their own needs, use innovative approaches to problem solving, and have social

interactions with other students as well as with their teachers (Chayakonvikom et al., 2016).

Interestingly, according to Cronjé (2011), in the context of education, Power Distance and Uncertainty Avoidance are reciprocal, that is the two dimensions tended to amplify each other. Moreover, the two dimensions operated together in moving students away from individualism towards collectivism. Thus, according to Cronjé (2011), education cultural multiplicity ("when cultures meet") promote a reduction of communicative uncertainty, shared meaning construction, and more appropriate use of technology.

Some researchers have pointed the importance of using cultural dimensions for studying the learning process of students from different cultural backgrounds and for teachers who face and deal with students from diverse cultural backgrounds. Holtbrügge & Mohr (2010), for example, find cultural dimensions to be associated with business management students' learning styles preferences. Their study involved 939 students from universities in Germany, Britain, the United States, Russia, Ireland, Spain, the Netherlands, China, and the United Arab Emirates. As documented also by Joy & Kolb (2009), Holtbrügge & Mohr (2010) findings show that learning style preferences vary in accordance with cultural values. For example, higher individualism was found to increase the likelihood of students' preference for active experimentation and abstract conceptualization.

Holtbrügge & Mohr (2010) findings also show that masculinity has a positive effect on the likelihood that learners will prefer learning styles characterized by abstract conceptualization and reflective observation. However, their study did not provide clear

evidence that other cultural dimensions (i.e., power distance, uncertainty avoidance, and long-term orientation) affect students' learning styles preferences.

Moreover, multinational analysis suggest cultural values are also associated with students' emotional intelligence and conflict handling styles (Gunkel et al., 2016). Accordingly, Uncertainty Avoidance and Long-Term Orientation were documented to influence students' preferences for handling conflicts by compromising, obliging, and integrating through emotional intelligence. Furthermore, Collectivism was found to negatively affect students' preference for a dominating conflict handling style and Power Distance positively affect students' preference for an avoiding and a dominating conflict handling styles (Gunkel et al., 2016).

Recent data of Israeli teachers and students (Amzaleg & Masry-Herzallah, 2021) also suggest that the association between cultural dimensions and students learning is mediated by teachers' skills, that is that culture affects students both directly and indirectly through its' influence on the teachers.

In the context of the present study, Ning et al. (2015) examined teachers' learning teams. Their findings suggest Collectivism positively affect learning teams' collegiality and collaboration. However, their findings also suggest that Power Distance has a (latent) moderation effect on learning teams' collegiality and collaboration, such that the positive effects of team collegiality on team collaboration were stronger for teams with lower levels of power distance (Ning et al., 2015).

Moreover, according to Amzaleg & Masry-Herzallah (2021), Israeli society as reflected in their study of 298 Israeli teachers leans towards Collectivism, low Power

Distance, high Uncertainty Avoidance and a tendency towards Femininity. Their findings also suggest cultural dimensions have a significant impact on teachers' 21st century skills, such that collaborative learning is positively associated with Collectivism and Femininity and negatively associated with Power Distance, teaching empathy is positively associated with Power Distance, Collectivism and Uncertainty Avoidance, multiculturalism-centered teaching was associated with Collectivism and Femininity, and learners' ICT literacy was found to be associated with Collectivism and Femininity. The findings of Amzaleg & Masry-Herzallah (2021) also suggest that collectivism and femininity influence teachers' motivation and communication literacy.

In conclusion, cultural dimensions can be used for educational practice, and particularly when educating students from different cultural background. This means that educators should apply preferable pedagogic approaches to cultural appropriate learning style. If people from different cultural backgrounds have different preferences for learning, then a uniform learning model may not help them achieve the required learning outcomes. By examining cultural differences, educators can develop a toolbox of instructional approaches to improve cultural compatibility between learners, learning environment, and learning outcomes (Holtbrügge & Mohr, 2010, p. 633).

Furthermore, the importance of understanding and applying cultural dimensions in education increases considering today's age of global, internet and digital available proliferation of online courses and students' exchanges, which intensifies students' cultural diversity (Holtbrügge & Mohr, 2010, p. 633). This is mostly expressed in higher education, since today these organizations and process of internalization of higher education sector (i.e., universities and colleges) must "cross borders", solve inter-cultural



dilemmas and develop inter-cultural abilities. Many institutions of higher education have entered international partnerships and offer international projects accompanied by intercultural programs. These programs consider that the cultural-ethnic differences among students may lead to conflicts and tensions. And therefore, the use of validated cultural dimensions model helps strengthen inter-cultural capabilities and improve students' learning outcomes and experience. Such models model may also serve as a basis for restructuring of teaching programs and curriculums in higher education institutes, as well as in other schools and other education frameworks (Syring, 2016, p. 127).

### **1.3 Socio-Cultural issues of education**

As stated above, the literature acknowledges a multitude of different definitions to the concept of culture. In the context of education, one must refer to the seminal work of Bruner (1996). According to him, culture is an expression of individuals' "*Meaning Making, [that is] assigning meanings to things in different settings on particular occasions*" (p. 3). This view sees culture as both a mean for individuals to perceive and interpret reality, as well as a tool (both symbolic and material) to operate and communicate with others. As such, "*learning and thinking are always situated in a cultural setting and always depend upon the utilization of cultural resources*" (p. 3-4).

Bruner (1996) outlines culturalism, as an approach to the nature of mind, which views education within the context in which it takes place. According to this view, education must serve some cultural purpose. This means that education is not exogenous to culture, but rather it stems from it, fulfilling some need for the individuals of that culture. Indeed, this leads to other issues concerning the interaction between culture and education. For example, to what extent culture, as an expression to power distribution

and social stratification, is or should be reflected in education, and accordingly to what extent resources are efficiently and effectively allocated to help individuals from different cultures to cope with education (Bruner, 1996, p. 11).

Bruner (1996) argues that culturalism can be viewed from a systemic point of view, as an entirety of values, social rights and obligations, as well as an expression of societal power or social communications and exchanges. However, he also argues that culturalism can also be viewed from an individualistic ("micro") point of view, in which it expresses how individuals within a certain culture might be affected by the demands such culture presents. Following these insights, Bruner outlines and discuss nine fundamentals (tenets) about the nature of mind as it functions within culture and the educational enterprise, among which are how making meaning is relative to context, how reality is naturally constructed, how education is interactional is its nature, the institutional and instrumental nature of education, and the crucial role of education in shaping identity and self-esteem (Porath, 2000).

Since its publication, more than two decades ago, Bruner's work was cited numerous times on many subjects. For example, regarding STEM<sup>20</sup> teachers' training, Awad & Barak (2018) and Knowles et al. (2018) have shown recently that learners' motivation towards learning is positively affected by the extent to which knowledge is relevant to their lives. Others, such as Lonka et al. (2004), emphasized "*active, constructivist, situational, and collaborative aspects of learning*" as an acceptable representation theme representing different traditions in the context of addressing

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<sup>20</sup>STEM a common abbreviation for Science, Technology, Engineering and Mathematics

students' approaches to learning (SAL) (p. 302). These issues will also be examined in the present study.

In recent years socio-cultural and education discourse have also focused on the concepts of multiculturalism and interculturalism. Although some argue that the two concepts are synonyms (Hill, 2007 as cited in Holm & Zilliacus, 2009), others indicate several differences between them. According to Holm & Zilliacus (2009), both UNESCO, the Council of Europe and the EU Commission refer to the term multicultural as a differentiative description regarding ethnic, national, linguistic, religious and socio-economic culturally diverse society, while the term intercultural refers to the exchange and interfaces within a culturally diverse society, celebrating diversity, aiming at promoting social justice and power perspective. Generally, it is assumed that interculturality presupposes multiculturalism (Holm & Zilliacus, 2009).

Attitudes toward multiculturalism are mixed. On the one hand, multiculturalism has positive influences on inter-group relationships, especially in societies with many cultures. However, on the other hand, it may embody fragmentary implications as groups might object one another (Yogeeswaran & Dasgupta, 2014).

Thus, multiculturalism can take different shapes in different countries as is demonstrated in the case of Belgium and the Czech Republic (both with two cultural groups whose size and power are similar) or, alternatively, in the case of Israel and England, each with a dominant majority group and several cultural minority groups. In the framework of multiculturalism, it is important to respect other lifestyles, other traditions and values, and view of all the citizens as equals (Rokach, 2016).

Regarding education, in view of globalization processes, researchers try to reconcile between the two approaches of multicultural education, who according to

Zilliacus et al. (2017) promote the "support of cultural pluralism and social justice and is rooted in principles such as equality, equity, solidarity, democracy and human rights" (p. 232), and intercultural education approach which enables individuals to understand themselves by interacting with and experiencing others' culture (Ogrodzka-Mazur, 2018). For instance, multicultural education might encourage minority communities to emphasize aspects of their culture as means for preservation and differentiation, as was the case of the emergence of Black studies courses during the late 1960s in the U.S., while intercultural education might promote internalization and integration, while regarding cultural factors such as community culture, religion, or ethnicity as private issues, as was the case with German or French education systems (Holm & Zilliacus, 2009).

Ogrodzka-Mazur (2018) discussed several concerns on intercultural pedagogy in view of "multiculturalism, the feeling of national, civil, ethnic, religious and cultural identity or the relationships between people of different nationalities and cultures" (p. 1). She views interculturalism positively, as a means for overcoming stigmatization, accepting, and acquiring the values of others and as a source for identity enrichment. However, in view of current globalization processes she also calls for an open, kind-hearted criticism of such intercultural society. Similar claims were also raised by Mikander et al. (2018) regarding education in the Nordic countries.

In the culturally diverse Israeli society (for a thorough review, see chapter 2.1), the discourse regarding intercultural and multicultural education is long lasting and continuous (Lev Ari & Laron, 2014; Negev & Garb, 2014; Tadmor, 2003).

Learning should not be viewed as a process whose objective is merely "*mastery of the content*", but rather as "*a set of phenomena that occurs around the mastery of the*

*contentTA*" (Takaya, 2008, p. 13). Thus, successful developmental and educational outcomes, or Bruner's "meaning making", are in fact a result of students' experiences and communications within a community where learning takes place. Furthermore, as stated by Bruner "*educational encounters ... should result in understanding, not merely performance. ... [implying] that the object of instruction [is] not coverage but depth*" (Bruner, 1996, p. XI).

This suggests that in order to examine students' education, it is more important to explore their experience during their studies as well as their understanding and interpretation regarding the context in which their studies take place. These aspects are embodied by the following constructs relating students' motives for learning and their learning experience, as well as their approach to learning.

### **1.3.1 Motives for choosing to pursue higher education and teaching career**

The decision whether to become a student, what to learn and where to learn (e.g., in which institution) have immense implications on one's future earnings and career development as well as on more immediate aspects such as investment of time, effort, and money. As a result, student's motives for choosing their profession have been extensively examined in the literature (Lent et al., 1994; Lent & Brown, 2019).

The research literature on the subject adopts a causal approach that includes a wide range of contextual and personal factors that help shape career developments throughout the stages of life. These factors may be related to the socio-demographic background characteristics (such as gender, ethnicity, cultural background, or socio-economic status), significant past events (such as migration or early learning experience), or individual characteristics and personal preferences (such as self-efficacy or personal

interest). These factors are intertwined and shaped in a way that influences the relevance and availability of different career choices, for example through differentiating socialization processes, the extent (variety) of available opportunities, and social and cultural encouragement (Lent & Brown, 2019).

These personal and contextual factors can help and promote, or alternatively hamper or limit, individuals career choices and development, where self-efficacy affects students' outcome expectations and consequent interest characteristics, career goals and available options, level and quality of achievements (Sheu et al., 2010).

Career choice, and especially higher education choice, is seen as a multidimensional framework in which the interactions between personality, emotion, cognition, and environment help in understanding the complexity of choice and may contribute to promoting better psychosocial adaptation (Sheu & Bordon, 2017). Hence, it is common to classify the factors that influence individual career choice according to three main cognitive-social dimensions (Carpenter & Foster, 1977; Akosah-Twumasi et al., 2018): Extrinsic factors, Intrinsic factor, and interpersonal factors. Below is an overview of the factors in the context of the choice of higher education.

*Extrinsic factors* express the individual's desire for economic security, respect, and status social. These factors relate to salary considerations and other job-related benefits, job security, job availability and even professional prestige (Akosah-Twumasi et al., 2018). In addition, these aspects may also address more practical issues of career choice, such as place of employment and geographical constraints, and they express individual perceptions regarding labor market trends (Purohit et al., 2020). External motives may include financial considerations, attractive pay and future income from the profession (Zoabi et al., 2015). In fact, Zoabi et al. (2015) study among Arab preservice

teaching students in Israel indicated that most influential motives were extrinsic, such as financial contribution, perceived prestige and professional status. However, most of their participants also reasoned their choice of teaching career as a default option.

Financial motives proved to be significant for many students, though at times these motives were stronger among students from a lower socioeconomic background. Presumably, since students from a higher status have the choice of a profession that is interesting for them, while students from a lower socioeconomic background have limited resources, so that they are encouraged to choose professions based on the financial outcomes of the job (Afaq Ahmed et al., 2017, p. 12). Similarly, Whatad-Huri (2008) and Zoabi et al. (2015) found that students' choice to enroll to teachers' training institutions was related to their a-priory perspective of labor market structure and development (i.e., demand for teachers), as well as their perspective of their prospects for early employment. Additionally, prior occupational experience, available opportunities, considerations of comfort and flexibility (such as a profession that allows to balance family life and a career), comfortable working environment and occupational security were found to influence students in teaching institutions choice of this profession (Easley et al., 2012, p. 164; Zoabi et al., 2015, pp. 124–125).

*Intrinsic factors* that represent subjective preference, i.e., personal interest, self-efficacy, and future expectations regarding their choice outcomes and career development prestige (Akosah-Twumasi et al., 2018). Personal interest is an important factor in an individual's career choices (Akosah-Twumasi et al., 2018; Atitsogbe et al., 2018; Lent, 2018; Purohit et al., 2020), or even a critical factor in this decision (Agarwala, 2008). Professional development and personal growth opportunities are also considered as important factors influencing career choice (Akosah-Twumasi et al., 2018; Purohit et al., 2020). As such, these growth factors also address other professional aspects, such as

the ability to specialize or the ability to deepen professional knowledge in the field (Abbasi & Sarwat, 2014), as well as personal aspects such as creative, personal expression, and entrepreneurship (Belchior & Lyons, 2021; Tran & Von Korflesch, 2016).

*Interpersonal factors* that refer to the extent to which others in the individual's environment (e.g., family members, educators, role models, friends, and other sociocultural commitments and expectations) influence the occupational selection process. For instance, friend and relatives were documented as a significant factor of American Mexican students' success in their higher education studies (Easley et al., 2012), or as most influential on young Arabs in Israel decision to pursue teaching career (Zoabi et al., 2015). The tendency to select a certain profession is also affected by parameters such as gender, age, educational level, character of education gained at home, parents' education level and socioeconomic status (Özçelik et al., 2014). Even prior familial business experience was found to influence career choice, as students with a family business background may be pessimistic about the choice of an entrepreneurial career (Zellweger et al., 2011). Turkish students career choices were found to regard work-life balance considerations over status and social respect, as students' professional preferences were moderated by their perception of the profession limiting their private, social, and familial life (Kaygin & Çağlar, 2013).

This view of career shaping contextual and personal factors provides a convenient setting for understanding individuals' career engagement and personal interest, the nature of the emotional, financial, and social support they receive during their development (Alshahrani et al., 2018; Troy, 2018), as well as the nature and extent to which these



factors affect individuals' expectations (Akosah-Twumasi et al., 2018; Purohit et al., 2020).

In the context of the present study, it is appropriate to focus on two aspects of career and higher education choice. The first aspect concerns with the influence of culture on this choice, while the second aspect concerns with typical factors in the choice of teaching career. Both are reviewed hereafter. However, for this aim, the review initially introduces the concepts of Cultural Capital (Bourdieu, 1979, 1999, 2005) and Social Capital (Putnam, 1993, 2000), followed by a review of the role culture play in individuals' vocational choice and higher education studies. Finally, these aspects are reviewed in the context of the present research, i.e., by referencing to the choice to pursue teaching career.

### *Cultural and Social capital*

Culture and its characteristics may have a significant influence on the choice of higher education and profession. Thus, to understand the complex interplay of culture and vocational choices and decisions, the concepts of Cultural Capital (Bourdieu, 1979, 1999, 2005) and Social Capital (Putnam, 1993, 2000) must first be introduced, which will be followed by a review of the way in which career decisions reflect social and cultural expectations.

According to Bourdieu (as cited in M. Regev, 2011, pp. 294–295), the field of cultural production is an environment, or rather an arena, where individuals and different groups compete to win a coveted reward - a reward that all contestants are interested in and believe in the value, benefits and benefits it provides to the winner. One can refer to different fields where struggles take place, such as the field of law, the field of medicine,

the field of sports, and even refer to secondary and sub-fields such as the field of public medicine (with respect to medicine) or the field of football or tennis (with respect to the field of sports). The different fields express different areas of activity and social action, and respectively the nature of the struggle and the rewards vary between them. Bourdieu's social field theory does not necessarily offer an accurate mapping of social reality but provides a conceptual general framework for examining processes that take place in some social field and the relationships between them (Regev, 2011).

Considering social fields as an arena recognizes that, in the context of a field, there is a constant, ongoing relationships between different individuals<sup>21</sup> and inequality that prevails, in which some dominate and others are dominated, some operate to preserve existing realities, hierarchy, and power relations while others strive to change it (Bourdieu, 1999).

Individuals operating in a field will act to realize their interests and to accumulate (i.e., maximize) power, as well as to gain recognition, legitimacy, status, and prestige. To conceptualize this, Bourdieu extends the (conservative) definition of the concept of economic capital (Bourdieu, 1999, 2005; Regev, 2011):

- Economic capital (capital in the ordinary sense) - material resources (money, assets;). Economic capital excels in its conversion capacity (to money); It is anonymous, versatile, formal, lacks "content", and can be passed from place to place and from generation to generation.
- Social capital - the level of connectivity within and between social networks. The concept of social capital emphasizes the value of social relationships and the role of collaborations and trust as a mean to obtain desired results and benefits. According

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<sup>21</sup> For simplicity, the description here refers to the various contestants that operate in a field as individuals, although this issue is not limited to individuals and can also refer to social groups, organizations, countries etc. (M. Regev, 2011)

to (Putnam, 1993, 2000), Bonding Social Capital refers to social interactions within a community and to social relationships between people with similar backgrounds (e.g., family members, friends, belonging to the same social class, with similar political views), while Bridging Social Capital refers to relationships with members in other communities and to relationships between people from different backgrounds (e.g., different religion, race or origin, different status or different political views). Both types of social capital are essential for a society to exist, however bridging social capital is considered more important for a prosperous, democratic, and pluralistic society (Putnam, 1993, 2000). The third type of social capital is Linking Social Capital as it is the weaker, but more important, pattern of social capital, tying together different groups, which form a broad entity, like a nation. This type of social capital is activated, for example, when governments cooperate with community networks and organizations to achieve a common goal (Amoyal & Karmon, 2011).

- Cultural capital - a form of acquired knowledge and cognitive ability, which enable a person to admire, appreciate and decipher works of art and cultural products that are institutionally identified as having "high" value. These cognitive knowledge and ability impart tastes, proficiency, and skills that enable familiarity and enjoyment of these works and products. According to Regev (2011, p. 281), individuals with higher cultural capital enjoy legitimacy and even dominance and advantages in the social structure. Like economic capital, cultural capital can be accumulated, so the more capital a person has, the higher their position on the social scale. However, unlike economic capital, cultural capital is not easy to measure and is not necessarily quantitative, and it cannot be passed on to others or from generation to generation.
- Symbolic capital – available resources based on honor, respect, prestige, and others' recognition that are used to signal the world about a person's social position through status symbols (Ihlen, 2018). For example, acquiring an academic education and attaching an academic degree to a name, hanging certificates in a prominent place, and wearing clothing symbols of the alumni organization. Generally, symbolic capital can be seen as a realization of cultural capital in social interactions (M. Regev, 2011). According to (Bourdieu, 1995, 2005), symbolic capital is of great importance, among other things in light of its role in the legitimation and naturalization of economic and social capital, and the approval of the existing social

realities. Symbolic capital highlights the dominance of the ruling class and the hierarchical system it dictates (Bourdieu, 1995, 2005).

Bourdieu's conceptual framework allows for the transcendence beyond economic considerations, to examine how non-material and non-economic forms and considerations may yield social benefits and advantages. To understand the way in which capital is embodied in cultural performance and practice, three main situations can be addressed (Bourdieu, 1979, 1999, 2005; Regev, 2011): A situation in which capital is translated into ownership of products and objects (*objectified state*), a situation in which capital is realized in the recognition of an institutionalized or organizational framework (*institutionalized state*) and in a situation in which capital is translated into personal qualities and characteristics assimilated as tacit knowledge (*embodied state*). The interaction and integration of these behaviors and propensities can be conceptualized to form the term *Habitus* (Bourdieu, 1979, 1999, 2005; M. Regev, 2011).

According to Bourdieu (2005), habitus is the collection of behaviors, habits, skills, inclinations, and preferences that a person acquires during their life - including how they use language, their social conduct, their aspirations and preferences. This collection also serves as a framework for individuals' values, through which they interpret and assess reality and as a practical guideline for their actions. A person's habitus is a product of their social systems - the family, the community, the school. As a result, individuals acquire the habitus of their parents and the social group to which they belong, hence individuals' tendency, even if unconscious, to prefer those who possess similar habitus to theirs. Thus, habitus largely determines a person's prospects of success in society (Bourdieu, 1979, 1999, 2005; Regev, 2011).

Acquiring higher education, as an example also related to the current study, entails economic benefits in the form of higher wages and more opportunities for career development. However, studies at an institution of higher education allow students to both acquire the accepted language (i.e., jargon) in the discipline (the habitus) and to obtain a certificate of their education (cultural and symbolic capital). Academic habitus consists of cultural practice and the production of symbols, a kind of pursuit of social status and the creation of an autonomous field of occupation in which only professionals operate. Thus, in the context of the present study, teachers training will not only include theoretical content of their expertise, for instance in the form of history lessons or mathematical formulas and exercises, but also reference to the behaviors, norms and social expectations practiced in this profession.

A significant part of Bourdieu's contribution focused on education and the field of art and cultural creativity. Bourdieu found that cultural capital foundations are acquired at an early stage of socialization, and that it is a key factor in the processes of social replication and the preservation of class hierarchy, thus challenging the assumption underlying modern education systems about their ability to provide equal opportunities to all (Bourdieu, 1979, 1995, 1999, 2005).

Many scholars, most notably Coleman (1988), argue that in order to explain human actions, the concepts of economic capital and cultural and symbolic capital need to be supplemented by the concept of social capital, since people's activities are shaped not only by the resources available to them but also by their relationships and social context (Baron et al., 2000). The distinction between the terms "human capital" and "social capital" is particularly important. Human capital focuses on the people themselves, while social capital focuses on the relationships between the people and the networks that are built between them (Putnam, 2000). Human capital approaches offer

linear models - investment is made in time and/or money (for the acquisition of education and professional experience) and economic income comes directly as a result of the investment. Social capital approaches are much less linear; The link between social capital and actual returns is complex and not always unambiguous (Baron et al., 2000).

One of the key insights of research on social capital is that social capital is more important to prosperity than economic capital (Putnam, 1993, 2000, 2016). Social capital contributes to the individual not only at the direct practical level of a decrease in alienation and loneliness feelings, but also indirectly by reducing crime, tax evasion and government corruption (J. A. P. López & Santos, 2014; Wachs et al., 2019). High social capital at the state level is reflected in better service to citizens and economic growth , and is also linked to entrepreneurship and innovation (Snellman, Silva, Frederick, et al., 2015; Snellman, Silva, & Putnam, 2015).

Furthermore, according to Stiglitz (2012), economic inequality causes the grinding of social capital and thus the impairment of social function. Among other things, the grinding of social capital decrease the perception of fairness. This makes employees feel resentful and therefore hurts their motivation to work. Inequality also negatively affects the degree of trust within society. Thus, with the increasing of inequality, more contracts are breached and more expensive steps are taken to enforce (social) contracts - this leads to a rise in transaction costs and is unbeneficial to the entire economy (Stiglitz, 2012).

In summary, cultural and symbolic capital embody personal resources that can contribute individuals by developing their knowledge and cognitive ability and enabling them to improve their social position (Bourdieu, 1999, 2005; M. Regev, 2011). Social capital reflects connections between people in the family, community and society, and

relationships that allow the individual and the group to advance their goals (Putnam, 1993, 2000).

The importance of cultural, symbolic, and social capital for the prosperity of the individual, group and state is no less than that of tangible economic capital, and some argue that it is even higher (Coleman, 1988; Helliwell & Putnam, 2004; Putnam, 1993, 2016; Stiglitz, 2012).

Although Bourdieu (1979) argued that the education system acts to preserve existing social structure by a cultural-social conversion, in which children with little or no cultural capital find it more difficult to succeed, the late research in the field of social capital indicates that the role of education, and especially of higher education, is in creating conditions for reducing social alienation and mediating between different cultural groups in society (Bocheliuk et al., 2021; Plagens, 2011). These ambiguous insights call for a deeper understanding of culture's role in individuals' vocational and educational decisions. I will address this issue hereafter.

### ***Culture role in vocational and higher education studies choice***

Career decisions reflect social expectations - expectations that go beyond the familial framework (Akosah-Twumasi et al., 2018; Polenova et al., 2018). In this sense, social expectations or social commitment refers to a set of behaviors that are supposed to embody social ideals, or at least stereotypes about those ideals (Tao et al., 2018). Social ideal is used here simultaneously as a conceptual framework according to which the individual perceives himself and through which they define their goals in life, and as a means of enforcing social values of various individuals in society or community (Tao et al., 2018).

Thus, for example, stereotypical perceptions about the role of women in society may lead them to certain career choices or alternatively be expressed in the degree to which society encourages (or opposes) women to choose these career areas (Wolter et al., 2019). Similarly, the degree of cultural assimilation into the majority culture is a key factor in the formation of individuals' identity and life goals (Tao et al., 2018), as well as a measure for appropriate conduct according to the values of the cultural caste (Gaurav & Sheikh, 2020).

People from different cultures may have different preferences or they follow different cultural principles in making academic and professional choices, thus these choices vary according to diverse cultural characteristics and its implied values (Fouad et al., 2008; Wesarat et al., 2014). For instance, students who hold individualistic, competitive, and universal values often tend to choose technical and entrepreneurial professions (Kaygin & Çağlar, 2013, p. 132).

Profession choice may change across different countries due to unique socioeconomic characteristics, as well as different geopolitical characteristics and cultural preferences (Afaq Ahmed et al., 2017). However, similar variation and diversification also hold with within country cultural differences. For example, certain cultures prescribe a higher value to educational achievements (Fouad et al., 2008). These cultures often express high academic expectations from their students. The reasons are related to the cultural perception of education as a route for upwards mobility, reinforcing the cultural value of representing the family through attaining prestigious academic degrees and careers and a perception according to which education and stable occupation help overcome blocks, prejudice, and racial discrimination, mainly among students from minority or ethnic groups. These perceptions affect the student's decision-making and



his or her self-perception, which in turn affect the will to develop on an academic and occupational level (Fouad et al., 2008, pp. 43–44).

The cultural-intellectual orientation as well as the religious-moral orientation were found to be associated with students' career choices (Zoabi et al., 2015, p. 125). For instance, in a study that examined how cultural, familial, and contextual factors affect the career choices of Asian Americans (Fouad et al., 2008), various fields were examined such as structural-social influences, and it was found that the culture and family of origin played an important role in building meaning in career choice. The research had emphasized the importance of the cultural and familial values such as altruism, finding satisfaction and enjoyment at work and hopes of parental approval regarding the career choice and the participants' career choice process (Fouad et al., 2008). Similarly, the student's background, the cultural-ethnic status and cultural-ethnic identity affect the choice of profession. For instance, there is an effect for the student's awareness of the potential future ethnic discrimination in the workplace, the limited occupation possibilities, and the obstructions to higher education, as one who is a member of a specific social group (Whatad-Huri, 2008; Zoabi et al., 2015).

Ethnic and familial heritage culture role in students' career choice was also discussed in Easley et al. (2012). Their study among American students of Mexican origin from families of immigrants indicated that the motivation for higher education was related to the Mexican cultural-familial heritage and the students' wish to honor their parents' struggle and sacrifice in order to allow them to attain higher education.

The effect of culture on the choice of higher education, profession and career may also be reflected in Hofstede's cultural dimensions. A study examining the career choice

and planning using a sample of 1800 students in universities in eight countries indicated the mediating relationship of the cultural dimensions (Gunkel et al., 2011).

Gunkel et al. (2011) found that the cultural dimensions of uncertainty avoidance, masculinity and long-term orientation are related to career planning through influencing various elements such as career optimism and career knowledge. The reason is that in societies that avoid uncertainty there is a larger tendency to plan the future, and therefore the career planning and information collection regarding the career/ profession may be more significant as opposed to societies that accept uncertainty in these societies students are less likely to prefer changes in career choice and seek more stable/conservative professions. Another explanation refers to societies with a strong masculinity dimension, in which there is high regard for values such as assertiveness, competitiveness and success, while in societies with a string feminine dimension there is high regard for values such as solidarity, humility and quality of life. Assigning importance to the status and strong pressure to succeed in one's career in the masculine cultures may lead to a more thorough career planning and seeking ways of planning it (Gunkel et al., 2011, p. 6). The power distance can also have influence on career choice. Cultures with higher power distance reflect systems in which skills, power and wealth go together. The decisions in these societies are made by the person with the highest hierarchical authority. Therefore, it is possible that the career decisions are controlled by the same person, as the candidates have less of an influence (Gunkel et al., 2011, pp. 4–6).

Another study (Wesarat et al., 2014) examined the relation between the culture dimensions and the choice of profession, while focusing on the values of collectivism and individualism. The influence of these cultural values is reflected in various forms, for instance people from a collectivist culture may view volunteer work as significant since it contributes to their community's interests. In such cultures people prefer

professions that offer training opportunities and good working conditions over freedom or challenge. In addition, the choice of profession in collectivist cultures is based on social, gender and family roles. Thus, for example, men and women in Asia make different career choices since in this culture women's financial responsibility is less than that of men (Wesarat et al., 2014, p. 5).

On the other hand, members of individualistic cultures focus on their personal interests and want to attain their objectives in their choice of profession. These people ascribe importance to freedom and challenge in their career, more so than training opportunities and working conditions. In addition, they tend towards more competitive fields, fields that allow for personal freedom and independent work. These individuals tend to choose themselves and for themselves the kind of profession. Their choices usually match their attitude and personal preferences as they think of their personal achievements rather than the group (Wesarat et al., 2014, pp. 5–6).

Akosah-Twumasi et al. (2018) systematic review also examined how individualism and collectivism are related to factors influencing the career choices. Their level of reference was countries, and their findings suggest that youths in individualistic cultural settings (such as Canada, Finland, Germany, Spain, Switzerland, and United States of America) were more inclined to making their own decisions and were encouraged by their parents to do so. Specifically, these students' choices were more influenced by intrinsic (i.e., personal interest and self-efficacy) and extrinsic (i.e., job security, higher salaries) than by interpersonal factors (such as parental guidance).

Their findings also suggest that youths in collectivist cultural settings (e.g., Argentina, Burkina Faso, Bulgaria, China, Croatia, Hong Kong, India, Indonesia, Japan, Mexico, Portugal, South Africa, South Korea, Taiwan, and Ukraine) are most influential

by others. Thus, interpersonal factors, such as honoring parental and societal expectations and parental requirements to follow a prescribed career path, as well as extrinsic factors (e.g., prestigious profession), were found to be very influential on these students' career choices (Akosah-Twumasi et al., 2018). The literature argues that personal interests and personal preferences of individuals with collectivist orientation are often subdued to align with group interests, and especially to the need to maintain accepted standards and family bond and cohesion (Kim et al., 2016).

In the context of the present study (see chapter 2.2.2 above), this pattern is particularly common among young people in traditional Arab society (Haj Yahia-Abu Ahmad, 2006; Jeraisy, 2012; Khamaisi, 2012).

However, cross-cultural transitions often subvert such patterns of behavior, as young individuals try to resettle their cultural (collectivist) ethos with individualistic cultural beliefs and practices. Akosah-Twumasi et al. (2018, p. 59) revealed that when transferred to a different cultural setting, young individuals' cultural values were challenged, and their career decision-making patterns were affected.

In summary, Conservative collectivist cultures foster subordination of personal interests to group goals, emphasizing the standards and importance of relatedness and family cohesion (Akosah-Twumasi et al., 2018). Such individuals prefer better working conditions over challenge or personal expression and creativity opportunities (Wesarat et al., 2014). Similarly, individuals in hierarchical higher power distance cultures are less influential of their career choices, as decisions in these cultures are directed by the highest hierarchical authority (Gunkel et al., 2011, 2013), may it be a political figure or the head of the Hamula (i.e., extended family).

Contrary, students of individualist orientation are more self-oriented, thus such students appreciate flexible choice options, such that can address their personal aspirations, interests, and creativity, and they value personal achievements, best practices, and higher salaries (Akosah-Twumasi et al., 2018; Kaygin & Çağlar, 2013; Wesarat et al., 2014). Career planning, as well as career optimism and knowledge, are associated with uncertainty avoidance, masculinity, and long-term orientation (Gunkel et al., 2011, 2013).

Thus, as concluded by Sheu & Bordon (2017, p. 70), students' career choices should take cultural context, especially individualism vs. collectivism, into their considerations as "*interventions or preventive efforts should be directed toward assisting ... students in locating and utilizing goal-related or efficacy-relevant resources. ... (and) in securing the supports they need for pursuing their career goals and well-being*".

Higher education institutions' cultural integration of students provides an excellent opportunity to examine the connection between cultural heritage and students career decision-making. Focusing on a specific profession (i.e., teaching), the focus of the present research on students in teachers' training institutions allows to better understand the main motives behind their decision to study this profession, and especially on the contribution of their cultural dimensions to this decision. Furthermore, the present study seeks to further examine the way in which students' cultural dimensions are reflected in their behavior as students (i.e., in their approach to learning) and in their experience in studies.

### *Motives for choosing to pursue teaching career*

The choice of teaching profession, like any other career decision-making, can be characterized with reference to the multidimensional perception of extrinsic factors, intrinsic factors, and interpersonal factors reviewed above (Akosah-Twumasi et al., 2018; Purohit et al., 2020; Zoabi et al., 2015). However, two key aspects of the teaching profession have increasingly been the focus of research attention regarding teachers' motivations, aspirations, and early career development. The first aspect concerns with a continuous shortage of teachers due to teaching students' preference not to enter the profession after their graduation, high drop-out rates of new teachers, and high burnout of teachers, some seven during their first years of work. The second aspect concerns with the motivational dimension of teachers' self-efficacy, which is later reflected in their studies and the quality of their teaching (König & Rothland, 2012; Watt & Richardson, 2008).

As stated by (Heinz, 2015, p. 259), teaching effectiveness and education quality are factors of teachers' academic proficiency, subject matter knowledge, and “technical” teaching skills, as well as their motivation, enthusiasm, and commitment to their students' education and to the teaching profession. Thus, it is not only about what teachers know or understand, but also about what they do, how much they care and why that is important (Hattie, 2003 as cited in Heinz, 2015).

Accordingly, since the focus of the present study is pre-service teaching students conduct and experience during their studies, teaching profession aspects (e.g., novice teachers drop-out, teachers' burn-out, teachers' self-efficacy and teaching quality) would not be reviewed in the present context. Still, these issues have led to an increase in teacher

motivation research across various contexts, with teacher motivation identified as a key determinant for student motivation and teaching effectiveness (Han & Yin, 2016).

An especially broad research area focused on the motives of teaching students to choose this professional area applied the FIT Choice<sup>22</sup> framework to successfully predict several important aspects of teachers' preferences (Watt & Richardson, 2008; König & Rothland, 2012; Watt et al., 2012). According to this model, teaching career choice is motivated by individual self-efficacy and teaching ability, individual values, professional beliefs, anticipated advantages, satisfaction, and professional development, job-related benefits (e.g., salary, job security), external influences and prior experiences (Watt & Richardson, 2008; König & Rothland, 2012; Watt et al., 2012).

Prominent motives included altruistic-philanthropic objectives connected to social contribution, an aspiration to work with children and teenagers, pedagogical mission and perceiving the teacher's role as a pedagogue (Löfström & Poom-Valickis, 2013; Shore & Levi, 2013; Watt et al., 2012) or intrinsic motives and beliefs connected to personal abilities.

Additional considerations were extrinsic motives such as job security, benefits, aspects relating to the teaching profession's demand and reward, fitting the profession with family life and other interest and activities (Watt et al., 2012). Meaning, examining study results on the subject shows that one can find four categories that are recurring in a variety of contexts, cultures and populations: *altruistic-philanthropic considerations* relating to perceiving teaching as a socially important profession that allows to promote children and contribute to society; *intrinsic considerations* related to the internal benefit

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<sup>22</sup>Factors Influencing Teaching Choice model

of educations such as enjoyment and satisfaction from engaging in education, *interest in the knowledge field*, and the opportunity to *realize personal capabilities* such as creativity and extrinsic or practical considerations related to benefits from the occupation that are not part of the work itself such as career comfort, vacations, working conditions and social status (Katzir et al., 2003; Shore & Levi, 2013). A newer category that was identified in the literature relate to *cultivating parenting skills*, wishing to benefit and contribute to children and learning how to teach children in the future (Shore & Levi, 2013).

Watt et al. (2012) tried to examine the motives for choosing the teaching profession, comparing different countries using the FIT model (FIT Choice Model: Factors Influencing Teaching Choice model). In the frameworks of their study, motives were examined for participants from Australia, USA, Germany, and Norway. The comparative analysis indicated in general that the motives for choosing teaching were more similar than different across the countries (which share similar western cultural features). On average, the same motives were ranked highest such as intrinsic values and perceived teaching capability. In addition, altruistic motives were ranked including the wish to contribute to society and work with children/ teenagers. On the other hand, job security and time for family were ranked lower. The external influences of friends, family members and colleagues were ranked lower. The general analysis showed that the choice of teaching as a career in these countries was mainly the result of a personal decision rather than the influence of others (Watt et al., 2012).

Nevertheless, a closer examination found differences in the motives that may be connected to differences between countries/ cultures. For instance, in the Australian sample job security was a prominent motive, as education is perceived as a more stable profession. In the United States the prominent motive was time for the family, since there



the profession is considered more flexible with the option of part time jobs and vacation (Watt et al., 2012, p. 803).

Fray & Gore (2018) suggest a "move beyond the traditional conceptualization of motivation". In this context they regard also maladaptive motives, according to which teaching is viewed as a fallback career, and adaptive motives, which relate to "*effort, involvement, and commitment, and include teaching ability, shaping the future of children, enhancing social equity, social status, intrinsic career values, expertise, and making a social contribution*" (Fray & Gore, 2018, p. 156).

Although the literature generally identified similar motives for choosing teaching career in different countries and cultures (Katzir et al., 2003, p. 13), few studies specifically focused on ethnicity as an influence (Fray & Gore, 2018), in which certain motives have identified as influences among cultures that have a high regard for teachers. According to the Global Teacher Status Index (Varkey Foundation, 2018), countries where the teacher is respected the most are China, Malaysia, Taiwan, Russia, and Indonesia. In these countries teachers are the regarded as an educated elite and are considered to play a significant role as an agent of social-cultural change in the school and outside it. Thus, these communities are generally favorable of teaching, mostly due to religious principles and religious purpose, parents and significant others encouragement, and a general positive image of teaching profession constructed by favorable conditions in teaching (Fray & Gore, 2018).

Interestingly, according to the Global Teacher Status Index report, Israeli teachers are the least respected - better only from Brazilian teachers (Varkey Foundation, 2018). According to Lev Ari & Gatz (2011), the contribution of the field studied to society and to the community was ranked as the least important motive motivations for choosing a

field of study. Their findings also suggest that, compared to other fields of study, the choice of teaching studies was often a compromise – a result of low achievements, poor self-efficacy, and limited ability to meet admission requirements. Their findings also suggest that students from the geographical periphery and from low socio-economic backgrounds were more inclined into making such academic compromises, and to choose a field of study that would also provide them with work immediately upon graduation. Nevertheless, it is worth mentioning that according to Lev Ari & Gatz (2011), interest is the most important factor in students' professional and institution choice.

In the context of the present study, a particular social group in which teachers are highly socially regarded is the Israeli Arab minority (Shore & Levi, 2013). Teaching profession is regarded in the Israeli Arab society as a profession that allows for self-realization and making change for the Arab society. In addition, the Arab society support professional continuity within the family, so that in families in which at least one parent is involved in education, one of the children will choose the profession as well (Alian et al., 2007; Abu Asba, 2006 as cited in Huri, 2008, p. 268).

A study conducted among the Arab minority in Israel suggest that the most crucial factors in the process of choosing teaching career was the parents' request or recommendations and persuasion by other family members (Alian et al., 2007).

Another study examining considerations for choosing education among Arab and Druze women in Israel (Shore & Levi, 2013) indicated practical motives that are the result of the family and society's influence. In this framework, it was found that the choice of profession is an ongoing process in which these elements have a significant role including providing information about the profession. Similarly, Mazawi (1995 as cited in Huri, 2008, pp. 278–279) indicated extrinsic motivation for choosing education

among Arab teachers, including lack of choice and lack of other professional prospects in the sector.

Additional central considerations among ethnic and minority (Arab) groups were intrinsic motives such as intellectual development, creativity, and fun. These candidates saw education as a means of self-fulfillment, leverage for leaning and renewal and a profession that allows them to be agents of change in the Arab society (Alian et al., 2007). The choice of education is also related to a cultural-gender issue. Teaching is perceived by female members of the Arab society as a preferred profession which facilitates upwards movement to a higher social-economic status, fun and fulfilment. In addition, female members of the Arab society view teaching as a caring profession that resembles that of a mother (Alian et al., 2007, p. 137).

In summary, teacher motivation has been identified as a key determinant for student motivation and teaching effectiveness (Han & Yin, 2016). The best accepted conceptual framework for examining the motives for choosing a teaching profession is through the FIT model. This model identifies several groups of motivating factors to choosing teaching career. The first group refers to factors related to social contribution and internal values of teaching, i.e., working with children and adolescents, enhancing social equity, shaping the future of children. Another group of factors refers to perceived self-efficacy and teaching ability, as well as positive prior teaching and learning experiences. Personal utility factors, (i.e., work-family balance, holidays and time for family, salary, benefits, and job security), teaching as a fallback career and the social influence of others are additional motivational factor groups (Fray & Gore, 2018; Watt et al., 2012; Watt & Richardson, 2008).

The extensive use of the FIT-choice model for nationally and internationally comparisons proved a successful approach for overcoming heterogeneity of design for examining what motivates people to choose teaching as a career and to enroll in a relevant teaching institution (König & Rothland, 2012).

Although relatively scant, the research points to cross-cultural differences of students' motives for choosing teaching careers, suggesting that social contribution and internal value of teaching are more prevalent motivational factors in a more conservative, religious, collectivistic, and power distant communities (Fray & Gore, 2018; Heinz, 2015). Moreover, choosing teaching as a compromise or fallback was found to be more prevalent with students from low socio-economic backgrounds and from geographical periphery (Lev Ari & Gatz, 2011).

As concluded by Heinz (2015, p. 279), these contextual, socio-economical, and cultural motivational factors influencing the choice of teaching career are interlinked, and *"although widely discussed are yet extremely difficult to conceptualize and/or measure... (Calling for an) in-depth understanding of relevant cultural and educational contexts"*. In the context of the present study, this means that the diversified, incohesive, and complex nature of the Israeli society (see chapter 2.1) is an excellent opportunity for this purpose. In this sense, the present study of Israeli students in teachers training institutions contributes to the understanding of the link between students' cultural dimensions and their motives for choosing teaching careers, as well as to the understanding of the contribution of both cultural dimensions and motives to these students' experience during their studies and their approach to learning.

### **1.3.2 Cultural aspects of students' academic learning experience**

The focus of this study is students in teachers training institutions Approach to Learning. Students' Approach to Learning (ATL) concerns with students' learning preferences by characterizing students' in-depth, superficial, and achieving goal-oriented approach to learning (Entwistle, 2018; Manikutty et al., 2007; Stover & Holland, 2021). As reviewed earlier (see chapter 1.1.3, Determinants of Students Approaches to Learning), this school of thought evolved in recognition that learning environment, or more precisely the context in which learning takes place, also influences the way people learn. That is, how students approach their learning depend both on their personal preference and tendency as well as the way they experience their learning.

Accordingly, as reviewed in chapter 1.1.3, students' experience can refer to a "narrow" context-related framework of learning experience referring to a course or an evaluation task, thus referring to specific aspects of teacher' characteristics (i.e., teaching style), course content, challenge, coherence of assignments and assessment requirements as well as other situational aspects of learning (Baeten et al., 2010; Coertjens et al., 2016; Gan et al., 2017; Lindblom-Ylänne et al., 2019; Smarandache et al., 2021).

However, the present study adopts a broader perspective of students' ATL by focusing on students' overall conduct and experience during their studies in teachers training institutions. In this "broader" perspective, context-specific learning aspects cannot be examined directly, but only indirectly and implicitly. Thus, instead of focusing only on specific teachers or certain courses, emphasis was placed on the general overall perception of teaching in the educational institution as transformational and supportive, such that aims to promote disciplinary knowledge and understanding, and especially

foster students' critical thinking (Entwistle et al., 2003; Manikutty et al., 2007; Utriainen et al., 2018).

Nevertheless, as the focus of the present research is Israeli students in teachers' training institutions, their cultural dimensions and Approach to Learning, one cannot overlook the context in which these students operate and in which learning takes place. In this context, one should consider that the same learning environment might be differently perceived and experienced by students from different cultural backgrounds (Yogeeswaran & Dasgupta, 2014).

Still, in the context of the present study, and despite the relevance and importance of learning experience of students from different cultural backgrounds and social groups to students' learning conduct during their studies, the research in the field remains relatively limited (Hagenauer et al., 2016; Lev Ari & Hassissi-Sabel, 2016; Lev Ari & Mula, 2017). Specifically, the research on socio-cultural background of students provides relatively little understanding of its implication on students' learning experience and other manifestations of learning, such as students' engagement and Approach to Learning (Sulkowski & Deakin, 2009).

For instance, Kahu (2013) identifies three main perspectives by which students' engagement is viewed: as an individual's process (i.e., a psychological perspective), as a socio-cultural role (i.e., socio-cultural perspective), and as an holistic broader view of students' engagement in higher education. Still, she concludes that these perspectives are limited and problematic in understanding students' engagement and experience due to "*poor definitions and a lack of distinction between the state of engagement, factors that influence student engagement, and the immediate and longer term consequences of engagement*" (Kahu, 2013, p. 758). This calls for an examination of how students' socio-

cultural background is reflected in the way they conduct during their higher education studies.

As I will show below, students' sociocultural background plays a significant role in framing their experiences during their studies in Higher Education and in forming students' attitudes toward Higher Education, thus influencing their conduct during their studies, as explicated by their Approach to Learning and engagement in their studies, may serve as an efficient means and indication for improving their experiences. For this purpose, I will examine how culture is expressed in the framework of higher education students experience, followed by a close-up examination of these cultural expressions in the Israeli higher education context, and specifically teachers' training institutions.

### ***Socio-cultural diversity and Higher Education***

Students' realities influence their engagement and learning at higher education institutions. Higher education experience is complex, however it is informed by students' cultural, racial, gendered and even class backgrounds (Housee, 2011, p. 86).

According to Laron & Lev Ari (2013, p. 101): “*Socio-cultural atmosphere, in the context of higher education, means that every student, regardless of sex, social status, ethnic, racial, and cultural characteristics, has an equal chance to integrate, to learn, and to succeed in the institution where he studies.*”. In other words, an examination of students' cultural dimensions and Approach to Learning must first consider their experiences when meeting and engaging with ‘others’, as explicated by Laron & Lev Ari (2013) concept of Socio-Cultural Atmosphere. As some students might experience their studies as supportive, inclusive, and favorable to learning, other students may experience them as dismissive, destructive, and alienating (Housee, 2011).

The ideological approach of multiculturalism views cultural diversity as an asset and an aim that needs to be cherished and further developed and the existence of cultural variance should not be perceived as a threat to social solidarity or as an affront to national or 'other' qualities. Accordingly, it is expected that, ideally, students' reference to 'the other' is supposed to be based on respect and recognition of differences (as opposed to paternalistic reference of 'the other' or even their total negation) (Lev Ari & Laron, 2014; Lev Ari & Mula, 2017). Additionally, as students who are more involved in their studies are often more successful, and consequently are more satisfied with their studies (Haarala-Muhonen et al., 2011), higher education institutions increasingly recognize the need to provide better learning environments and foster better learning atmosphere that can empower students' learning experience, including by mitigating socio-cultural needs (Sakurai et al., 2016). Still, academic experience was found to be different among students from different cultural backgrounds (Lev Ari & Mula, 2017; Parpala et al., 2013; Sakurai et al., 2016).

The common assertion that sociocultural background affects the learning experience of students was examined by Hagenauer et al. (2016). Their study involved students from universities in two individualistic but culturally different countries (Australia and Germany). Their findings showed that while students from both countries experienced both positive and negative emotions regarding to their learning and institutions, the ideal relationship between faculty and students was perceived differently by the two groups. Students from both cultural contexts exhibited some similarities: both groups expression of positive emotions was construed as an integral part of their academic experience, with emotions perceived as being controlled by professionalism. Nevertheless, a closer examination elicited significant differences between the groups, such as the Australians were more inclined to express positive emotions while the



Germans were more inclined to expressing anger (Hagenauer et al., 2016, pp. 44–45). Hagenauer et al. (2016) also document differences in students' perception of the quality of their interpersonal relationships with their teachers. The interpersonal relations between teachers and students, as well as teachers' caring, were more prominent in the Australian group than in the German group, while students from the latter group put more emphasis on professional working relationships and formalities of their interactions with their teachers (Hagenauer et al., 2016, p. 66).

The interaction of students with other students from different socio-cultural background might affect their ideas, attitudes, and perceptions. On the one hand, such interactions might expand knowledge of 'the others' and promote cultural openness, thus contributing to an open, plural learning environment. Nevertheless, on the other hand, such interactions may incite and reinforce stereotypes and prejudice, which can lead to a learning environment laden with stress and alienation between the different groups (Lev Ari & Hassissi-Sabel, 2016; Lev Ari & Mula, 2017).

Higher education learning experience in a multicultural<sup>23</sup> context, such as illustrated by the Israeli case, includes interaction with students who are different, which may shape and affect the social-cultural experience in the institute. According to Laron & Lev Ari (2013, pp. 104–105), learning experience in the multicultural context refers to students' regard of the social-cultural climate, i.e. their perception regarding the degree to which they receive a fair chance to integrate and succeed in their studies regardless of their gender, social status, religion, ethnicity, race and culture, the degree to which they feel there is equality and consideration on the part of the teachers regarding all students

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<sup>23</sup> The term 'multicultural' in this context refers to ethnic and cultural diversity (as in "many cultures"), and not in the sense of liberal pluralistic education (Lev Ari & Laron, 2014)

regardless of the cultural sector to which they belong, the learning atmosphere in the classroom, whether the teachers encourage students from different sectors (i.e., minorities) to freely express their opinion in class, the degree to which the students are tolerant to others and the degree of the learning institution's cultural sensitivity (Laron & Lev Ari, 2013).

In conclusion, the review suggest that students' higher education experience is informed by their background (e.g., their race, gender, cultural affiliation, religion, and socio-economic class), and as such their learning experience and engagement are influenced by their perception of reality (Housee, 2011).

Socio-cultural diversity of students contributes to the diversity of opinions, broadens the perspective of students, and therefore contributes to improving the quality of higher education. Better yet, socio-cultural diversity of students contributes to the inclusion of various individuals in society, and particularly of individuals from underprivileged groups. Higher education institutions increasingly recognize the need to provide better learning environments and foster a better learning atmosphere that can empower students' learning experience, including by mitigating socio-cultural needs.

In the context of the present study, this means that students that feel they can thrive and succeed in their academic studies, regardless of their socio-cultural background, experience their studies better and are more engaged in their studies. Thus, in the next section I will examine how these feelings are expressed in relation to the academic institutions in Israel.

### *Cultural facets of Israeli students' Higher Education academic experience*

Research of Israeli higher education students' cultural orientation and experience is limited, and so is research of students in teachers training institutions (Kharanbeh, 2018; Laron & Lev Ari, 2013; Lev Ari & Hassissi-Sabel, 2016; Lev Ari & Laron, 2014; Lev Ari & Mula, 2017). As many Israeli teachers' training institutions are culturally or ethnically separated<sup>24</sup>, some argue that there is a measure of cultural-ethnic separation in the academic institutions for education (Lev Ari & Mula, 2017). This means that many Israeli students, at the very least students in teachers training institutions, often prefer to study with students which are culturally and ethnically like them. In other words, by choosing a profession and a higher education institution that corresponds to the characteristics of the sector to which they belong, the students' apply what can be viewed as voluntary ethnic-cultural convergence (Lev Ari & Mula, 2017).

Moreover, according to Lev Ari & Laron (2014), the non-pluralistic reality of the Israeli society is of a multiplicity of cultural groups, trying to control each other and avoiding mutual openness, not recognizing differences between cultural groups while maintaining equality between people. This lack of salient features of tolerance and pluralism is also evident in Israeli higher education institutions, as well as in teachers training institutions in Israel in which, according to Lev Ari & Laron (2014), there is no proper preparation (and sometimes any preparation) of students for successful coping with for the complex multicultural Israeli reality.

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<sup>24</sup> According to the Israeli Council of Higher Education (2019, 2021) approximately 40% of students in teachers' training institutions study in Arab or in Jewish religious dedicated and separated institutions (see Figure 35, p. 109 and chapter 3.3)

A study by Laron & Lev Ari (2013) focused on the learning experience of Arab<sup>25</sup> students in a public plural (i.e., not an Arab or Jewish religious dedicated institution) teachers' training institution in Israel. Such teachers' training institutions are one of the liberal pluralistic higher education institutions in which the main language of instruction is Hebrew and in which most of the students are Jews. Thus, Laron & Lev Ari (2013) focus on Arab students as members of the “other” group, thus in the context of their study Arab students were viewed as a national and ethnic minority. The Arab students in their study expressed their experience regarding academic teaching quality, learning contents, informal day-to-day life in the college, as well as regarding symbolic facets affiliated with the formal culture of the institution (i.e., secular Jewish).

Laron & Lev Ari (2013) results indicated that Arab students had generally positive learning experiences, an intercultural rapprochement, and a good feeling regarding the social-cultural climate in the college. Arab students report a relatively successful integration into the college's social-cultural climate. Laron & Lev Ari (2013) also find that both Arab and Jewish students attested to feeling equal and maintaining good social ties and friendly interpersonal communications, devoid of any sectorial friction. The learning experience reflected in the students' reports depicted a respectful, open, and accepting climate (Laron & Lev Ari, 2013).

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<sup>25</sup> In their study Laron & Lev Ari (2013), Arabic was used as the main characteristic for defining the research groups. Such a definition considers the group of Hebrew-speaking (and usually secular) Jews to be the main reference group in Israeli society to which other groups are compared. Moreover, such an inclusive approach sees the Arabic-speaking public in Israel as one homogeneous group ethnically, religiously, socially, culturally, and even politically. Although there are many differences in these respects between the different Arab groups (see chapter 2.2.2), this approach prevails in other studies on this topic (for example, Abu-Saad, 2016; Asbah, 2018; Eshel et al., 2007; Hertz-Lazarowitz et al., 2010; Lev Ari & Hassissi-Sabel, 2016)

Nevertheless, Laron & Lev Ari (2013) also document some indication of alienation and estrangement feelings among some of the Arab students, which, according to these Arab students, were related to the institution's official conduct, public sphere, and informal surroundings controlled by Jewish culture. These symbolic experiences were accompanied by feelings of bitterness and frustration among the Arab students, and some even expressed their indignation and protest. Thus, Israeli Arab students' learning experience is generally positive and cultural supporting, i.e., providing them with an equal chance to integrate, learn, and succeed. However, these positive experiences might be hampered due to cultural related negative feelings of them as minorities (Laron & Lev Ari, 2013, pp. 112–113).

A similar study was conducted by the same researchers (Lev Ari & Laron, 2014) among post-graduate students in a teachers training institution over a period of two years. Overall, their findings show that the students' learning experience had a positive effect on reinforcing positive perceptions regarding multiculturalism and that students perceived the “other” culture as equal and legitimate. However, despite a positive improvement in their second year, most of the students did not hold positive positions regarding multiculturalism, and this position was particularly notable among Jewish students.

According to Lev Ari & Laron (2014) this shows that higher education studies indeed provides students with an opportunity for a pluralistic, liberal and expansive experience on a personal level. However, according to their findings, multicultural policy is regarded as more beneficial to minorities, aiming at lessening inequalities and discrimination, thus multicultural policy is more supported by minorities. Still, it seems that students understand that educating towards multiculturalism reinforces feelings of

equality and allows the minority to lead change in their community and in the entire society in preparation for a more equal society (Lev Ari & Laron, 2014).

In a more recent study, the researches Lev Ari & Hassissi-Sabel (2016) also focused on post graduate students' learning experience in the framework of meetings between Jews and Arabs during their studies in teachers training institutions and in education faculties in Israeli universities. Their research aimed to examine whether the joint learning experience had any effect on the framing and development of intercultural efficacy. The research results indicated that the learning experience of higher education students studying education raised, all-in-all, positive feelings and it contributes to intercultural efficacy (Lev Ari & Hassissi-Sabel, 2016).

Nevertheless, Arab students raised suggestions for improvement following their learning experience, as they feel disenfranchised while trying to be accepted by the Jewish majority. According to Lev Ari & Hassissi-Sabel (2016) Arab students felt the need to show their Jewish peers who they “really” were, aspiring to break negative stereotypes and overcome their feelings as a deprived minority. Some of the Arab students pointed the need for the learning materials to be more culturally sensitive and diversified, such that the knowledge regarding the “others” would be better conveyed, and that the faculty staff should be more diversified by adding Arab lecturers (Lev Ari & Hassissi-Sabel, 2016, pp. 6–7).

Using a similar research setup, Lev Ari & Mula (2017) examined post graduate students' experience in four teachers' training institutions in Israel. They focused on students' experiences regarding their multicultural meetings on campuses, both in-class interactions and informal after-class meetings. Specifically, their purpose was to examine whether these interactions had a positive effect on students' attitudes and behavior

towards the "others", as well as on students' learning experiences in the educational institution. For students for whom higher education was the first meaningful interaction with the "others", Lev Ari & Mula (2017) results indicated that intercultural meetings during their studies in the institutions had a significant positive influence on their learning experience, enabling them to familiarize with the "others", to experience and understand the concept of multiculturalism, as well as to enjoy a better learning environment which contributed to their learning engagement (Lev Ari & Mula, 2017). Moreover, Lev Ari & Mula (2017) document that the experience of studying together allowed students from both groups (Arabs and Jews) to assuage and even completely eliminate negative perceptions and stereotypes regarding the "others", create close friendships and identify personal and group similarities.

Furthermore, students' cultural orientation was found to contribute to the social strategy they employed during their interactions with others during their higher education studies (Eshel et al., 2007). Arab students (in this context, a socio-cultural minority group) are more prone to use a strategy of social integration, while the (secular) Jewish students (in this context, the majority-hegemonic socio-cultural group) were more inclined to follow a social isolationism strategy (Eshel et al., 2007). The learning experience in higher education institutions exposed many Arab students to a new culture. A good learning experience with social adaptation on the part of the Arab students included cultural adaptation that supports integration with the majority group (in this case, secular Jewish). The perception of the majority positions in the eyes of the minority had another contribution to the Arab students' social and psychological adaptation. This means that the minority group's experience is not unilaterally set by them but is also shaped by the majority's positions and objectives (Eshel et al., 2007; Lev Ari & Mula, 2017).

Another study (Kharanbeh, 2018) conducted in the Ohalo College of Education and Teaching in northern Israel had generally indicated positive learning experiences as part of the integration between Arab and Jewish students. The study had examined the experience and perceptions of Jewish and Arab students (among them Muslim, Christian and Bedouin students) regarding their joint studies, the contribution of integrating students from different backgrounds to minimizing the rifts in society, a better perception of the others and understanding others. The research indicated that students who prefer to study in integrated classrooms believe that this had a positive contribution to minimizing social rifts. These students also believe that the joint learning experience assists in accepting the others and leads to minimizing the gaps in Israeli society.

Other associations between students' Higher Education experience and cultural orientation were documented by Davidovich et al. (2006 as cited in Lev Ari & Mula, 2017). They examined the academic learning experiences of Jewish and Arab students in two regional colleges in Israel and found positive academic experiences of both groups, as well as positive attitudes toward- and perception of- the 'others', with most of the students viewing the cooperation and relationships between students from both groups as a valuable aspect of their academic tasks involvement Davidovich et al. (2006, as cited in Lev Ari & Mula, 2017).

Thus, like Lev Ari & Hassissi-Sabel (2016), other researchers conclude that, overall, students perceive the climate in the educational institution mainly as positive and feel that their academic institution refer to all students equally, where all students are given the same fair chance to attain and succeed in their academic studies (Kharanbeh, 2018; Lev Ari & Mula, 2017). Additionally, according to Lev Ari & Mula (2017), students feel equal among equals and define the teachers training institution as generally culturally sensitive.



However, Lev Ari & Mula (2017) also documented a socio-cultural differences of students' perceptions regarding their learning experience, indicating that common learning experience in higher education institutes is complex and diversified. According to them "*Arab students are more knowledgeable regarding the Jewish culture and are more willing to change attitudes and educational practices in light of multiculturalism, Jewish students are less prone to make such changes*" (Lev Ari & Mula, 2017, p. 979). Some of the Jewish students, for instance, described their cultural-related learning experiences as personal, context-related, and fleeting, that is, they estimate that their learning experience will not extend beyond the framework of their higher education institution studies. In contrast, some Arab students criticized the institution's attitude towards Arab students and raised the need for a more honest student integration, for example by inviting them to expose their feelings in class in order to honestly depict the social experience they have outside the classroom. Some Arab students claimed, in this context, that their learning experiences were hampered because of a de facto separation between the different socio-cultural groups. In other words, the students felt that the joint learning experience in the college was coincidental and not deliberate, so that the college did not make an exceptional contribution towards multicultural education (Lev Ari & Mula, 2017).

Several researchers have tried to provide explanations for the apparent equivocal association between socio-cultural background and students' higher education learning experience (for instance, Kharanbeh, 2018; Lev Ari & Mula, 2017). According to which, on the one hand higher education institutions serve as a relatively successful framework for the inclusion of students from diverse cultural and socioeconomic backgrounds, but on the other hand trying to provide a socio-cultural learning atmosphere is perceived

differently by students from different backgrounds thus affecting their learning experience differently.

For instance, Lev Ari & Mula (2017) concluded that the learning experience of students from a different cultural or ethnic background (in their context referred to as minority groups) in many cases encompasses unique difficulties. First, some of these students come from pre-academic educational systems that do not provide them with sufficient or robust basis for higher education due to limited teaching force and teaching resources, as well as inadequate teaching methods and learning skills (Lev Ari & Mula, 2017).

Kharanbeh (2018, pp. 12–13) also concluded that socio-cultural background<sup>26</sup> can at times be expressed as poor quality of education even before reaching higher education institutions - as many socio-cultural minorities students often choose to learn at cultural-homogenous elementary and high schools, it turns out that the education level of many of these schools is relatively poor, with their students ranked low in achievements, learning proficiencies, and computer skills (Kharanbeh, 2018).

Another aspect of learning experience at higher education institutions of students from different cultural background is language (Ippolito, 2007; Méndez García & Pérez Cañado, 2005). As mother tongue is one of the most prominent characteristics by which students are culturally differentiated, language barrier becomes central on a personal level. Higher Education studies are most often than not held in the more common language (in Israel the language is Hebrew) and students are expected to master this language, i.e., they are expected to be proficient with verbal conversation, reading, and

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<sup>26</sup> Similar to Lev Ari & Mula (2017), in Kharanbeh (2018) context, the term "socio-cultural background" is in practice a reference to socio-cultural minorities in the Israeli society

writing in the language. Students from 'other' lingual background, for instance immigrants or students from ethnic minorities, are thus expected to quickly adapt to a double challenge set by both the academic studies and by language - they must understand the teachers, participate in class discussions, take notes, read articles, submit courses' assignments, and succeed in examination all in a language that is not their native tongue, and sometimes it is even their third language (Culp et al., 2009; Méndez García & Pérez Cañado, 2005). Thus, students from different cultural backgrounds may experience their higher education studies differently due to different language challenges (Kharanbeh, 2018).

Research conducted in Haifa University in Israel (Hertz-Lazarowitz et al., 2010) showed that the experience of studying in higher education institutions is also related to political positions and national aspirations. Although their study indicates that both Jewish and Arab students feel that all in all the socio-cultural learning atmosphere in the university is positive and empowering, they also indicate different learning experiences in diverse contexts on the political and national level.

Hertz-Lazarowitz et al. (2010) research shows that the learning experience is significant in formulating positions among students and their regard of "others". Nevertheless, their research also found that the Muslim-Arab students were less inclined to regard the university as an institution that provides academic empowerment and democratic experiences, creates ties between different social group and promotes pluralistic multicultural life. However, those students did not rule-out and were more than willing to integrate with the majority group, i.e. secular Jewish students (Hertz-Lazarowitz et al., 2010).

Furthermore, Hertz-Lazarowitz et al. (2010) also documented that some of the Arab students' (in their context, a socio-cultural minority group) were inclined to refer to their experiences in terms of a conflict and negative emotions, while other Arab students' experiences voiced their aspiration to integrate and attain equality in a multicultural society. In addition, most Arab students expressed their experiences using more collectivist terms, while experiences depicted by Jewish students were more individualistic in their nature and expressed concern and threat due to their view of the national conflict (Hertz-Lazarowitz et al., 2010, p. 126).

In conclusion, an examination of the effect of students' background characteristics on their higher education experience in Israel leads to conclusions that are ambiguous and even contradictory.

On the one hand, Israeli higher education institutions provide students with an inclusive framework that cultivates pluralistic values and a socio-cultural atmosphere (Laron & Lev Ari, 2013). Hence, Israeli higher education students' experience is positive, and is mainly characterized by a feeling that this atmosphere provides and enables all students an equal and fair opportunity to have an equal chance to integrate, to learn, and to succeed, regardless of their socio-cultural background and characteristics. This also leads students to a general convention according to which Israeli higher institutions constitute one of the most open and culturally liberal frameworks in Israel, in which equal, personal, and close interactions and relationships are taking place, sometimes for the first time in the students' lives, between individuals from different backgrounds in Israeli society (Lev Ari & Mula, 2017). These personal experiences, and particularly in

the context of joint learning, contribute to the alleviation of prejudices and stereotypes and to bridging of gaps in society.

On the other hand, however, the Israeli reality indicates that cultural considerations play a significant role in shaping students' experience in higher education institutions. First, it turns out that a significant part of the teacher training institutions in Israel are sectoral and seclusive, mainly on a religious and ethnic basis. This suggests not only an ethno-cultural learning experience preference of students in these institutions, but also on an ethno-cultural vocational bias of the Israeli students, according to which students' vocational choice (i.e., to become teachers) and higher education institution choice reflect their socio-cultural background characteristics (Lev Ari & Mula, 2017).

Second, socio-cultural background of students affects their knowledge, skills, and proficiencies. Higher education requires (or at least, implicitly assumes) all its' students to be well educated, however the literature documents significant socio-cultural disparities concerning students' education quality, such as the level of knowledge they have acquired in elementary and secondary education, their learning skills, and their language proficiencies, and especially their degree of Hebrew proficiency (Culp et al., 2009; Ippolito, 2007; Kharanbeh, 2018; Méndez García & Pérez Cañado, 2005). As these cultural induced gaps are often apparent and substantial, they are sometimes manifested by students' negative positions toward the institution and higher education in general as well as in students' higher education learning experience and engagement.

Third, it is evident that students' higher education experience is influenced by political and national positions. That is, students' attitudes can view academic studies are a means of social equality and inclusion and therefore their learning experience is usually positive. However, students' may view the high education institution, or their academic

studies, as means for differentiation, in which case their learning experience is often negative. In both cases students' cultural orientation was found to contribute to the social strategy they employed, whether it is a strategy of social integration or of social isolationism (Eshel et al., 2007; Hertz-Lazarowitz et al., 2010).

Therefore, in the context of the current study, it can be concluded that students' socio-cultural background plays a key role in forming their learning experience. The literary review indicates that students' cultural orientations express their perception and attitude toward the higher education institution and the role of academic studies. Thus, diverse students' cultural orientations are expected to be reflected in various motifs for choosing teaching profession, as well as their academic experience, i.e., their perception of their studies as transformational and supportive, promoting disciplinary knowledge and understanding, and fostering critical thinking (Entwistle et al., 2003; Manikutty et al., 2007; Utriainen et al., 2018). Furthermore, as students' ATL depend both on their personal preference and tendency as well as the way they experience their learning, it is expected that diverse students' cultural orientations are reflected in the way students are engaged with their studies and approach their learning, i.e. whether their preferences might be characterized as in-depth, superficial, and achieving goal-oriented (Entwistle, 2018; Manikutty et al., 2007; Stover & Holland, 2021).

## **Chapter 2: Teachers' training in Israel - a socio-cultural development, challenges, and investment overview**

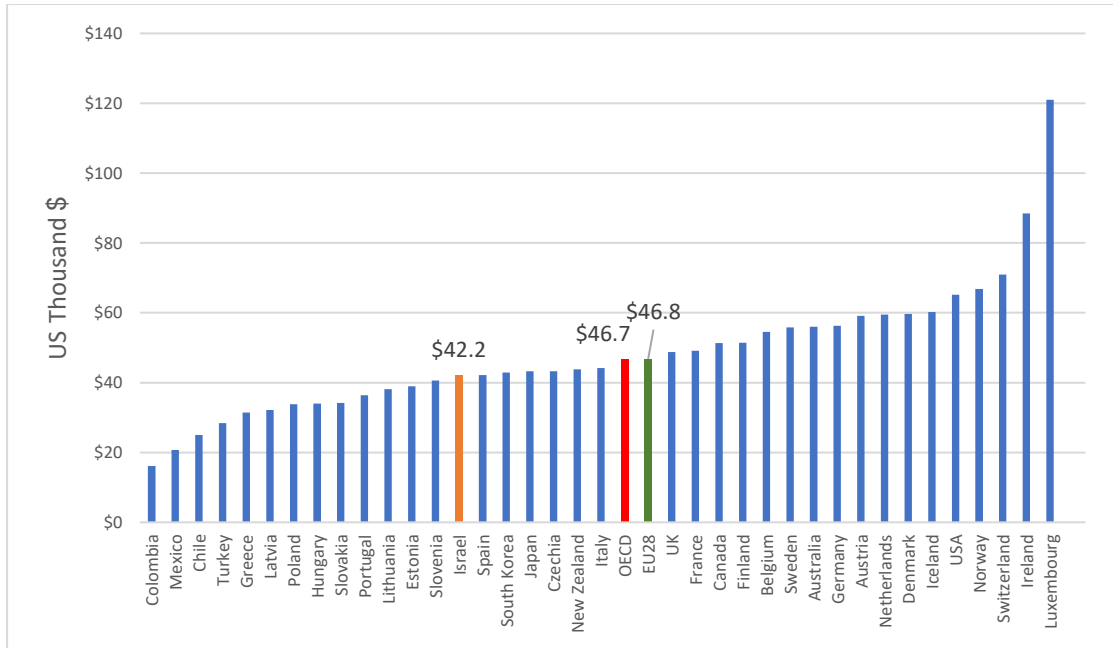
As a member of the OECD<sup>27</sup>, Israel is one of the most economically developed countries in the world. With a per capita economic product of just over \$ 42,000 in 2019 and an economic growth rate of about 4.4% (see Figure 2 and Figure 3), Israel's development is similar to other developed countries such as Spain and South Korea. In recent years, its unemployment rate has been historically low (3.8%) and it enjoys a continuous surplus in the balance of payments and trade (Central Bureau of Statistics, 2020c).

As will be reviewed below, the economic success of recent years is threatened by a bleak forecast for Israel due to demographic changes, centered on significant demographic growth of seclusive socio-cultural groups that do not participate in the labor market and have low levels of education, questioning Israel's ability to maintain this level of development over time (Even, 2021; Soffer, 2016)<sup>28</sup>.

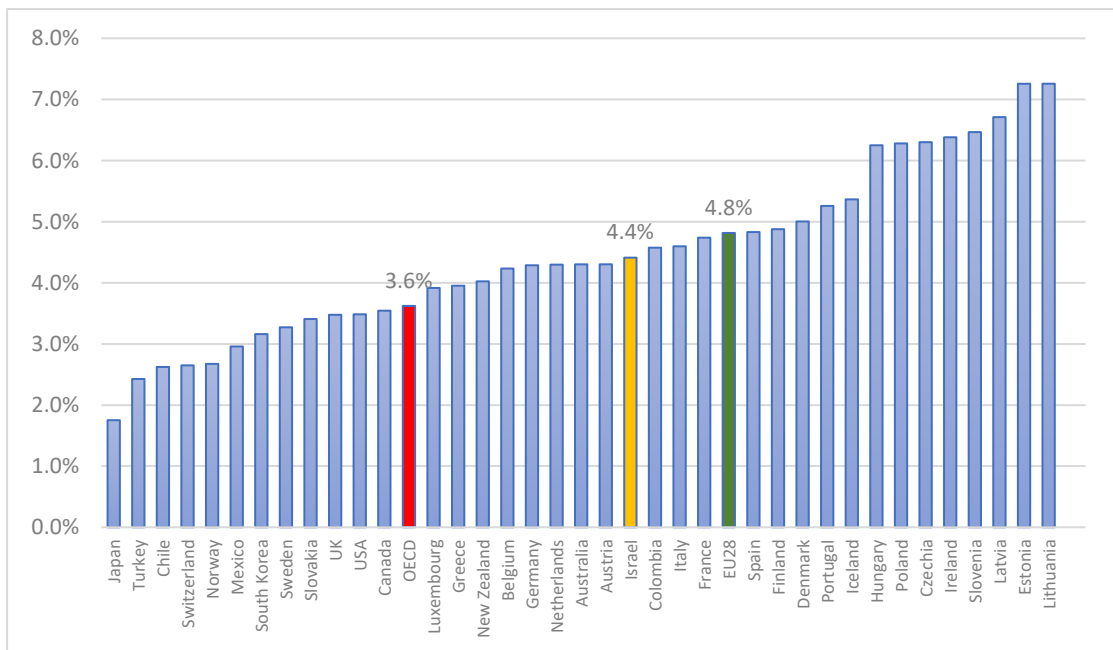
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<sup>27</sup> The Organization for Economic Co-operation and Development (OECD)

<sup>28</sup> A review on the demographic and economic projections of Israeli society is presented in **שגיאה! מקור ההפניה לא נמצא.** (p. 392)



**Figure 2: Gross domestic product (GDP) per capita in OECD countries in 2019 (OECD, 2020)**



**Figure 3: 2015-2019 average GDP per-capita growth in OECD countries (OECD, 2020)**

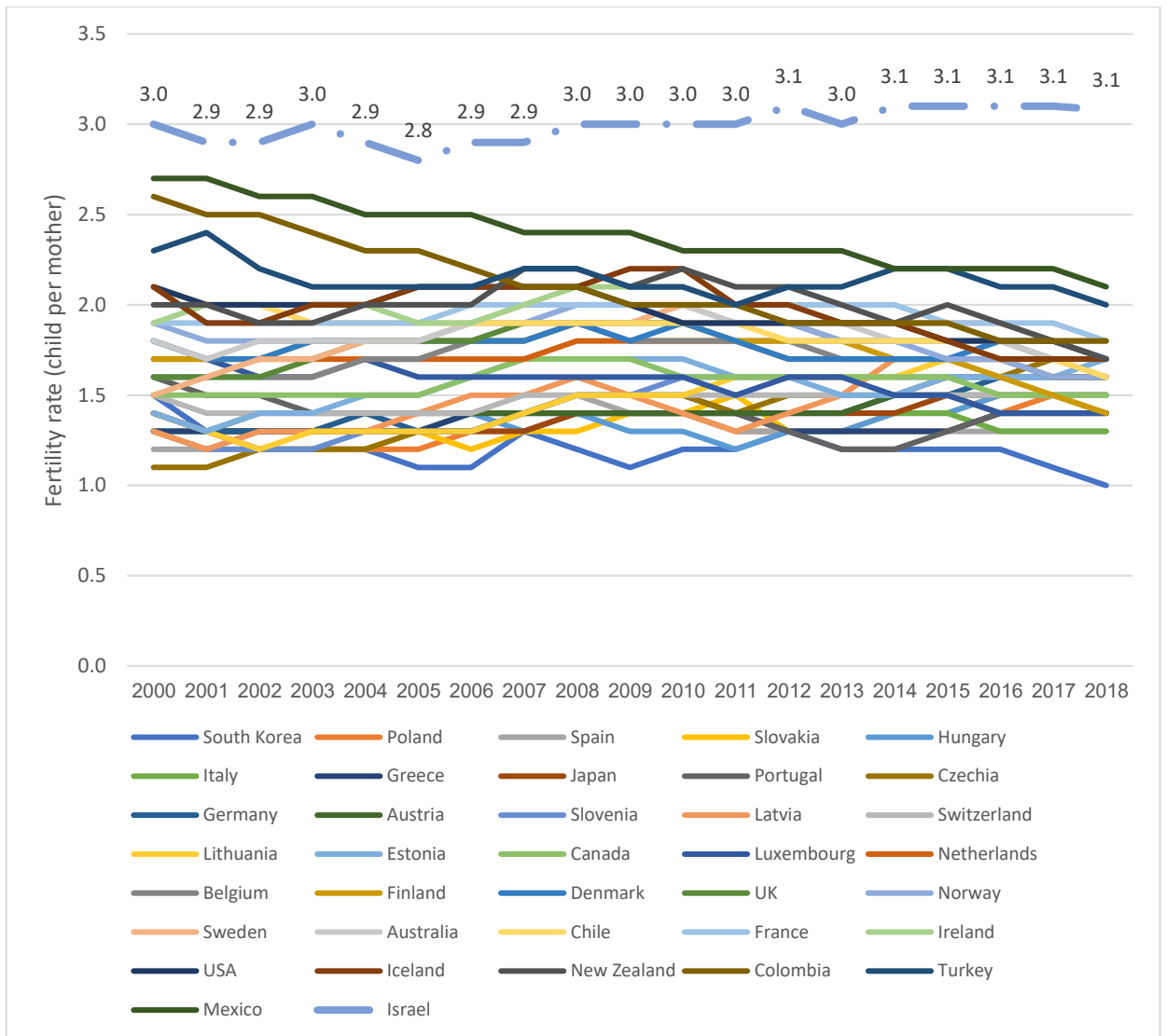


Considering these flattering economic data, it is interesting to discover a significant demographic difference between Israel and other developed countries. According to the Central Bureau of Statistics (2020), at the end of 2019 the population of Israel was estimated at 9.14 million people, belonging to 2,667,600 households with an average of 3.24 people per household. The average annual population growth rate in Israel is 1.9% and the total birth rate in the country is 3.01 children on average per woman. As illustrated in Figure 4, this fertility rate is stable over the recent decades.

Using recent OECD (2020) data, a comparison of the Israeli fertility rate with fertility rates of other OECD countries, as illustrated in Figure 4, reveals two main dissimilarities. The first concerns with steady declining fertility rates in all OECD countries, except Israel. The second concerns with the fact that during the last decades fertility rates in all OECD countries, except Israel, Turkey and Mexico, are negative, meaning that fertility rates in the former countries are below the Replacement-level Fertility Rate threshold of 2.1 children per woman<sup>29</sup> (Winkler, 2015). The implication of this is that unlike most OECD countries whose population is shrinking and maturing, Israel's population is growing and becomes younger.

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<sup>29</sup> According to Winkler (2015), Replacement-level Fertility Rate is the total fertility rate sufficient for one daughter to replace one mother each year. In developed countries this threshold is 2.1. It is worth pointing that intergenerational turnover rate is 2.1, and not just 2.0, because each year slightly more boys than girls are born, and because not all women, even in industrialized societies, survive until the end of their fertility period. In developing countries, where mortality rates are higher, the intergenerational turnover rate is higher than 2.1 children per woman (Winkler, 2015)



**Figure 4: Fertility rates (children per mother) in OECD countries (OECD, 2020)**

This means that the Israeli birth rates (or fertility rates) are exceptional in an international comparison. As will be reviewed below, this insight entails grave implications for Israeli society and economy. First, Israel's fertility rates are economically unsustainable, which in the educational context of the present study mean allocating more resources for education (e.g., more institutions, more teachers and caregivers, and higher government financial support). As current highest Israeli public budget expenditure is on

education, this means that Israel will not be able to sustain its future educational needs (The Chief Economist, 2021).

This also has grave implications for the future composition of students in the education system, the nature of its institutions and its curriculum. As I will see below, the state's official education system already operates alongside independent (mostly ultra-Orthodox) educational frameworks, which are financially supported by the state but not supervised by it. In particular, the quality of education in these frameworks is not high - it does not equip its graduates with the appropriate tools for integration into the labor market and imposes on them and future generations further cultural, social and economic segregation and isolation (Blass, 2019, 2020; Chernovitsky & Feldman, 2018; Ministry of Education, 2020a; The state comptroller and ombudsman of Israel, 2020).

Second, and more importantly, Israel's exceptional fertility rates are not homogeneous. Rather, they are high mainly among specific socio-cultural groups, such as religious and orthodox Jews and Arab Muslims. These socio-cultural groups prefer social seclusion, with many of their members are from lower socio-economic strata or from marginalized groups, and their participation in the labor market is low (Winkler, 2015).

Moreover, I will show that many of these socio-cultural groups often operate separate and dedicated state-funded education systems, with poorer educational outcomes and lacking students' skills (see section 3.1, regarding the structure of the Israeli education system). An increase in the population share of these socio-cultural groups means a bleak future for the whole Israeli society, as more of its workforce will be unskilled with no appropriate education to meet future employment market demands,

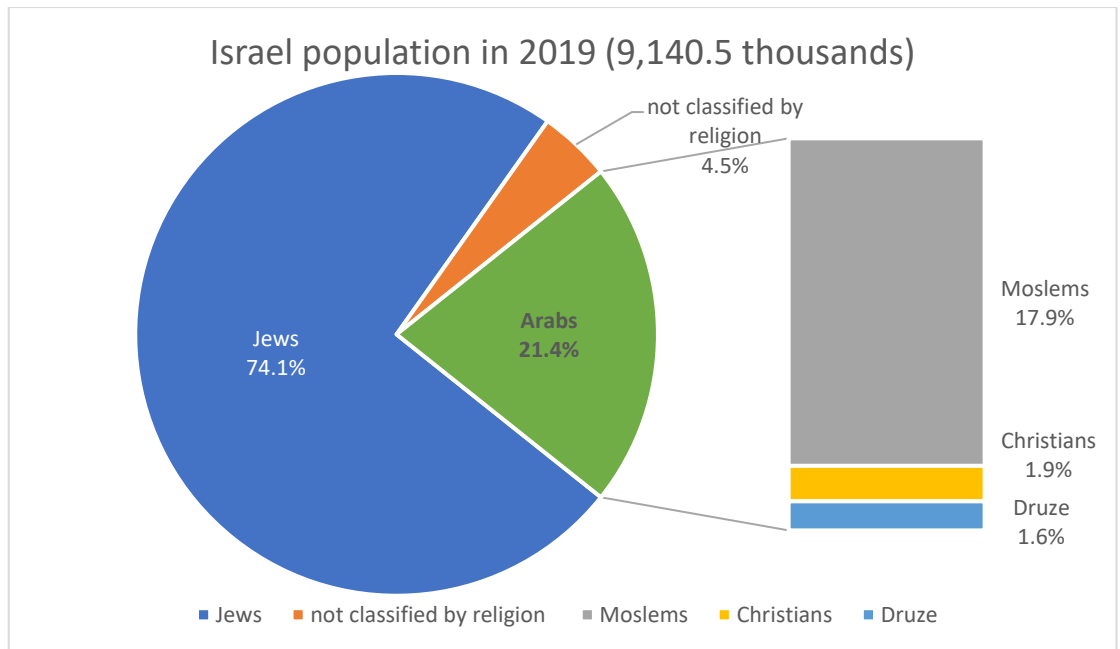
and therefore doomed to remain at the bottom of socio-economical strata (Even, 2021; Soffer, 2016)<sup>30</sup>.

For this purpose, in the following of this section I will review key aspects of the Israeli society, socio-cultural groups, and demographic trends. I will then provide a review of social investment in Israel and a review of the Israeli education system. Special emphasis is placed on reviewing the characteristics of Israeli teachers and of the Israeli higher education system.

According to the official publication of the Central Bureau of Statistics (2020c), Israeli population can be divided into three major population and religion groups (as illustrated in Figure 5): Jews (6.773 million inhabitants, constituting 74.1% of the country's population), Arabs, including Muslims, Circassians, Christians and Druze (1,958 Million residents, 21.4%) and others, including non-Arab Christians, members of other religions and non-religious classification (0.409 million residents, 4.5% of the country's population).

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<sup>30</sup> A review on the demographic and economic projections of Israeli society is presented in *שגיאה! מקור ההפניה לא נמצא.* (p. 392)



**Figure 5: Israel population by religion in 2019 (Central Bureau of Statistics, 2020b)**

Such a definition of population groups and religion in a way that obscures the religious, cultural, and even political background is neither accidental nor unique to Israel (Winkler, 2015). According to Winkler (2015, pp. 13–14), obscuring census data due to political and social sensitivity is not uncommon, with one of the most known examples in this context is Lebanon, whose governmental structure and composition of power was determined by a religion-ethnic key according to a census it conducted when it was founded back in 1932. Lebanon has not conducted a single census since, and if it did, the results would probably confirm the loss of the Christians majority in government institutions in favor of the Shiites, and probably lead to a fundamental change in government order there (Winkler, 2015, pp. 13–14). More recent examples for such obscurity practice refer to methodologies used to measure and report race (Song, 2018), as in the case of third-generation Mexican American (Vasquez, 2010), to measure

diversity (Harries et al., 2019; Patsiurko et al., 2012; Voas & McAndrew, 2012), and even as means for reducing the risk of armed conflict (Strand & Urdal, 2014).

In Israel, the demographic issue is one of the most significant issues in the political system, now as it was since its foundation, regarding many socio-religious-religious issues: right- and left wing arguments concerning the definition of who is a Jew which lies at the core of immigration laws to Israel (Gal, 2008); the state's attitude to the Arab minority (Rajagopalan, 2002; Toft, 2012); the development of immense variability of fertility rates between different social groups (Almog & Bassan, 2018) that one of its main expressions is an ongoing debate about the applicability and character of the welfare state (Soffer, 2016; Weinreb et al., 2018). Addressing this issue leads Winkler (2015, pp. 19–20) to the gloom conclusion that in practice there are a number of different sectors in Israel whose only common denominator is living in the same political territory. According to him, the creation of these polarized sectors in society is the result of poor demographic and employment policies of Israeli governments and they may even cast a heavy shadow on the future of the State of Israel as a democratic state.

Since the focus of the present study is the Israeli education and higher education systems and following Bruner (1996)'s view of education within the context in which it takes place, hence as indigenous to culture, stemming from it and aimed to serve some of its purposes<sup>31</sup>, the implications entailed in these demographic trends calls for a better understanding of Israeli socio-cultural groups.

For this purpose, I present a brief review of Israel's population development and characterize Israel's main socio-cultural sectors. It is important to clarify that the purpose

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<sup>31</sup> שגיאה! מקור ההפניה לא נמצא. Socio-cultural background of education is reviewed in chapter (p. 201)

of this review is not to perform an in-depth demographic analysis of Israel's population, but instead to illuminate the demographic changes experienced by the various sectors in Israel in the context of long-term processes, recognizing that these processes have a significant impact on society and culture, and, hence, on Israel's education system.

In the context of the present research, these socio-cultural demographic developments are expected to have significant implications for Israeli teachers and the nature of the future Israeli education and educational system. For instance, very high fertility rates among only several socio-cultural groups are expected to have direct implications on poverty rates (especially child poverty), population aging and labor force participation rates and are therefore challenging and require rethinking the socioeconomic pattern of different sectors (Soffer, 2016). Hence, in the context of the present research, it is important to review the Israeli socio-cultural demographic developments and characteristics.

In addition, the social and demographic development of Israel must be examined with reference to general demographic trends in the world. The common approach to understanding such developments is Demographic Transition Theory (Handwerker, 2019b). In general, according to the Demographic Transition Theory social status and economic development are largely the results of rational decisions of members of a society (Handwerker, 2019a). It views demographic changes as multidimensional expressions of society and culture that entail meanings regarding the perceived expectations for the future, e.g. prospects for economic development, concern for economic security, individuals' status and role in society, as well as their family, tribe, and tradition characteristics (Winkler, 2015).

For example, according to the Demographic Transition Theory, the choice of a family to follow a religious-communal lifestyle, such that is culturally secluded and financially supported by the state, is rational and has direct influence on the family's standard of living, number of children, and most importantly, in the context of the present study, the nature, place, and quality of its' children's education (Lee & Mason, 2010). It is also argued that this choice is made possible in direct affinity with state policy, social structure and cultural characteristics (Handwerker, 2019a).

Therefore, the following provides a brief review of the main changes of the main socio-cultural population groups in Israel. The review is organized as follows. First, the development of the population of Israel from its establishment to the present day, as the nation state of the Jewish people and as an immigration state (for Jews) (Dror, 2013; Sternhell, 2009) is reviewed (see chapter 2.1). The review identifies three main periods: The first period (1948-1967) of mass immigration, the second period (1967-1989) of social consolidation during military conflicts and acute economic crisis, and the third period (1990 to the present) of economic growth and population growth, alongside with growing polarization and extremism (Even, 2021; Soffer, 2016; Winkler, 2015). Each period witnessed the emergence of new socio-cultural groups and the changing of former groups, to what is now known as the Israeli socio-cultural mosaic (Bareli et al., 2005).

Second, the review also points to two socio-cultural groups that are of particular concern due to their low socio-economic status, their cultural seclusion, and especially the quality of their education and its contents. These groups are the ultra-Orthodox Jews, which will be reviewed in chapter 2.2.1, and the Arab society which will be reviewed in chapter 2.2.2. Conclusions and implications of the review are summarized in chapter 2.2.3.

**שגיאה! מקור ההפניה לא נמצא.**



Third, and since the present study is in the field of education, the importance of the review is not only in understanding Israel's complex and unique cultural-social fabric, but in the fact that these demographic, political, cultural and social developments are anchored in legislation and in the characteristics of the Israeli education system (Kup, 2002), for instance as a highly segmented, complicated and untransparent system (Ministry of Education, 2020a, 2020c; Veissblei & Vieneger, 2015; Vieneger & Zerad, 2019a). For this purpose, following the review of Israeli socio-cultural development, I present an analysis of Social Investment as a means of mitigating Israel's social challenges (see chapter 2.3), and continue with a review of the structure of the Israeli education system, as well as its five segments (chapter 3.1), Israeli teaching staff characteristics (chapter 3.2), and Israeli higher education, and especially teachers training institutions (chapter 3.3).

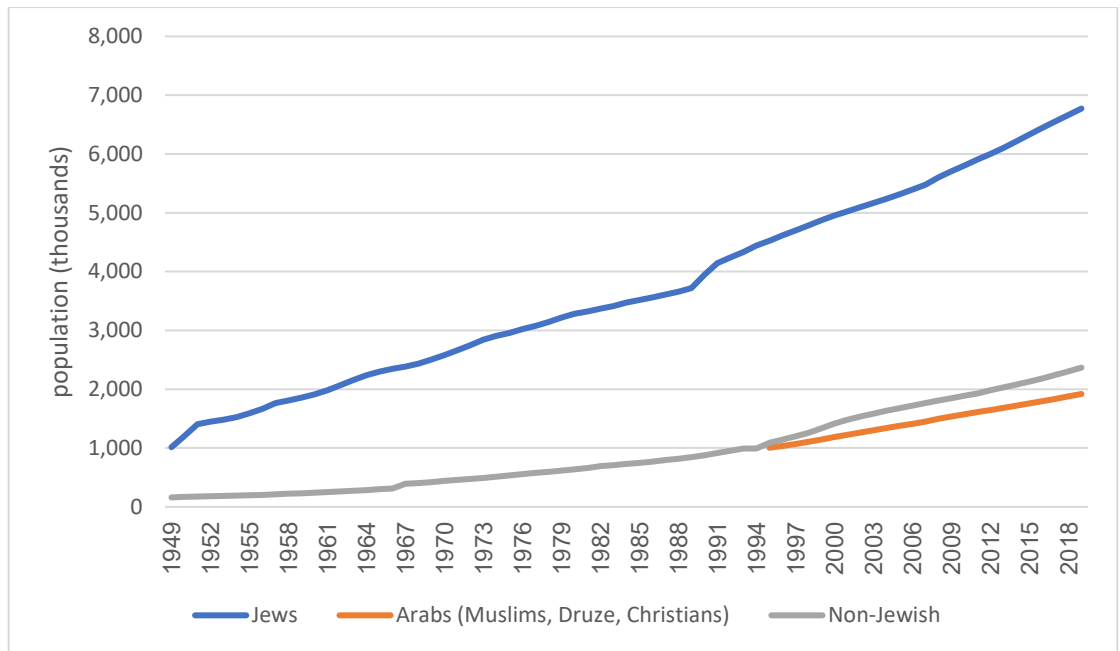
Specifically, the review adopts Katz (2010) view of the education system and curriculum, as "*designed to include the most important body of knowledge to be taught and acquired by every student... [and] also includes the learning skills and social values necessary for the development of productive citizens who function adequately in both cognitive and affective domains*". However, the review reveals that Israeli society, and its' educational system, has radically moved from social solidarity and concern for the welfare of the collective to a post-modern, individualized society in which collective values have all but disappeared (Katz, 2010). Thus, reviewing demographic and socio-cultural developments of the Israeli society is necessary for a better understanding of the significant widening of the social gaps between the different groups in the Israeli population (Katz, 2010; Winkler, 2015), and the complicated structure of the Israeli education system and its' performance.

## **2.1 Milestones in Israel's socio-cultural development**

The founding document of the State of Israel is The Declaration of the Establishment of the State of Israel. In this document, the state was defined as the Jewish state in Eretz-Israel, to be known as the State of Israel (The Knesset, 1948).

Israel's identity as a Jewish state is reflected in the laws of the state in both the national and religious aspects. The effects of this identity on the Arab minority and the ultra-Orthodox minority are very different from each other. In the national aspect, the definition of Israel as a Jewish and democratic state means that Israel defines itself as a state that belongs first and foremost to the Jewish nation and not to all its citizens (Sternhell, 2009). Therefore, some argue that the prevailing democracy in Israel is ethnic – an ethnic democracy is located in the democratic part of the continuum between democracies and non-democracies and combines the granting of equal civil and political rights to individuals and certain collective rights to minorities (Smoocha, 1997; Stopler, 2015). Accordingly, I begin my review by addressing first to the Jewish population in Israel.

Since the declaration of the establishment of the State of Israel in May 1948 until today, the state's population has more than 11 times increased: from about 806,000 people in 1948 to 9.14 million people today. During this period, the proportion of Jews dropped from 86% in the first years of the state to approximately 74% in 2019 (as illustrated in Figure 6), and today there are about 6.8 million Jews living in Israel (Central Bureau of Statistics, 2020c).



**Figure 6: Israeli Jewish and non-Jewish population 1948-2019 (Central Bureau of Statistics, 2020c)**

However, the Jewish population in Israel is not homogenous, and furthermore several "stages" of its development can be identified in the form of waves of immigration and periods of political-social policy (Bareli et al., 2005).

**2.1.1 The early years after the foundation of the state of Israel (1948-1967)**

The first two decades of Israel's establishment were characterized by waves of mass immigration that have no parallel in modern history. For example, within two years of the establishment of the State of Israel, the state's population doubled (from about 800,000 to 1.6 million). This migration wave might be referred to as distressed migration – i.e., of Jewish communities and families from lower social strata that have suffered from harassment in their countries of origin. Many of these immigrants are Jews of Ashkenazi descent, mainly Holocaust survivors and refugees from Europe, but with them also came Mizrahi Jews (such as from Yemen, Syria, Iraq) many of whom were expelled

from their homes following the establishment of the Jewish state (Hacohen, 2001; Meir-Glitzstein, 2018).

It is worth noting that, in general, Ashkenazi Jews are Jews of European descent (and especially, Eastern and Central Europe), while Mizrahi Jews is a referral for Jews from Middle Eastern and North African countries. Although the division between the two communities is geographical, it embodies deep differences in the common traditions, in religious laws, and language. It is also worth noting that such a division has existed since the Middle Ages, and that there is great variation between different groups within this division into Mizrahi or Ashkenazi Jews. For example, the definition of Mizrahi Jews is usually broad and general in a way that includes Maghrebi Jews and Sephardi Jews, who had lived in North Africa, as well as Yemenite Jews or Central Asian Jews (Georgian, Azerbaijan, Persian, Bukharan, Uzbekistan and Tajikistan Jews) despite many differences in religious and social traditions between these groups (Winkler, 2015).

Between 1951 and 1967, two more waves of Jewish immigration arrived in Israel, and a total of another 650,000 immigrants arrived in Israel during this period - most from North African countries and a minority from Southeast European countries such as Romania (Hacohen, 2001). These immigration waves marked not only a quantitative change regarding the social composition, but a social and cultural change. If before the establishment of the state most of the Jewish residents in Israel were from Ashkenazi backgrounds, then after the first waves of immigration the population of Jews in the country included Ashkenazi and Mizrahi Jews at a similar proportion. More importantly, waves of immigration have transformed the population from a relatively homogeneous community to an extremely heterogeneous, similar to other immigrant societies around the world (Smoocha, 2008).

Economically, the first period was characterized on the one hand by rapid growth and expansion of the economy, along with the expansion of Jewish settlement in the territories of the young state through the establishment of many new settlements. The massive economic development, along with the absorption of mass migration waves and the expansion of settlement was made possible through the introduction of an acute austerity regime in the early years, in which the state ensured basic subsistence needs for a population many of whom were destitute. This regime was gradually abolished until 1959 (Winkler, 2015).

Except for the War of Independence (1947-1949), the rest of the period was mostly characterized by relative security stability, which enabled the rapid economic growth. Also, this first period is the founding period, in which the legal system and the judicial system in Israel were regulated, many public institutions were established, regulating civilian life. At the same time, due to the adoption of a parliamentary regime, as well as due to the Jewish character of the state, the religious political parties have been part of the coalition since the early days of the state and continuously since then until today. For this reason, the separation of religion and state was not possible. Thus, although in nature the State of Israel is a secular state, many religious aspects are integrated in its set of laws (Peters & Pinfold, 2018, pp. 2–3). As argued by Cochran (2017, pp. 38–39), this had led to the infiltration of religion to the education system, both in its administrative structure and the values it aspired to bequeath to its' students. One of the most prominent aspects of this was the development of a curriculum that met the needs of "all" Jews – natives and new migrants (Cochran, 2017).

During these early years, two major developments related to the education system took place (Veissblei & Viener, 2015). The first development is the transfer of responsibility for the education of children from private and political organizations

(before the establishment of the state) to the responsibility of the state. This transfer was made through the enactment of the Compulsory Education Law (1949) which stipulates that every child in Israel must be in an education framework (kindergarten or school) from age 5 to age 15. The law requires parents to enroll their children in an educational institution (independent or state) and ensure their regular attendance at school until the end of compulsory school age. The law also stipulates that tuition in compulsory educational institutions will be free until the end of the twelfth grade (Veissblei & Vieneger, 2015).

The second important development was the enactment of State Education Law, (1953). The law abolished the various ideological-political streams of education, and in their place created the infrastructure of Israeli education streams known today: national (secular) state education, state religious education, and independent education for the ultra-Orthodox public (Veissblei & Vieneger, 2015).

It is interesting to note that both developments reflect a compromise made by the founding fathers of the new state. On the one hand, these enactments reflect an ideological state perception that views education and education system as a melting pot for the creation of a new Israeli society (homogeneous, secular, national and socialist in nature), but on the other hand they reflect political arrangements between the ruling party and the religious coalition parties. To a large extent, these arrangements have remained intact and have been perfected over the years, so that the education system is to this day a means of reflecting the balance of political power on the one hand, and on the other a means of promoting various state-sponsored political ideologies (Cochran, 2017).

### **2.1.2 Israel in the third and fourth decade of its establishment (1967-1989)**

This period is defined in practice according to the consequences of the two main wars experienced by the State of Israel: the June War of 1967 (the "Six Day War") and the October War of 1973 (the "Yom Kippur War"), and the dissolution of the Soviet Union (Cochran, 2017).

As a result of the 1967 war, Israel tripled its territory and annexed the Gaza Strip and the Sinai Peninsula, the West Bank, including East Jerusalem, and the Golan Heights. The following years were characterized by prosperity in all fronts – geopolitically, political stability, economic development, as well as socio-demographic prosperity (Winkler, 2015). An important demographic expression of this prosperity was a new immigration wave, this time migration of choice, i.e., a new wave of immigrants mostly from developed and industrialized countries. These immigrants were wealthy, educated, and skilled, with many of them professionally experienced and relevant to the labor market - that is, unlike the nature of the unskilled and capital-poor (refugee) migration in the early years of the state, migration in the second period might be referred to as "quality migration" (Meir-Glitzstein, 2018; Smootha, 2008; Winkler, 2015). Demographically, if in the early years many immigrant families had many children, then the second era witnessed a significant decline in family size (Winkler, 2015).

The second significant demographic change after the 6 days war was the annexation (permanent residence) of the population in East Jerusalem and its environs. As will be expanded below, until then the share of the Muslim population in Israel was less than 13% and its influence on the overall population growth was relatively very small. With the annexation of East Jerusalem, Muslim share in the population increased dramatically (Cochran, 2017).

If the results of the June 1967 war brought prosperity, then the results of the October 1973 war (also known as the "Yom Kippur War") pushed Israel into a deep economic crisis that continued until the late 1980s, and into social and political turbulence. During this period, the economy experienced an inflationary surge that at its peak reached triple-digit level. The main cause of the economic crisis was the rapidly growing budget deficit. The startling increase in government budget deficit was a direct result of huge military spending following the results of the war Yom Kippur War, as well as increase of social policies expenditures that promoted a variety of social allowances and benefits. In 1984, the inflation rate reached 445% and the Israeli economy was on the verge of anarchy (Bareli et al., 2005).

Just as the economic boom in the period between the June 1967 and October 1973 wars led to waves of immigration from wealthy countries, thus, economic stagnation led to a marked slowdown in immigration to the country during the decade following the October 1973 war and the First Lebanon War (1982-1985) (Hacohen, 2001; Smooha, 2008).

However, demographically, the years after the Yom Kippur War were characterized with significant changes in the nature and behavior of the Jewish population in Israel, to what Winkler (2015) refers to as population convergence. That is, regardless of their origin or social-cultural background, Israeli Jewish families have become to resemble each other. This is expressed in two main aspects (Winkler, 2015):

- A significant increase in intercultural marriages, e.g., marriages between European-American and north-African-Asian. These mixed families suggested a decline in the importance of tradition and cultural identity. These families have changed from



Ashkenazi or Sephardi Jews into Israeli-Jewish, at least in terms of their lifestyles and preferences.

- The formation of the "**Israeli family**": During this period, the socioeconomic patterns of the "typical" household in the Jewish sector were also shaped: two working parents who married in their early 20s and have three or four children with relatively low divorce rates.

The convergence process has generated a new socio-cultural status in Israel: younger and much more educated than their parents, abandoning their "culture of origin" and adopting a Western way of life (i.e., westernization) (Azaryahu, 2000; Smooha, 2005).

During this period, the current fertility pattern of the ultra-Orthodox population began to take shape - families with a huge number of children - exceptional on all international scales, not least in industrialized countries (Keren-Kratz, 2016). The main reasons for the formation of this new pattern were the political change in the exemption and postponement of military service arrangement<sup>32</sup> in 1977, in which practically all Orthodox Jews were exempt from military service, a sharp increase in child benefits for

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<sup>32</sup> The exemption and postponement of military service arrangement of "His Torah studies, His Art" (Ministry of Education, 2006): The State of Israel requires all young Jews to enlist in military service for 2-3 years. At the same time, ever since the establishment of the state until today, the state has allowed young ultra-Orthodox men to postpone their military service for their religious studies (studies in Yeshiva) as long these are their sole occupation. Up to the age of 41, ultra-Orthodox young people are required to study and are prohibited from any work or occupation (i.e., earn a living). If the student ceases to study in a Yeshiva, he must report for full or short service, depending on his marital status, however, since in this age group it is customary to marry at a young age and have many children, this means a significant reduction in military service (up to 4 months) or granting an exemption from the service in practice at an early stage (usually age 35).

The arrangement was originally intended to allow several dozen elite students to continue their religious studies. However, in 1974 these students made up 2.8% of the recruitment cycle, and in 2018 it is estimated that the deferral of service under this arrangement affected about 20% of the recruitment cycle (no official and public data were published on this subject).

It should be noted that over the years, several attempts have been made to change or repeal the arrangement, including through public committees and legislative arrangements, but so far these attempts have not been successful and constitute, as stated above, a politically and socially charged issue in Israel.

low-income families, and the intensification of "ultra-Orthodox politics" (Even, 2021; Soffer, 2016). According to Winkler (2015), this was the beginning of the ultra-Orthodox Jews "disengagement" - voluntary socio-cultural separation from the general public while ensuring state financial support through its' political parties (see chapter 2.2 for a detailed review of the ultra-Orthodox society).

During the second period, Arab society in Israel also experienced significant changes (see chapter 2.2.2 for detailed review of the Arab society in Israel). The Muslim and Christian populations exhibited a sharp decline in fertility rates. Among the Druze, a rapid process of modernization took place in all areas of life, including that of fertility. The Druze, who have joined and politically supported the Jewish sector in Israel, also "joined" it in fertility patterns (Winkler, 2015).

In Summary, the second period witnessed the ripening of the Israeli society. The tremendous effort to absorb the first waves of immigration ("Aliyah") was successful, with many of Israel's diverse population groups converge socially and culturally to form a typical integrated family. Indeed, the first prosperous years of this period *"symbolizes the end of poverty and the beginning of welfare and economic security for Israeli society. ...Even among researchers identified with a more critical analysis of the Israeli welfare state, there is a consensus that this period is characterized by an expansion of social rights and a significant growth in the volume of social spending"* (Kore, 2017, p. 159). In fact, according to Winkler (2015), Israel in those years was an example of a country that has succeeded in achieving economic prosperity within the framework of capitalist policy while reducing economic disparities. Israel's example in those days served as conclusive proof against critics of capitalism who argued that economic growth within a

capitalist regime has a socio-political "price" in the form of widening economic disparities (Winkler, 2015).

In retrospect, this policy took its toll, as in the second half of the period (since the late 70s and throughout the 80s) Israel suffered a severe economic crisis, along with political instability, which led to significant increases in welfare spending, and with-it political social- and cultural- sectarianism to ensure as many budget allocations as possible (Kore, 2017; Sternhell, 2009).

One of the significant manifestations of this trend was in the field of education, with the development of education streams external to the Ministry of Education but funded by it<sup>33</sup>. These streams of education were mainly religious and ultra-Orthodox, and they differed from each other on an ethnic and cultural grounds. More importantly, controlling the curriculum and administrative conduct of these institutions also served as an infrastructure for providing welfare services (such as day care and kinder garden frameworks), and as a mechanism for ensuring political support (Schiffman, 2001). The most renowned, in this context, are the Sephardic education network "Maayan Hachinuch HaTorani" affiliated with the Shas party (Schiffman, 2001), the "Beit Yaakov" for girls and the "Independent Education" for boys networks affiliated with the Ashkenazi-Haredi parties, and the high school-Torah yeshivot network affiliated with religious-national parties (The state comptroller and ombudsman of Israel, 2020).

In the context of the present study, it can be concluded that towards the end of the period the main characteristics of the Israeli education system began to take shape – a state (secular) supervised and state-religious supervised education systems, and

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<sup>33</sup> Chapter **שגיאה! מקור ההפניה לא נמצא.** offers a review of the Israeli education system. Specifically, the structure of the Israeli education system is revied in chapter 3.1 (see p. 86)

alongside them independent sectoral education systems with variable support and supervision of the state. As reviewed later (see chapter 3.1) these aspects embody the sectoral segmentation of the education system to this day.

### **2.1.3 Israel in recent decades (1990 to the present).**

During the 1990s and into the early 2000s, Israel experienced a resurgence of economic growth alongside population growth, partly because of mass immigration, mostly from the former Soviet Union and Ethiopia, during which more than a million people arrived in Israel. Many immigrants from the former Soviet Union were highly educated, and were quickly integrated into the Israeli high-tech industries, national infrastructures, higher education institutions, and the various medical professions. This high human capital<sup>34</sup> of these immigrants, i.e., the combination of a high level of education, rich experience, and relatively older age, contributed to a sharp increase in the participation rates of the entire Israeli population in the labor force, which soon led to an increase in the average per capita income (Schafferman, 2008; Smooha, 2008).

The demographic registration of immigrant families from the former USSR turned out to be problematic, as many of them were not Jews according to the definition of Israeli law<sup>35</sup>. Some were Christians or defined themselves as non-religious. Until this wave of immigration, state authorities were not required to address this issue. Defining

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<sup>34</sup> The concept of Human Capital is reviewed in chapter 2.3. In general, Human Capital is the sum of the natural skills (age, sex, etc.) and acquired (education, experience, physical fitness, etc.) of a person, in a manner that determines their employability, quality of employment, as well as other benefits that are related to the labor market (Angrist et al., 2019; Asadullah & Zafar Ullah, 2018; Marginson, 2019)

<sup>35</sup> The definition of Jewish origin entails many economic and administrative benefits. For instance, the Law of Return provide Jewish immigrants with an automatic right for immigration, housing grants and tax deductions.

the residents almost dichotomously as Jews or Non-Jews. With the increase in the number of immigrants from the former USSR, registration posed a fundamental challenge to distinguish between Arab-Christians and Christians from the former USSR, as well as non-Arab ethnic and non-religious minorities. Correction of the methodology was applied by the Central Bureau of Statistics only in 1995 (as can be seen in Figure 6)(Central Bureau of Statistics, n.d.).

During the third era, several new Jewish socio-cultural groups were formed and consolidated. The first are immigrants from the former USSR. From 1990 to 2005, 1.1 million newcomers immigrated from the former USSR to Israel, raising the country's population by 35% (Schafferman, 2008). While characterized by high level of human capital, their motivation for immigration was political, economic, and social crises in their homeland countries accompanied by increasing fear of antisemitism. Israel, as their immigration destination, suited their national identity even though many of them were unfamiliar with the Jewish religion<sup>36</sup>. The volume of this immigration wave, along with its' secular lifestyle, small families, very low fertility rates, and its' cultural affiliation and social relationships with their homeland led many of them to socio-cultural segregation – i.e., concentration in specific residential areas along with a sense of estrangement (Leshem, 2009; Schafferman, 2008; Smoocha, 2008).

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<sup>36</sup> To this date, many immigrants from the former USSR are not recognized as Jewish according to the religious halakic definitions. This also affects their children, both in relation to their loyalty to the state in light of their continuous conflict between their "Russian" identity and their Israeli identity, as well as in relation to difficulties in the civil sphere, such as in marriage, divorce, and registration of children (Leshem, 2009, pp. 81–95)

In the educational context private monolingual institutions were established at the time to preserve the Russian language and culture<sup>37</sup>. Thus, for example, many of the immigrants' children (even those who were born in Israel) did not meet other Hebrew speaking children until they were 5 years old and entered preschool, hence for many of them Hebrew was a second language (Kopeliovich, 2011). Moreover, it is estimated that approximately 20% of the immigrants from former USSR who were parents to children under 18 integrated their children into substitute/complementary education systems established in Israel for immigrant children from the former USSR (Leshem, 2009, p. 150).

Educationally, according to a special report of the Israeli Central Bureau of Statistics (2014), the achievements of children to immigrants from the former USSR are better than those of other students and students of Hebrew education. According to the report, 66% of the students who are immigrants from former USSR or that are children to such immigrant parents are entitled to a matriculation certificate (compared with 52% of the students in Hebrew education) and 54% of them are entitled to a matriculation certificate that meets the threshold requirements of the universities (compared to 52% of Hebrew education). At the same time, dropout rates among this population group (2.9%) are higher than those of other students in Hebrew education (2.1%) (Central Bureau of Statistics, 2014), an indication of their difficulty in establishing in the country of immigration and in bridging the identity gaps (Leshem, 2009).

This population group also has unique characteristics in the context of higher education. According to the report by the Israeli Central Bureau of Statistics (2014),

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<sup>37</sup> Chapter **מקור ההפניה לא נמצא**. שגיאה! מקור ההפניה לא נמצא offers a review of the Israeli education system. Specifically, the structure of the Israeli education system is revied in chapter 3.1 (see p. 86)

among the children of immigrants from the former USSR, there was a preference for the fields of engineering, medical auxiliaries, natural sciences, and mathematics. In 2014, about a quarter of the recipients of bachelor's degrees in these fields were children of immigrants from the former USSR. In contrast, only few have opted for professions of educational administration, education and teaching, as well as other more "text-oriented" fields (such as law, history and literature), since, according to the report, these studies require command of the Hebrew language (Central Bureau of Statistics, 2014).

The second population group that formed during these years is of immigrants from Ethiopia. These immigrants arrived in several waves mainly during the late 80's and early 90s<sup>38</sup>, and due to their communal nature were concentrated in designated neighborhoods, usually distant from Israeli employment and social centers (Schafferman, 2008). With low human capital, as many of them were uneducated and unfamiliar with modern technology and society frameworks, their ability to integrate into the labor market was very limited. These immigrants had very large families, among which many single-parents' families and a high incidence of households with fathers ages over 65 with children under age 18. The immigrants from Ethiopia were also religious, but their religious stream was not accepted by the Israeli religious establishment until a special religious ruling that recognized them as Jews. Their geographical and social segregation, along with their communal and cultural seclusion and sense of alienation toward the Israeli society led to what Schafferman (2008) refers to as marginalization: *"shock experienced by new immigrants leads to feelings of loss, estrangement, lack of belonging,*

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<sup>38</sup> At the end of 2020, the population of Ethiopian origin in Israel numbered approximately 160,000 residents, slightly less than 2% of the country's population (Central Bureau of Statistics, 2021b)

*and alienation. As a result, they are unable to form a connection with the dominant majority and are shunted to the margins of society".*

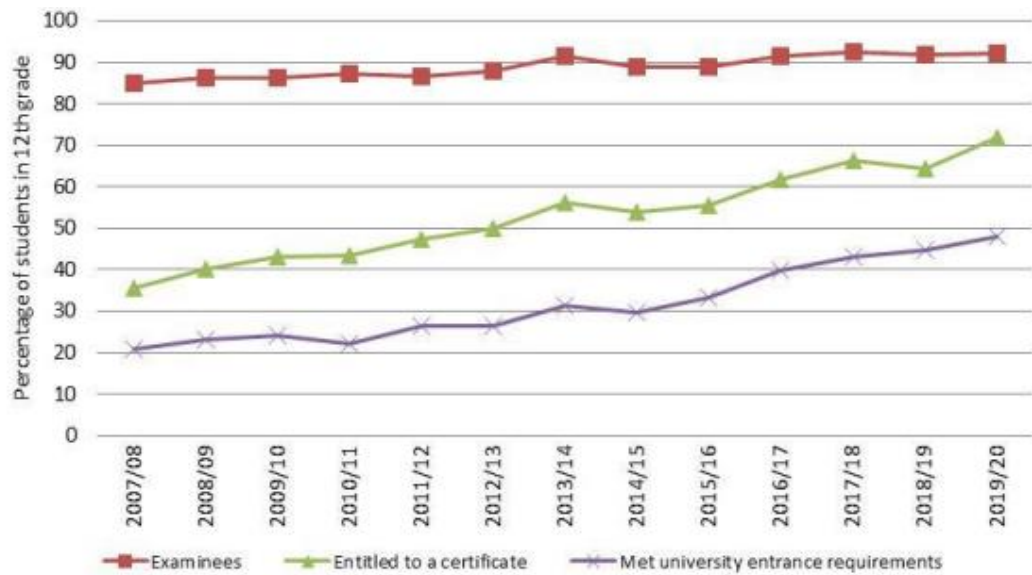
Due to their religious affiliation, most of the children of Ethiopian origin were enrolled in schools under State-religious supervision (primary and secondary education)<sup>39</sup>. Over the years, the percentage of children of Ethiopian origin that are enrolled in schools under State-religious supervision has been constantly declining, and since 2015 most of them (51-52.6%) are enrolled in non-religious state supervision schools (Central Bureau of Statistics, 2021b). Still, many students, especially boys, in upper secondary education of Ethiopian origin are routed to technological/vocational track. According to the Central Bureau of Statistics (2021), in 2020 48.5% were enrolled in the technological/vocational track, whereas 34.9% of their non-Ethiopian counterparts in Hebrew education were enrolled in the technological/vocational track.

Although the percentage of students of Ethiopian origin eligible for a matriculation certificate that meets university entrance requirements has been increasing in recent years (see Figure 7), it is still considerably lower (43%) compared with 73% of the total number of students in the Hebrew education sector.

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<sup>39</sup> Chapter **שגיאה! מקור ההפניה לא נמצא.** offers a review of the Israeli education system. Specifically, the structure of the Israeli education system is revied in chapter 3.1 (see p. 86)





**Figure 7: 12th-Grade Students of Ethiopian Origin Eligibility for matriculation diplomas (Central Bureau of Statistics, 2021b)**

Similarly, Ethiopian's origin integration into the higher education system is lower than that of other population groups. However, in recent years it has been improving. The enrollment rates of students of Ethiopian origin in the fields of engineering, life sciences, mathematics and computer science are significantly lower than those of other population groups. However, in the field of education and teaching enrollment rates of students of Ethiopian origin resemble the rest of the student population (about 16%) (Central Bureau of Statistics, 2021b). The reasons for this are the low admission threshold in the areas of education and teaching and the development of special training programs for teachers of Ethiopian origin in order to bridge the educational and socio-cultural gap and improve the chances of students of Ethiopian origin integrating into the labor market as teachers (Kalnisky, 2013)

The third socio-cultural group who consolidated in these years are Sephardic-Haredi Jews. This latter demographic group originates from the second and third

generation of immigrants from Arab countries who underwent a process of orthodoxy in which the socio-economic patterns of the Ashkenazi ultra-Orthodox, including the field of fertility, were adopted (Winkler, 2015). As stated above, one of the most prominent aspects of the consolidation of this group was through the foundation of the Sephardic education network "Maayan Hachinuch HaTorani" affiliated with the Shas party (Schiffman, 2001)<sup>40</sup>.

In addition to political influence, the establishment of the education network, which is currently the fourth largest in Israel, also had cultural and educational motives (Feldman, 2013). Prior to the establishment of "Maayan Hachinuch Hatorani" education network, there was no culturally appropriate educational option for this population group - neither in the state secular education system nor in the Ashkenazi ultra - Orthodox education system. In fact, the Ashkenazi education system has set various entry thresholds for the Sephardic population, while dismissing their cultural background and Halacha of this religious stream. Students of Sephardic origin were discriminated against, which led them to feel shame, estrange, and inferior compared to the conventional culture of the Ashkenazi Haredi majority (Feldman, 2013).

According to Feldman (2013), the establishment of "Maayan Hachinuch Hatorani" education network has proven to be successful in contribution to the rehabilitation of the Mizrahi society and Sephardic cultural values in the State of Israel as well as in their political representation. Moreover, despite operating hundreds of institutions and educating tens of thousands of students, *"there having been no organized pedagogical discussion regarding the professional, legal, or ideological aspects in the Ministry of*

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<sup>40</sup> Chapter **שגיאה! מקור ההפניה לא נמצא.** offers a review of the Israeli education system. Specifically, the structure of the Israeli education system is revied in chapter 3.1 (see p. 86)

*Education, the government, or the Knesset*" (Feldman, 2013). According to Feldman (2013), these developments symbolizes the segregation of the Israeli sectors of the Israeli society since the 1990s.

During these years, a fourth socio-cultural group moved from the margins to the socio-political center stage – these are the National-Religious camp, also known as the Dati-Leumi community or “religious Zionist” community (Herman et al., 2014). This socio-cultural group is characterized by attempt to incorporate two identities – the Jewish-religious identity and the Jewish-Zionist<sup>41</sup> identity (Dori, 2019). Thus, for example, many of them live in the territories of Judea and Samaria<sup>42</sup>, have very high fertility rates similar to the ultra-Orthodox community, but their employment and educational patterns are similar to those of the secular Jewish population (Winkler, 2015). This means that religiously, much like the ultra-Orthodox Jews, this population group live according to religious tradition, but are economically differentiated from the former as they are well educated, have high human capital, and are highly integrated in the labor market (Winkler, 2015), they identify with Zionism and actively participate in the Israeli modern society (Somech & Sagy, 2019).

Like other religious streams, since the 90s the National-Religious community fostered dedicated education networks, aimed at enhancing strong community values, promoting Jewish religious-national agenda, and creating a socio-cultural mechanism for

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<sup>41</sup> Zionism is a Jewish nationalist movement whose goal is the creation and support of a Jewish national state in (part or whole) area of the biblical “land of Israel”, i.e., the ancient homeland of the Jews, now days referring to areas of the state of Israel, the west bank, and some parts of Jordan and Syria (Britannica, n.d.)

Palestine, (Hebrew: Eretz Yisra’el, “the Land of Israel”)

<sup>42</sup> Judea and Samaria is a term for areas in the West Bank that are not part of the State of Israel but are under its control (Area C). Administratively, this is an additional district to the six existing districts in the State of Israel.

ensuring political support (Schiffman, 2001). The most known in this sense are the Bnei-Akiva religious youth movement, secondary and post-secondary religious schools for boys (called "Yeshiva" or religious preparatory program) and for girls (called "Ulpana") (Herman et al., 2014)<sup>43</sup>.

Simultaneously with the deepening of polarization of Israeli society, the relative share of the "Israeli family" in society decreased. The main reason for this decline is the adoption of Western life patterns by the Jewish (mostly non-religious) middle class, in part due to the sharp improvement in the level of education of women, resulting in a sharp increase in their labor force participation rates. The fertility rates of the educated non-Haredi Jewish sector have been declining and are now approaching what is customary in the Scandinavian countries, i.e., a comprehensive fertility rates around the level of intergenerational turnover (Winkler, 2015).

In summary, the establishment of the State of Israel as the national state of the Jewish people and as an immigration destination for Jewish Diaspora from all over the world influenced its' early social development. During its' early decades, Israeli society developed as a melting pot aimed at bridging cultural differences between population groups, increasing its' population human capital and workforce participation that were essential for the construction of the young state (Katz, 2010; Sternhell, 2009).

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<sup>43</sup> Chapter **שגיאה! מקור ההפניה לא נמצא.** offers a review of the Israeli education system. Specifically, the structure of the Israeli education system is revied in chapter 3.1 (see p. 86)

However, during the last three decades, and even more so in the last decade, Israeli society has been unwinding into separate and segregated sectors, whether by homeland cultural background and preferences (as in the case of immigration from the former USSR or from Ethiopia) or by religious, ethnic, or political affiliation. According to Feldman (2013), this might be an indication that the processes of building the Israeli nation are defeated in the face of the firm demand for patriarchal assembly, in which state values are abandoned in favor of returning to historically strong communities.

These developments has resulted in a significant widening of the social and economic gaps between the different groups in the Israeli population (Katz, 2010), and were also reflected in the Israeli education system, or rather, in the development of separate and independent education systems for different sectors (Dori, 2019; Feldman, 2013; Herman et al., 2014; Schiffman, 2001) and in the depreciation of the values-based mandatory curriculum (Katz, 2010).

In its' ever-increasing pursue for providing a significant and systematic value-based education while nurturing its' students' Jewish-Israeli identity, Israeli education system "*perpetuates the division into sectors that divides Israeli society from within*" (Dori, 2019).

These transformations, and their implications, were diagnosed, almost in real time, by President Rivlin (Rivlin, 2015), in which he defined a new Israeli order:

*"the 'new Israeli order' is ... a reality, that can already be seen in the composition of the first-grade classes in the Israeli education system. In the 1990s ..., Israeli society comprised a clear and firm majority, with minority groups alongside it.... Today, the first-grade classes are composed of about 38% secular Jews, about 15% national religious, about one quarter Arabs, and close to a quarter Haredim. ...[this is] A reality*

*in which there is no longer a clear majority, nor clear minority groups. A reality in which Israeli society is comprised of four population sectors, or, if you will, four principal 'tribes', essentially different from each other, and growing closer in size."*

According to Rivlin (2015), this division into tribes is expressed, first and foremost, in the division into different and separate streams of education. Israeli children are sent, consciously and by choice, to one of four separate education systems, whose purpose is to educate them, to shape their worldview and their cultural, identity, religious and national ethos in a different way. The sectors themselves are not homogeneous, but diverse and varied, and although there are common areas between the sectors, the new Israeli order entails far-reaching implications for the national resilience of the State of Israel, as the current reality is not viable, especially from an economic viewpoint (Rivlin, 2015). Rivlin (2015) also specify his vision for a successful partnership of the four sectors, and specifically points to the critical role of education in familiarizing Israeli society with this partnership, supporting and exceling its' economy and "*an academic world that does not compromise on quality, but also knows how to create a sensitive cultural environment*".

## **2.2 Socio-cultural challenges in Israel: The ultra-Orthodox Jews and Arab community**

As the present study is concerned with the preparation of future teachers during their training in teachers' training institutions, the review raises the need for a better understanding of the socio-cultural and educational characteristics of two of the "tribes", whose educational achievements and participation rates in the labor force are relatively low (Blass, 2019, 2020; Chernovitsky & Feldman, 2018; Ministry of Education, 2020a;

The state comptroller and ombudsman of Israel, 2020). The ultra-Orthodox Jews which will be reviewed in chapter 2.2.1 and the Arab community which will be reviewed in chapter 2.2.2.

### **2.2.1 Socio-cultural challenges associated with ultra-Orthodox Jews**

The ultra-Orthodox religiosity is characterized by a deep commitment to the Jewish religious practice (the "Halakhah"), with a deep affinity for the religious tradition that has developed in Eastern European communities and a tendency to prefer the strict ruling in halakhic literature (Friedman, 1991). In its ideology, as well as in its way of life, ultra-Orthodox Judaism presents itself as a counterculture to the society around it (Kaplan, 2003). Translated into everyday life, this is expressed in various and broad aspects: the large size of the family, individual and family status in the community, the attitude to work and studies, the attitude to language, choosing a living area and devoting much time to religious activities like Torah study, prayers, and volunteering in the community (Cahaner, 2009).

At the outset, it is important to highlight researchers of ultra-Orthodox community' several methodological challenges in trying to characterize this population group and estimate its size, mainly due to the lack of official statistical information. For instance, several approaches have been suggested for identifying ultra-Orthodox individuals, among which are self-definition of level of religiosity, classification according to the educational institution where the children study, and voting for ultra-Orthodox political parties in Knesset elections (Central Bureau of Statistics, n.d.; Gottlieb, 2019; Portnoy, 2007). Others, like Cahaner (2009) or Perelman et al. (2019), use specific indicators of ultra-Orthodox everyday life, such as fully obeying rabbis'

instructions, eating only ultra-Kosher food, no owning or using TVs or computers at home (Cahaner, 2009; Perelman et al., 2019). Recent estimates estimate the ultra-Orthodox population at 8-11 percent of Israeli society (Cahaner, 2009; Central Bureau of Statistics, 2017; Gottlieb, 2019).

The ultra-Orthodox society is not homogeneous and it is divided into many groups that represent different social and ideological characteristics (Friedman, 1991). The key component in the unprecedented growth of the ultra-Orthodox population in Israel is the natural growth rates that have reached unprecedented levels in the industrialized world in the last two decades, with an average of more than 7 children per ultra-Orthodox mother. Some researchers (Winkler, 2015) suggests that these high fertility rates reflect an attempt to compensate for the loss this population group suffered in the Holocaust and the need to re-establish the religious infrastructure of the Jewish people. Other researchers (Gottlieb, 2019; Soffer, 2016) point out that these high birth rates were possible due to deliberate government policies, which created a significant economic incentive to bring many children and maintain the secluded lifestyle of the ultra-Orthodox community<sup>44</sup>.

Winkler (2015) lists three main reasons for this unprecedented trend:

- **A very young age of marriage:** a political decision in the early 1980s, in effect, freed ultra-Orthodox young people from the obligation to enlist in the IDF<sup>45</sup>. In fact, one of

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<sup>44</sup> Israeli demographic projections and economic developments is reviewed in **שגיאה! מקור** **ההפניה לא נמצא.**

<sup>45</sup> There is ample legislation and regulation on the subject (for instance Israeli Defense Service Law, Tal Law & the Plesner Committee recommendations). According to which a Jewish man aged 18-25 is required to perform 36 months of service. However, married men of these ages with 2 or more children are only required to perform 4 months of service. A married man aged 26-28 with one child is required to have 12 months of service, compared to 18 months in which a single or married man without children at these ages is required.



the most significant means of obtaining exemption from military service is through marriage and having children. Following the decision, the average marriage age of an ultra-Orthodox man dropped from 27 in the 1950s to 22.5 in the 1990s. Moreover, not only was the military phase spared from them, but young marriages became the ideal of preserving the ultra-Orthodox man within the Yeshiva (holy studies institutions) for married man and within the ultra-Orthodox community by forcing them to follow a strict educational path of ultra-orthodox institutions since childhood and declare their occupation as "teaching art", both entitled them considerable financial support (both indirect benefits and allowances) (Barth et al., 2020; Perry-Hazan, 2018).

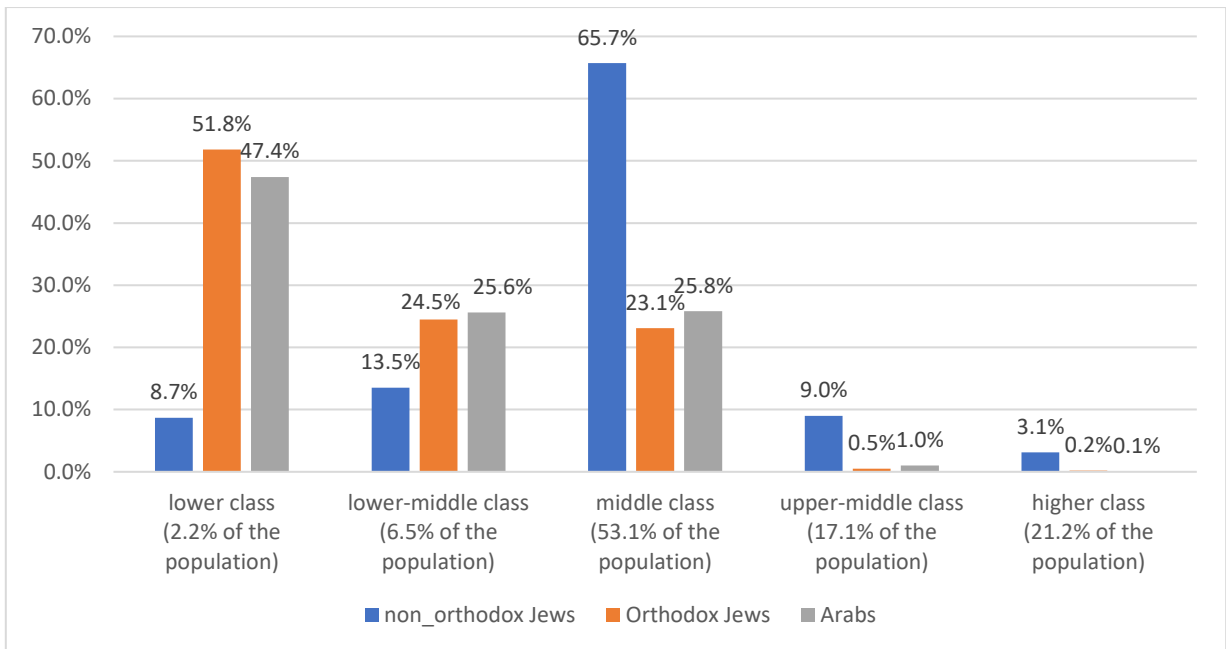
- **Change in the structure of child benefits:** The economic stabilization program implemented in 1985 provided a higher benefit to children of a higher order within the family. Focusing child benefits on low-income families has led to the creation of a significant economic incentive for a high number of children in families, because the average amount of child benefit per child increases according to the number of children in the family, contrary to common economic logic of reduced marginal cost. This welfare arrangement was strengthened by further legislation in 2000(Winkler, 2015).
- **The transformation of the ultra-Orthodox parties into a libra factor in the political system** after the political upheaval of 1977 enabled them to achieve a variety of economic benefits unique to the ultra-Orthodox population, including independence of the education system and financial support for sector institutions (Soffer, 2016; Winkler, 2015).

To enjoy the economic benefits, the ultra-Orthodox family must have many children, otherwise it will not meet the criteria of support from the state. Moreover, the

reward system built by the ultra-Orthodox community includes not only positive incentives to maintain its' members within the community, but also direct and indirect fines for leaving it. Thus, for example, for an ultra-Orthodox man to leave his holy studies in favor of the army or secular higher education means risking his chances to find decent match, obtaining discounted housing in community, an even preventing his children from getting in to ultra-Orthodox educational institutions (Perelman et al., 2019). As stated above, allocating sufficient national economic resources for sustaining the ultra-Orthodox community while enabling it to produce a system of rewards, positive and negative, so that only those who follow the path can benefit from it, were possible due to deliberate government policies (Gottlieb, 2019; Soffer, 2016).

Thus, political power of ultra-Orthodox parties, as a political equator, enabled ultra-Orthodox community to foster a (mostly) independent education system that channeled its' students to follow holy studies as an occupation as adults, adhere to strict cultural behavior and communal expectations, and mainly to avoid secular studies and secular Israeli culture and society (Friedman, 1991; Perelman et al., 2019; Winkler, 2015). Friedman (1991), however, also argues that in its' success also lies the seeds that lead to a constant erosion in the resilience and economic and social stability of the ultra-Orthodox community, since the rapid demographic growth and cultural closure of the ultra-Orthodox society led to the beginning of its economic undermining.

From an economic point of view, however, the absence of the ultra-Orthodox from the labor market has extremely severe economic consequences, which are reflected in particularly high poverty rates. According to the National Insurance Institute (Gottlieb, 2019), the proportion of poor ultra-Orthodox is almost 52%, compared with about 9% of non-ultra-Orthodox Jews (see also Figure 8).



**Figure 8: Distribution into economic classes by population groups in 2018 (Gottlieb, 2019)**

It is not only the ultra-Orthodox who lose out on not participating in the labor market. The non-integration of the ultra-Orthodox in the labor market detracts from the economic wealth of Israeli society as a whole – it is estimated that NIS 1.5 million is detracted for every ultra-Orthodox man who does not join the labor market (Cave & Aboodi, 2011). Therefore, their integration into the education and labor market is a declared government goal and of paramount macroeconomic importance in order to preserve economic growth and the standard of living in Israel (Perelman et al., 2019; The State Comptroller and Ombudsman, 2019).

This raises the need to review of the ultra-Orthodox education system. The main characteristic of the Israeli ultra-Orthodox education system is that it is gender-adjusted - It is not only gender-separated (i.e., two separate education systems, one for boys and the other for girls), but there are significant differences in curricula between boys' and

girls' education. Additionally, only male teachers can teach in boys' educational institutions, and while male teachers can teach at girls' schools this is very unusual for them to do so. Still, many senior management positions in girls' schools are held by men (Barth et al., 2020).

Furthermore, ultra-Orthodox educational institutions are segmented to three types according to their legal status<sup>46</sup>: "official" (state schools) - institutions held and managed by the state and / or local authorities, "The recognized non-formal institutions" - privately owned institutions that are recognized and supervised by the Ministry of Education and "exemption" institutions"- Privately owned institutions, which are not under the supervision of the Ministry of Education but are financed by it and are considered to comply with the Compulsory Education Law (Perry-Hazan, 2018).

According to Israel's State Comptroller and Ombudsman (2020), only 3% of all ultra-Orthodox students studied in official schools where the emphasis is on basic secular Studies<sup>47</sup>. Over 75% of the students in the ultra-Orthodox educational system study in the recognized non-formal institutions: Boys' elementary schools known as "Talmud Torah" (ages 6-14) and elementary and secondary schools for girls. Secular studies take up only small share of ultra-Orthodox boys' elementary curriculum, especially when compared to the ultra-Orthodox girls' and official schools' curricula. The "exempt" educational institutions (called Junior Yeshivot) include boys aged 14-17 which function according to the "Law of Unique Educational-Cultural Institutions". In these institutions,

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<sup>46</sup> The structure of the Israeli education system, and its' various segments, are reviewed in chapter 3.1 (p. 88)

<sup>47</sup> According to (Blass, 2019, 2020; Ministry of Education, 2020a), basic secular studies is a framework that varies in scope according to age which includes languages and literature, mathematics, nature, science and technology, as well as heritage, humanities and social sciences

where the majority of ultra-Orthodox boys study, secular subjects are not taught at all (Barth et al., 2020; Malach & Cahaner, 2020; Perry-Hazan, 2018).

Three decades ago, it was argued that in the long run it would be inevitable that certain sections of the ultra-Orthodox population in Israel would be required to acquire vocational training and higher education to be able to integrate into various employment circles in the future (Friedman, 1991). However, it turns out that despite a budget allocation of 1.7 billion NIS for the years 2011-2022 for the purpose of promoting higher education in the ultra-Orthodox sector, in practice less than a quarter of the amount has been used so far, and as of the middle of the decade only 2% of the ultra-Orthodox men and about 8% of the ultra-Orthodox women aged 25-35 possessed an academic degree (compared with about 28% of secular Jewish men and about 43% of secular Jewish women)(The State Comptroller and Ombudsman, 2019)(The state comptroller and ombudsman of Israel, 2019a).

Moreover, according to a recent report, three out of four ultra-Orthodox men who begin pre-academic preparatory courses do not complete a degree and 44% of ultra-Orthodox higher education graduates are teachers, despite a large surplus of ultra-Orthodox teachers (The State Comptroller and Ombudsman, 2019). According to this report, ultra-Orthodox dropout rate from academic studies (excluding preparatory courses) is more than twice the dropout rate among other sectors – 46% dropout rates of ultra-Orthodox men (compared to about 20% non-Ultra-Orthodox men) and 28% of ultra-Orthodox women (compared with about 12% among non-ultra-Orthodox women) (The State Comptroller and Ombudsman, 2019).

Among the causes of male dropout are the lack of basic concepts in the core professions (i.e., Mathematics, Science, English, and Hebrew language and literature), low technological skills, inappropriate learning and assessment habits, and having families (Regev, 2016).

According to the State Comptroller's findings (The State Comptroller and Ombudsman, 2019), the problem is not only with ultra-Orthodox dropouts but also with the students' preferences. According to the report, about 78% of ultra-Orthodox graduates are women, and as mentioned above, 44% of them were graduates of education and teaching. As ultra-Orthodox education system does not need more than 1,500 teachers, and as there is no shortage of ultra-Orthodox teachers in any profession in ultra-Orthodox education, this means that the vast majority (about 88%) of women who graduated will not be able to work in the profession. In contrast, there is a shortage of ultra-Orthodox (male) teachers for the core (secular) subjects, but since in the ultra-Orthodox sector women do not teach boys, there is not enough teachers to fill the gap. Accordingly, the report suggests the state should offer incentives for training men for teaching, as well as options for vocational retraining of female teachers for required professions in the economy (The State Comptroller and Ombudsman, 2019).

There is agreement among researchers of ultra-Orthodox society on the need to address the promotion of higher education among the ultra-Orthodox, and especially among men. Which includes, among other things, addressing gaps in basic secular studies<sup>48</sup>, expanding, and adapting pre-academic preparatory courses, as well as

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<sup>48</sup> See footnote 47 above (p. 49)

appropriately addressing dropouts and prioritizing areas of study that meet the needs of the economy (Regev, 2016; The State Comptroller and Ombudsman, 2019, 2020).

In addition, to encourage ultra-Orthodox men's participation in academic studies, scholarships for men must be increased (The State Comptroller and Ombudsman, 2019). Moreover, it turns out that the height of such an economic incentive is an outgrowth of socio-cultural identity and its role is to offer compensation for both the a priori economic difficulty associated with embarking on such studies and the intangible benefits associated with choices that do not comply with the cultural framework of this sector (Perelman et al., 2019).

In conclusion, the ultra-Orthodox community in Israel is an extreme example of a cultural sector that seeks to preserve religious values while differentiating itself from other parts of society on the one hand, and on the other hand relying almost entirely on the financial support of these parts without full partnership and without equal burden. Predictions regarding the lack of success in improving the level of education of the Ultra-Orthodox Jews, as well as failure at significantly advancing and accelerating their participation in the Israeli labor force, paint a rather dismal future for the whole Israeli society. However, it is already clear today that a multi-dimensional investment that will combine economic incentives and improve the infrastructure and educational products of the children in society may change these trends.

### **2.2.2 Socio-cultural challenges associated with the Arab community**

As of 2019, Arab society in the State of Israel numbers approximately 1.92 million persons, constituting approximately 21% of the total population of Israel. According to Central Bureau of Statistics (2020c), most Arab citizens of Israel (84%) are

Muslims, while the remaining are Christians (9%) and Druze (7%).(see Figure 5, page 179)<sup>49</sup>.

Historically, before the 1948 war, about 1.3 million Arab residents lived in the territories of Mandatory Palestine, along with 600,000 Jewish residents. At the end of the war and after the signing of the ceasefire agreements ("Rhodes Agreements"), only about 156,000 Arab citizens remained in the territory of the State of Israel, whose share of the total population of the young state was 17.9%. Due to waves of mass immigration of Jews in the 1950s, the relative share of the Arab population decreased and in 1955 reached 11%. The inclusion of the Arabs of East Jerusalem (after the 1967 war) and the Druze in the Golan (after the application of Israeli law in the Golan in 1981) increased the proportion of the Arab population in the late 1980s to 18%. During the 1990s and due to an immigration from former USSR and Ethiopia, the relative share of the Arab population decreased, but increased again after 2000 (Winkler, 2015).

The Israeli Arab population group is not homogeneous. It is made up of different religious groups and socio-cultural communities that differ from each other in their lifestyles, employment preferences and participation in the labor force, as well as their education and academic achievements.

While the focus of the present study is education, it is worth mentioning that official data regarding the Arab population group, such as of the central bureau of statistics or the ministry of education, refer mainly to its religious segmentation. However, before reviewing this religious socio-cultural segmentation it is worth

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<sup>49</sup> This quorum also includes about 300,000 residents of the Jerusalem District, most of whom are defined as "permanent residents." At the same time, in the current research framework, there will be no separate reference to the Arab residents of the Jerusalem District, since they have full access to the education and higher education infrastructure in Israel.

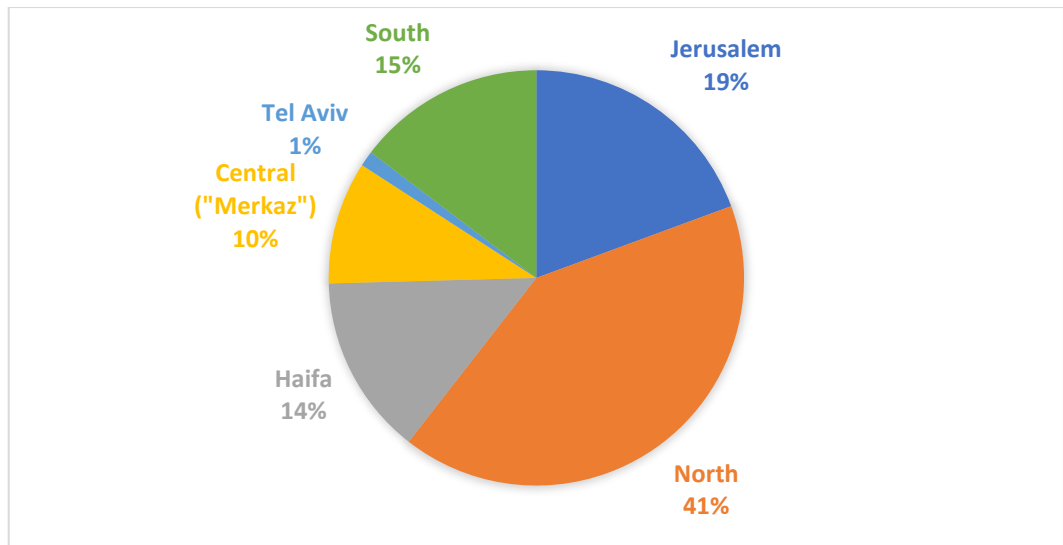


mentioning other socio-cultural approaches. For instance, several researchers (Even, 2021; Soffer, 2016; Winkler, 2015) focus on Israel's "dual society"<sup>50</sup> that distinguish between modern, thriving, mostly educated population groups, and poor, uneducated and low human capital population groups, while others point to the geographical separation and characterization of different sectors of the Israeli society (Kalnisky, 2013; Rivlin, 2015). These distinctions are particularly striking in the context of the Arab community.

Geographically, the Arab population group is unevenly distributed. As illustrated in Figure 9, as of the end of 2019, most of the Arab population in Israel lives in northern Israel (about 41% live in the Northern District and an additional 14% live in the Haifa District), and the rest live in Jerusalem (19%, including east-Jerusalem), in Tel-Aviv and the central district (11%), or in the south (15%) (Central Bureau of Statistics, 2020a).

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<sup>50</sup> שגיאה! מקור ההפניה לא נמצא. This term is reviewed in



**Figure 9: Geographic distribution of Arab citizens of Israel (end of 2019) (Central Bureau of Statistics, 2020a)**

Furthermore, there is a growing urbanization trend occurring among Israeli Arab community in which significantly more Arab households shift from traditional villages to mixed cities (Rudnitzky, 2015). The Arab sector in Israel has another and unique form of urbanization, in which the residents of the Arab villages become urban because their villages grow, expand, and become towns and cities and not because they themselves immigrate to the cities. This brings about an imposed change in their traditional way of life (Khamaisi, 2012; Smootha, 2017).

While scholars mainly refer to the duality of the Israeli society<sup>51</sup> (Even, 2021; Soffer, 2016; Winkler, 2015), Meler (2017) identifies three typical household types in the Arab community:

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<sup>51</sup> As reviewed in *שגיאה! מקור ההפניה לא נמצא.* (p. 400), dual society refer to Israeli society being divided between a thriving society with excellent macro-economic performance and high human capital and standard of living, and significant proportions of poor populations, especially among ultra-Orthodox Jews and the Arab community (Gottlieb, 2019; Soffer, 2016).

1. **Uneducated families in non-mixed rural localities:** this refers to families living in rural communities, mostly peripheral, with both parents uneducated with low human capital. While the women are usually not employed or employed in traditional and feminine professions in the community (e.g., cleaning, cooking, agriculture), the men work in occupations that are considered stereotypical, e.g., physical labor (such as drivers, construction, infrastructure, agriculture) or petty trade. The demographic development stage of these households is relatively low (Winkler, 2015). As these families often follow a traditional lifestyle, children are generally not encouraged to excel in their studies<sup>52</sup>, but rather are expected to acquire only essential (basic) skills and follow and join their parents and help support the family (Meler, 2017).
2. **Educated families in mixed cities:** Families that are mostly secular with two educated parents, working and mostly engaged in liberal professions. These high human capital families are usually characterized by a small number of children, they live in urban areas, mostly in mixed cities, and generally leads a lifestyle similar to the secular and non-ultra-Orthodox Jewish sector (Meler, 2017). These families encourage their children to excel in their studies and pursue higher education (Fuchs, 2017).
3. **Educated families in non-mixed rural localities:** the third group refer to households in which at least one of the parents has high human capital, i.e., educated and enjoys occupational prestige (e.g., teachers, social workers, self-

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<sup>52</sup> According to the Compulsory Education Law (1949), every child in Israel must be in an education framework (kindergarten or school) from age 5 to age 15. The law also requires parents to enroll their children in an educational institution and ensure their regular attendance at school until the end of compulsory school age (Veissblei & Vieneger, 2015).

employed). The uniqueness of this group is in its affiliation with traditional peripheral community values. This is especially apparent with two distinctive typical women's employment patterns: "*One enables acquisition of higher education and participation in the public sphere and the other is the normative, patriarchal, gender-dependent system that controls women's behavior and mobility*" (Meler, 2017, p. 792). From an educational perspective, this group varies between preference for local, within the community, educational frameworks, usually according to the values of conservative tradition and with an aim of preserving this outline, and between preference for open modern education, usually with the aim of integrating into the Israeli society and the world labor market, as reflected, for example, in the some parents preferring to send their children to Jewish schools in nearby localities (Fuchs, 2017).

Still, as stated above, the more conventional approach to portray the Arab community is by its' religious sub-sectors (Muslims, Christians, Druze) with its' different socio-demographic characteristics (Central Bureau of Statistics, n.d.; Gottlieb, 2019; Peters & Pinfeld, 2018; Winkler, 2015).

**The Muslim population.** As shown in Figure 5 (p. 179), Muslims make up most of the Arab community in Israel. Geographically they are scattered over several regions, which, to a considerable extent also outlines their socio-cultural and economic characteristics. Unlike the Jewish sector, where socio-cultural, demographic (i.e., fertility rates), and economic patterns are associated with the level of religiosity, among Muslims the degree of religiosity has a negligible effect, if any, and the main correlation is employment availability. Thus, among the population with the lowest employment

availability and ability, i.e., the Bedouin population in the Negev, is characterized by large households, high poverty and crime rates, and conservatism (Meler, 2017). The level of education of Bedouin communities in the Negev is relatively very low, both in terms of low attainment rates, higher dropout rates, educational achievements, matriculation eligibility rates, and poor higher education registration (Fuchs, 2017). Conversely, Muslim who live near employment centers, in the mixed cities, especially in Haifa and Tel Aviv-Yafo, exhibit increasing similarities to the Jewish sector in terms of occupation and employment, lifestyle and other socio-cultural characteristics (Soffer, 2016).

Educationally, Muslim students' performance is historically and continuously worse than other religious and cultural sectors in Israel (Balas, 2019). These gaps are document to be present at an early stage, for example regarding the poor achievements of 5<sup>th</sup> grade Muslim students in mathematics and English. Additional gaps indicate higher and earlier dropouts, a preference for vocational field of study in high school (rather than humanities or theoretical studies), which also translates into lower matriculation eligibility rates. These gaps are even expressed by higher rates of copying (i.e., cheating) and inappropriate assistance by teachers during exams, that reach up to 12% compared to less than one percent in other sectors. The gaps are also reflected in the relatively low enrollment of Muslims in higher education (Balas, 2019). Recent reports suggest that Arab high school students', and especially Bedouin students', command of the Hebrew language is relatively poor. Compared to other sub-sectors in the Arab sector (especially Druze), Muslim and Bedouin students are less exposed to Hebrew, and although they see importance in its learning, they report little investment in teaching and learning the language, both in terms of teaching hours and in terms of teaching quality (National Authority for Measurement and Evaluation in Education, 2016).

**The Christian-Arab population.** This is a group of Arabic speakers who mostly belong to the Greek Orthodox Church. Since 1948 (the establishment of the State of Israel), Arab Christians fertility rates dropped from about 4.5 children in the 1950s to 2.06 in 2018 (Central Bureau of Statistics, 2019b). The causes of the decline in fertility rates among Christians are essentially similar to those of secular Jews: a sharp improvement in the level of education, especially of women, and a sharp increase in their labor force participation rates as well as an increase in their first age of marriage. Unlike other Israeli Arab populations, a unique key factor of Israeli Arab Christians community is that it dwindles, mainly because of massive migration of young people. Already today Israeli Christian Arab population is on the verge of intergenerational turnover, and in light of current trends, it seems that in the near future, the growth rate of this population will become negative - a combination of massive migration and aging population, along with low fertility rates (Winkler, 2015).

Israeli Christian Arabs are one of the most educated groups in Israel. According to Fuchs (2017), this population has the highest success rate in matriculation exams per capita (73.9%). In addition, 63% of Arab Christians in Israel have an academic education, the highest of any religious and ethno-religious group, and their proportion among students in institutions of higher education is high in relation to their relative share in the population (Fuchs, 2017).

**The Druze population.** Like the Christian Arabs, the fertility rates of the Druze are declining, to a level of 2.16 children per mother in 2018, a level close to the level of intergenerational turnover (Central Bureau of Statistics, 2019b; Winkler, 2015). Unlike the Christian Arabs, the rapid demographic change of the Druze did not include the

typical social conditions for such a change: the participation rates of Druze women in the labor force remained low, the average first marriage age of Druze women remained low, divorce rates among Druze society remained low, with urbanization of the Druze population remained negligible, as most Druze live in small homogeneous town (most are still called villages) (Winkler, 2015).

According to Fuchs (2017), two key characteristics underlie the "Druze paradox". The first is a high employment rates, mostly in the public sector, and particularly in Israel's security forces, at high wage levels. The high-income level made child benefits irrelevant, while at the same time the high-income level of Druze men was not associated with changing basic lifestyles, such as an unequivocal preference to continue living in the sector villages, perceiving extended family as a binding framework, and low labor force participation rates of women. The second characteristic concerns the proximity to secular Jews both in the army and in the workplace. The result of this proximity is a close acquaintance with the life patterns and lifestyle of the Jewish-secular population, and the increasing adoption of certain aspects of it.

Thus, for example, a recent report by the Israeli National Authority for Measurement and Evaluation in Education (2016) illustrated that Druze high school students' command of the Hebrew language is consistently better than that of students in the Arab and Bedouin sectors. Moreover, Druze students were more exposed to Hebrew, outside of school and in their immediate environment, their perception of self-efficacy in a higher language, and in general they have expressed a more positive and significant attitude towards Hebrew language studies. Druze students' reported higher exposure to a variety of Hebrew language teaching methods in school, greater engagement with Hebrew writing assignments, and a higher incidence of independent reading (unrelated

to their studies) in Hebrew (National Authority for Measurement and Evaluation in Education, 2016).

Furthermore, increase in matriculation eligibility rates of Druze students has been noticeable in recent years, with some of the Druze schools having consistently the highest matriculation eligibility rates in Israel (Fuchs, 2017).

In general, along with demographic differences, there are other gaps between the Arab population, in its various sectors, and the Jewish majority in the State of Israel. According to the socio-economic index published by the (Central Bureau of Statistics, 2019c), the vast majority of Arab localities are ranked in the three lowest socio-economical clusters. This means that the average standard of living in Arab localities is low compared to the average standard of living in Jewish localities. According to the National Insurance Institute (Gottlieb, 2019), almost half of the Arabs are poor, with a rate of about 47%, compared with about 9% of poor non-Haredi Jews (see also Figure 8).

It is estimated that one of the reasons for this lies in the combination of internal factors, such as the preference for traditional lifestyle of this group, and external factors as government policy and labor market structure (Soffer, 2016). Processes of modernization and economic growth that gained momentum in the 1990s following the peace process did give their signals in the Arab localities in Israel, but despite an increase in the level of education and health services, the gap between the Arab and Jewish populations remained unchanged.

Moreover, the socio- economic gap between the Jewish majority and the Arab minority remains significant despite the socio-economic changes in Arab society and



despite the rapprochement of Arabs in Israel with Jewish culture, among other things by preferring to adopt modern values and a move away from traditional elements. Still, the contact with the Jewish population was not enough to bring about a total change in values towards modernization and westernization. The Arab minority has not assimilated and is still different from the Jewish majority in terms of nationality, national identity, ethnic origin, religion, and various demographic-social characteristics (Smootha, 2017).

Additionally, Israeli Arabs were found to be less identified with "Israeliness" and feel more connected and identified with traditional Arab culture (Amara & Schnell, 2004). Most Israeli Muslims emphasize their national-Arab identity, about 90% of them identify to a high degree with their religious affiliation and about 60% identify only moderately as Israelis (Amara & Schnell, 2004). According to Smootha (2017), the Arab public laments a feeling of inequality, due to the fact that the poverty rate in the Arab population is very high relative to the corresponding rate in the Jewish population. These feelings, in turn, lead to an increase and the sharpening of tension between the two population groups, as well as conflicts regarding the formation of their identity (Shdema et al., 2020).

According to Meler (2017), there is only little research on the family structure of Arab society. In general, it is assumed that, unlike the Jewish population, Arab society is characterized by a traditional family structure with two main characteristics: a patriarchal family structure and an extended family structure, both influenced by the traditional rural perception of the population (Khamaisi, 2012).

The traditional Arab family structure is described as hierarchical and authoritative when the hierarchy is based on four main components: age, gender, generation, and birth order. Preference is given to older men and older siblings (Barakat, 1993). These make

the family structure, as well as the whole Arab community, patriarchal in nature. In this context, the father of the family is placed at the top of the pyramid and is perceived as having authority when his sons and wife are subordinate to him. He is perceived as responsible for his family members and for making most of the family decisions (Meler, 2017).

In contrast, women in such traditional family are expected to be dependent on their husbands and serve as a source of support for them and for her family. Thus, women traditional roles, roles they are expected to follow and which they are measured by, are to serve as wife and mother. Hence, traditionally, most women's activities are limited to the private sphere, as women do not actively participate in public (male) sphere. The woman accepts the authority of the man and together they impose their authority on their children (Jeraisy, 2012).

However, some argue that although in traditional society the father is admittedly considered as the dominant public figure of the family, in practice the mother is the one who controls the family, for instance because of the father's absence from home due to his work and his public obligations. The intense and direct contact between the mother and her children creates greater closeness followed by greater dependency of the children in their mother than in their father (Barakat, 1993).

Children in traditional families are required to respect and obey the adults, particularly the elders. They acquire great respect for adult members in the family, who play the role of protector and breadwinner. As Haj Yahia-Abu Ahmad (2006) points out, this respect is probably related to the perception of adults by family members as having the experience, wisdom and ability to lead and protect them. In addition, she argues that this attitude stems from one of the basic values of Arab society - emphasizing the past

and appreciating its cultural and historical roots (Haj Yahia-Abu Ahmad, 2006). The hierarchy that characterizes the traditional family based on age and gender is also reflected among the children themselves. First, there is a preference for male children over females. And second, the older siblings, and particularly older brothers, are considered dominant and have exclusive powers and roles. This is in accordance with the prevailing perception in traditional society in which the sons are the ones who will bear the family name, ensure its continuity, and take responsibility for the property and provide for the whole family. Conversely, after they marry, daughters will move to live with their husbands (and move to the husbands' house), and their children are considered as those of the "other family". However, some argue that the loving and supportive bond between brothers and sisters is a positive aspect of the traditional hierarchical structure (Meler, 2017).

Apart from characterizing Arab family structure as patriarchal, Haj Yahia-Abu Ahmad (2006) points to an extended cooperative family structure. Similar views of extended Arab families as collectivist traditional are common (Barakat, 1993; Jeraisy, 2012). The extended traditional family usually includes three generations: the father and wife, his married sons (along with their families), as well as the unmarried sons and daughters. In addition, most extended traditional families lead a cohabiting life headed by the father and function as a single consumer or producer unit. Also, according to custom, the sons do not leave the family before their marriage. After they get married, they stay in the family home with their new families and work under the head of the family who controls the financial resources, while their wives are responsible for everyday maintenance and management of the household and family (Haj Yahia-Abu Ahmad, 2006).

Relationships between family members are even more complex when family relationships are characterized by cohesion, support, and mutual help. Everyone contributes their share for the betterment of the status and living conditions of the family (Meler, 2017). At the same time, family relationships are based on values that emphasize respect for the adult, maintaining family ties and seeing the collective at the center. Jeraisy (2012), adds that in the collectivist Arab society the individual gives up his self and follows the will of the group, which represents the individual's norms and values. Thus, in such collectivist society, an individual's self-image and status largely depends on the family image and status, rather than on personal accomplishments or characteristics. Hence, maintaining family status and prestige outweighs the fulfillment of personal desires and needs. Thus, in the traditional family structure, family members are expected to humble their personal needs and prioritize the good of the collective. However, this relationship is not one-sided and the collective itself helps and supports each member of the family (Khamaisi, 2012).

However, in recent years there some evidence of change in the characteristics of the collectivist, extended, and traditional Arab family (Fuchs, 2017; Khamaisi, 2012; Meler, 2017). Most often, these changes are part of a broader set of social change processes that take place among Arabs in Israel. Among other things, there seems to be a process of weakening of the patriarchal family structure. Recent years have witnessed a decline of agriculture, as well as an increase in out-of-family employment, a trend that has increased women's ability to join the labor force and reduced dependence on men's physical abilities that were part of the source of male authority. In addition, these processes are weakening the extended family structure and its management as a joint household. Unlike past years, boys in the family are beginning to develop their financial

as well as their marital independence – preferring to live with their wives as an independent unit, separated from the extended family (Khamaisi, 2012; Meler, 2017).

Another change in Arab society characteristics on recent years involves increased urbanization. As part of this trend, more and more Arab residents are leaving their traditional villages and moving to cities with a Jewish majority. The motives for this process are mainly economic. In doing so, part of the Israeli Arab population detaches itself from the traditional and patriarchal family structure that characterizes general Arab society in the Middle East (Rudnitzky, 2015; Smooha, 2017).

In conclusion, although the traditional Arab family (characterized by patriarchy and expanded structure) is undergoing significant changes, these are not inclusive or revolutionary (Haj Yahia-Abu Ahmad, 2006). The importance of the father's house has not disappeared, nor has the preference of family members to live close to each other and to maintain close family ties. Also, the respect and dependence on adults in the family still exists. There were no revolutionary changes of the patriarchal family structure. The changes that have taken place in recent years in the status of women in the Arab sector have been "quantitative" changes (mainly in the field of going to work) but not "qualitative". That is, these are changes on the surface whose significant impact on the status of women within the family has not yet given its signals (Haj Yahia-Abu Ahmad, 2006; Meler, 2017).

Moreover, as stated by Meler (2017, p. 792), *“The complex realities thus engendered can no longer be characterized by the conventional dichotomous division between modern/western and traditional/conservative lifestyles”*.

### **2.2.3 A concerned outlook for Israel's future**

An overview of Israeli society reveals great complexity, which makes it difficult to characterize Israeli society in a coherent and unequivocal manner. There is great variability between the different cultural sectors that make up society in many respects and characteristics. Economically, Israeli society is a developed society that enjoys a high standard of living and impressive economic growth, but not all population groups are active in this trend, partly by choice (such as the ultra-Orthodox Jews or the Arab rural population) and partly by distance from employment centers (Bedouin in the south, immigrants of Ethiopian origin). The State of Israel was founded and operates to reflect the values of the Jewish majority, while this definition creates a distinction between the Jewish majority and the Arab minorities. At the same time, the definition of the state as a secular state raises tensions between the pursuit of conduct that promotes liberal values, such as equality and freedom, and religious conservatism of both Jews (whose prominent representatives are ultra-Orthodox and national-religious) and Arabs, especially Muslims and Druze. Demographically, too, much variability between sectors is notable. As some sectors completed the demographic change, like other developed countries (non-religious Jews, Christians, Druze), other sectors are still characterized by very high fertility rates (ultra-Orthodox Jews and Muslims in remote or dislocated employment areas).

These are, of course, are just few examples to which the profound implications for poverty, employment, family structure, the nature of the community, place and residential preferences and so on must be added. Continuing in the current outline is a recipe for disaster for Israeli society, with declining participation rates in the labor force, widening the huge wage gaps anyway, deepening the scope and applicability of poverty and with them social, cultural, and religious segregation. More importantly, deepening current trends is unsustainable (Even, 2021; Rivlin, 2015; Soffer, 2016; Stiglitz, 2012).

The main conclusion that emerges from the review is that, to a considerable extent, the main component that shaped Israeli society, especially regarding labor force participation rates and patterns, were not structural changes in the Israeli economy but rather socio-cultural characteristics of the various groups. Moreover, as stated by (Winkler, 2015, p. 218), these "special" social and cultural preferences have been implemented as official policy over the years, and especially as "*political decisions whose connection to the labor market at first glance seems loose.*"

This means that Israel faces foreboding future, with lower labor force participation rates, widening socio-economical gaps, increased poverty, and increased social changes. Most importantly, continuation of the existing situation is evidently unsustainable (Rivlin, 2015; Soffer, 2016). In the face of this gloomy outlook, it is essential to address Israel's social investment main characteristics as means for mitigating Israel's social challenges.

### **2.3 Social investment as a means of increasing human capital and mitigating Israel's social challenges**

As the focus of the present study are students in teachers' training institutions as agents of tomorrow's socio-cultural change (Pantić & Florian, 2015) and the influence of culture on their approach to learning, it was implicitly suggested that education and higher education (therefore, teachers and students in teachers' training institutions) can be viewed as a long-term investment directed at improving the life chances of as large a part of the population as possible (i.e. social investment) (Hemerijck, 2018) by improving their skills and consequently their employability, quality of employment, as well as other

benefits that are related to the labor market (i.e., human capital) (Angrist et al., 2019; Asadullah & Zafar Ullah, 2018; Marginson, 2019).

The concepts of social investment and human capital were briefly introduced earlier (see p. 15), however there is room for a more explicit and comprehensive explanation of the concepts and the relationship between them and society, economy, and especially education. For this purpose, a short review of the concepts of social investment and human capital is presented in chapter 2.3.1, followed by an analysis of educational and vocational social investment in Israel in recent years (chapter 2.3.2).

### **2.3.1 Social investment as a means of increasing human capital**

The idea of social investment (SI) argues, in general, that spending on welfare and social support should be treated not as an immediate expense or cost, or rather as a burden on the state budget, but as an economic investment whose fruits can be enjoyed in the medium and long term (Plavgo & Hemerijck, 2020). Thus, as stated by Plavgo & Hemerijck (2020, p. 2), "*In a generic sense, SI reform tilts the welfare balance from ex-post compensation in times of economic or personal hardship to ex-ante risk prevention*". The concept of social investment seeks to examine the distribution of economic resources ("Redistribution") and the ability of productive sectors in the economy to carry the non-productive sectors ("Carrying Capacity") throughout the life trajectory of workers, including in the context of an individual changes throughout his their life-course and as they matures and ages, changes in their household ("Gendered Family Life-Course"), as well as the extent to which the institutions are adapted to such support ("Institutional Complementariness") (Hemerijck, 2018).

The concept of social investment was formulated on the background of socio-economic issues documented in Israel, as well as many other countries, including the



aging of the population and the prolongation of life expectancy with collapsing pension systems and the increasing difficulty of supporting an annuity system; Globalization and the impact of technological change on the labor market, and in particular on the employment of low-skilled people; Changes in family structure and their effect on the ability to balance the needs of livelihood and family, such as the expansion of the single-parent family phenomenon, an increase in the participation rate of women in the labor market and the postponement of the birth of the first child (Gal et al., 2020). The intensification of these economic and demographic processes challenges the state's central welfare systems, whose role is to provide social protection and promote social equality. In this sense it would be more correct to treat these socio-economic issues as social risks. This perceptual shift in addressing the issue of risk will also lead to the insight that not treating them means suboptimal life chances for large sections of the population (Hemerijck, 2018).

Here are a few examples that illustrate the difference between a policy of social protection and social investment (Gal et al., 2020, p. 7). Instead of allowances for children and families, the concept of social investment offers equivalent services (not money), education for all stages of development and education (early childhood, primary and post-primary) and savings plans for every child. Similarly, instead of old age, survivors' or nursing benefits offered as social protection, social investment offers equivalent services (not money) for older people. For people of working age, the concept of social protection offers options for early retirement, housing assistance, unemployment and disability benefits and income support benefits, while social investment offers programs for integration re-integration into the labor market and employment rehabilitation, employment grants (such as negative income tax), R&D investment and higher education accessibility options.

Since it was first introduced, more than two decades ago (Gøsta Esping-Andersen, 1990 and Gøsta Esping-Andersen et al., 2020, both as cited in Plavgo & Hemerijck, 2020), the concept of social investment has been adopted by the world's leading economic institutions, including the European Commission, the OECD , and the World Bank Group (Gal et al., 2020; Plavgo & Hemerijck, 2020). Moreover, the claim that extended welfare policy impairs competitiveness turns out to be empirically problematic when among the ten most successful economies are five European high-spending welfare states (K. Schwab, 2019). Given the consistency of the findings, there is at least a room not to outright reject the rationale that high-spending social investment-oriented welfare contributes to the long-run economic process, and that the degree of competitiveness of the economy depends more on the quality of social spending than its scope (Hemerijck, 2018).

Social investment has three main objectives or complementary policy functions, which depend on and overlap each other: Stock, Flow, and Buffer (Gal et al., 2020; Plavgo & Hemerijck, 2020).

**Stock.** Investment in the development of human capital throughout a person's life, from early childhood to old age, with the aim of improving his productivity. Human capital theory is an economic theory that assumes that a person's labor force is an asset that may change in value over time and differ from employee to employee, depending on changes that occur in the employee's quality (Angrist et al., 2019; Marginson, 2019).

According to this theory, human capital is the sum of the natural skills (age, sex, etc.) and acquired (education, experience, physical fitness, etc.) of the employee. Respectively, it is argued that the value of jobs in the labor market is determined, *inter alia*, by the human capital of the job holder. This means that the economic benefit that an

employee embodies can be functionally expressed through a weighting of their characteristics. Thus, for example, the benefit gained by an employee with experience in his work or the benefit of professional knowledge and training on employee productivity can be assessed (Asadullah & Zafar Ullah, 2018).

Therefore, it is easy to see why one of the main uses of human capital concerns the ability to invest in this capital and the return it yields. One of the main manifestations of this investment is relevant training in the context of the workforce. This investment can be measured in terms of the duration of the training and the amount of information conveyed in it, and even distinguish between a general investment, which is generally applicable to the labor force (such as an academic degree) and a unique investment that is mainly relevant to the organization performing it (such as personal on-the-job training or specialized workshops). In particular, it is generally assumed that investment in academic studies (Tertiary-education) leads to higher productivity at work, to a continuous and longer employment sequence throughout an individual life course, and to higher earning potential (Angrist et al., 2019).

However, in recent years it has also become clear that the relationship between investment in human capital and the labor market depends largely on the quality of education and the polarization and social stratification (Dadon-Golan et al., 2019; Marginson, 2019).

Gal et al. (2020) review several scenarios in which social investment policies are implemented with the aim of improving the stock of human capital. These include, among others, early childhood care, primary and secondary education as well as higher education, lifelong professional training, promoting work-family balance,

encouragement of women employment, programs to encourage active aging as well as improving employment skills.

These initiatives aspire to ensure access to quality education systems from early childhood to higher education and are designed to improve the human capital of the population to enable their optimal integration into the knowledge economy and service-oriented economy.

**Flow.** An aspect of social investment that refers to improving human capital stock utilization, mainly through systems that encourage the integration of individuals in labor force and by regulating the labor market, for example through laws and regulations protecting workers, in a way that allows easy entry into and out of the labor market throughout workers' life-course as well as in accordance with changes in the labor market itself. An aim in this context is to bring about higher employment volumes and reduce wage disparities (Kuitto, 2016; Plavgo & Hemerijck, 2020).

Two main aspects are commonly mentioned in the context in which social investment policy can be implemented. The first aspect is the adaptation and development of vocational training and activation programs designed to maintain employees' abilities and hone their skills in line with changes occurring in the world of employment, help them make the expected transitions during their adult lives between and out of the labor market and back, enabling workers to continue contributing to their surrounding even in old age. The second aspect concerns social investment programs that focus on women and the family, such as child and patient care systems and generous maternity leave for mothers and fathers, designed to enable maximum integration of women in the labor market and help all parents create a reasonable work-family balance (Gal et al., 2020).

**Buffer.** This aspect of social investment focuses on encouraging social inclusion and integration of excluded social groups. Particularly, the aim of social investment in this context is to make sure that life circumstances or misfortune will not lead individuals to "*fall between the cracks*". In this sense, a policy of social investment is an attempt to correct the distortions and problematic aspects of neoliberalism by investing in the productivity of underprivileged minorities or of groups on the margins of society (Zehavi & Breznitz, 2019).

From a broader perspective, it is argued that the implementation of such policy can help maintain previous social investments while investing in future generations, subsequently leading to higher employment volumes and reduce future wage disparities (Plavgo & Hemerijck, 2020).

In this context it is worth pointing two recent Israeli examples in which such new policies were implemented. The first concerns the development of dedicated and tailored programs for improving labor market participation in the Arab sector which, as an ethnic minority, suffers from almost structural exclusion in the labor market (Zehavi & Breznitz, 2019). The second example concerns with the key role of economists in promoting social investment strategies in Israel, in which case it is argued that their individual perception of economic growth, policy-making and public management have a crucial impact on the success (or failure) of the transition from a neo-liberal policy to a policy of social investment (Maron, 2020). Similarly, vocational training programs and programs to promote core or academic education among the ultra-Orthodox Jews population in Israel reviewed above (Cave & Aboodi, 2011; Perelman et al., 2019; Regev, 2016) are also an expression of an attempt to promote social investment policy in Israel.

It is noteworthy, that the purpose of social investment policy is not only to address the "socio-economic" aspects of the labor market, but also to improve the welfare and quality of life of all sections of the population and sections of society (Morel et al., 2012). Thus, social investment policy seeks to address the improvement of human capital to enable their optimal integration into the developed economy, for example through programs that ensure accessibility to quality early childhood education systems, or labor market focus (e.g., through vocational training). However, it also aims to maintain employees' abilities and perfecting their skills in accordance with changes occurring in the world of employment. Social investment programs also focus on women and family, whose best-known expressions are childcare frameworks, health care and quality frameworks for patient care and generous maternity leave for mothers and fathers. For all parents in creating a reasonable balance between work and family.

As a political and practical concept, social investment stands at the center of a lively public and academic debate, especially in Europe. In recent years, social investment principles have become a leading paradigm in the EU and the OECD, and many expect that this paradigm can serve as a worthy substitute for neoliberal welfare policies (Hemerijck, 2018; Zehavi & Breznitz, 2019). On the other hand, critics of the concept question the benefit of the transition from social protection to social investment, especially in the context of tackling poverty and inequality, especially since social investment, as a construct, focuses on population groups that are perceived (beforehand) as productive (at least, theoretically) and can contribute to economic growth in a way that hinders labor force participation of groups that already excluded or are unable to integrate into it. In addition, critics argue that limited budgetary resources and preferring social investment over social protection will inevitably lead to the widening of gaps and social distress (Cantillon & Van Lancker, 2013; Kazepov & Ranci, 2017).

### **2.3.2 Social investment through education and training in Israel**

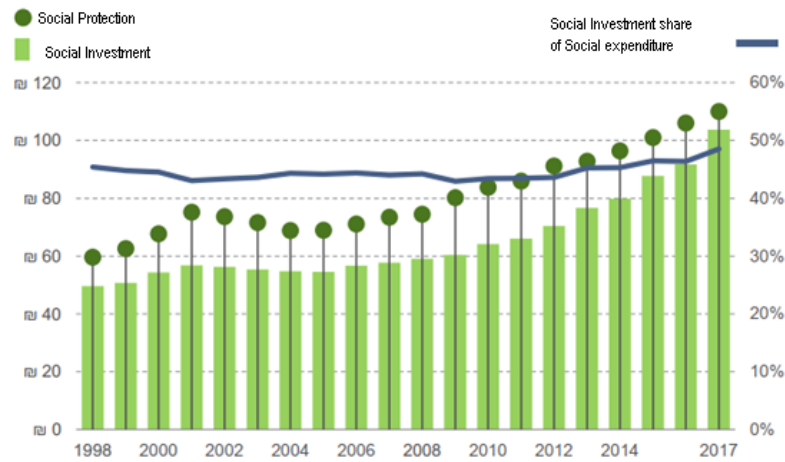
A review of key elements in Israel economy and society reveals great variability between different cultural sectors that make up its' society (see chapters 2.1 and 2.2). With declining participation rates in the labor force of some sectors, widening wages gaps, and increasing poverty rates and social, cultural, and religious segregation, Israel is facing foreboding future (Even, 2021; Rivlin, 2015; Soffer, 2016; Stiglitz, 2012). Hence the need to examine the characteristics of Israel's social investment in recent years, especially in the context of improving Israelis' human capital through education and professional training, and the way in which this investment will enable Israel to face the future social challenges.

Unlike in Europe and other developed countries where there is a lively public and academic debate about the benefits and limitations of the idea of social investment, in Israel the discourse on social investment is still in its infancy, and the idea has not yet become an integral part of social policy in Israel (Gal et al., 2020).

The main significant publication in the context of social investment in Israel is that of Gal et al. (2020), which compiled data from a number of sources, including the OECD and the Bank of Israel, in order to try and characterize the trends in the field. Below is a concise review of their main findings.

As illustrated in Figure 10, a review of Social Expenditure in Israel over the past two decades shows an increase in both the scope of social protection and the volume of social investment, and in recent years it has even become apparent that the growth rate of social investment is greater than that of social protection. Moreover, as of 2017, the

Expenditure on social investment accounted for almost half (48.5%) of the total Social Expenditure.

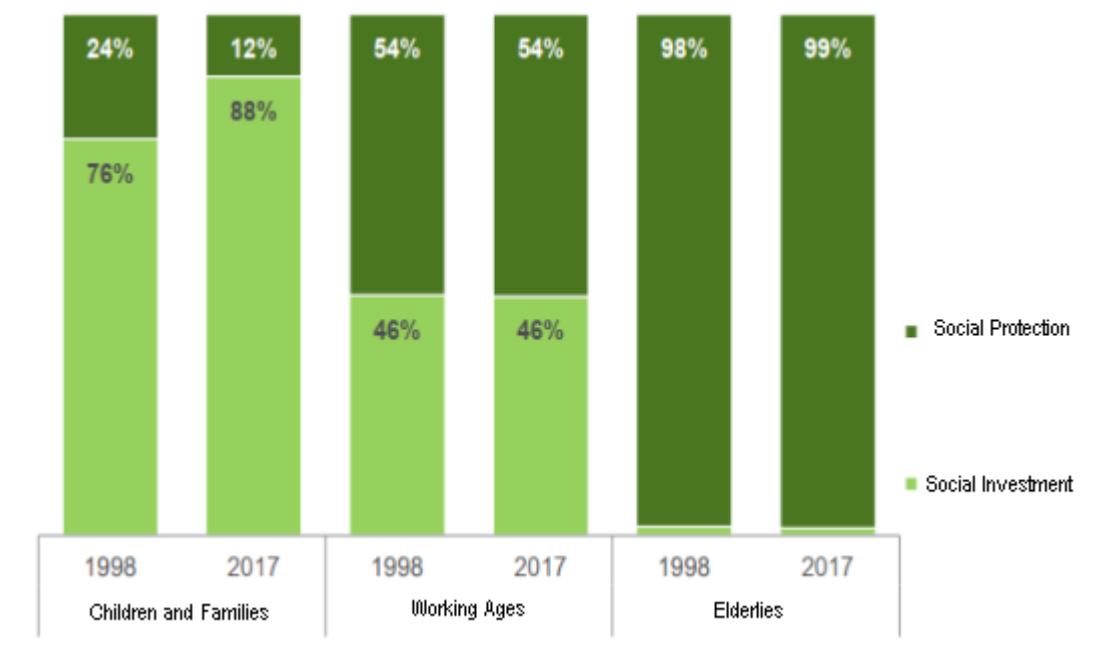


**Figure 10: Public expenditure on social investment and social protection in Israel - 1998-2017 in Billion NIS, 2017 prices (Gal et al., 2020)**

According to Gal et al. (2020), in Israel, it is common to refer to social investment in accordance with three main stages of life: investment in children and families, investment in working age and social investment in the elderly. Such a separation makes it possible to focus the allocation of public resources according to the relevant time horizon for each age group. Thus, investing in children is a medium and long-term investment, investing in working age is a medium-term investment, but naturally the investment horizon in adults is not long. A look at Figure 1 reveals that the rate of social investment in children and families is very high - it rose from 76% in 1998 to 88% of the total Social Expenditure on this age group in 2017, mainly due to the implementation of a savings plan for each child and the expansion of daycare support for toddlers. Respectively, social investment in working age accounts for only 46% of total Social Expenditure on this age group, and as can be seen the extent has not changed over the last two decades (Gal et al., 2020).



Conversely, the extent of social investment in the elderly is negligible. Most of the social expenditure for this group is mainly social expenditure in the form of social protection. In this case, too, the scope of social investment has not changed in the last two decades.

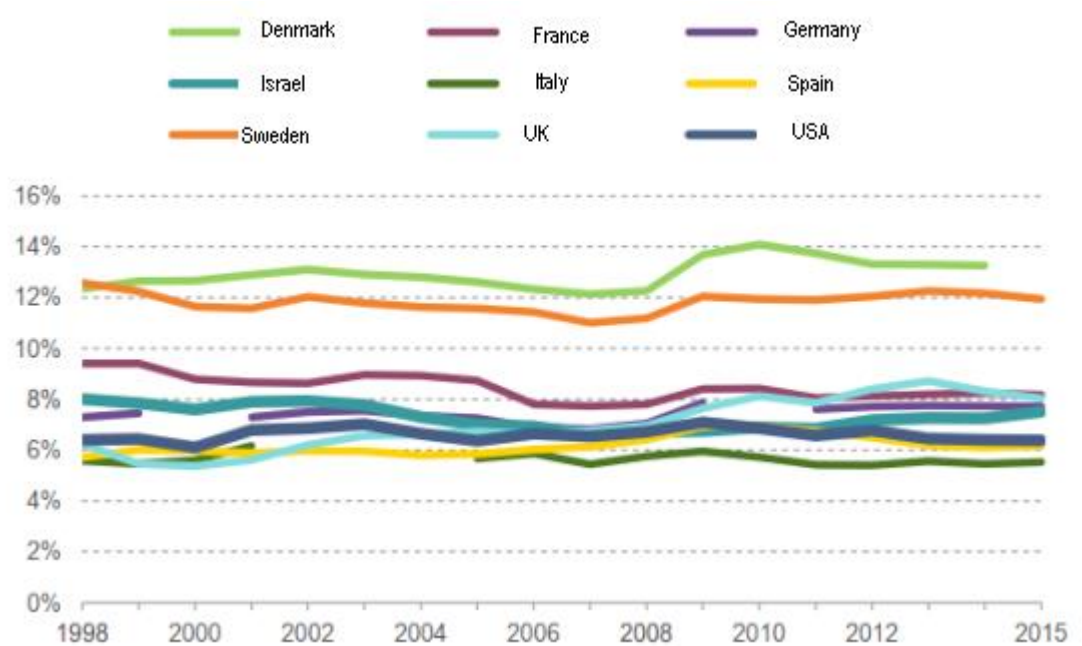


**Figure 11: Social Investment and Social Protection share of Social Expenditure in Israel - by age group (Gal et al., 2020)**

Ostensibly, these data show that Israel is allocating increasing sums for social purposes, which, practically, might indicate of an increasing allocation of Social Expenditure in favor of social investment. Indeed, in an international comparison, the volume of allocation in favor of social investment in relation to the total social expenditure of Israel is similar to that of leading welfare states such as Germany, Sweden and Denmark (Gal et al., 2020, p. 12).

In practice, however, such a quantitative comparison is misleading because it refers to absolute social investment. For the reader to get a better idea of this scope, it is

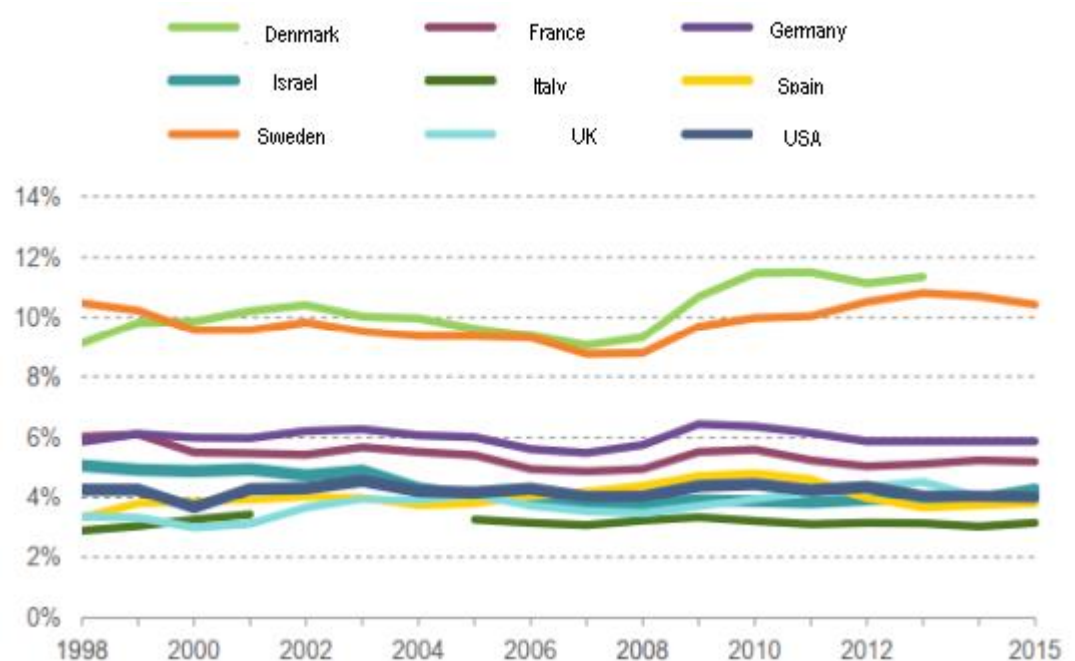
worth examining the volume of resources allocated by the economy to public investment out of the total resources available to it. Indeed, when examining the volume of social investment in Israel as a percentage of GDP, it turns out that the relative volume in favor of social investment in Israel is low by international comparison (Gal et al., 2020). As shown in Figure 12, it turns out that SI in Israel is more similar in its spending patterns to liberal welfare states (United Kingdom and United States) and that its' presumed increasing social investment is mainly because its social investment is low. In fact, since 2009 Israel has spent less than one percent of its GDP on social protection programs than any other country, including the United States.



*Figure 12: Social Investment as a percentage of GDP (Gal et al., 2020, p. 13)*

Moreover, it seems that the relatively large share of social investment out of the total social expenditure in Israel is due to Israel's low expenditure on social protection. This point becomes particularly clear when considering the expenditure on social

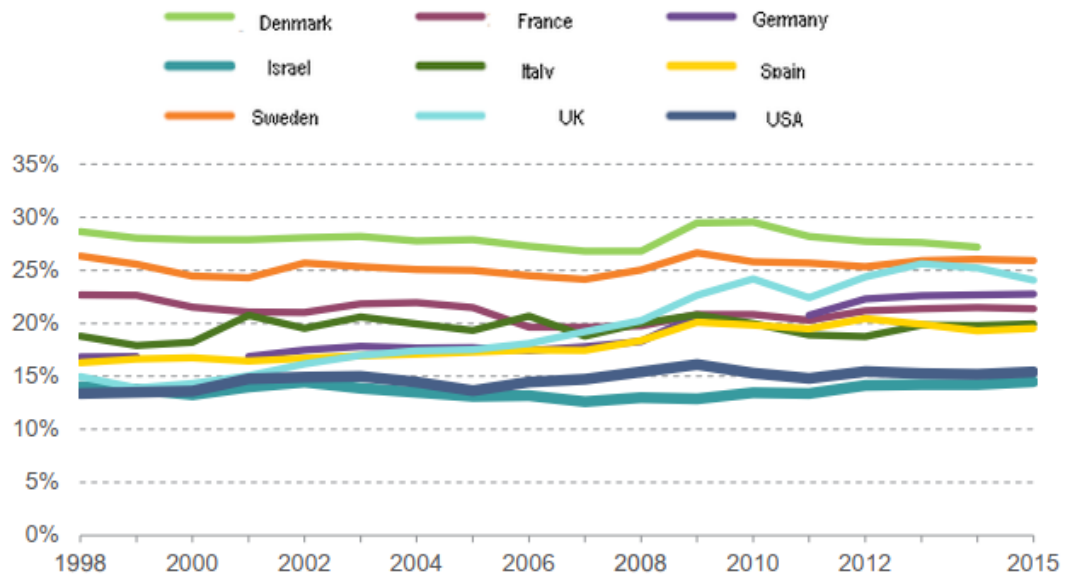
investment per capita. First, by examining the rate of social investment for a person of working age (20-64) in relation to GDP per capita (Figure 13). This examination shows that the volume of social investment relative to a person of working age is only 4% of GDP per capita. In an international comparison, this is an investment that places Israel at the bottom of the rankings, much like other Mediterranean welfare states (Italy and Spain) and the liberal welfare states (the United States and the United Kingdom) (Gal et al., 2020).



**Figure 13: Social Investment as a percentage of GDP per capita at work ages 20-64**  
(Gal et al., 2020, p. 13)

The gap between Israel and other countries is even more severe when considering social investment per capita for children and youth (ages 0-19). As shown in Figure 14, Israel is ranked last with a social investment per child at a rate of only 15% of GDP per capita. This low rate is a result of the relatively large proportion of children in Israel's

population, but also of the low volume of its social expenditure, especially on education (Gal et al., 2020).



*Figure 14: Social Investment as a percentage of GDP per capita at ages 0-19 (Gal et al., 2020, p. 13)*

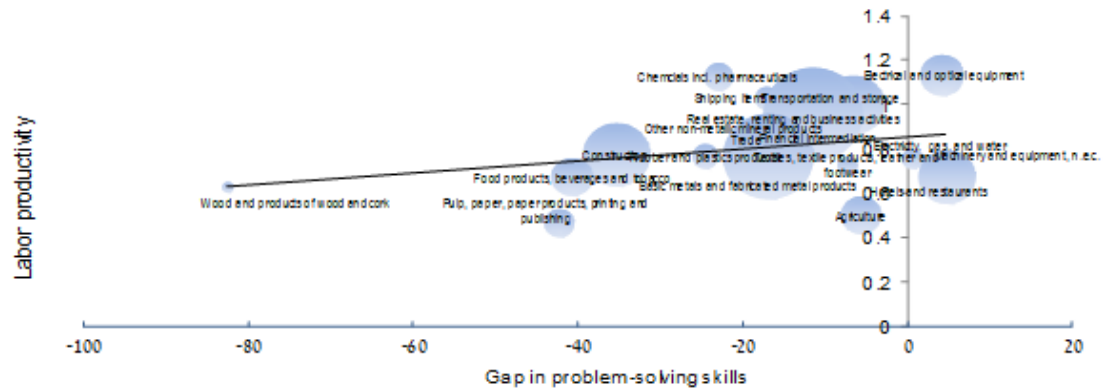
After recognizing that social investment in Israel is relatively low in international comparison (although it has increased quantitatively over the years), one might argue that the quantitative comparison (i.e., through the sums of money allocated for this aim) might not be enough, as this perspective do not convey the qualitative aspect of this investment. In the present framework, there are two main channels in which this argument must be examined: first, the quality and skills of the Israeli worker and, second, the quality of Israel's education system. As will be further reviewed hereafter, in an international comparison, Israel is lagging.

As mentioned above, one of the goals of social investment is to improve the quality of employees and their set of skills in order to improve their functioning at work and enable their market mobility over their years at work, and if possible, also allow them to leave and return to the labor market according to the stages of life (Plavgo & Hemerijck, 2020). Hence, one of the means of examining the quality of social investment in this sense is in examining its products - that is, in examining the quality of employees.

One of the key metrics for measuring workers' quality is their productivity, which is usually measured by estimating the volume of product per worker<sup>53</sup>. It turns out that the productivity of the Israeli worker is 14% lower than that of a worker in other developed countries. Indeed, in industries in which Israel leads (electronics and communications industries) the productivity of the Israeli worker is higher than average and helps reduce the gap between it and other developing countries, but in most industries, especially in sectors who focus on domestic markets (Figure 15). Among other things, it turns out that the low level of productivity of workers is reflected in low-cost, low-tech production methods, and that a significant part of Israel's economic growth is the result of more working hours (Bank of Israel, 2016).

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<sup>53</sup> Workers' productivity is usually measured in terms of product per work year or in terms of product per hour worked.

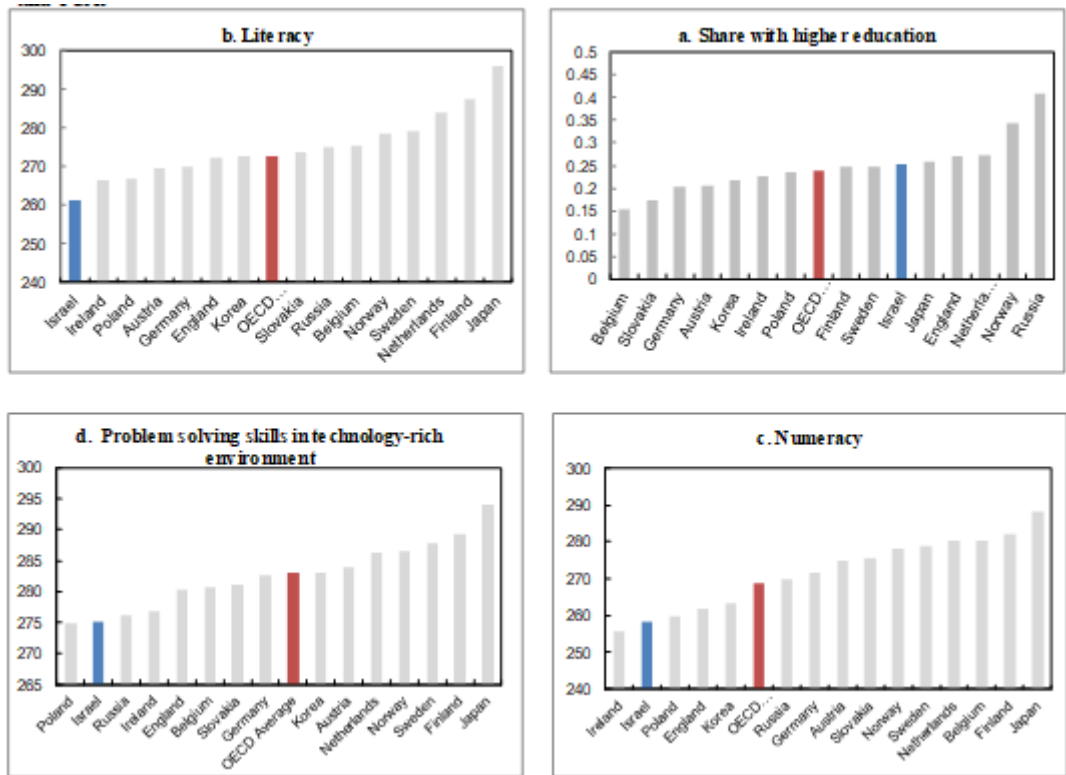


**Figure 15: Gap in problem-solving skills in various industries, Israel vs. OECD average (Bank of Israel, 2016)<sup>54</sup>**

Worse, an examination of the productivity gap (Bank of Israel, 2016) reveals that although the working public in Israel is educated - the proportion of those with an academic education in Israel is higher than in OECD countries (see Figure 16) - in practice, this level of education does not translate into higher market capabilities. In practice, the reading skills of the Israeli worker, his quantitative skills and his problem-solving skills in a digital environment are significantly lower than the OECD average (see Figure 16).

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<sup>54</sup> The size of the bubble in the figure represents the amount of workers employed in the sector

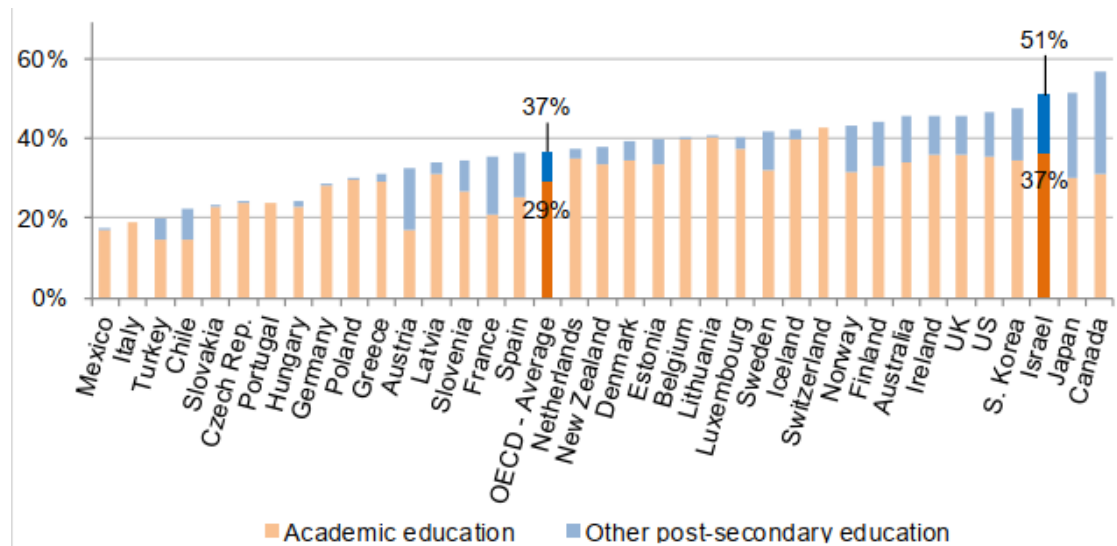


**Figure 16: Workers' education and skills, Israel vs. other OECD countries, based on PIAAC survey (Bank of Israel, 2016)**

According to Bank of Israel (2016) the implication of these findings is that : "... workers' skills, and particularly their cognitive abilities, are not derived from years of schooling only, but also from the quality of education and from other personal and environmental variables.". Simply put, the quality of Israeli workers is lower than the quality of workers in other developed countries, and the many years of education are a quantitative means of bridging this quality gap.

Turning to education, an examination of the macroeconomic aspects of the Israeli economy reveals that public spending in Israel in recent decades on child education is lower than that of other developed countries. It also turns out that the government invests less in the public capital stock and infrastructure, and that the total lack of sufficient investment detracts from about 2% of GDP per year and is reflected in the low skills of the labor force in Israel and the low quality of infrastructure. As a result of the authors of

the report estimate that the likelihood that Israel will succeed in achieving similar productivity to other countries with such a low level of expenditure is not high (Bank of Israel, 2019).

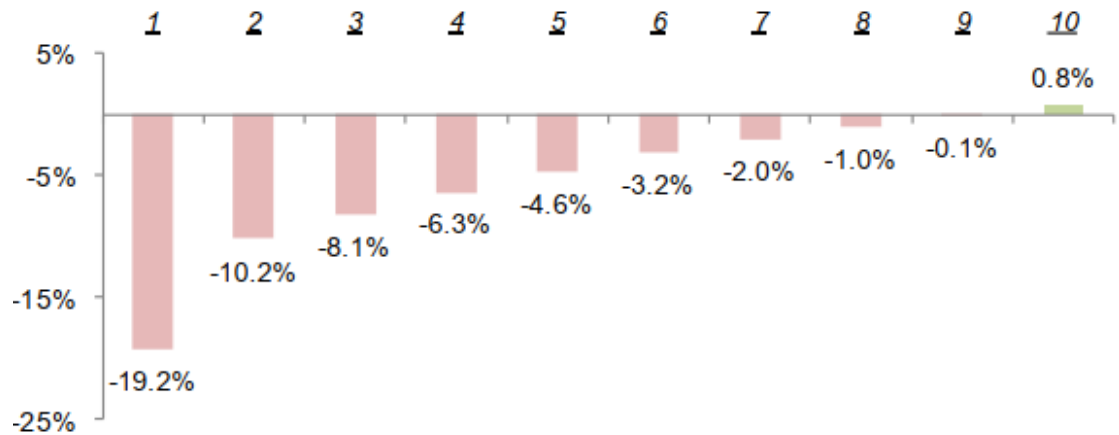


**Figure 17: Percentage of Post-Secondary education in Israel and the OECD, 2017**  
(Bank of Israel, 2019, p. 23)

Not only that the quality of education in Israel is relatively low, despite the large number of years of schooling (another example of this aspect is illustrated in Figure 17), other aspects of education that emerge from these reports indicate great inequality in achievement, both between different population groups (e.g., Jews versus Arabs), as well as with respect only to Hebrew speakers, including secular Jews. Thus, for example, the basic skills of the upper median of achievement of Israel students are not much behind compared to the corresponding median in developed countries. However, the gap between the skills of the lower median of Israel students' and the lower median in other developed countries is large. Moreover, the results of the PIAAC tests for 2015 indicate significant disparities in skills to the detriment of Israeli students in almost all income deciles, as illustrated in Figure 18.



As the lag in Israeli workers' skills is consistent and manifested among most age and education groups, and is characterized by large inequality, it might lead to the conclusion that there is a problem in early stages of Israeli education (Bank of Israel, 2019).

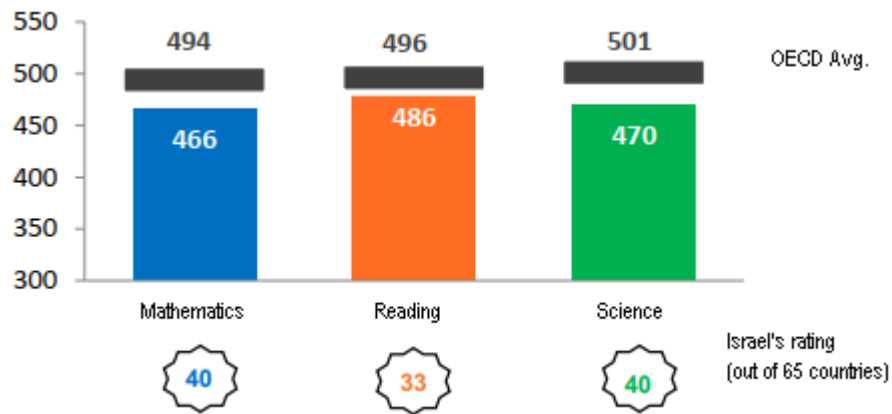


**Figure 18: Skills gap between Israel and the OECD, by Decile, 2015 (Bank of Israel, 2019, p. 25)**

Comparative tests, such as the PISA test<sup>55</sup>, conducted in recent years, indicate that student achievement in Israel is faltering and places Israel in an unflattering position in terms of rankings. For example, the results of the 2015 tests showed that the achievements of Israeli students in mathematics and science are ranked 40th compared to 65 countries (Flug, 2016).

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<sup>55</sup> It should be noted that despite its vast popularity as a means of measurement and comparison of students' achievements, PISA tests tool is not without limitations, both in the methodological aspect and in the context of the legitimacy of causal inferences regarding educational policy. See, for instance, Goldstein (2017).

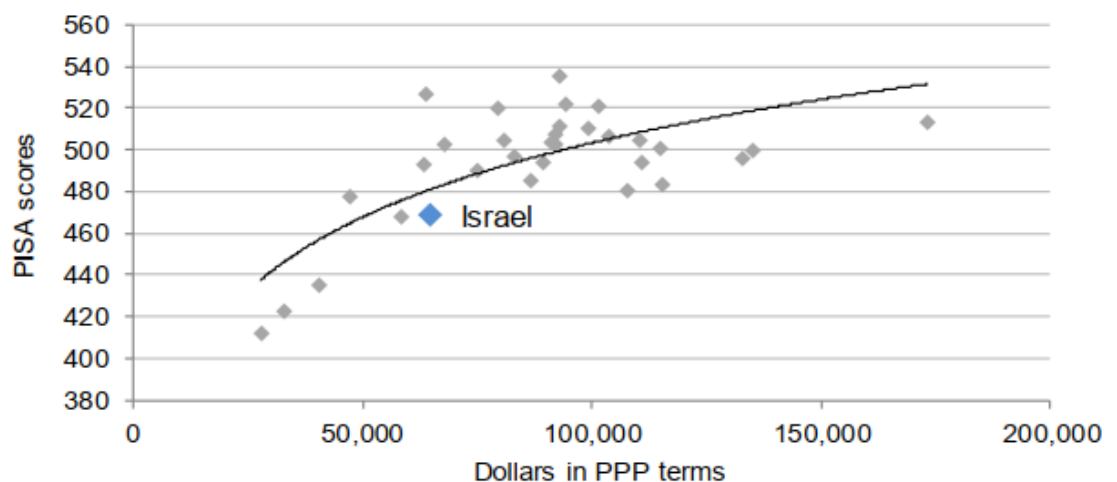


**Figure 19: PISA achievements, Israel vs. OECD (Flug, 2016)**

The relatively low achievements of most Israeli students lead to the need to examine the manner and effectiveness of allocating resources to education. This issue is at the center of a lively public debate in which infrastructural aspects (e.g., the number of students in the classroom, the classroom size (area) and design, or the amount of air conditioners installed in it) mix alongside calls for far-reaching reforms or structural change of the entire education system. From a more economic perspective, the research literature on the existence of a consequential relationship between the volume of investment in education and achievement in education is not unequivocal, and in any case it is agreed that it is not immediate - that is, investing a certain amount in a particular year does not necessarily yield results in that school year (Bank of Israel, 2019; C. K. Jackson et al., 2016).

It is also common to assume that increasing education expenditure, in its' own sake, does not guarantee improvement in achievement (Blankenau & Camera, 2009; Lips et al., 2008; Verhoeven et al., 2007). The desired improvement in achievement depends on the efficiency of the use of these resources. Thus, for example, it has been argued that one of the signs that resource efficiency is not optimal is that teachers' salaries in Israel

are similar to the average salary in OECD countries, while students' basic skills are lower. In addition, the existence of a particularly large gap between the salaries of new teachers and veteran teachers indicates that teachers' remuneration and promotion in the education system is not a result of their skills or performance, but rather the result of wage and employment agreements between the state and the teachers' professional unions which mainly determine seniority and tenure<sup>56</sup> as criteria based on (Bank of Israel, 2019). Based on these recognitions, a number of reforms have been implemented in recent years, all aimed at changing the structure of teachers' salaries, their tenure, retirement age and more, but so far, the results of these changes have not been substantial (Arar et al., 2019).



**Figure 20: Cumulative expenditure on education for students aged 6-15 and students' PISA scores, Israel and other OECD countries, 2015 (Bank of Israel, 2019, p. 24)**

Economically, there is evidence that the volume of social investment in education is not high. Among other things, the volume of expenditure on vocational training in

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<sup>56</sup> In Israel, the term tenure also implies occupational security (i.e., teachers cannot be fired), salary increases based on seniority, as well as ensuring priority in applying for higher positions

Israel is less than half of what is customary in OECD countries (0.06 per cent of GDP vs. 0.14 per cent of GDP, respectively) and so is the rate of expenditure on active participation in the labor market. Despite the accumulation of studies indicating the contribution of these educational tools to increasing employment, wages, productivity, and the total welfare and life quality (Flug, 2016). As illustrated in Figure 20, it turns out that Israel's investment in primary education is also relatively low, and worse, it is also evident that it is sub-optimal, meaning that the system does not utilize and invest its resources efficiently (Bank of Israel, 2019).

In summary, social investment in Israel is low, despite an absolute (but not relative) increase in recent years. Israeli social investment is low relative to the size of its' economy, as well as to its' economic and population growth, and more so when compared to other countries.

More concerning is that the investment effectiveness in developing and improving its' workforce human capital is low compared to many developed countries, both in working age and in the early stages of education. This gap in Israeli society, both in the context of the quality and skills of the Israeli worker and in the context of the abilities of future workers in Israel (i.e., today's schoolchildren) casts a heavy shadow on Israel's ability to face the demographic challenges it faces in the future.

The present study does not purport to offer solutions to these weighty issues. At the same time, these socio-economic trends clarify the complex and intricate background of the Israeli society and outline the framework for the issues that lies at the center of the present study concerning teachers' training in Israel.

The analysis shows that already Israel's education system success in responding to its' economy and labor market needs is limited. As will be discussed below, structural characteristics of the Israeli education system, such as its' fragmentation and complexity, provide only partial explanation for this. Another partial explanation can be attributed to the cultural segmentation of the education system, which allows some cultural sectors to perpetuate ignorance and unwillingness to integrate into society and the labor market. These explanations will be reviewed in the next section.

Another possible explanation, which is at the heart of the present study, holds that in order to better understand Israel's education system and its ability to support the future needs of Israeli society, one must better understand the agents of the education system – i.e., its teachers. To this end, better understanding of teachers' training process and institutions is required, as well as understanding teaching students' Approach to Learning as a proxy for subsequent quality of their learning outcomes and academic achievements (Artlet et al., 2003; Biggs, 1987; Burton et al., 2009; Teoh et al., 2014).

# **Chapter 3: Teachers' training in Israel – an overview of Israeli education system structure, teaching stuff, and higher education and teachers' training institutions**

## **3.1 Structure of the Israeli education system**

In the focus of the current research are students in teaching institutions and their approach to learning. Hence, the state of education in Israel and the way Israeli education services are organized must be discussed. As will be presented hereafter, the need for this discussion is necessary first and foremost because of the great cultural and social diversity of Israeli society, as reviewed above. More importantly, a review of the structure of the education system in Israel is required because it is a system with a complex structure. This complexity leads many to simply disregard many of the system's components, and to the focus only on its official parts, or even only on the Jewish-secular sector, for instance in the context of examining the products of the system and evaluating students. The heterogeneity of the education system is reflected in different levels of the system's structure, its' budget, as well as in its' many types of educational institutions. This highly categorized education system is the result of extensive legislation<sup>57</sup>, the history and tradition of educational development, competing ideologies and educational perceptions prevalent in the education system and other cultural and political factors<sup>58</sup> (Kup, 2002).

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<sup>57</sup> This includes direct legislation on issues related to education (such as the Compulsory Education Act, the State Education Act, the Special Education Act, or the Student Rights Act), as well as indirect legislation and regulatory regulations (such as the Annual Budget Act, or the Unique Cultural Educational Institutions Act).

<sup>58</sup> Key aspects regarding the development of the Israeli education system were reviewed earlier (see chapters 2.1, 2.2, and 2.2.2). The present chapter is focused in reviewing the complex structure of Israel's education system, as well as presenting the current challenges, issues, and its' performance.

Israeli education system operates according to three main laws<sup>59</sup>:

- **The Compulsory Education Law** stipulates that every child in Israel must be in an educational setting (kindergarten or school). In 2017 the law has been updated so that it applies to students from kindergarten to twelfth grade. The law defines education as compulsory for all children and adolescents in Israel, and it imposes on parents the responsibility to enroll their children in an educational institution. It also allows parents to choose their preferred stream of education. The law stipulates that education will be free (i.e., fully funded by the state), but at the same time allows the Minister of Education to establish regulations that allow parents to be charged for activities that are not directly derived from the law. Recently, parental payments were estimated to be more than NIS 800 per year per student, on average (Central Bureau of Statistics, 2021a).
- **State Education Law**, that defines the education provided by the state according to the curriculum, without affiliation to a party, ethnic or other body outside the government, and under the supervision of the Minister of education. The law formally defines the various streams of education that operate under the supervision of the Ministry of Education, and in particular the operation of religious education (Veissblei & Vieneger, 2015).
- **Special Education Act** defines and regulates special education in Israel. The purpose of special education is to promote and develop the skills and abilities of the child with special needs, to correct and improve his physical, mental, emotional, and behavioral functioning, to impart knowledge, skills and habits and to adopt acceptable behavior in society, in order to facilitate his integration into the work cycle.

In addition to these laws, the education system operates on the basis of additional laws and regulations, which directly or indirectly relate to the field of education, such as The Basic Law of Human Dignity and Liberty, the Freedom of Information Law, the

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<sup>59</sup> as retrieved from the Knesset (Israeli Parliament) website <https://main.knesset.gov.il/EN/>

Protection of Privacy Law, the Student Rights Law and other welfare and labor related laws<sup>60</sup>.

The structure of the Israeli education system has not changed significantly in the last two decades. Also, it is customary to present the structure of the education system in Israel in accordance with five main segments. Although there is some overlap between the different segments, in practice each segment also represents different administrative function in the Ministry of Education (for example, division, supervisor, district). This systemic complexity makes it difficult, as mentioned, to understand in depth the products of the system and to bring about perceptual changes at different levels of the system (Kup, 2002; Veissblei & Vieneger, 2015; Vieneger & Zerad, 2019a).

#### *Israeli education system by stage (age) of education*

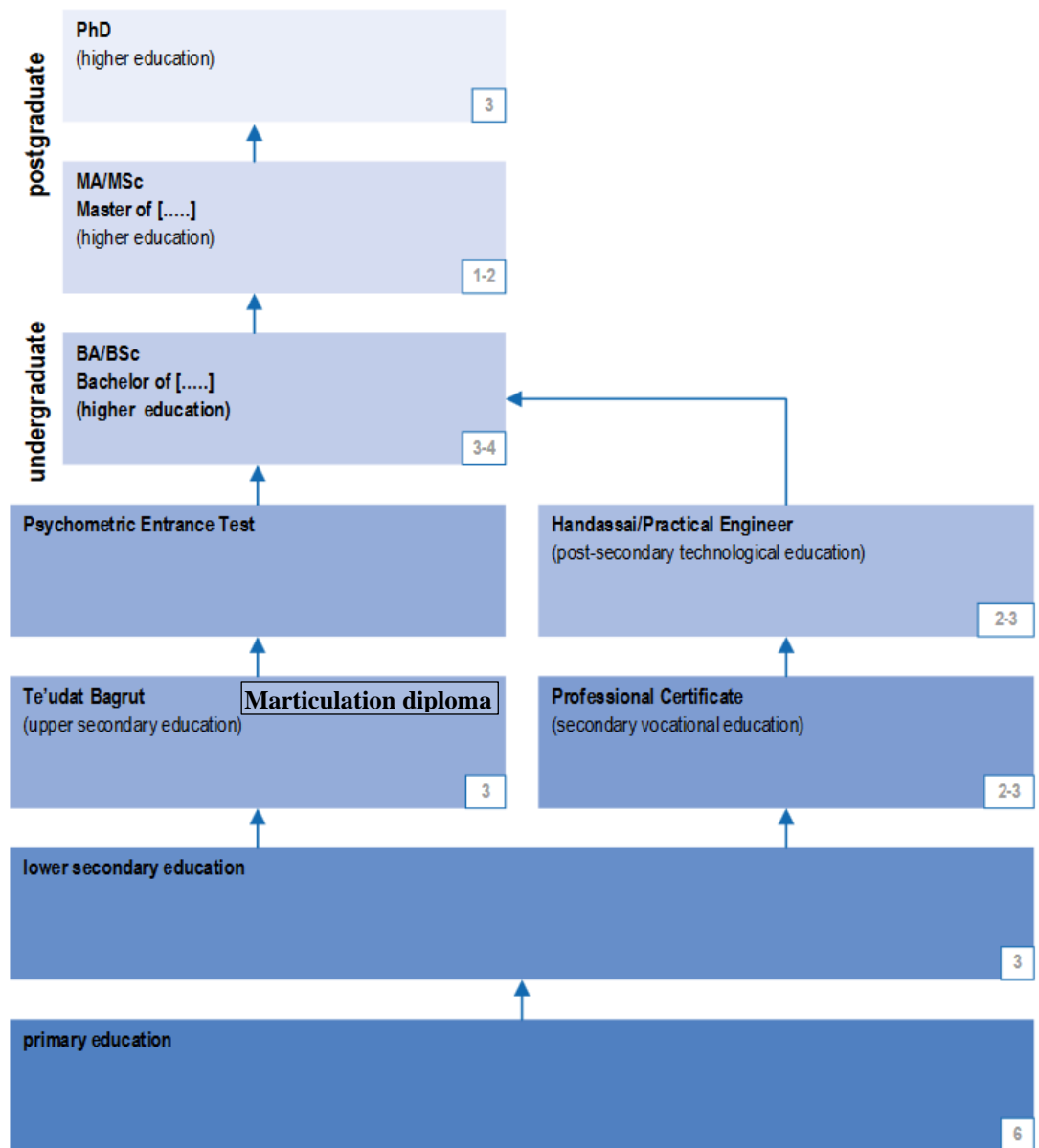
This is the most common frame of reference to the Israeli education system's structure among the public, and it addresses in principle the following stages of education. As illustrated in Figure 21, higher education refers to post-graduate and undergraduate studies. Admission to higher education studies is based on the weighting of matriculation certificate grades (which in Hebrew is called "Te'udat Bagrut") and psychometric test score. Practical engineering diploma scores (i.e., post-secondary technological education) can also be used for admission to higher education studies as a replacement of matriculation diploma (psychometric test score is still required for admission). The psychometric test is held 4 times a year by the Israeli National Institute for Testing & Evaluation ("NITE") and registration, as well as preparation, to it is private

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<sup>60</sup> See for example Israeli Ministry of Education portal at <https://cms.education.gov.il/educationcms/units/zchuyot/chukimveamanot/chukim/>



– i.e., it is not a part of primary and secondary education curriculum and activities (Nuffic, 2017).



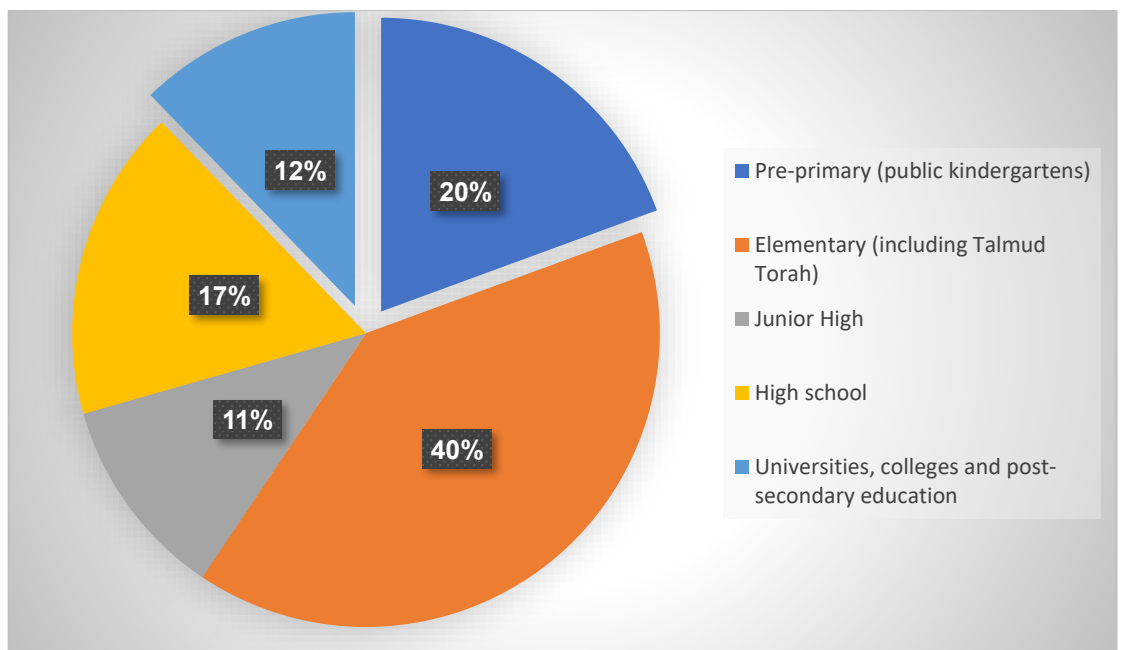
*Figure 21: Israeli education system – structure according to stage of education and duration (Nuffic, 2017)*

In accordance with the Compulsory Education Law, which in the early years of the State of Israel applied to education up to eighth grade, school education was divided

in those years into two stages of study: primary (8 years) and post-primary (secondary, 4 years). As the applicability of the Compulsory Education Law was later extended to include the twelfth grade, it also affected the administrative division of school education to three stages (see below). However, several municipalities continued to operate their school education system according to the old division of two stages, as detailed below system (Kup, 2002; Veissblei & Vieneger, 2015; Vieneger & Zerad, 2019a):

1. Pre-primary education: Divided into a pre-compulsory stage (ages 3-4) and a compulsory stage (ages 5). Education for younger ages (0-3) takes place in the framework of day care centers, and its treatment, including subsidizing some of the institutions, is coordinated by another government ministry (as of this writing, this is the Ministry of Economy).
2. Primary education: usually refers to the education phase of grades 1-6 (ages 6-11). In several (few) municipalities this educational phase refers to grades 1-8 (ages 6-13).
3. Post-primary education: Usually, this educational phase is divided into two sub-phases. The first is middle school (grades 7-9, ages 12-14) and the latter refer to high school (grades 10-12, ages 15-17). In several (few) municipalities this educational stage refers to an annual high school for grades 7-12 (ages 12-17) or a high school for grades 9-12 (ages 14-17).
4. Post-secondary and academic studies: This educational phase refer to post-secondary vocational education as well as the other universities and academic institutions (Kup, 2002; Nuffic, 2017; Veissblei & Vieneger, 2015; Vieneger & Zerad, 2019a).

Israeli education system segmentation by its' stages of education is illustrated in Figure 21. It is important to note that the above stages of education can be described as a primary division or as a principled division. In practice, within and between each of the stages of education, there are other possible frameworks, some of which include a combination of two stages (for example, a three-year kindergarten in which children of all kindergarten ages study together, or junior high and second grades in elementary schools) or otherwise a split of each stage (for example separate kindergartens for each age group, or separate schools for grades 1-3 and grades 3-4).



**Figure 22: Students in the education system by stage of education in 2019-2020 school year (N=2,697 thousand students) (Ministry of Education, 2020a)**

According to official data (Ministry of Education, 2020a), in the school year 2019-2020, 2.697 million students studied in the education system - an increase of 1.85% compared to the previous school year and of about 27% compared to the number of

students a decade earlier. The distribution of students by educational stage is described in Figure 22 above.

The significant increase in the number of students in the Israeli education system is due to its' high birth rate. This exceptional high rate requires Israel to invest a significant share of its public resources to mitigate and prepare for absorbing future students (for example, the construction of new schools or the expansion of existing schools). This is especially sensitive and complex in view of its' population ever changing socio-cultural composition and geographical distribution<sup>61</sup> (Soffer, 2016; Stiglitz, 2012; Winkler, 2015).

#### *Israeli education system by institutions' legal status*

This segmentation refers to different types of educational institutions according to the nature of their ownership and the extent to which they are subject to the provisions of state education laws, hence this segmentation distinguishes between educational institutions according to the extent to which they are subject to and comply to state supervision system (Kup, 2002; Veissblei & Vieneger, 2015; Vieneger & Zerad, 2019a).

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<sup>61</sup> See chapter 2.1 for a thorough review of Israel population groups and, developments and projections

As stated, this division is the result of explicit legislation:

A. Official education:

State and state-religious educational institutions owned by the state or local authorities and declared official institutions in official records. These are usually pre-primary educational institutions up to and including middle schools. The teachers in these institutions are usually civil servants or local authority employees.

B. The "recognized" education

Institutions that are not state-owned but whose students are subject to state education laws. The institutions in this category have assumed some of the obligations applicable to official educational institutions, and most are budgeted by the state. Institutions in this category enjoy greater freedom and flexibility in accepting students, determining curricula, and hiring teachers (Perry-Hazan, 2018).

This category includes two main types of institutions. The first type are institutions of the ultra-Orthodox Jews education, and especially to the two major education networks in this sector - The independent education network<sup>62</sup> and the "Maayan Hachinuch HaTorani"<sup>63</sup> (Schiffman, 2001) - but also of schools in other religious communities (e.g., Christian Arab schools) or independent private schools in Hebrew education (Kup, 2002; Vieneger & Zerad, 2019a).

In general, according to the provisions of Israeli law, educational institutions that fall into this category are entitled to budget allocation from the state, but at a lower rate

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<sup>62</sup> The Independent Education Network is an education system that unites a number of educational frameworks identified with the ultra-Orthodox-Ashkenazi political parties.

<sup>63</sup> An education network that unites a number of educational frameworks established and identified with the ultra-Orthodox-Sephardic political parties

than the budgeting of registered institutions (up to 75%), but the two ultra-Orthodox networks are excluded from this rule by explicit reservation in the budget law (100% budget rate) (Veissblei & Vieneger, 2015; Vieneger & Zerad, 2019a).

The second type of institutions that fall into this category are the four-year post-primary education institutions and the upper division. Most of these institutions are not official institutions, although some are owned by local municipalities or the state. These institutions also receive full funding (100%) from the Ministry of Education, like the official educational institutions in the early stages of education (Veissblei & Vieneger, 2015; Vieneger & Zerad, 2019a).

### C. Exemption institutions

The category of these institutions includes non-formal and non-official institutions which do not comply or adhere to any state supervision. The meaning of the term exemption is that children studying in these institutions have been exempted from complying with state education laws. These are usually ultra-Orthodox-religious frameworks (in primary education, for example, these are institutions called Talmud Torah for primary education in grades 1-8, or for institutions called Yeshivot for grades 9-12) (Perry-Hazan, 2018).

The activities of these institutions are regulated in section 5 of the Compulsory Education Law. These institutions have been set special conditions that they must meet for the exemption provision to apply to them, and that if they are complied with, the state will budget them at a rate of 55-60% of the budget per student in a formal educational institution.

Since these educational institutions are hardly under any supervision of the state, the knowledge about their conduct and the quality of education in them is not systematic.

A review by Chernovitsky & Feldman (2018) on the subject reveals that the dropout rate of students in these institutions (3.3%) is significantly higher than the dropout rate of students in state and state religious education (1.1%) and even than the dropout rate in Arab education (2.3%).

Another issue documented by the researchers, which has gained wide media exposure in recent years, concerns with the schools' registration process. Registration processes in these schools are poorly administrated, which also raised suspicion of irregularities and overfunding (The state comptroller and ombudsman of Israel, 2019, 2020). In addition, registration processes in these schools were found to be discriminatory based on ethnicity, religiosity level, and even socio-economic status (Chernovitsky & Feldman, 2018).

The most important issue in this context is that in most such ultra-Orthodox educational institutions for boys secular subjects are not taught at all (Barth et al., 2020; Malach & Cahaner, 2020; Perry-Hazan, 2018). Basic<sup>64</sup> secular studies is a framework that varies in scope according to age which includes languages and literature, mathematics, nature, science and technology, as well as heritage, humanities and social sciences (Blass, 2019, 2020; Ministry of Education, 2020a). Thus, history and geography, for example, are not taught as subjects, and arithmetic studies are usually limited to basic arithmetic. During middle school some of the core subjects disappear completely from the weekly schedule hours (Chernovitsky & Feldman, 2018).

Ultra-Orthodox Jews students' achievements are among the lowest in Israel. Also, despite relatively high parental payments, services offered to students in these institutions

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<sup>64</sup> Sometimes referred to as "core studies"

are limited: computer rooms, for example, were found in barely one-tenth of primary schools for boys, and safety shifts were found in less than one-fifth of all primary schools. The quality and level of teaching power in these institutions is also low. Principals of the ultra-Orthodox schools are appointed by the educational institutions (with no threshold requirements, tenders or transparent election process for the public) and the level of training of ultra-Orthodox teachers is lower than the level of training of the non-Haredi teachers (Chernovitsky & Feldman, 2018; The state comptroller and ombudsman of Israel, 2019, 2020).

### ***Israeli education system by type of supervision***

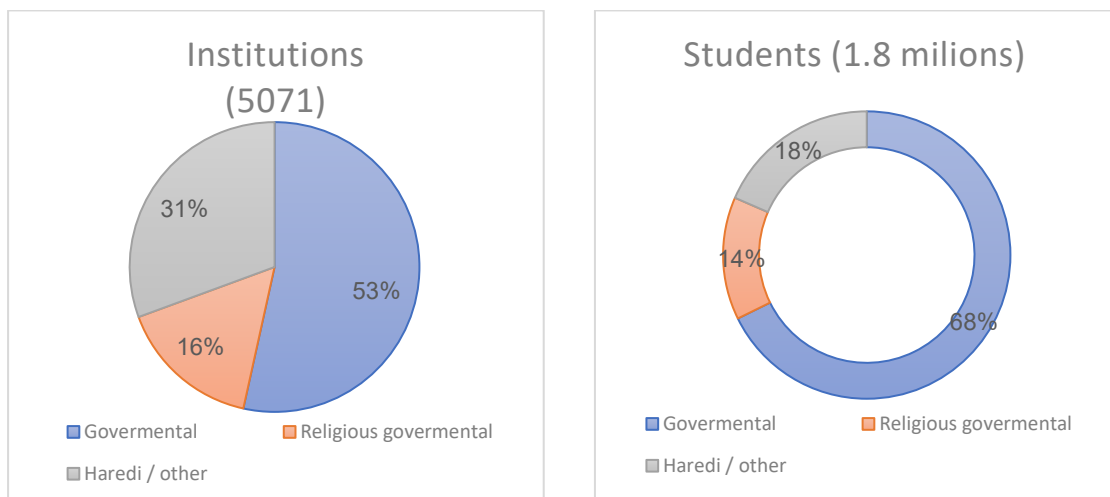
Despite the use of the official term "type" of supervision, the reference in this context is to the segmentation of educational institutions according to their level of religiosity, or more precisely according to their socio-political affiliation. In this context the following three divisions can be distinguished (Kup, 2002; Veissblei & Vieneger, 2015; Vieneger & Zerad, 2019a):

- A. State education - non-religious institutions in the Jewish sector and all institutions in the non-Jewish sector (Muslim, Christian and Druze students are considered in this context, although many of them are religious). Most of these institutions are official institutions. Most students and educational institutions in Israel belong to this type of institution (see Figure 23).
- B. State-religious education - This is a state education whose institutions are religious in their way of life and in the curriculum that is practiced in them, and the teachers and supervisors in them are religious. For the most part, the



reference is to religious-Zionist educational frameworks, the vast majority of which are formal.

C. Other education (ultra-Orthodox) - This usually refers to ultra-Orthodox Jewish education. There is a separation within this education group according to the types of institutions: recognized institutions (networks versus others) and it also includes the exemption institutions.



**Figure 23: Students and Institutions by type of supervision in 2019 (Ministry of Education, 2020c)**

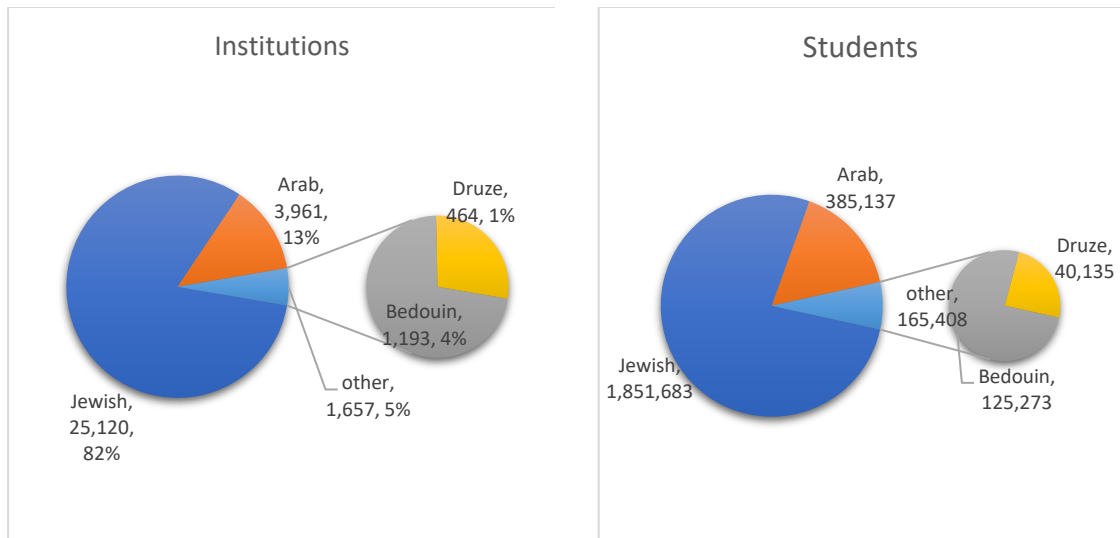
### ***Israeli education system by national sectors***

This segmentation is mainly national, and it distinguishes between Jews and non-Jews. The Jewish sector also includes non-Jewish non-Arab students<sup>65</sup>. The non-Jewish sector refers to mainly three sub-sectors: Arab, Bedouin and Druze<sup>66</sup>.

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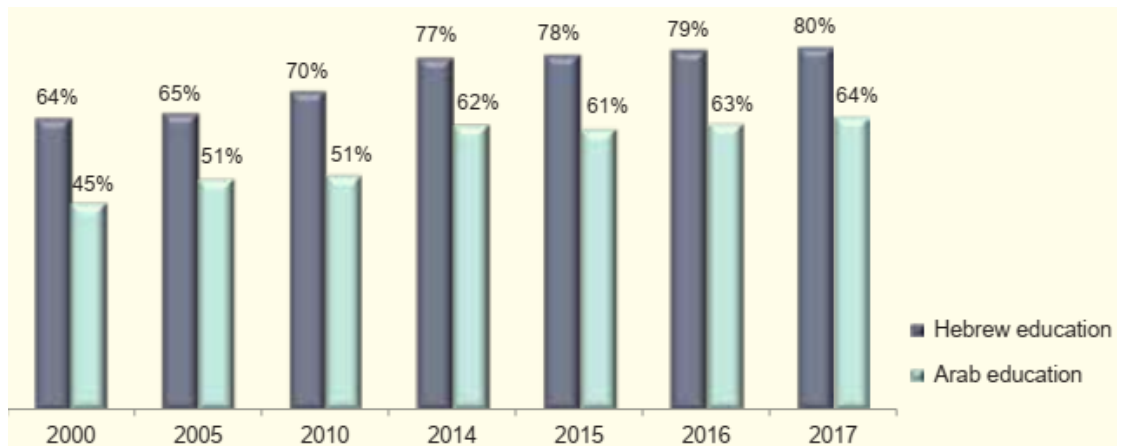
<sup>65</sup> Also referred to as Hebrew-speaking sector

<sup>66</sup> There other sectors, such as the Circassian or the Samaritans, but they are negligible in size relative to the other sectors



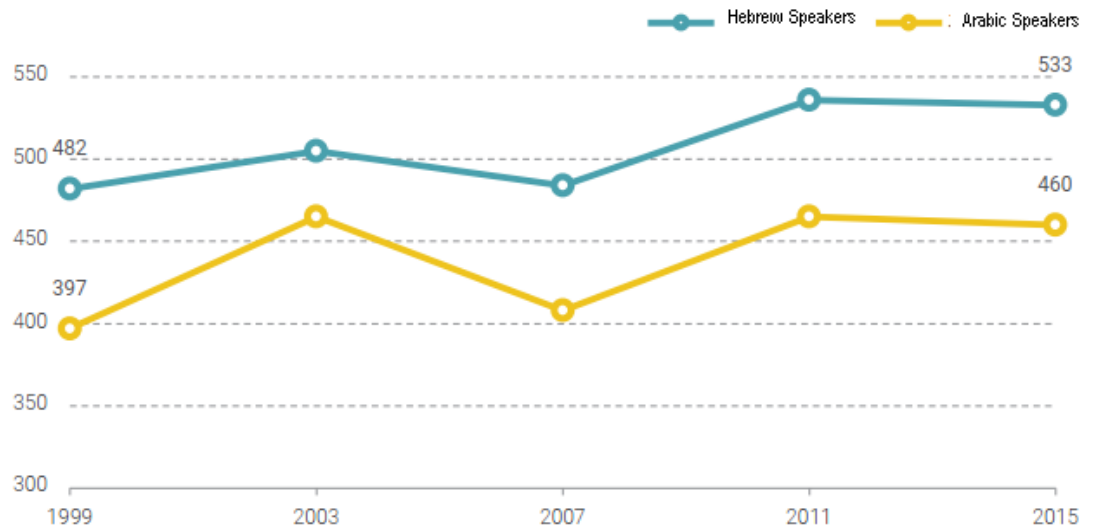
**Figure 24: Students and Institutions by sector in 2019 (Ministry of Education, 2020c)**

There is much public criticism regarding a significant and ongoing gap in the quality of education in both segments (Jewish vs. non-Jewish). Thus, for example, as illustrated in Figure 25, throughout the 2000s the rate of Students Entitled to a Matriculation Certificate in the Arab sector is significantly lower than the rate in the Jewish sector (Central Bureau of Statistics, 2019a). As noted above (see chapter 2.2.2 for a review of Arab community in Israel, p. 213), dropout rates from schools in the Arab sector are significantly higher than those in the Jewish sector (Chernovitsky & Feldman, 2018). Still, it is worth noting that these aggregated figures are biased due to the weighting of students from different socio-cultural and economic backgrounds, and in particular because of documented significant gaps between Christian and Druze students and other Arab students (Balas, 2019; Fuchs, 2017; National Authority for Measurement and Evaluation in Education, 2016).

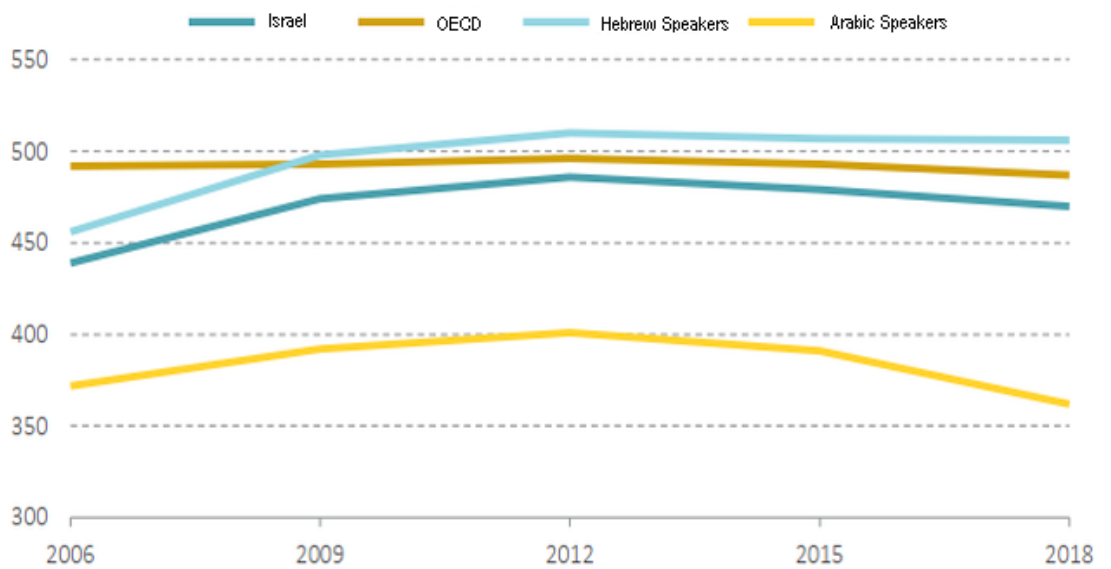


***Figure 25: Percentage of Students Entitled to a Matriculation Certificate Out of All Examinees in Selected Years - Hebrew Education and Arab Education (Central Bureau of Statistics, 2019a)***

These sectoral gaps are also reflected in other accepted comparative tests. Among other things, it was found that in the last five cycles of the TIMMS test, the achievements of students in the Arab sector in mathematics are significantly and consistently lower than those of Hebrew-speaking students (see Figure 26). Similarly, as illustrated in Figure 27, the literacy rate of students in the Arab sector is lower than that of students in the Hebrew-speaking sector (mainly Jews), and that literacy rate of students in the Arab sector is lower than the literacy rate of students in OECD countries. This, while Hebrew-speaking students' literacy is similar and even slightly better than literacy in other OECD countries (Blass, 2020).



**Figure 26: Hebrew and Arabic students' achievements in Mathematics in TIMMS tests (Blass, 2020)**

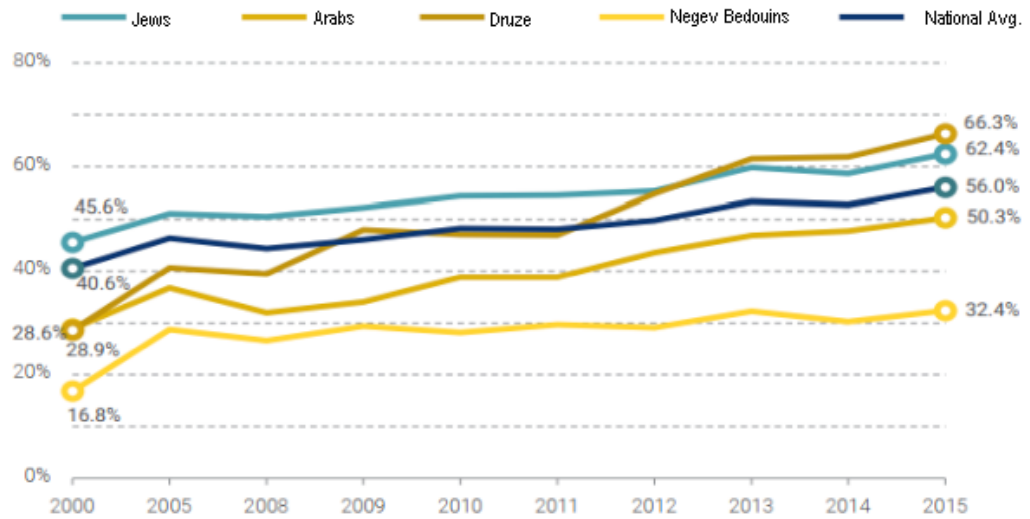


**Figure 27: Hebrew and Arabic students' reading literacy in PISA tests (Blass, 2020)**

Attempts to explain the consistent gap between the sectors, across all age groups, have not provided convincing or well-founded explanations. Among other things, it was suggested that students in the Arab sector coped worse with high stake tests (for example,

by relying on cheating), different age development between the two sectors, the possibility that Arab students attach less importance to international tests than their Jewish counterparts (hence, they put relatively little effort in succeeding in these tests), and even hostile attitude towards international tests due to increased national tensions between sectors in the Israeli society (Ofek-Shanny, 2019).

One of the more appealing arguments claims that the gap is not sectorial, but rather socio economical. Analyses of achievements reveal that when the socio-economical background are similar, the gaps between students in the Jewish sector and students in the Arab sector are smaller and narrowing: in 2008 the achievements in mathematics of middle class Jewish students were 16 points higher than the achievement of similar middle-class Arab students, while in 2017 there was already a 9 point gap in favor of students in the Arab education system. Regarding students from lower socio-economic backgrounds, in 2008 the gap was 19 points in favor of Jewish students, which was reduced to only one point in 2017. The situation was similar in English, although the gaps at each socio-economic level are larger. In science, a revolution took place in 2017, when the achievements of students in the Arab education system were higher at every socio-economic level. Similar trends also emerge from the analysis of domestic comparison tests according to which Druze achievements are higher even than students in the Jewish sector, and Christians' achievements surpass those of Jews in English (Blass, 2020). Similarly, Druze and Christians students' achievements were found to be less influenced by their family socio-economic background than Muslim and Jews, whereas family background was most influential with students from disadvantaged strata, especially Muslim students (Miaari et al., 2021). However, socio-economic background was found to be less important for students' matriculation certificates than for academic degrees (Miaari et al., 2021).



**Figure 28: Percent of Students Entitled to a Matriculation Certificate by sector and age group (Blass, 2020)**

Similarly, as illustrated in Figure 28, a tailored examination of the Students Entitled to a Matriculation Certificate indicates many socio-economic differences within the Arab sector as well. Thus, for example, it turns out that matriculation eligibility rates among Druze students are higher than those of Jews throughout most of the last decade.

According to Blass (2020, p. 52), "... the fact that the gaps are closely related to socio-economic background data and are identified with two main population groups - the Arabs and the ultra-Orthodox - is particularly disturbing. In our opinion, the achievements of the education system stand in contradiction to the common argument regarding the futility of investing resources and efforts in the system".

One of the interesting phenomena of these trends that has developed in recent years is the choice of Arab parents to send their children to Jewish schools, in Jewish localities or mixed localities. Among the reasons why Arab students turn to Jewish

schools is the desire of a growing proportion of the Arab population - especially those who are more economically established and more educated - to provide their children with a better education than they think they receive in the official Arab education system (Blass, 2019).

### *Israeli education system by education type*

Alongside the regular education system, the special education system operates. The special education system educates students aged 3 to 21. These students are with disabilities or have been referred to special education institutions or special education classes operating in regular educational institutions study. These institutions and classrooms operate in official and unrecognized schools at all stages of education, sectors, and types of supervision. They are divided according to the type of disability and the level of disability of the students studying in them. Special education classrooms are smaller than regular education classrooms and have more teaching staff relative to the number of students. There are also students with disabilities who are integrated into regular education, who are entitled to special services, such as paramedical treatments, academic assistance, and general assistance support. In the 2018/2019 school year, about 11% of all students in the education system studied in the special education system (Kup, 2002; Veissblei & Vieneger, 2015; Vieneger & Zerad, 2019a).

In conclusion, a review of the structure of the educational system reflects the great heterogeneity of Israeli society. This heterogeneity is reflected in the great fragmentation of policy factors, including aspects of budgeting, supervision, political affiliation, or even

curricula content, which give expression to the needs and characteristics of different groups in the population.

However, one of the most prominent aspects of this complexity is very wide gaps in achievements and different quality of education of the various population groups, and in particular these gaps are related to the socio-economic background of Arabs and ultra-Orthodox - two prominent cultural, social, and economic groups in Israeli society.

### **3.2 Teaching staff in Israel**

According to reports from the Central Bureau of Statistics, in the 2020/2021 school year the number of teaching staff in the entire education system was about 190,000 compared to about 186,000 in the previous school year (an increase of about 2.2% in the number of teachers). In Hebrew education, the number of teaching staff increased by an average of 2.4%, from 143,000 to 147,000 teachers in 2020/2021, while in Arab education there was a smaller increase in the number of teachers of 1.4%. In total, about 50.5 thousand new teaching staff were added in the last school year (Central Bureau of Statistics, 2021c).

It is worth to note that this report refers to the sectoral affiliation of the school, and not to the teachers' socio-cultural background (Central Bureau of Statistics, 2021c). Still, although Jewish teachers can teach in schools in the Arab sector, and vice versa, this phenomenon is not widespread (Vieneger, 2012). The number of Arab teachers in Jewish schools is estimated at not more than several hundred or a few thousands. These teachers teach, for the most part, "sectoral" subjects such as teaching the Arabic language (a compulsory subject in many elementary schools) or Middle Eastern and Arabic studies in high school. The number of Jewish teachers teaching in schools in the Arab sector is



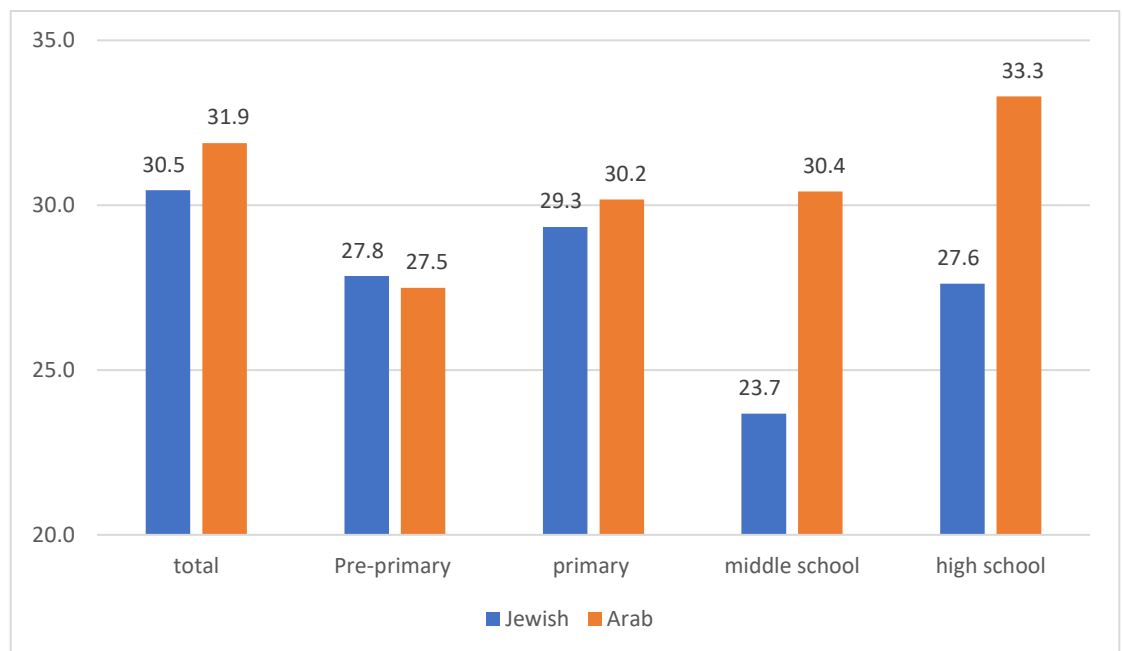
even smaller, and for the most part they are hired as professional teachers in required fields such as high school math teachers (Vieneger, 2012).

According to Vieneger (2012), there is a large surplus of teachers in the Arab sector - the number of Arab teachers trained for teaching is much greater than the number of vacancies in Arab schools. In 2012 the number of teachers in the Arab sector who are not employed in teaching, even though trained and qualified for teaching, was estimated between 7,000 and 12,000 teachers (Vieneger, 2012). Two structural phenomena were argued to cause this surplus: the first is that the Israeli education system operates under conditions of discrimination against Arab education (such as by allocating financial resources, adding teaching positions, building classrooms, etc.) (Hadad Haj-Yahya et al., 2021, pp. 55–77), and the second is that Israel has an uncontrolled and poorly supervised admission policy, which led to an over-admission of Arab students to higher education in the field of education and training and consequently led to over-representation of Arab students in the field of teaching (Agbaria, 2011 as cited in Vieneger, 2012; Central Bureau of Statistics, 2021c; Council of Higher Education, 2020; Hadad Haj-Yahya et al., 2021).

In the examination of the last decade, the number of teaching staff in Hebrew education increased at an average rate of 3.2% per year, while this increase was particularly noticeable in pre-primary education (an increase of 4.7% per year). In contrast, in Arab education the number of teaching staff increased at an average annual rate of only 2.9% - the growth rate was relatively high in the upper division (5.4%) and relatively low in primary education (1.9%) (Central Bureau of Statistics, 2021c).

According to Blass (2019), one of the indicators for examining the development of an education system is the amount of teaching hours generated in a period of time. This indicator weighs the number of teachers and the number of teaching hours, thus expresses not only change in available manpower, but also changes in the extent to which it is utilized.

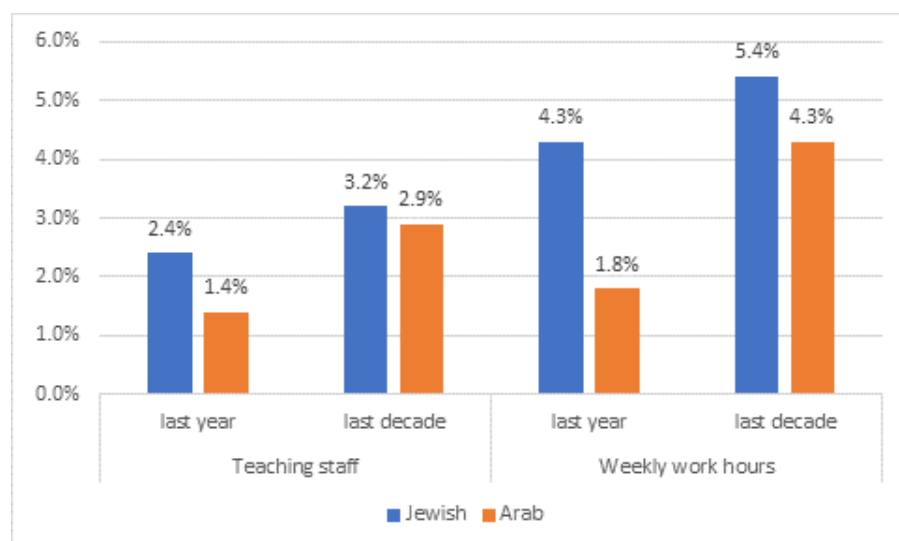
In the 2020-2021 school year, teachers worked 30.8 hours a week on average (Central Bureau of Statistics, 2021c). However, as illustrated in Figure 29, weekly working hours in Arab education (31.9) is higher than in Jewish education (30.5), mainly due to higher weekly work hours of middle school (30.4 in Arab sector vs. 23.7 hours in Jewish sector) and high school teachers (33.3 vs. 27.6, accordingly).



**Figure 29: Average weekly working hours yearly – by sector and type of education**  
(Central Bureau of Statistics, 2021c)

Aggregate examination of the scope of manpower and teaching hours is better suited to withstand changes in allocations and the development of the education system.

In the 2020-2021 school year, the number of weekly working hours was 5.68 million working hours, an increase of 3.1% compared to the previous school year. As stated above (Central Bureau of Statistics, 2021c), Israeli teaching staff increased by 2.2% in this period, which means that Israeli teachers taught more hours in this school year. However, in this case, too, there are differences between Hebrew education (4.3 million weekly working hours, an increase of 3.6% compared to the previous school year, and an average increase of 5.4% over the last decade) and education in the Arab sector (1.39 million hours in 2020/2021, an increase of 1.8% Compared to the previous school year and 4.3% on average in the last decade). These differences are illustrated in Figure 30 (Central Bureau of Statistics, 2021c).



**Figure 30: Teaching staff and weekly working hours yearly average change – by sector (Central Bureau of Statistics, 2021c)**

The volume of recruitment of new teaching staff is characterized by a declining trend in the entire education system. In this context, the volume of recruitment of new teaching staff decreased from 6.8% in 2019/2020 to only 5.1% in 2020/2021. The declining trend in recruitment has characterized the education system over the past two decades, and is more acute in Arab education, even though overall, the number of retired

teachers is on the rise. As will be explained below, among the reasons for the decline in recruitment rates are a decrease in the number of teaching staff going on sabbatical and the exhaustion of reforms as means to extend the overall teaching hours (Central Bureau of Statistics, 2021c).

Over the last decade, two comprehensive wage reforms have been implemented for teaching staff in Israel's education system - The "Ofek Hadash" reform in 2008, for teaching staff in pre-primary education, primary education and lower secondary schools, and the 2012 "Oz Litmurah" reform for teaching staff in upper secondary schools. These reforms increased the salaries of teaching staff on the one hand, and on the other, increased the scope of their jobs (Blass, 2019, 2020; Central Bureau of Statistics, 2019a).

Following the implementation of the two reforms (i.e., "Ofek Hadash" and "Oz LaTmura", there has been a significant increase in the percentage of teachers with an academic education. The increase is particularly noticeable in the stages of pre-primary and primary education. As can be seen in Table 6, more than 90% of Teaching staff in the official regular education system are academics, while about half of the academics in the middle and upper divisions have a master's degree or more (Ministry of Education, 2020a).

**Table 6: Teaching staff in the official regular education system - a selection of indicators (Ministry of Education, 2020a)**

	pre-primary		elementary		middle high		High school	
	Jewish	Arab	Jewish	Arab	Jewish	Arab	Jewish	Arab
Academics	93%	96%	93%	97%	95%	98%	92%	93%
Thereof: Holders of MA and above	25%	27%	39%	34%	51%	44%	47%	42%
Women	99%	99%	89%	80%	79%	72%	72%	59%
<b>Age</b>								
Average	42	42	42	40	44	40	45	40
Median	43	44	42	41	45	40	45	39
50 and over (%)	28%	27%	28%	18%	35%	19%	38%	21%
Under 29 (%)	11%	9%	12%	12%	9%	10%	8%	16%
Seniority (years)	15	18	15	16	17	16	18	14

In Hebrew education, the age of teachers increases with the stages of education. In middle and high schools, over 35% of teaching staff are aged 50 and over, and respectively less than 10% of teachers are under 30 years old. In Arab education, the opposite phenomenon is evident, with young teachers replacing older, retired teachers. At all stages of education, the age range of all teachers in Arab education starts from a younger age when 13% of all teachers in Arab education are aged 30 and under compared to only 10% in Hebrew education. Also, older teachers are more frequent in Hebrew education when 20% of all teachers in Hebrew education are aged 55 and over compared to only 10% of teaching staff in Arab education (Ministry of Education, 2020a).

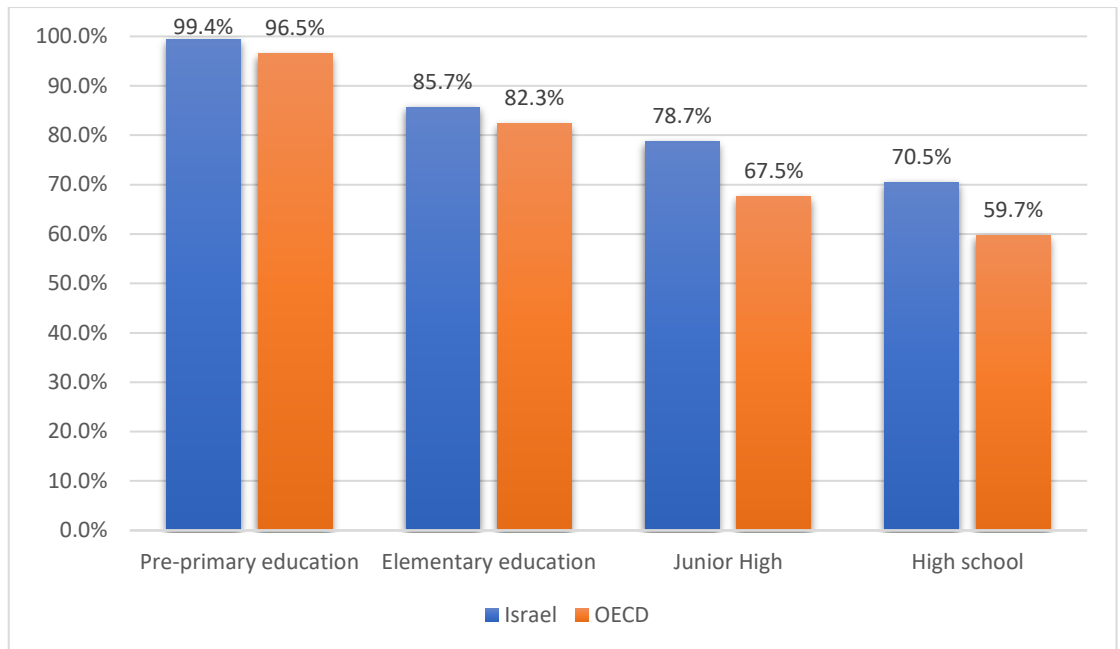
Teachers in the Arab sector start their training at teachers' training institutions and integrate into teaching at an earlier age, both because they are not committed to military

service and because of a socio-cultural preferences (Agbaria, 2011 as cited in Vieneger, 2012). This also means that the rate of retirement in the Arab sector is slower than in the Hebrew sector, both resulting in younger teachers in the former sector (Vieneger, 2012).

A comparison with OECD countries indicates that Israeli teaching staff are younger - in pre-primary education, Israeli teachers' and OECD teachers' age are similar, but in all other stages of education teachers in Israel are younger than the OECD average. The average age of a teacher in Israel and in the OECD decreases with the education phase (Ministry of Education, 2020b).

According to a report by the Ministry of Education (2020a), by gender, the percentage of women at all stages of education, both in Hebrew and Arab education, is higher than that of male teachers and that the proportion of male teachers out of the total teaching force is increasing in the higher stages of education (i.e., high school). However, the percentage of female-teachers in Arab education is lower than in the Hebrew education, except in pre-primary education. This is because teachers' status in the Arab sector is traditionally high, and it is specifically higher than in the Hebrew sector (Avidov-Ungar, 2016; Fisher, 2013; Goldberg & Ishan, 2020)

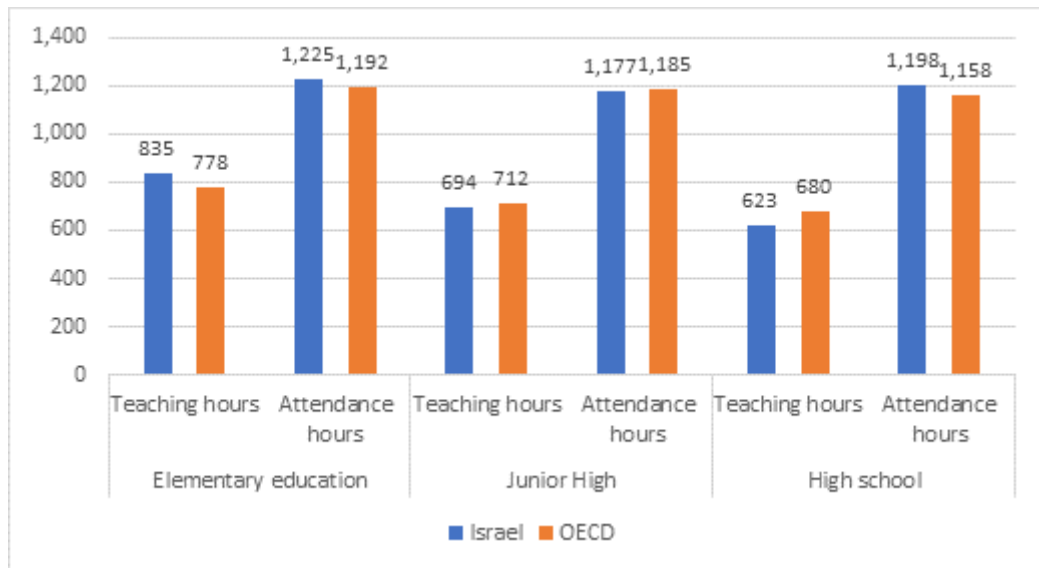
When compared internationally, the proportion of women in teaching in Israel is lower than the proportion in the OECD, and the gap increases with the stages of education. Thus, for example, in pre-primary education the gap between Israel and the OECD is 2.9%, whereas in high school this gap increases to 10.8% (see Figure 31).



**Figure 31: Women-Teacher rate by level of education in 2018 (Ministry of Education, 2020b)**

Moreover, as will be reviewed below, the comparison of teachers' salaries shows that in Israel there is a difference in salaries in favor of women compared to men. Women earn about 1% less in elementary school, but about 4% more in high school and about 15% more in elementary school (Ministry of Education, 2020b).

As illustrated in Figure 32, in recent years, following the "Ofek Hadash" reform in primary and secondary education in Israel, teachers are more present in school and teaching more hours. As of 2019, primary school teachers are more present in school and teaching more than a teacher in the OECD. In the upper division, a teacher in Israel is more present and teaches less. In middle school, the number of hours of attendance and the number of teaching hours in Israel are similar to those of teachers in the OECD. In middle and high school, the number of days a teacher teaches in Israel is lower than the OECD average. In primary education, the number of teaching days in Israel is similar to that of the OECD average (Ministry of Education, 2020b).



**Figure 32: Attendance and teaching hours of Teacher by level of education in 2019 (Ministry of Education, 2020b)**

As noted above (Arar et al., 2019; Bank of Israel, 2019), teachers' salaries are one of the areas in which the inefficiency (sub-optimality) of the Israeli education system is evident. To illustrate these wage gaps, wages must be adjusted to Private Purchase Parity (PPP) and the change in prices by which national expenditure is measured (Ministry of Education, 2020b). The results of the comparison are summarized in Table 7.

In pre-primary education, the actual salary of teachers in Israel is 3% higher than that of the OECD, but in upper secondary education it is 5% lower and in primary and upper secondary education about 6%. Israeli 25-34 aged teachers' salaries are lower than 55-64 aged teachers, in all education levels, as is in other OECD countries. However, the difference is greater in Israel. In 2019, 25-34 aged Israeli teachers' salaries were lower than their peers in other OECD countries, while 55-64 aged Israeli teachers' salaries were higher.



**Table 7: Teacher's salaries by level of education in 2019 (Ministry of Education, 2020b)**

	level of education			
	Pre-primary education	Elementary education	Junior High	High school
<i>Actual salary in PPP</i>				
Israel	40,029	41,258	43,947	46,694
OECD	38,677	43,942	46,225	49,778
Israel/OECD ratio	1.03	0.94	0.95	0.94
<i>Actual average full-time teacher salary and tertiary education employees' salary ratio</i>				
Israel	0.83	0.86	0.91	0.97
OECD average	0.80	0.85	0.89	0.94
<i>Actual wages by hours of attendance</i>				
Israel	37.9	33.7	37.3	39.0
OECD average	30.1	36.9	39.0	43.0
Israel/OECD ratio	1.26	0.91	0.96	0.91

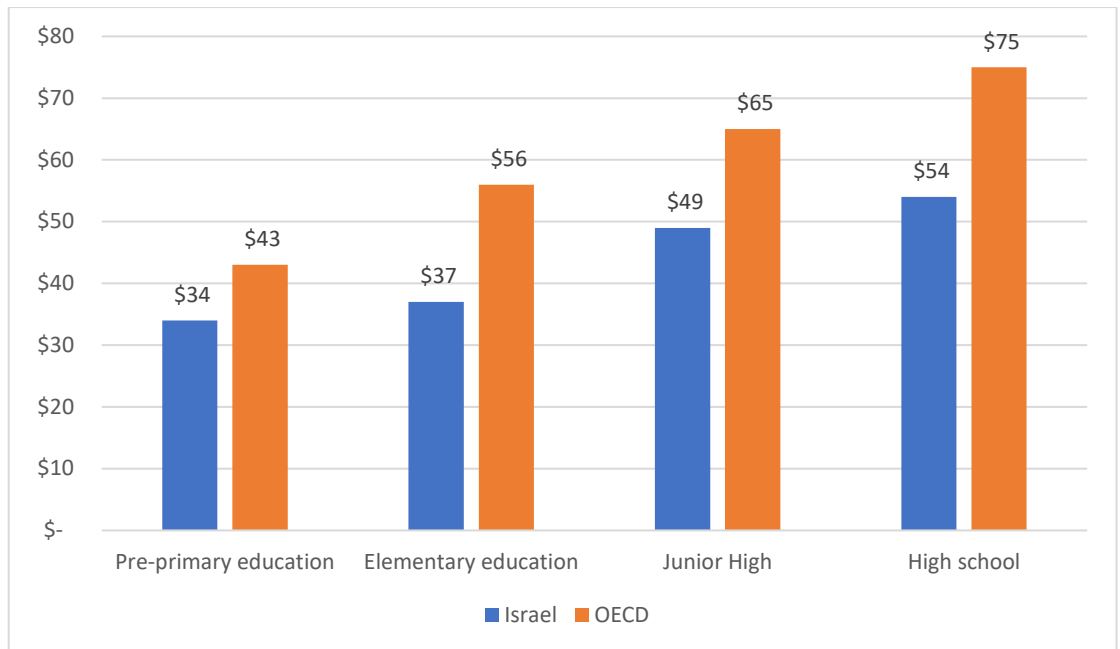
In Israel, the share of seniority in teachers' salaries is greater than in the OECD. The salary of a teacher in the OECD reaches a peak after 25 years, while in Israel after 36 years. In 2018, the salary of a teacher in Israel at the peak of seniority (36 years) in the upper division was 116% higher than the starting teacher salary, while in OECD countries, where the average seniority record is 25 years, it was only 66% higher (Blass, 2019).

Between 2014 and 2019, the actual salaries of teachers in Israel and in the OECD increased at all stages of education and throughout all age groups. A comparison of similar age groups in Israel and the OECD shows that the growth rate in Israel is much higher. For example, the salary of a 55-64 high school teacher increased by 2.6% in the

OECD and by 24.7% in Israel, almost 10 times. In Israel, the actual salary increase rate for older teachers at all stages of education is higher than for young teachers (between 3% in pre-primary education to about 15% in high school). In the OECD the phenomenon is the opposite: there is a decrease of about 3% in pre-primary education, primary education, and secondary school (Ministry of Education, 2020b).

The actual salary of a teacher in Israel is higher than the average teacher in the OECD compared to their counterparts in the economy (young and old). In 2019, the actual average salary of teachers in relation to the salary of those with tertiary education in the economy is higher at all stages of education compared to this ratio in the OECD average. In Israel, teachers' salaries are closer to those of those with tertiary education in the economy in the two age groups of young people and adults. In contrast, older teachers (55-64) are less rewarded in the OECD compared to their peers in the country and compared to younger ones (25-34). That is, teachers' salaries, according to the OECD average, are growing at a lower rate and are therefore eroding relatively (Ministry of Education, 2020b).

Blass (2019) weighted the level of pay in the amount of teachers' practical frontal teaching hours ("net contact time"), which indicates that pay in Israel is significantly lower than in the OECD, and this is particularly noticeable in primary education (see Figure 33).



**Figure 33: Salary for "net contact hour" (for teachers with 15 years of experience in PPP terms) (Blass, 2019)**

In conclusion, the review of the Israeli teaching staff indicated a constant increase in the number of teaching staff and the number of school hours, which is in principle in line with the trend of population growth in Israel. The review also shows that teaching staff are more educated than in the past.

However, the review also points to significant sectoral differences of teaching staff characteristics, as well as to teaching as a field in which women are dominant, both in representation rates and to a considerable extent also in wage levels relative to men. The review also indicates that the salary structure of teaching staff includes several distortions in an international comparison. Among other things, it is higher in international comparisons in terms of purchasing power, but it deprives young teachers, and it requires teachers to maintain a very long career (more than 40% compared to OECD teachers) to exhaust full seniority rights and reach the peak of salaries.

This review should be considered in view of the implementation of two major reforms in the education system over the past decade - The "Ofek Hadash" reform and the "Oz Litmurah" reform. It is common to assume that a significant part of their contribution in the form of changes in the education of teaching staff, increasing teaching hours and changing the composition of teachers' working hours has not yet been fully reflected in education products, and it may be several more years before the effects of these reforms and improvement in education are reflected in international comparison tests.

Still, it might be argued that these unique characteristics of the Israeli teaching staff along with its sub-optimal efficiency are the result of inadequate teacher training, which in turn can explain, at least to some extent, the public dissatisfaction with Israeli students' achievements. For this purpose, Israeli higher education system will be reviewed next. The review will particularly address teachers' training institutions, as a unique area of expertise of Israeli higher education system.

### **3.3 Israeli higher education system and teachers' training institutions**

Israeli higher education system is managed and supervised by two regulatory authorities: The first is The Council for Higher Education ("Malag"), which is a politically independent statutory institution for outlining Israeli higher education policy, headed by the Minister of Education and is responsible for preserving the academic freedom of the institutions. The second is The Planning and Budgeting Committee of the

Ministry of Education ("Vatat"), which is the body in charge of budgeting the higher education system<sup>67</sup> (The Council for Higher Education, 2017).

According to The Council for Higher Education portal, there are several levels of operation of Israeli Higher Education institutions (The Council for Higher Education, 2017): Universities<sup>68</sup>, Academic colleges, and Vocational colleges.

Universities, which are engaged in research and teaching for all academic degrees, in a very wide range of fields. According to the Central Bureau of Statistics (2019a), there are currently 10 research universities in Israel, most are public and state-funded<sup>69</sup>, including the Open University and the recently recognized Ariel University in Samaria<sup>70</sup>. Israeli universities are highly ranked and particularly innovative (Mizrahi-Shtelman & Drori, 2021).

Academic colleges, which engaged in a more limited variety of academic fields (relative to universities), with more emphasis on teaching (rather than research), and award only a bachelor's or master's degree. Most on these academic institutions are focused on specific subjects, such as Teachers' training, Law, and Accounting, Such Academic colleges refer to both public and state-funded institutions and private institutions. The 1993 enactment of the 10th amendment to the Council for Higher

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<sup>67</sup> The Council for Higher Education was founded pursuant to the Council for Higher Education Law, 1958 and The Planning and Budgeting Committee was established in 1972, by the Council which delegated its funding authorities to the committee (The Council for Higher Education, 2017).

<sup>68</sup> Sometimes referred to as Research Universities

<sup>69</sup> Reichman University, which operated since 1994 as a private college, was recognized as the first private university in 2021

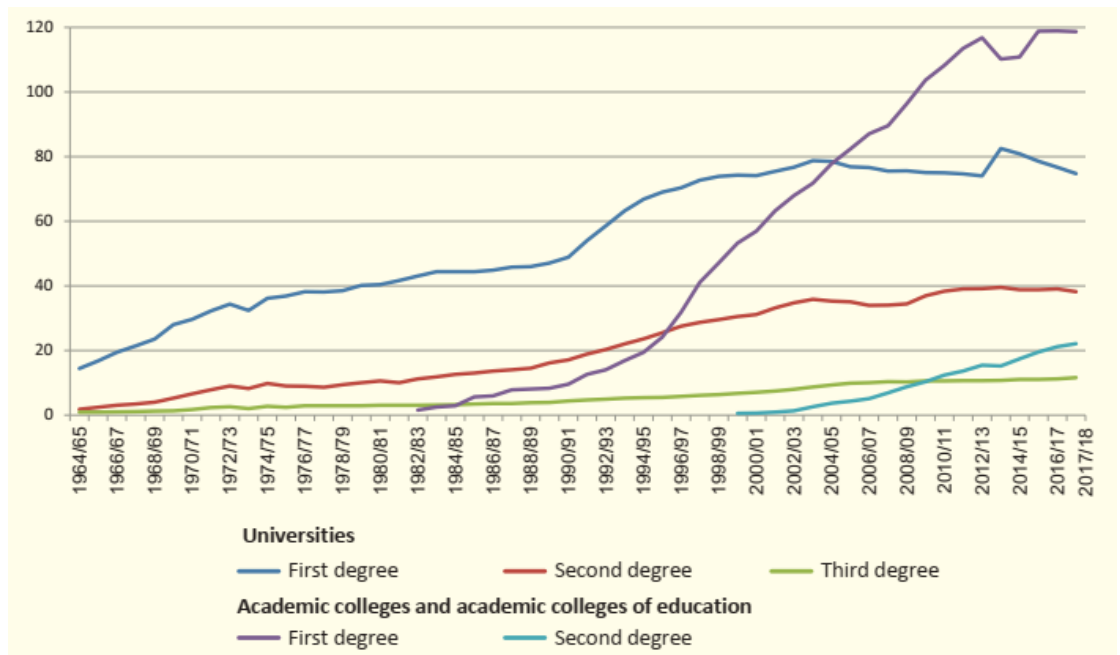
<sup>70</sup> Ariel University in Samaria was established as a public college in 1982, but because of its location in the occupied territories its recognition as a university by The Council for Higher Education was delayed due to political complexity and sensitivity

Education Law in 1993, allowed for their operation as academic teaching organizations and changed Israeli Higher Education dramatically (Mizrahi-Shtelman & Drori, 2021).

In 2003, the number of undergraduate students in academic colleges exceeded the number of students in universities for the first time. In addition, since 2000, the number of students eligible for a bachelor's degree from academic colleges has increased by 2.8 times, and since 2011 it has exceeded the number of students eligible for a bachelor's degree from universities (Ministry of Education, 2020a).

The third level of operation of Israeli Higher Education institutions, are Vocational colleges, which provide training and certification in certain professions, without awarding an academic degree (The Council for Higher Education, 2017).

According to Central Bureau of Statistics (2019a), in 2017/18, there were 312,700 students (including 47,700 students who studied at the Open University) in 63 institutions of higher education, of which 9 are universities, 32 are academic colleges, and 21 are academic colleges of education. Figure 34 illustrates the development of the number of students in the higher education system in Israel over the years.



**Figure 34: Students in Universities, Academic Colleges and Academic Colleges of Education by Degree, 1964/65-2017/18 (Central Bureau of Statistics, 2019a, p. 8)**

According to the Council of Higher Education (2020), 76% of students in the higher education system are undergraduate students. An analysis of the distribution of these students (Table 8) reveals that half of them study at universities, 11% study at Engineering/Technologic colleges, 14% study at Comprehensive colleges & Academies and a proportion of 15% of undergraduate students study at Private colleges (i.e., higher education institutions which are not budgeted by the Planning and Budgeting Committee of the Ministry of Education but are supervised by the Council for Higher Education). Finally, 10% of undergraduate students attend teachers' training institutions.

It is worth noting that the only institutions that can grant their students with a teaching certificate are dedicated colleges for teachers training and universities. In addition, all institutions that have a program for training academics for teaching provide graduates of the program with a teaching certificate, without a degree in education.

Training for early childhood and elementary school teaching is given only in teachers' training institutions; Training for post-primary and special education is provided in all institutions; And upper division training (11-12) is usually only given at universities, although there are circumstances in which colleges can also train for teaching these classes (Blass, 2019).

**Table 8: Students in Institutions of Higher Education by level of academic degree and type of institution, 2019/20 (Israeli Council of Higher Education, 2019)**

Institution of Higher education	Level of degree Bachelor's degree	Master's degree	Doctorate	Diploma	Total
Universities	118,858	40,777	11,641	944	172,220
Engineering/Technologic colleges	25,249	1,520			26,769
Comprehensive colleges & Academies	33,530	3,411			36,941
Private colleges	35,963	9,584	5		45,552
Teacher training seminars	23,253	7,926			31,179
<b>Total</b>	<b>236,853</b>	<b>63,218</b>	<b>11,646</b>	<b>944</b>	<b>312,661</b>

Institute	Bachelor's degree	Master's degree	Doctorate	Diploma	Total
Universities	50%	65%	100%	100%	55%
Engineering/Technologic colleges	11%	2%			9%
Comprehensive colleges & Academies	14%	5%			12%
Private colleges	15%	15%			15%
Teacher training seminars	10%	13%			10%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

International comparisons (Ministry of Education, 2020b) show that Israel's population is one of the most educated in the world. As of 2019, the percentage of those



with tertiary education in Israel is much higher than that of the OECD average (50.2% compared to 38.0%). At the same time, the percentage of those with little education is quite low: 12.9% in Israel, compared with the OECD average of 22.1%. Despite the difficulty of increasing the rates of those with higher education among a population that was initially considered very educated, the education system in Israel still manages to achieve an increase in the rate of tertiary education and a greater reduction among the less educated population.

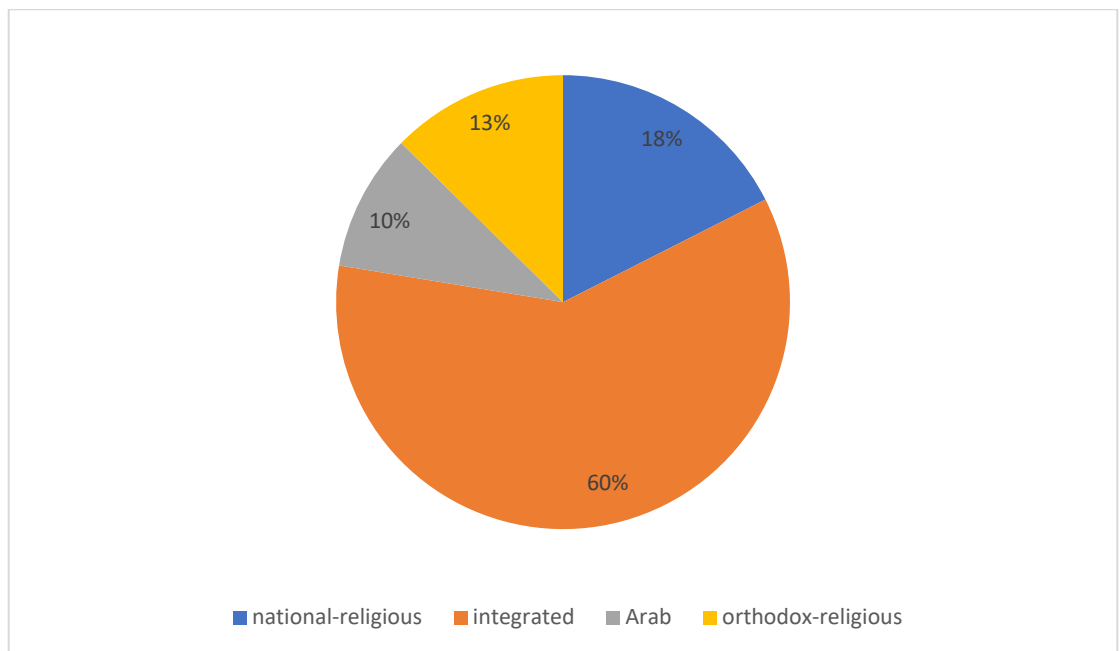
However, as noted above (Bank of Israel, 2016, 2019), the amount of education does not necessarily indicate its quality or equality regarding its expression in the population and in the context of labor productivity in Israeli society.

Compared to OECD, undergraduate, graduates and doctoral students in Israel are older. The reason for this is the Mandatory Military Service in Israel, which in many cases postpones the start of studies for 2-4 years after graduating from high school. In addition, women make up the majority of undergraduate, graduates and doctoral academic students and about half of the students in post-secondary education (Ministry of Education, 2020b).

The number of students from the Arab sector tripled within two decades and their share of students in higher education doubled during this period (from 8.3% in 1999/00 to 16% in 2017/2018) (Central Bureau of Statistics, 2019a). In 2019/2020, students from the Arab sector accounted for 19.2% of all undergraduate students, and 24.9% of students in the Academic Colleges of Education (Council of Higher Education, 2020).

According to recently data published by the Israeli Council for Higher Education (2021), to date 22,600 students currently study for undergraduate degrees in teachers' training institutions. As illustrated in Figure 35, although most of the students (60%)

learn in integrated-secular institutions, 10% study in Arab institutions (teaching language is Arabic, studies are in accordance with Muslim-Arabic culture), and 28% study in dedicated Jewish religious institutions.



**Figure 35: students in teachers' training institutions – by sector in 2021 (Israeli Council of Higher Education, 2021)**

Three bodies are involved in teachers training process, which influence its content and nature: the Ministry of Education, the Council for Higher Education and the teacher training institutions (The state comptroller and ombudsman of Israel, 2019).

The Ministry of Education determines the policy of the education system, including the teaching and learning patterns, and is also involved in the teacher training process: starting with the admission stages of the candidates for teaching studies in teacher training institutions, through their training in these institutions until their placement in the education system. The ministry also grants the license to the graduates

of the teacher training programs and employs some of them. In that it is also responsible for the internship phase and the phase of novice teachers' entry into the education system (The state comptroller and ombudsman of Israel, 2019).

The Council for Higher Education outlines the policy of the higher education system. It approves all the study programs of the teacher training institutions, outlines a policy regarding the academic needs of the study programs delivered in the academic institutions (The state comptroller and ombudsman of Israel, 2019).

The actual training process starts with the selection of candidates for studies in teachers training institutions. The entrance threshold for admission to studies at teacher training institutions is lowered in order to comply with the allocation requirement of the Ministry of Education. According to Vieneger (2018), only 57% of the students in the (secular) state education institutions and only 36% of the religious state education institutions were tested in the psychometric exam. Moreover, according to Vieneger (2018), the decrease in the number of candidates who have passed a psychometric test in recent years can be attributed to significant easing of admission standards to studies based on a matriculation certificate only or on the admission of candidates without a matriculation certificate at all subject to them completing studies within a suitable preparatory school.

Training at the teachers' training institutions is conducted in two main models: the "following model" and the "parallel model". According to the following model, the student first receives disciplinary training (academic degree), and then studies another period for training as a teacher. This model is often applied in the context of retraining academics or graduate studies. As part of the parallel model, the student studies at the same time in both tracks, academic and teaching. Their training as a teacher is aimed at

the profession studied in the disciplinary track (The state comptroller and ombudsman of Israel, 2019).

According to the Ministry of Education, the curriculum for teaching training will be made up of three parts (Rann, 2017):

- Disciplinary component, which includes the studies of the profession, for example mathematics or English,
- Pedagogical component: a component of theoretical studies for education and teaching and practical training, which includes studies in the field of education, pedagogy and (usually subject oriented) teaching methodology, and literacy in education and teaching.
- Basic and enrichment studies component.

The Ministry of Education outline also determines the core areas that must be brought to light during teachers' training, and accordingly must be interweaved in all study programs. These include ethics, moral, and social aspects of the educator's work, cognitive, emotional, and social development of children and youth, theories and approaches in teaching and learning, and planning, organizing, managing and evaluating learning in relation to the education system and its policies track (Rann, 2017). Still, teachers' training institutions enjoy "academic freedom" to adapt their study programs (subject to the approval of the Higher Education Council). The result is that the study programs vary from institution to institution in their disciplinary specialization, teaching methods, pedagogical study contents, (physical) learning environment (e.g., room and corridor design, lighting) and the means of study (including technological means) (The state comptroller and ombudsman of Israel, 2019).

The last component of teachers' training is practical training (also called practical experience, practical work or practicum). The practical training has a central and essential

place in teachers' training, as it is the link between their theoretical studies and the realities of teachers work, between theory and practice, between the student being a learner and being a teacher. The scope of the practical training is between 9 and 15 hours per week, spread over the entire teaching period (that is, between 800 and 1500 hours in total). In order for the new teacher to be able to integrate optimally into the education system, pre-service practical training takes place under real-world conditions (i.e., in kindergartens and schools), and is accompanied by the teachers' training institution (Rann, 2017).

In some institutions, the practical training is integrated already in the first year, and in others it begins only in the second or even third year. In addition, after completing their academic training (which usually takes 3 years of study), teachers are required to complete another year of internship before they can integrate as teachers in the education system (Rann, 2017).

Over the years, many criticisms have been raised regarding the functioning of teachers training institutions. Among other things, it is claimed that these institutions focused on expanding the number of students at the expense of developing their training quality, among other things by reducing the threshold level of candidates admitted to studies, that the training is deficient in dimensions such as teachers' leadership development, classroom management skills, and the ability to solve problems that do not have a ready solution, as well as in the ineffectiveness of practical training to identify and filter students who are not suitable for the profession (The state comptroller and ombudsman of Israel, 2019, 2020; Vieneger, 2012, 2018).

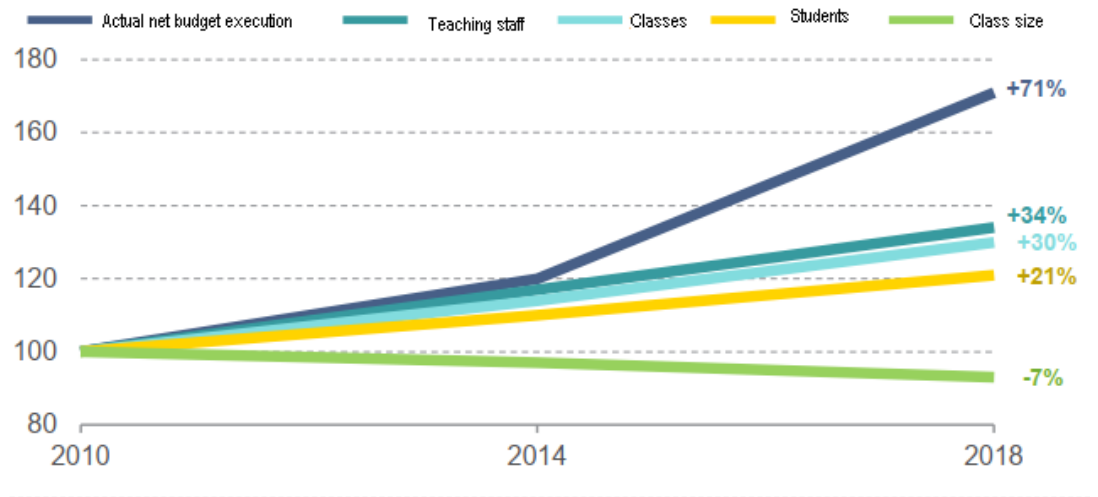
The quality of teachers is an important issue in the context of examining the horizon of social and economic development in Israel. Thus, for example, the Bank of Israel's assumption in the context of Raising the Standard of Living in Israel is (Bank of Israel, 2019, p. 4):

*"Improving the quality of educational staff is the most efficient way to improve scholastic achievements even at older ages, particularly for students from the lower levels of the achievement distribution. ... [there is] a causal connection between the quality of teachers and wages in the adult lives of their students."*

It has often been argued that the level of teacher education in Israel is low in relation to the rest of the population and in relation to other countries, or at least claims regarding a shortage of teachers or a lack of quality teachers in appropriate professions and regions were suggested (Bank of Israel, 2019, p. 4).

The issue of teacher shortages and their quality was reviewed by Blass (2019). First in the context of teacher shortages, the main argument is that a relative shortage of teachers leads to a decline in the quality of education - for example because some students do not get the full hours to which they are entitled, or due to teachers working longer hours to make up for the shortages. one. As illustrated in Figure 36, the number of teachers increased at a faster rate than the number of students and the number of classes, a fact that should lead to a surplus of teachers (rather than a shortage of teachers) and therefore lead to an improvement in the number and quality of hours teachers are required to give. The trends described in Figure 36 also indicate an improvement in the average number of students in classes. In addition, as reviewed above, the demand for teachers following the reforms of the last decade this demand has been met by a greater increase in the number of teachers, and almost no change in the average job volume - about 75%

of all levels of education. Along with the increase in the proportion of teachers holding higher education, there is no indication of a shortage of teachers.



**Figure 36: Index of Budget, Teachers, Classes and Students (2010 = 100) (Blass, 2019)**

The issue of quality of teachers is more complex. According to Vieneger & Zerad (2019), several studies conducted in recent years have indicated a link between the knowledge level and skills of teaching staff and student achievement. At the same time, there is controversy over how the level of teachers' knowledge or quality can be measured. Common quantitative indicators for measuring teacher quality include OECD International Skills (PIACC) tests, matriculation scores, psychometric scores, and matching between teacher training and education in their field of instruction. The level of education of teachers is also a quantitative measure of the quality of teachers. Quantitative metrics are relatively easy to measure, but they reflect only narrow aspects of the teaching profession. For example, the state comptroller and ombudsman of Israel (2019b) recently reported that there is a need to examine personal and behavioral

parameters as admission requirements for teaching studies, as well as an examination of students' personal suitability for the teaching profession during the teacher training process. As can be understood from this critique, to-date such an assessment of teachers does not exist.

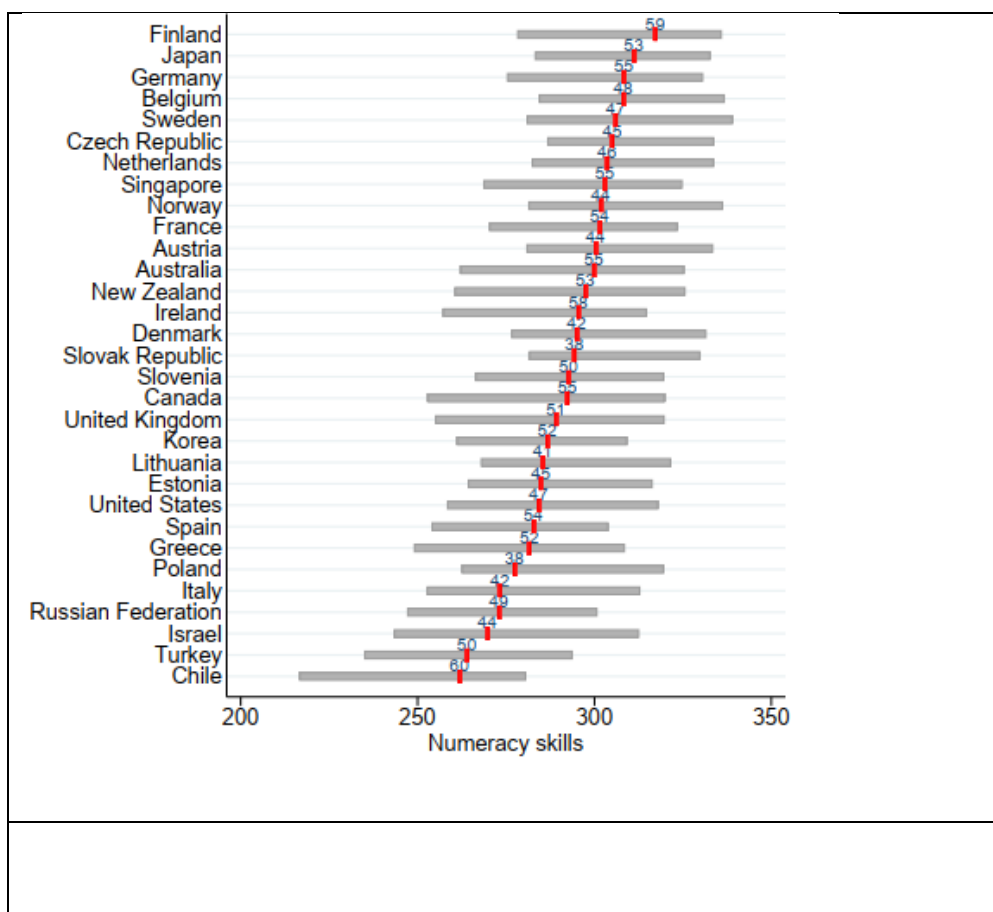
According to the Education Index, the proportion of undergraduate teachers has risen in the last decade (Blass, 2019; Ministry of Education, 2020b). Hence, if the rate of those with an academic degree and its level are considered as a criterion for the quality of teachers, then according to these data there is no decrease in the quality of teachers. An analysis of the findings of the matriculation exams of teachers in Israel indicates an improvement in the achievements of teachers in mathematics and the language field over the past decade, and that overall, their average matriculation scores are higher than the scores in the appropriate yearbooks in which the exams were conducted. At the same time, in recent years there has been a slight decline in the level of matriculation grades, partly because of the flexibility of the admission criteria for teacher training colleges (sometimes to the point of eliminating the requirement for a minimum psychometric score or a minimum matriculation score), mainly in order to mitigate the overwhelming demand for teachers created by the reforms (Vieneger & Zerad, 2019b). In addition, there is also evidence that the growing demand for teachers in Arab education has led to the absorption of students from this sector who have significantly lower achievements (Blass, 2019).

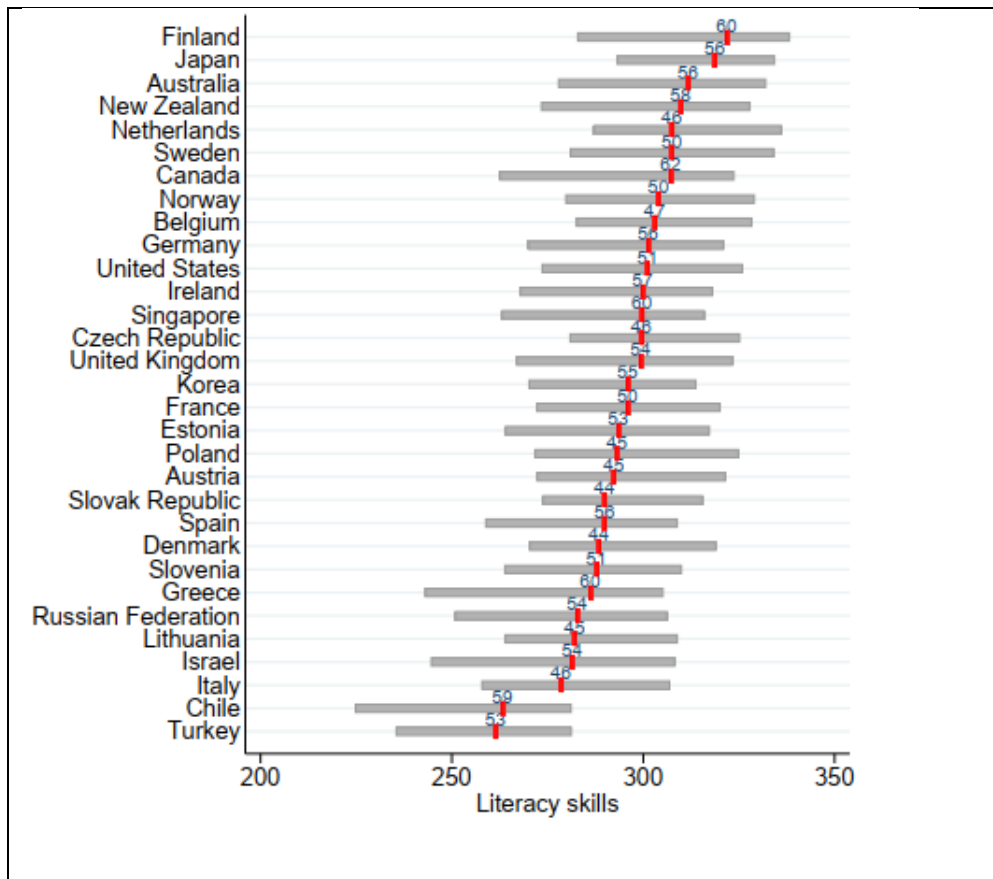
A comparison of PISAAC data of teachers from different countries (see Figure 37) revealed that Israel ranks 28th in reading skills and 29th in teachers' mathematical skills (Hanushek et al., 2019). Although it is possible to criticize the extent to which the research findings represent the general teaching community in Israel, they confirm



previous findings that indicate that the basic skills of teachers in Israel are relatively low (Blass, 2019).

A similar picture emerges from the analysis of teachers' scores on psychometric tests, which show that the scores of teaching staff in the last decade have hovered around the 40th percentile. Moreover, it turns out that like the matriculation exam scores, in this case too there is a trend of a decrease in admission scores to institutions in recent years - both in the sense of a decrease in grade and in the sense of a drastic drop in the number of examinees, both are results of a more flexible admission standards by teachers' training institutions (Vieneger & Zerad, 2019b).





**Figure 37: Position of Teacher Cognitive Skills in the Skill Distribution of College Graduates (Hanushek et al., 2019)**

Another measure for teachers' knowledge level and proficiency is the degree of correspondence between their field of training or specialization and their actual teaching. The greater the number of teachers who teach subjects or fields in which they have not been properly trained (and sometimes not trained at all), the more students' education is harmed - usually in terms of long-term damage in terms of the quality of knowledge, skills they acquire and academic achievement in late stages in their lives and education (The state comptroller and ombudsman of Israel, 2019).

As the situation in which a teacher teaches subjects they are not specialized in, or only poorly trained for teaching, is undesirable, the reasons for such a situation are diverse. For instance, it might be a result of limited supply of teachers in a particular

profession or area, inability to allow a full-time job for a teacher who teaches a particular profession, or even inefficient hours allocation in a certain school (Blass, 2019). The following are the main findings of the Israeli State Comptroller's report in this regard (Blass, 2019; The state comptroller and ombudsman of Israel, 2019; Vieneger & Zerad, 2019b):

- In 2017/2018, only about 40% of mathematics teachers in primary and secondary education had training in mathematics. In middle schools this rate is even lower and reaches 24%. The State Comptroller explicitly states that "*a significant proportion of students study mathematics from teachers without proper training, and this may impair their studies and achievements in the future in middle school and high school*" (The state comptroller and ombudsman of Israel, 2019b, p. 8). The mismatch between the profession and teacher training is not new, and it was clearly reflected in the decline in the quality of mathematics studies of students in Israel, when since 2006 there has been a sharp decline in the proportion of students who studied high-level mathematics in high school. The result is a formulation of a "national program for the advancement of mathematics" that has included the expansion of powers for teachers in this field, but in the absence of appropriate teacher training it is doubtful whether the program's objectives can be adequately achieved.
- As of 2017-2018, only 12% of the teachers in state-Hebrew education in primary education had training in Hebrew (language). In post-primary education, the proportion of teachers with appropriate training is 33%. This means, as formulated by the State Comptroller, that most students (at least in Hebrew education) do not learn language education from trained

teachers, contrary to the stated educational goal of "*cultivating a literate person, who uses his language as a learning and social and cultural infrastructure*" (The state comptroller and ombudsman of Israel, 2019, p. 8). It is worth noting that even in this case the training of teachers in this field is not included in the long-term planning of the Ministry of Education.

- Between 35-46% of all teachers who taught English in 2017/2018 did not have appropriate training in the field (percentages vary by stage of education). Like mathematics, a national program for English studies was formulated in English in 2016 against the background of the poor achievements of Israeli students. The aim of the program is to improve students' English level and better prepare them for their social and occupational needs as adults. However, implementation of the program does not include long-term planning, it lacks appropriate teachers' training, and it does not address urgent needs in several geographical areas where the shortage of trained and specialized teachers is especially noticeable.

Thus, despite the high quantitative proportion of academics among teaching staff, and among Israeli residents in general, it is clear that quantity is not fully reflected in terms of quality. In general, the Israeli education system still draws its teachers from the academically weaker strata of university students, there are still many schools where teachers teach subjects for which they have not been trained, and the abandonment rates of the profession are still high. However, when looking at a comparative perspective and a time perspective, one can certainly point to progress as the system continues to expand (Blass, 2019).

In the context of the present study, it is appropriate to quote in this context the conclusions of the Committee of Experts on behalf of the Ministry of Education and The Israeli National Academy of Sciences, which published its recommendations nearly a decade ago with a view to examining the issue of student diversity and to suggest a more beneficial structural and pedagogical organization of Israel's education (Harkabi & Mendel-Levi, 2014). The committee confirmed that there was a significant correlation between academic achievements and students' family background and socioeconomic status. According to the committee, as background and status differences are expressed not only in resources but also in values, expectations, norms, language, and behavior, they influence academic achievement.

Following, the committee concludes that the education system alone cannot deal with the problems that arise in society as a result of socio-economic and ethnic-cultural differences. At the same time, the education system must be aware of the crucial influence of these aspects on education, and must refrain from adopting principles, programs or approaches that may perpetuate the wide gaps that already exist between groups of students, especially at young ages. Respectively, some of the committee's recommendations are "*reinforcement of all teacher training programs at all stages of their training (students, teachers in the first years of work and teachers in the continuation of their work) on issues related to academic, emotional and socio-cultural differences. This reinforcement may include acquaintance with various theoretical approaches (including critical pedagogy), research (and their limitations), and tackling value-based, social, and cultural challenges. It is recommended that teachers training include a key component of familiarity with models applied in educational institutions, encourage communication between teachers working in the various models and support it.*" (Harkabi & Mendel-Levi, 2014, pp. 5–6).

### **3.4 Summary**

Culture, whether viewed as meaning making or as differentiative collection of traits, enables the prediction of individuals' behavior. Hence, as Israeli society is culturally diverse, both nationally, ethnically, and religiously, there is a need to understand intercultural interactions and cultural experiences within such multicultural framework. Furthermore, following Bruner's (1996) culturalism approach, such understanding is reflected in education, as culture and education are interrelated.

However, examining Israeli higher education system reveal that despite extensive reforms it failed to reduce socio-cultural inequalities in the Israeli society, casting a shadow on future economic and social stability, as more of Israel's population might not be able to integrate into the labor market due to lower participation of these socio-cultural groups in higher education system.

This suggests that cultural dimensions play a significant role in education and learning. As educational outcomes should be evaluated by students' understanding and instruction depth, it should be expressed by students' learning intentions and the context in which their learning takes place. Such expression is conceptualized by students' approach to learning, whether as a superficial approach, an in-depth approach, or an achievement approach to learning, or whether through students' motivation to learn or the strategy they employ. Additionally, as culture is both a mean for individuals to perceive and interpret reality, as well as a tool (both symbolic and material) to operate and communicate with others, it is natural to assume that the same learning environment might be experienced differently by students from different cultural backgrounds. Thus, an examination of students' cultural dimensions and approach to learning must also

consider students' experience during their studies, as explicated by the concepts of Socio-Cultural Atmosphere and empowering students' learning experience environment.

## **Chapter 4: Methodology**

### **4.1 Research aims and objectives**

The objective of this research is to examine Israeli prospective teachers as agents of future socio-cultural change by studying their approach to learning and its relationship with the students' cultural dimensions, career choice motives and perceived quality of academic experience.

By extending the knowledge regarding approaches to learning of students in teachers' training institutions in Israel, as well as their cultural background and their career choice motives, the research will provide a better understanding of the means and factors that influence training process of teachers as agents of social change and socialization.

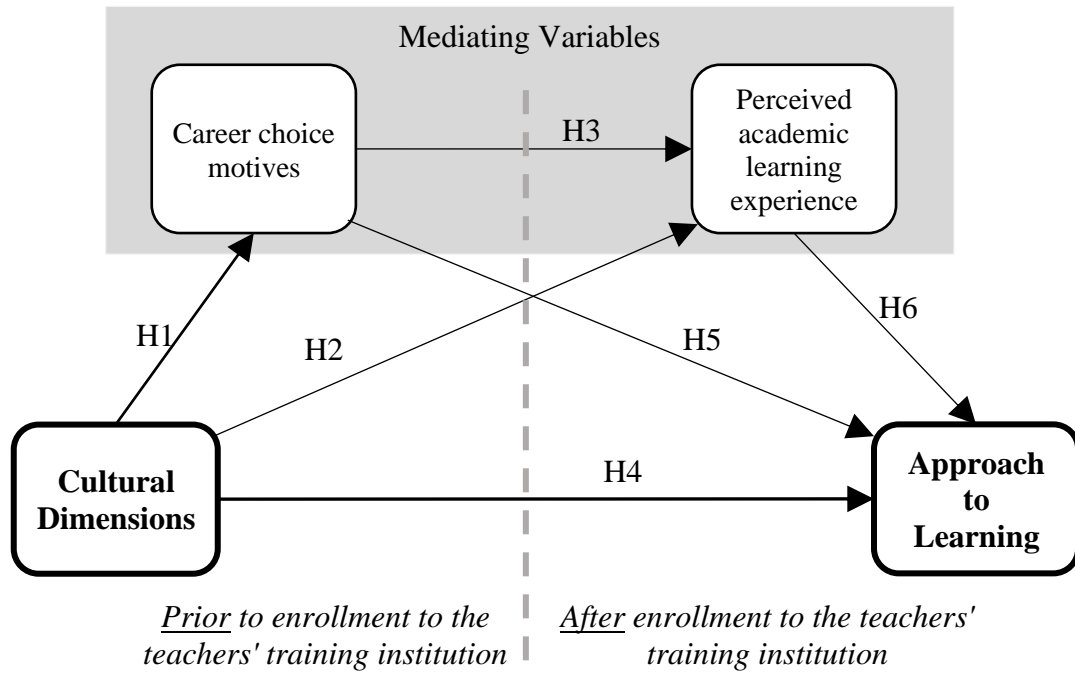
The main research question is as follows:

**How Approach to learning of students in teachers' training institutions in Israel is related to their cultural dimensions, career choice motives and perceived quality of academic experience?**

The present study intends to examine the population of students in teachers' training institutions in Northern Israel according to the Positivistic-Inductive paradigm implemented in the quantitative research strategy, as correlational research.

Figure 38 offers a schematic illustration of the research model and the relations it intends to examine between the different research variables.





**Figure 38: The Research Model**

It is clear from the research model that the hypothesized relations between approach to learning and cultural dimensions, career choice motives and perceived quality of academic experience also imply a causation. This implied causation is a result of the timeline on which students' lives are evolving, as a series of consecutive events, resolutions and decisions who lead to the formation of separate and differentiate attitudes and perceptions. Thus, culture is first construct (within the framework of the present study) which takes place. Culture is influenced by the nature of the family and the community in which the student was raised and educated, so it is rather intuitive to expect students' cultural dimensions to consolidate during childhood and puberty (Schneider, 1998).

Unlike childhood aspirational dreams regarding profession and career choice (such as "I want to be an astronaut", "I want to be a doctor"), individuals' resolution and choice usually consolidate during their first steps into adulthood and, more importantly,

is followed by a practical action - in the case of individuals who choose to become teachers this means enrolling to a teachers' training institute. This means that career choice consolidates later in students' life than culture is. In fact, as will be discussed later, it is argued that cultural dimensions play significant role in this choice.

As culture and career choice occur prior to the enrollment to teachers' training institutions, it is obvious that students' impression of their academic experience as well as their characteristics as learners occur only after they already started their studies. It then follows that students' perceived quality of academic experience during their studies and students' approach to learning occur *after* enrollment, which sets it as a clear and identifiable reference point along the timeline of events.

Finally, as students' actions (i.e., Approach to Learning) are a product (among other things) of their impressions and experiences during their higher education studies (Laron & Lev Ari, 2013; Lev Ari & Laron, 2014; Lev Ari & Mula, 2017), i.e., while attending classes, during breaktimes, and even at home. It follows then, that students' ATL, as motivational strategies employed by students (Fox et al., 2001), consolidates after the formation of their evaluation regarding the quality of their academic experience as transformational and supportive, promoting disciplinary knowledge and understanding, and fostering critical thinking (Entwistle et al., 2003; Manikutty et al., 2007; Utriainen et al., 2018).

Altogether, the research model outlines several events along the timeline of students' life. First, cultural dimensions consolidate, then during early adulthood career choice is made, followed by an enrollment to teachers' training institutions. After studies start, students first evaluate the quality of their academic experience and then decide on the appropriate learning approach. The research model suggests a hierarchical

development of the research constructs (throughout students' life) with each developmental leap draws on previous levels.

However, though it is implied, for the purpose of the present study the above-mentioned causation is of less importance and interest. The focus of the research is students during their studies, that is after their approach to learning, cultural dimensions, career choice motives, and perception of academic experience quality as constructs are already shaped and constructed. In other words, I am not interested in the way in which students' Approach to Learning, cultural dimensions, career choice motives, and academic experience evolve during the course of life, but rather I am interested in how these constructs are related to each other at "the present" (i.e., while students attend their studies at the teachers' training institutes), and specifically to the students' Approach to Learning.

The research model suggests six research questions (the arrows in Figure 38). This model outlines a multi-layered framework, in which each layer adds to those that preceded it. As will be explicated below, the model suggests that students' cultural dimensions are associated with both their motives for choosing to study teaching (H1) as well as their perceived academic learning experience (H2). The model, then, suggest that students' perceived academic learning experience is associated with their career choice motives (H3), which also implicitly suggest that the previous two hypotheses hold. Similarly, the model suggests students' cultural dimensions are associated with their Approach to Learning (H4), followed by the two hypotheses that suggest students' ATL are associated with both their motives for choosing to study teaching (H5) as well as their perceived academic learning experience (H6) – both imply that all previous hypotheses hold to be true.

Below is a detailed presentation of the research questions and hypotheses.

The first research question is:

***Q1. How pre-service teaching students' career choice motives are related to their cultural dimensions?***

The corresponding hypotheses are as follows, with the main hypothesis is that:

**H1: Students in teachers' training institutions' motives for choosing to become teachers are related to their culture dimensions**

Accordingly, it is hypothesized that cultural dimensions are associated with students' motives for choosing to become teachers (Fouad et al., 2008; Gunkel et al., 2011). Specifically, following Watt et al. (2012) measures for pre-service teaching students' motives for choosing teaching as a profession, the following can be hypothesized:

H1.1: Students' studies expectancy considerations (i.e., expectations that teaching studies will not be difficult and their subjective teaching ability beliefs) are positively related to their power distance and masculinity orientation.

H1.2: Students' intrinsic considerations (i.e., subjective educational contribution and education specific interest) are positively related to their uncertainty avoidance, collectivism, and long-term orientation cultural dimensions.

H1.3: Students' extrinsic considerations (i.e., financial and personal utilities) are positively related to their power distance and masculinity orientation.

H1.4: Students' social influence considerations are positively related to all cultural dimensions.

The second research question is:

***Q2. How does perceived academic learning experience of future teachers is related to their cultural dimensions?***

As culture play a key role in framing students' academic experience, both positively (Laron & Lev Ari, 2013; Lev Ari & Mula, 2017) and negatively (Eshel et al., 2007; Hertz-Lazarowitz et al., 2010), students' socio-cultural background characteristics may be reflected in their vocational choice (i.e., to become teachers) and higher education institution choice (Lev Ari & Mula, 2017), as well as in their perceived experience during their studies (Culp et al., 2009; Ippolito, 2007; Kharanbeh, 2018; Méndez García & Pérez Cañado, 2005).

Thus, diverse students' cultural orientations are expected to be reflected in students' perceived academic experience, that is their perception of their studies as transformational and supportive, promoting disciplinary knowledge and understanding, and fostering critical thinking (Entwistle et al., 2003; Manikutty et al., 2007; Utriainen et al., 2018). The corresponding fifth main hypothesis is:

**H2: Culture dimensions are related to students in teachers' training institutions' perceived academic learning experience**

The second hypothesis can be expressed in more details by the following hypotheses:

H2.1: Better perceived academic learning experience, in which teaching is supportive, promoting disciplinary knowledge and understanding, and fostering critical thinking, is positively related to Short-Term Orientation, higher Uncertainty Avoidance, and Collectivism.

H2.2: Better perceived academic learning experience is negatively related to higher degree of Power Distance and Masculinity

The third research question is:

***Q3. How does career choice of future teachers is related to their perceived academic experience?***

As students' socio-cultural background plays a key role in forming their learning experience, and specifically as diverse students' cultural orientations are expected to be reflected in various motifs for choosing teaching profession, students' perceived experience is hypothesized to be associated with their motivators for pursuing teaching career in the first place. Hence, socio-economical, and cultural motivational factors influencing the choice of teaching career are interlinked with the students' contextual experience (Heinz, 2015).

As illustrated in Figure 38, the corresponding third hypothesis is:

**H3: Students in teachers' training institutions' motives for choosing to become teachers are positively related to their perceived quality of academic experience**

The fourth research question is:

***Q4. How Approach to Learning of prospective teachers is related to cultural dimensions?***

Accordingly, the following hypotheses will be examined:

**H4: Students in teachers' training institutions' Approach To Learning is related to their cultural dimensions**

The present study sets out to meet the challenge set by Manikutty et al. (2007). That is, to validate empirically the association between cultural dimensions and students' approach to learning. While Manikutty et al. (2007) addressed only five cultural dimensions, one can add a sixth hypothesis, regarding the Indulgence vs. Restraint dimension. However, as mentioned above, the accepted measure for Hofstede's cultural dimensions at the individual (rather than country) level addresses only five dimensions (Yoo et al., 2011). The five hypotheses are summarized in a relationship matrix (Table 9):

**Table 9: Hypothesis 4 relationship matrix summary - Culture dimensions affect students in teachers' training institutions' Approach to Learning**

Cultural dimensions		Learning approaches		
		Deep <sub>1</sub>	Surface <sub>2</sub>	Achieving <sub>3</sub>
Power Distance	The extent to which less powerful members accept and expect power to be distributed unequally	Neg.	Pos.	-
Collectivism (vs. Individualism)	The degree to which individuals are expected to be integrated with their families or cultural group (rather than look after themselves)	Pos.	Pos.	Pos.
Uncertainty Avoidance	The level of stress in face of an unknown future, e.g., the way uncertainties are viewed and taken care of	Pos.	Neg.	Pos.
Long-term orientation	The extent to which members accept delayed gratifications of their material, social and emotional needs	Pos.	Neg.	Pos.
Masculinity (vs. Femininity)	The degree in which members manifest as more aggressive (versus more "obedient" behaviors)	-	Pos.	Pos.

- <sup>1</sup> Deep: relating ideas and using evidence, an interest in new ideas and willingness to explore them in depth
- <sup>2</sup> Surface: focus on memorization, being extrinsically motivated by the fear of failure, and focus strictly on the task at hand
- <sup>3</sup> Achieving ATL, also referred to as strategic ATL (Manikutty et al., 2007) or Organized effort (Herrmann et al., 2017), refers to learning aspects such as organized studying, efficient time and effort management, achieving motivation, and monitoring effectiveness

Following Manikutty et al. (2007), the research hypotheses are as follows:

H4.1: Students' Deep Approach to Learning is positively associated with Uncertainty Avoidance, Collectivism and Long-term orientation, but is negatively associated with students' Power Distance



H4.2: Students' Surface Approach to Learning is positively associated with Power Distance, Collectivism and Masculinity, but is negatively associated with Uncertainty Avoidance and Long-term orientation

H4.3: Students' Achieving Approach to Learning is positively associated with Collectivism, Masculinity, Uncertainty Avoidance and Long-term orientation

The fifth research question follows from the fourth research question:

***Q5. How are Career Choice Motives of future teachers related to their Approach to Learning?***

The corresponding fifth hypotheses are as follows:

**H5: Motives of students in teachers' training institutions for choosing to become teachers are related to their Approach to Learning**

Students' motives for choosing their profession have been extensively examined in the literature, with much academic attention focusing on the motives of teachers and students in teachers' training institutions to choose this professional area (Watt et al., 2012). Such motives often relate to internal motivation, expected satisfaction, social status, working conditions, professional development opportunities, leadership (Watt et al., 2012), as well as a conviction view of teaching as a pedagogical mission (Löfström & Poom-Valickis, 2013). Accordingly, the research hypotheses are as follows:

H5.1: Students' expectations that teaching studies will not be difficult are positively related to Surface Approach to Learning, and their subjective

teaching ability beliefs are positively related Deep and Achieving Approach to Learning.

H5.1: Students' expectations that teaching studies will not be difficult are positively related to Surface Approach to Learning, and their subjective teaching ability beliefs are positively related Deep and Achieving Approach to Learning.

H5.2: Students' intrinsic considerations (i.e., subjective educational contribution and education specific interest) are positively related to Deep and Achieving Approaches to learning (students' intrinsic considerations are not hypothesized to be associated with Surface ATL).

H5.3: Students' extrinsic considerations (i.e., financial and personal utilities) are positively related to Surface and Achieving Approaches to Learning (students' extrinsic considerations are not hypothesized to be associated with Deep ATL).

H5.4: Students' social influence considerations is positively related to Deep Approach to Learning (students' social influence motive is not hypothesized to be associated with Achieving and Surface ATL).

Finally, the sixth research question is:

***Q6. How pre-service teaching students' perceived academic learning experience is related to their Approach to Learning?***

The corresponding hypotheses are as follows:

**H6: Pre-service teaching students' perceived academic experience is related to their Approach to Learning**

As learning experiences were documented to be positively associated with cultural integration (Hagenauer et al., 2016; Kharanbeh, 2018) and following Herrmann et al. (2017) and Sakurai et al. (2016) measure for perceived academic learning experience as transformational and supportive, promoting disciplinary knowledge and understanding, and fostering critical thinking (Entwistle et al., 2003; Manikutty et al., 2007; Utriainen et al., 2018), the following can be hypothesized with relation to students' ATL:

H6.1: Better perceived academic learning experience, in which teaching is supportive, promoting disciplinary knowledge and understanding, and fostering critical thinking, is positively related to Deep and Achieving Approach to Learning

H6.2: Better perceived academic learning experience, in which teaching is supportive, promoting disciplinary knowledge and understanding, and fostering critical thinking, is negatively related to Surface Approach to Learning

## **4.2 Research methodological approach and design**

Research in the fields of Education and Social Science often refers to three main methodological perspectives: quantitative, qualitative, and mixed methods, which offer some combination of the first two (Panhwar et al., 2017). The two "classical" methodological perspectives derive from different paradigms. The quantitative approach

is based on the Positivist paradigm while the qualitative approach is based on the Naturalistic paradigm (Harvey, 2019; Taylor & Medina, 2013).

The research will follow the Positivist-Inductive paradigm. According to Taylor & Medina (2013, p. 1), a paradigm is a system of beliefs or world-views which, from a philosophical perspective, provides a representation of reality's nature (i.e., ontology), the knowledge and justification that is generated according to such representation (i.e., epistemology); and an approaches to generating that knowledge (i.e., methodology).

#### **4.2.1 Positivist paradigm and quantitative research approach**

Positivism is a scientific paradigm who assumes the existence of an absolute reality (or truth) which the researcher should discover using objective and empirical tools. In other words, the Positivist paradigm asserts that reality is not illusional, but rather it is real, and its existence do not rely on the knower perspective. As stated by Kincheloe & Tobin (2009, p. 515), positivism assumes that "*the natural and social worlds could be understood and improved by using reason and systematic observation; that is, the use of scientific reasoning could enhance social progress and the human condition by emulating the successes of science ... Observing, experimenting, and predicting were among the processes thought to constitute a scientific method that would lead to an understanding of social life in terms of causal, invariable, and universal laws and the interrelations among them*".

It should be noted that the interpretation to the reference of "positive" means that scientists can speculate that a theory (i.e., the existence of some constructs as well relations and interrelations between them) is true, which imply that they need to research what they hold to be true to confirm their speculation. The result of such examination is either that there is enough evidence that support the theory - hence, providing some

confirmation for the speculation— or that evidence does not support the theory, in which case researchers cannot confirm their theories. The latter does not mean that the proposed theory is not true, but rather that the researcher failed to prove it is true. It also should be noted that positivists cannot investigate a hypothesis that is thought to be wrong, as there is really no way to refute such hypothesis. This means that, as positivists seek to get confirmations for their proposed theory, their main concern should be determining the scientific criterion for such confirmation (or else the proposed theory is refuted) (Harvey, 2019; Kincheloe & Tobin, 2009).

As such, positivism asserts that the reality is open to an objective investigation through science. Thus, a positivist inquiry is based on what is and can be measured ("in the eye"), on what can be clearly and surely proved. The positivist data is accessible to research using their senses (unlike metaphysical or theological concepts, which make assumptions that cannot be proved by scientific tools). The main tenets of Positivism are that data concerning the phenomena is empirically observable (i.e., Empiricism) and that scientific enquiry is neutral, unbiased and its methods independent of the researcher, repeatable and reliable (i.e., Objectivism) (Harvey, 2019). Thus, it follows that according to positivistic paradigm theory formation is viewed as an inductive generalization from observation. What also follows from this is that, according to positivistic paradigm, disputes between competing theories can only be verified by empirical tests – all for the purpose of pursuing an ever more complete explanation of the world (Harvey, 2019).

Overall, the positivist paradigm is focused on the objectivity of the research process, mostly involving quantitative methodology, as the researcher is external to the research site and serves as the controller of the research process (Taylor & Medina, 2013).

According to Kaniel (2014), the origin to quantitative approach is in psychology's attempt to imitate the exact sciences through the behaviorist approach, which people perceived was compatible with the natural sciences. The main principle that guided the researchers was reductionism, which is the assumption that different aspects of the human being (such as characteristic traits, memory, identity etc.) can be explored, find causal laws, connect them to other laws and get an overall picture of mankind.

Quantitative research is based on the positivist view, which presupposes the existence of causality. The purpose of quantitative research is to provide data in relation to reality (Rafaeli, 2011). Thus, quantitative research is interested in the phenomenon as it represents a general law and does not deal with specific, one-off, and concrete phenomena. Therefore, for the most part, its findings can be generalized to other contexts from the context in which the study was conducted (Rafaeli, 2011).

According to Rafaeli (2011), the quantitative research process begins with a theory that expresses a certain association or causality, which the researcher seeks to examine. This type of research is suitable for situations where prior knowledge exists in the field of research. This knowledge can be theoretical knowledge, or knowledge based on findings from previous research in the field. Specific hypotheses can be derived from the theory, which can be put to the test. Quantitative researchers attempt to refute a hypothesis by searching for at least one case that contradicts the suggested causality implied by the same hypothesis ("a refuting example"). At the same time, if the hypothesis has not been refuted, it is held to be true. Still, such hypothesis cannot be said to have been "proven correct". Similarly, and unlike mathematics or logic science, empirical data-based research does not pertain to claim that "the theory has been proved", but only discuss the extent to which findings support the theory— findings cannot prove a theory (Rafaeli, 2011).

To test hypotheses, quantitative research, as mentioned above, collects data. It uses experiments, observations, surveys, and questionnaires. As the name of quantitative research imply, the data that quantitative researchers collect and analyze are measurable and quantifiable. It is assumed that numbers, or more accurately, numerically coded data, can be manipulated so that explored reality emerges and revealed. For this reason, quantitative research often use inferential statistics tools, in which statistical significance is used as a means of supporting or refuting hypotheses (Kaniel, 2014; Rafaeli, 2011). Much of the quantitative approach vantage lies with its scale (i.e., large quantities) and standardization, hence to more objective, methods and normative concepts (Wilson, 1970 as cited in Flick et al., 2004, p. 5).

#### **4.2.2 Naturalistic paradigm and qualitative research approach**

The Naturalistic paradigm evolved "*in contrast to positivistic traditions in which the scientific method was considered the route to discovering an objective reality. The naturalistic paradigm assumes that meaning is constructed by both participants and observers so that, in effect, there are multiple realities (Erlandson et al. 1993). Because these multiple versions of reality are shaped by both theoretical and value frameworks, it is not possible to achieve pure objectivity. (Guba 1990). (p. 459)*" (Erlandson et al., 1993; Guba, 1990 both as cited in Moschkovich, 2019, p. 61)

During the last decades, the determinism that underpins positivism and the quantitative approach to research was challenged (Kaniel, 2014). First in natural sciences, as was demonstrated for instance by the blurring boundaries between causality and probability in quantum mechanics, and later in the social sciences in which reductionism was left behind in favor of Holism, i.e. the assertion that different parts are all

interconnected and cannot be understood without understanding the entire whole (Kaniel, 2014). As stated by Taylor & Medina (2013), the usefulness of scientific knowledge is tested against the human purposes that shape its production, forever evolving, contingent and open to challenge. However, according to them, applying similar approach to examine human mind or heart encounters a major representation issue: "*what goes on in our minds and hearts is not directly accessible to the world outside us. There is no window in our heads that allows another person to look directly into our minds and see 'exactly what we mean'; the best we can do is 'represent' our thoughts and feelings through various means of communication (e.g., language, art, dance, gesture).*" (Taylor & Medina, 2013, p. 8). This calls for a more narrative and interpretive approach which empowers criticism while unfolding personal experience and providing deep inquiries and insights.

Generally, as stated by Harvey (2019), the naturalistic paradigm refer to an attempt to grasp the 'natural' processes of social action and interaction. It pertains to eliminate distortions which are presumed to be an artificial byproduct of other research approaches (i.e., positivism and quantitative approach) by placing the researcher in a better position to interpret social aspects in their own context.

Thus, naturalistic research's goals are to simultaneously identify existing constructions and offer consensual interpretations of them. This means embracing a holistic perspective while examining several constructs, each with its own context, but with relation to other constructs. This means that "*using this paradigm implies that design and analysis are conducted from an ethnographic stance, that context is defined as a complex, multifaceted, and interactional phenomenon and that design considers the ecological validity*" (Moschkovich, 2019, pp. 61–62).



According to the naturalistic paradigm, an ethnographic stance means that the researcher must consider multiple points of view and acknowledge cognition in its context. This also implies that meaning is socially constructed and negotiated in practice. Similarly, ecological validity implies that "*examining reasoning and cognition must rely on regular cultural practices*" (Moschkovich, 2019, p. 63). Naturalistic researchers strive for an understanding and presentation of reality in a way that both heightens the researcher's own awareness and that of the participants.

According to Moschkovich (2019) the Naturalistic research paradigm can be summarized by two principles: (1) Consider multiple points of view, and (2) Study it in context. For this purpose, context should not be viewed as a setting for the research but rather as an identifiable framework which exist prior to the activity researched and beyond the control of the participants, with transcending properties regarding the participants experience (Lave, 1988, in Moschkovich, 2019).

This requires alternative modes of reasoning and thinking, for example, as stated by Taylor et al. (2012), metaphorical, dialectical, inductive, and reflective thinking. What is common to such thinking is that it is more "open", flexible and "involved" and less standardized than the quantitative approaches. A generic term to describe research perspectives that incorporate these elements is "qualitative research" (Flick et al., 2004, p. 5).

According to Kaniel (2014), qualitative research can be generally associated with several claims:

- (A) Human-beings are different from nature. Thus, explanations of human activity and behavior are different from explanations for materials behavior in nature.

- (B) An individual, as well as its environment, are a whole. Breaking it down into components and reassembling them is very complex
- (C) To understand an individual, one must be viewed as an entity who enjoys free choice with large variation both within and between other individuals.
- (D) It is important to explore what one knows about oneself, and how these affect their behaviors, feelings, and thoughts, expressed in a unique personal story (narrative)
- (E) An individual wholeness must be explored within a social and cultural values context
- (F) A complete view of the whole requires the researcher to be present with the participants in uncontrolled conditions and in a state in which the researcher is both influencing and influenced by the process.

In fact, qualitative research practice is not a single method, but rather it corresponds to a variety or a spectrum of methods that may be selected according to the research questions at hand (Flick et al., 2004, p. 8). For instance, as stated by Jackson et al. (2007), such methods include *Content analysis* (which is a generic name for conducting systematic textual analysis that involves comparing, contrasting, and categorizing a set of data), *Conversation analysis* (a form of textual analysis rooted on ethnomethodology, i.e., how people accomplish every day, taken-for-granted interactions), *Discourse analysis* (a way for examining language as it is used in specific contexts, mainly focusing on the content of talk, ideologies, attitudes, ideas, and courses of actions of the subjects and the objects they speak about), and *Narrative analysis* (an analysis of life histories, interviews, journals, diaries, autobiographies, memoirs, or

biographies with the aim of examining how a story is developed, organized, begins and ends, as well as, its goals or aims).

According to Flick et al. (2004), these qualitative tools, techniques, or procedures used to generate data share three main attributes. The first is that researchers should pursue subjective meanings and individual sense attributions with reference to *symbolic interactionism* (i.e., interpreting the meanings that people develop through their interaction with others) and *phenomenology* (i.e., philosophically, concentrate on the essential nature of the social world). The second attribute refer to *ethnomethodology* and *constructivism*. As stated above, ethnomethodology focus on individuals' everyday tasks and routines, and especially on taken-for-granted interactions, and Constructivism refers to human experience constructed knowledge (as opposed to obvious of self-evident knowledge). The third attribute refer to *structuralism*, i.e., uncovering latent structures that underlie all the things that humans do, think, perceive, and feel.

#### **4.2.3 The research design of the present research**

According to Stake (1995, p.37 as cited in R. L. Jackson et al., 2007, p. 22), there are three major differences between quantitative and qualitative research:

- (1) *The distinction between explanation and understanding as the purpose of inquiry.*
- (2) *The distinction between a personal and impersonal role for the researcher*
- (3) *A distinction between knowledge discovered and knowledge constructed.*

As positivistic quantitative research is interested at the uncovering and affirmation of relationships between variables constructed by validated reliable empirical

data (Shkedi, 2011), in keeping with the above mentioned differences, qualitative and quantitative approaches differ in data analysis and interpretation as well.

Qualitative-constructivist researchers attempt to understand the phenomena being studied by trying to understand human beings' experiences and reflections about those experiences. It focusses on interpreting social and personal meanings, based on their subjects' experience, usually in everyday context, and presuming that these meanings convey latent social structures or cultural values. As such. These researchers prefer staying as close as possible to the unique view of the world among those participating in the processes under investigation. Subjectivity, according to this approach, is critical to understanding (Shkedi, 2011).

The qualitative paradigm, on the other hand, takes a naturalistic approach to reality as an internal, individually constructed reality that is shaped by the cultural and personal experiences of the research participants. Proponents of this approach believe that to be understood, phenomena and processes must be studied in the dynamic and evolving social and historical context in which they occur (Flick et al., 2004; Moschkovich, 2019).

The positivistic approach to research, on the other hand, is based on a clear differentiation between the objective and the subjective worlds, and the use of unique sets of tools for data collection helps maintain unbiased objectivity and based on the perception of an absolute reality, which is constant and non-evolving, and which can be evaluated by statistical methods (Harvey, 2019; Kincheloe & Tobin, 2009; Panhwar et al., 2017).

Regarding the present research, the main research problem suggests a relationship between students' approach to learning and their cultural dimensions, career choice motives and academic experience. Clearly, the emphasis of such research question are *the relationships* between the theoretical constructs of approach to learning, cultural dimensions, career choice motives, and academic experience - with no pretension or effort to control extraneous variables – consistent with the positivist paradigm.

Furthermore, the main research focus is on students in teachers' training institutions in Israel approach to learning in view of their cultural dimensions, career choice motives and academic experience. This means that my main interest are the *students as a population*, rather than as (different and unique) individuals, which also means that a more objective and large-scale (from a bird's eye view) approach is appropriate for this purpose rather than a subjective small-scale approach (Creswell & Clark, 2017; Creswell & Creswell, 2017).

Finally, as discussed also in the following chapters, the research method for all the research questions is Correlational Research (Quantitative approach), based on a sample of subjects, *validated* measures and using statistical inference, all of which consistent with the confirmatory nature of the positivist-inductive paradigm.

### **4.3 Research sample**

The study population consists of students who study in teachers' training institutions in Northern Israel. According to the Israeli Council of Higher Education (2019), presently about 25,000 undergraduate students attend 23 academic institutions for training teachers presently operating in Israel. Of which, 31% of the students attend institutions in Northern Israel. As only 27.6% of the Israeli population reside in the

northern, this means that teachers' training institutions located in northern Israel represent larger share of the students' population.

Additionally, some of the teachers training institutions are more oriented towards certain publics in the Israeli society. Such "dedicated" institutions include Religious-Jewish institutions, Religious-Muslim's institutions, and specialized institutions (e.g., sports). These "dedicated" institutions are not "open for all" and are very restricted in their nature, both with regards to the character of the training and curriculum and regarding the positions and schools their graduates are intended for (Israeli Council of Higher Education, 2019, 2021). According to the Israeli Council of Higher Education 61% of the teachers training institutions are such "dedicated" institutions. However, although pluralistic and secular institutions comprise only 39% of the teachers' training institutions, they are responsible for educating 53% of the future teachers.

As data regarding teachers' training institutions located in Northern Israel is similar, with 50% pluralistic and secular institutions responsible for educating 54% of the future teachers in the district (Israeli Council of Higher Education, 2019, 2021), one can view teachers' training institutions located in northern Israel as a representative cluster for all the institutions in the country. Moreover, as the distribution of the workers in the field of teaching in Israel, most of the learners in these institutions are women with consistent representation of students from different ethnic and religious background (Israeli Council of Higher Education, 2019), one can regard each pluralistic and secular students' training institutions in northern Israel as a representative cluster for sampling students in these institutions.

According to Raviv & Levitan (2005), a popular method for reducing sample size and sampling costs while maintaining a desired accuracy is cluster sampling. As in the

case of the present research in which Israeli districts are similar to one another, with most of the variation attributed to internal characteristics of the districts (i.e., clusters) rather than between them, one can randomly subsample a selected elements (in the present case this means students) from a specific district (cluster) according to what is known as a "two-stage" cluster sampling plan.

Accordingly, in the framework of the research study, a sample of 314 students<sup>71</sup> from three pluralistic and secular students' training institutions in northern Israel was obtained. The three (out of 11 institutions) account for 24% of all pluralistic and secular students' training institutions in Israel.

The sample's background characteristics are summarized in Table 10. As expected, 95% of all respondents are female and most of the students (75.2%) are Jewish, and the rest are Muslim (9.4%), Druze (7.5%), and Christian and others (7.8%).

Only 46% of the respondents are secular. The rest follow a religiously conservative way of life (38%) or are religious (16%).

As summarized in Table 10, 50% of the respondents report of their economic status to be average. However, only 8% of the respondents report their economic status to be relatively high, and 42% report their economic status to be relatively low.

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<sup>71</sup>An estimate that was obtained according to the valuation of confidence interval of 95% and margin of error of 6%.

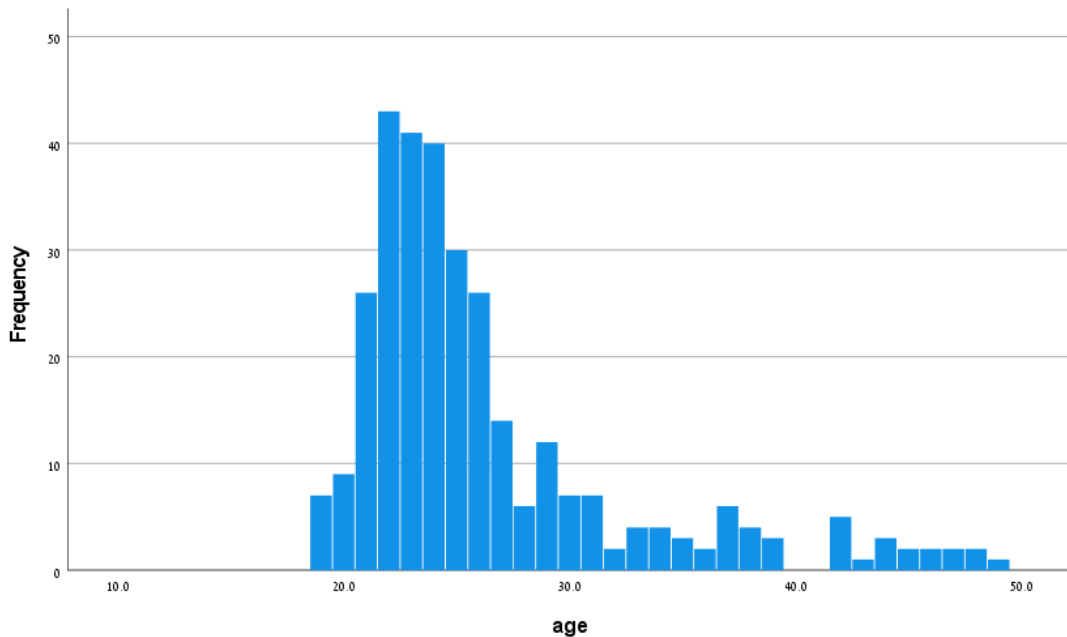
**Table 10: Participants background characteristics**

	Characteristic	%	N
Gender	Female	95.2%	299
	Male	4.8%	15
Ethnic group	Jewish	74.8%	235
	Druze	7.6%	24
	Muslim	9.6%	30
	Christian and others	8.0%	25
Age	<i>M=26.3 [19-49], Median=24, SD=6.2</i>		
Marital status	Single	67.5%	212
	Married and other	32.5%	102
Have kids	No	78.0%	245
	Yes	22.0%	69
Religiosity	Secular	46.2%	145
	Conservative	37.9%	119
	Religious	15.9%	50
Economic status	Relatively low	42.4%	133
	Relatively average	50.0%	157
	Relatively high	7.6%	24
Learning stage	Preparatory	23.9%	75
	1st year	29.6%	93
	2nd year	19.7%	62
	3rd year	10.8%	34
	4th year	16.2%	50
Total		100.0%	314

As stated in Table 10 above, respondents' age ranges from 19 to 49, with an average of 26.3 years and a median of 24 years. As illustrated in Figure 39, 83% of the students are under 30 years old. Older students (i.e., over 30 years old) are holders of a bachelor's degree (not in teaching or education) who train for teaching, mostly as a second career choice. These students are often exempted from basic general courses (such as English, basic mathematics, and general seminars that are not related to education or pedagogy), but otherwise participate all other curricula activities. Accordingly, 32.5% of the respondents are not single, and 22% of all respondents report of having children. In the context of the presented research, it is assumed that students'



age, marital status, and children reflect students' life stage as means to understand their teaching career choice.



*Figure 39: Participants age distribution (N=314)*

Finally, respondents' learning stage is summarized in Table 10. According to which, about 24% of the respondents learn at preparatory school, and the rest (76%) are undergraduate students. As such, 29.6% of the respondents are first year students, 19.7% are second year students, 10.8% are third year students, and 16.2% are fourth year students. It should be noted that the typical duration of studies in the teaching tracks is three years (not including the preparatory year), but in quite a few cases some of the students continue to the fourth year as well.

#### **4.4 Research instruments**

The main research tool in the presented research is a validated closed questionnaire. The questionnaire consists of five sections. At the beginning of the questionnaire, subjects are asked to fill out demographic information to obtain general

information about their background and personal characteristics, including the data regarding their gender, age, social status, and household income level, religion, and religiousness. The following are the details of the other section of the questionnaire, that correspond to the research variables. It should be noted that all questionnaires are translated to Hebrew.

#### **4.4.1 Cultural dimensions**

Students' cultural dimensions will be measured using the CVSCALE questionnaire (Yoo et al., 2011). The CVSCALE is a 26-items dimensional scale of individual cultural values. It corresponds to Hofstede' original 30-item questionnaire. However, it was found to "overcome every major weakness" of Hofstede' past studies, and it was found to better suit for measuring cultural dimensions at the individual (rather than country) level (Yoo et al., 2011).

The 26-items of the questionnaire are presented in Appendix (page 468), and it presents a grouping of the items according to the different dimensions, with original reliability measures ( $\alpha$ ) as follows: Power distance (5 items,  $\alpha=.61-.69$ ), Uncertainty Avoidance (5 items,  $\alpha=.65-.80$ ), Collectivism (6 items,  $\alpha=.76-.80$ ), Long-term Orientation (6 items,  $\alpha=.70-.76$ ), Masculinity (4 items,  $\alpha=.68-.77$ ). All items were measured using a 5-level measurement scale.

Participants' measurements of Cultural Dimensions are summarized in Table 11, which also include measurements' Chronbach's  $\alpha$  and correlations. As summarized in Table 11, Cronbach's  $\alpha$  is higher than 0.70 for all cultural dimensions, which indicate higher internal consistency for all items measured.

In relation of the measurement scale, in which 1 represent the lowest level of a measurement and 5 represent the highest level of a measurement, participants' Power

Distance ( $M=1.84$ ) is relatively low, Uncertainty Avoidance ( $M=4.29$ ) is relatively high, Collectivism ( $M=3.70$ ) is medium-high, Long-term Orientation ( $M=4.48$ ) is relatively high, and Masculinity ( $M=2.30$ ) is medium-low.

In this sense, the presented research measurements of cultural dimensions correspond most of Hofstede's scores (i.e., low Power Distance, medium Masculinity and Collectivism, and High Uncertainty Avoidance)<sup>72</sup>. However, while Hofstede's Long-term Orientation scores concerning Israel are medium-low, the presented study measurement of this dimension is high, thus portraying Israeli pre-service teaching students as exhibiting only small respect for traditions, high propensity to save for the future, with education viewed as means to prepare for the future, and such that success and failure are attributed to effort. Also, higher LTO scores may also imply that these students are relatively slow on adapting to novel concepts (Yalcinkaya, 2008 and Chandrasekaran & Tellis, 2008, both as cited in Bukowski & Rudnicki, 2019).

As summarized in Table 11, higher Power Distance scores are significantly and positively correlated with higher Masculinity scores ( $r=0.179$ ,  $p<.01$ ), and are significantly and negatively correlated with Long-term Orientation scores ( $-0.128$ ,  $p<.05$ ). Similarly, Uncertainty Avoidance is positively correlated with both Collectivism ( $r=0.141$ ,  $p<.05$ ) and Long-term Orientation ( $r=0.341$ ,  $p<.01$ ), and Collectivism is positively correlated with Long-term Orientation ( $r=0.207$ ,  $p<.01$ ).

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<sup>72</sup> See chapter **שגיאה!** מקור ההפניה לא נמצא, and particularly Israel Hofstede's scores (**שגיאה!** מקור ההפניה לא נמצא, p. 208).

**Table 11: Cultural dimensions – Descriptive statistics, Chronbach's  $\alpha$ , and Correlations**

Cultural Dimensions	Descriptive Statistics			Correlations				
	Mean	Std. Deviation	$\alpha$	PD	UA	CO	LTO	MAS
Power Distance (PD)	1.84	0.73	0.798	--				
Uncertainty Avoidance (UA)	4.29	0.65	0.818	0.041	--			
Collectivism (CO)	3.70	0.75	0.737	0.107	0.141*	--		
Long-term Orientation (LTO)	4.48	0.48	0.748	-0.128*	0.341**	0.207**	--	
Masculinity (MAS)	2.30	0.94	0.753	0.179**	-0.056	-0.022	-0.094	--

\*\*p<.01, \*p<.05

#### **4.4.2 Motives for choosing to become a teacher**

To measure students' motives to learn how to become teachers I used Bohndick et al. (2017)'s English version of Pohlmann & Möller (2010 as cited in Bohndick et al., 2017) German version of the Motivation for Choosing Teacher Education Questionnaire (FEMOLA<sup>73</sup>).

The FEMOLA 21 items questionnaire is comparable to the FIT questionnaire (Watt & Richardson, 2007). The questionnaire consists of seven subscales according to the following four components (see Research questionnaire appendix, p. 469):

<sup>73</sup> FEMOLA – Fragebogen zur Erfassung der Motivation für die Wahl des Lehramtsstudiums (in German)

1. **Expectancy component** which includes individuals' perception regarding their fit for teaching (the *Ability Beliefs* subscale, original  $\alpha=.87$ ), as well as their expectation that teaching studies would not be too difficult (the *Low Difficulty* subscale, original  $\alpha=.97$ ).
2. **Intrinsic Values component** represents the extent to which individuals are interested in social contribution through education (the *Educational Interest* subscale, original  $\alpha=.91$ ) and their personal interest in the academic content of education studies (the *Subject-Specific Interest* subscale, original  $\alpha=.89$ ).
3. **Extrinsic Value component** which covers *Financial Utility* (original  $\alpha=.84$ ) and *Personal Utility* subscales (i.e., family and leisure time, original  $\alpha=.86$ ).
4. **Social Influences component** is represented by a single subscale (original  $\alpha=.83$ ) measuring the extent to which choosing to become a teacher is a result of others' influence.

Participants' responses were measured using a 5-level Likert scale, and measurements descriptive statistics, Chronbach's  $\alpha$ , and correlations are in Table 12. Accordingly, Cronbach's  $\alpha$  is higher than 0.70 for all motives, thus indicating higher internal consistency for all measurements.

In relation of the measurement scale, in which 1 represent the lowest level of a measurement and 5 represent the highest level of a measurement, students were very highly motivated to choose teaching for its' educational contribution ( $M=4.54$ ) and subject-specific interest ( $M=4.46$ ). Their motivation to choose teaching in view of their perceived abilities are high ( $M=3.87$ ). Extrinsic motivational factors were found to be only medium, with personal utilities ( $M=3.17$ ) higher than financial utility ( $M=2.58$ ).

Students' motivation to choose to become teachers due to others' influence (i.e., social influence) was relatively medium-low ( $M=2.51$ ), and they were hardly motivated to choose teaching because they expected (in advance) the studies would not be difficult ( $M=1.72$ ).

As summarized in Table 12, students' ability as motive for choosing teaching is positively correlated with both their educational contribution motive ( $r=0.169$ ,  $p<.01$ ) and their subject-specific interest ( $r=0.147$ ,  $p<.01$ ), suggesting that ability is associated with students' intrinsic values for choosing teaching. Additionally, students' educational contribution motive and their subject-specific interest are also positively correlated ( $r=0.763$ ,  $p<.01$ ).

Students' expectation that teaching studies would not be too difficult were found to be positively correlated with their financial motives ( $r=0.294$ ,  $p<.01$ ), personal motives ( $r=0.240$ ,  $p<.01$ ), and social influence motives ( $r=0.224$ ,  $p<.01$ ). More, social influence motives were found to be positively correlated with students' financial ( $r=0.288$ ,  $p<.01$ ) and personal ( $r=0.302$ ,  $p<.01$ ) motives, and the latter two were found to be also positively correlated ( $r=0.584$ ,  $p<.01$ ). Thus, extrinsic value and others' influence are associated and are also suggested to be associated with students' expectation that teaching studies would not be too difficult.

**Table 12: Motives for choosing to become a teacher – Descriptive statistics, Chronbach's  $\alpha$ , and Correlations**

Motives for choosing to become a teacher	Descriptive Statistics			Correlations						
	Mean	Std. Deviation	$\alpha$	Ability	Low Difficulty	Educational Contribution	Subject-Specific Interest	Financial Utility	Personal Utility	Social Influence
Ability	3.87	1.03	0.933	--						
Low Difficulty	1.72	0.99	0.895	0.074	--					
Educational Contribution	4.54	0.67	0.828	0.169**	0.028	--				
Subject-Specific Interest	4.46	0.72	0.779	0.147**	-0.017	0.763**	--			
Financial Utility	2.58	1.19	0.853	0.077	0.294**	0.035	0.080	--		
Personal Utility	3.17	1.22	0.870	0.109	0.240**	0.029	0.037	0.584**	--	
Social Influence	2.51	1.34	0.898	0.085	0.224**	0.008	0.074	0.288**	0.302**	--

\*\*p<.01, \*p<.05

#### 4.4.3 Students' perceived academic learning experience

To measure students' perception of their teaching and learning environment I employed Utriainen et al. (2018) shortened and modified version of the Experience of Teaching and Learning Questionnaire (ETLQ) (Entwistle et al., 2003). Their version consists of 23 items corresponding to students' teaching-learning environment, critical thinking, and approach to learning (as will be presented in the next section) according to the following subscales:

*Table 13: Quality of Academic Experience subscales and reliabilities\**

Quality of Academic Experience subscale	Items	Reliability ( $\alpha$ )*
Teaching for understanding	TE1, TE2, TE5, TE12	.79
Supportive teaching	TE7, TE9	.65
Disciplinary understanding	TE4, TE6	.69
Alignment	TE8, TE16-TE18	.78
Peer Support	TE13-TE15	.73
Constructive Feedback	TE10, TE11, TE19	.86
Critical Thinking	CT1-CT4	.81

\* Cronbach's  $\alpha$  as measured by Utriainen et al. (2018)

Respondents' responses were measured using a 5-level agreement scale, and the computed variables are summarized in Table 14, which also include measurements' Chronbach's  $\alpha$  and correlations. As summarized in Table 14, Cronbach's  $\alpha$  is higher than 0.70 for most of the students' perceived academic learning experience dimensions, which indicate higher internal consistency for all items measured. However, a index for students' measurement of supportive teaching was only 0.585 which only indicate an



acceptable and sufficient level, apparently, as a result of the low number of items (Taber, 2018).

In relation of the measurement scale, in which 1 represent the lowest level of a measurement (i.e., poor experience) and 5 represent the highest level of a measurement (i.e., excellent experience), participants' perceived academic learning experience dimensions range from 3.19 (Teaching for understanding) to 3.81 (Peer support) which reflect a good experience<sup>74</sup>.

**Table 14: Perceived academic learning experience – Descriptive statistics, Chronbach's  $\alpha$ , and Correlations**

Perceived academic learning experience	Descriptive Statistics			Correlations						
	Mean	S.D.	$\alpha$	TU	SU	DU	AL	PS	CF	CT
Teaching for understanding (TU)	3.19	1.02	0.818	--						
Supportive teaching (SU)	3.64	0.94	0.585	.482**	--					
Disciplinary understanding (DU)	3.32	1.07	0.679	.624**	.561**	--				
Alignment (AL)	3.55	0.90	0.781	.540**	.520**	.531**	--			
Peer Support (PS)	3.81	0.93	0.773	.278**	.312**	.312**	.322**	--		
Constructive Feedback (CF)	3.40	0.96	0.753	.528**	.514**	.516**	.494**	.362**	--	
Critical Thinking (CT)	3.53	0.93	0.852	.495**	.387**	.545**	.469**	.295**	.547**	--

\*\*p<.01, \*p<.05

<sup>74</sup> See for instance Henchoz et al. (2016)

In addition, as summarized in Table 14, all perceived academic learning experience dimensions are significantly and positively correlated with each other. These positive associations suggest that different facets of students' perceived academic experience are interrelated.

#### 4.4.4 Approach to learning

Utriainen et al. (2018) shortened version of Study Process Questionnaire (SPQ) questionnaire was also used to measure students' Approach to Learning. There are three learning approaches: Surface, Deep, and Achieving (i.e., organized studying). Each approach can be attributed to two dimensions, the first corresponds to the motivation behind such approach and the latter to the strategy employed as result, as summarized in the following table Fox et al. (2001, p. 513).

***Table 15: Summary of the differences in motivation and study process of surface, deep, and achieving approaches (Fox et al., 2001, p. 513)***

Learning approach		
Surface approach	Surface motivation	Fear of failure Desire to complete their course of study
	Surface strategy	Rote learning of facts and ideas Focusing on task components in isolation Little real interest in content
Deep approach	Deep motivation	Interest in the subject Vocational relevance Personal understanding
	Deep strategy	Relate ideas to evidence Integration of material across courses Identifying general principles
Achieving approach	Achieving motivation	Achieving high grades Competing with others To be successful
	Achieving strategy	Use any technique that achieves highest grades Level of understanding patchy and variable

Accordingly, the SPQ 9-items questionnaire presents different situations representing different learning approaches, as follows:

**Table 16: Approach to Learning subscales and reliabilities\***

Approach to Learning subscale	Items	Original Reliability ( $\alpha$ )*
Achieving (Organized Studying)	LA1-LA3	.72
Deep Approach	LA4-LA7	.78
Surface Approach	LA8-LA9	.63

\* Reliability factors as measured by Utriainen et al. (2018)

Respondents' responses were measured using a 5-level agreement scale. The computed variables and measurements' Chronbach's  $\alpha$  and correlations are summarized in Table 17. According to the analyses, Cronbach's  $\alpha$  of all students' ATLs are larger than 0.65, which is considered satisfactory and indicating on acceptable internal consistency of the items (Taber, 2018).

In relation of the measurement scale, in which 1 represent the lowest level of a measurement and 5 represent the highest level of a measurement, the students scored high on Achieving Approach to Learning (Achieving ATL) (M=4.06), while their scores reflect medium high Deep ATL (M=3.88), and medium Surface ATL (M=2.99). Furthermore, students' Achieving ATL was found to be positively correlated with Deep ATL ( $r=.494$ ,  $p<.01$ ) and negatively correlated with Surface ATL ( $r=-.203$ ,  $p<.01$ ). However, no significant correlation was documented between Deep ATL and Surface ATL. It is interesting to note that these findings imply that Deep ATL is positively associated with goal-oriented organized learning, while Surface ATL is negatively associated with such learning aspects.

**Table 17: Students' Approach to Learning – Descriptive statistics, Chronbach's  $\alpha$ , and Correlations**

Students' Approach to Learning	Descriptive Statistics			Correlations		
	Mean	S.D.	$\alpha$	Achieving Approach	Deep Approach	Surface Approach
Achieving Approach	4.06	0.74	0.723	--		
Deep Approach	3.88	0.67	0.667	.494**	--	
Surface Approach	2.99	1.05	0.699	-.203**	-0.009	--

\*\* p<.01, \* p<.05

#### **4.5 The course of the research**

The data was collected in three pluralistic and secular students' training institutions in northern Israel. For this purpose, it is needed to receive the institutions consent to survey their students. Often this means receiving the approval of the research committee in the institutions or the departments' heads. After receiving such approval, I invited all the students in the institution to participate in the research by presenting myself and the research context. Students who agreed to participate in the research were invited to answer the research questionnaire.

During the study, personal identifiers were not collected, and all related analyzes was conducted relating to the students' socio-demographic characteristics. Participants were also notified that they are not obligated to answer the questionnaire, participate in the study, and that even if they start to answer it, they can drop at any time with no

consequences to them whatsoever. It was also emphasized that participants details were discreetly and anonymously handled and were used for research purposes only.

#### **4.6 Data analyses**

Analysis of the data was conducted using SPSS version 27. In the first stage, descriptive statistics of the characteristics of the research population and the main research variables were examined. In this framework, the distribution of univariate frequencies was examined for each of the variables, as well as averages and standard deviations. In the second stage, the internal reliability of the various research questionnaires was examined based on the Cronbach  $\alpha$  index.

In the third stage, the research hypotheses were examined. The relationships between the variables were examined by using the Pearson index to examine direct linear correlation between variables. Further analysis, using multiple linear regressions was also preformed to test these correlations in a broader sense, in which several relationships co-exist. These multiple linear regressions analyses were performed using a multivariate analysis of variance (MANOVA).

## **Chapter 5: Findings**

### **5.1 Preparatory analyses: research variables associations with respondents' background characteristics**

As students' socio-cultural background plays a key role in forming and framing their learning experience (see chapter 1.3.2 Cultural aspects of students' academic learning experience), it is also assumed to be reflected in their cultural orientation, motives for choosing teaching profession, as well as their Approach to Learning. Thus, initially, and prior to examining the research hypotheses, it is worth examining how respondents' background characteristics are reflected and related to the research variables. These aspects will be reviewed in the chapter below

#### **5.1.1 Culture dimensions and background characteristics**

As summarized in Table 18, ethnic groups, in general, do not differ in their cultural dimensions. An exception in this regard is that Muslims power distance (2.2) was found to higher than Jewish students (1.7).

Similarly, except for Masculinity, respondents' cultural dimensions do not differ relatively to their religiosity level. As summarized in Table 18, orthodox students' Masculinity (2.8) is higher than conservative students' (2.4), and both are higher than secular students' Masculinity (2.1). These findings suggest a positive association between religiosity and Masculinity.

**Table 18: Cultural dimensions by Ethnic group and religiousness level**

Cultural Dimensions		Ethnic Group				Multiple comparisons of means <sup>^</sup>	Religiousness level			
		Jewish (A)	Druze (B)	Muslim (C)	Christian and others (D)		Secular (A)	Conservative (B)	Orthodox (C)	Multiple comparisons of means <sup>^</sup>
	N	235	24	30	25		145	119	50	
Power Distance	M (SD)	1.7 (.7)	2.1 (.8)	2.2 (.9)	2.1 (.8)	C>A*	1.8 (.7)	1.8 (.7)	1.9 (.7)	
Uncertainty Avoidance	M (SD)	4.3 (.6)	4.3 (.8)	4.2 (.7)	4.2 (.8)		4.3 (.7)	4.3 (.6)	4.3 (.6)	
Collectivism	M (SD)	3.7 (.8)	3.6 (.6)	3.7 (.7)	3.5 (.9)		3.8 (.7)	3.7 (.7)	3.5 (.9)	
Long-term Orientation	M (SD)	4.5 (.4)	4.5 (.6)	4.3 (.6)	4.3 (.5)		4.4 (.5)	4.5 (.5)	4.5 (.4)	
Masculinity	M (SD)	2.3 (1.0)	1.9 (.7)	2.4 (.8)	2.1 (.7)		2.1 (.9)	2.4 (.9)	2.8 (1.0)	C>A**, B** B>A*

<sup>^</sup> Multiple comparisons of means, based on two-sided tests assuming equal variances and adjusted for all pairwise comparisons using the Benjamini-Hochberg correction

\*\* p<.01, \* p<.05

Additionally, as summarized in Table 19, students' cultural dimensions are not associated with their age, learning stage, or economic status. An exception in this regard is that Power Distance was found to be negatively correlated ( $r=-0.132$ ,  $p<.05$ ) with age, which means that students' Power Distance decrease with age.

**Table 19: Pearson correlations of Cultural dimensions and students' age, learning stage, and economic status**

Cultural Dimensions	Age	Learning stage	Economic status
Power Distance	-.132*	-0.101	0.065
Uncertainty Avoidance	0.010	-0.047	0.075
Collectivism	0.046	-0.006	0.069
Long-term Orientation	-0.063	0.014	0.000
Masculinity	0.038	-0.056	-0.003

\*\*  $p<.01$ , \*  $p<.05$

Similar findings emerge from regression analyses of Cultural Dimension as dependent variables on respondents' background characteristics as independent variables (see Table 20). In these analyses, the reference group is of secular Jewish students.

Only two regression models are significant. In the first significant model Power Distance is the dependent variable ( $F_{(8,305)} = 2.88$ ,  $p < .01$ ,  $R^2 = 0.07$ ) and, relatively to secular Jewish students, Power Distance is higher for Muslim ( $b=.40$ ,  $p<.01$ ) and Christian ( $b=0.30$ ,  $p<.05$ ). In the second significant model Masculinity is the dependent variable ( $F_{(8,305)} = 3.84$ ,  $p < .01$ ,  $R^2 = 0.09$ ) and, relatively to secular Jewish students, Masculinity is higher for Conservative ( $b=0.28$ ,  $p<.05$ ) and Orthodox ( $b=0.72$ ,  $p<.01$ ). It is worth noting that in both models age was not significant.



**Table 20: multiple regressions of Cultural Dimension (dependent variables) on Background Characteristics (independent variables)**

Independent Variables	Cultural Dimensions (Dependent Variables)				
	Power Distance	Uncertainty Avoidance	Collectivism	Long-term Orientation	Masculinity
	<i>Coefficients (b)</i>				
Intercept	1.90	4.20	3.63	4.67	1.96
Druze	0.27	-0.07	-0.14	-0.07	-0.31
Muslim	0.40**	-0.14	0.05	-0.22	-0.03
Christian	0.30*	-0.16	-0.24	-0.26	-0.22
Conservative	-0.06	0.06	-0.12	0.08	0.28*
Orthodox	0.07	0.07	-0.26	0.07	0.72**
Age	-0.01	0.00	0.00	-0.01	0.00
Learning stage	-0.05	-0.02	-0.01	0.01	-0.04
Economic status	0.11	0.08	0.06	0.00	0.08
F <sub>(8,305)</sub>	2.88**	0.67	1.07	1.73	3.84**
R <sup>2</sup>	0.07	0.017	0.03	0.04	0.09

\*\*p<.01, \*p<.05

These findings confirm that students' cultural dimensions are not associated with their background characteristics, except for Power Distance which is associated with their ethnic group, and students' Masculinity which is associated with their religiousness.

### **5.1.2 Students' motives for choosing teaching career and background characteristics**

As summarized in Table 21, ethnic groups, in general, do not differ in their motives for choosing teaching. However, Jewish students' financial utility (2.4) was found to be lower than Druze (3.5) and Muslim (3.1) students, and Druze students' personal utility motives (3.9) were higher than Jewish (3.0) and Christians and others (3.2) students.

**Table 21: Students' motives for choosing teaching career by Ethnic group and religiousness level**

Students' motives for choosing teaching career		Ethnic Group				Multiple comparisons of means <sup>^</sup>	Religiousness level			Multiple comparisons of means <sup>^</sup>
		Jewish (A)	Druze (B)	Muslim (C)	Christian and others (D)		Secular (A)	Conservative (B)	Orthodox (C)	
	N	235	24	30	25		145	119	50	
Ability	M (SD)	3.9 (1.1)	4.0 (.8)	3.8 (1.0)	3.9 (.9)		3.9 (1.0)	3.9 (1.1)	3.8 (1.0)	
Low Difficulty	M (SD)	1.7 (1.0)	1.8 (1.0)	2.0 (1.0)	2.0 (1.3)		1.7 (1.0)	1.7 (.9)	1.9 (1.1)	
Educational Contribution	M (SD)	4.5 (.6)	4.6 (.5)	4.4 (.8)	4.5 (.8)		4.5 (.6)	4.6 (.6)	4.4 (.9)	
Subject-Specific Interest	M (SD)	4.5 (.7)	4.6 (.6)	4.4 (.8)	4.5 (.8)		4.5 (.6)	4.4 (.8)	4.3 (.8)	A>C*
Financial Utility	M (SD)	2.4 (1.2)	3.5 (1.0)	3.1 (1.1)	2.9 (1.1)	B>A** C>A**	2.5 (1.2)	2.6 (1.2)	2.8 (1.1)	
Personal Utility	M (SD)	3.0 (1.3)	3.9 (.8)	3.6 (1.0)	3.2 (1.1)	B>A**, D*	3.1 (1.2)	3.2 (1.2)	3.2 (1.1)	
Social Influence	M (SD)	2.5 (1.3)	2.9 (1.4)	2.5 (1.4)	2.3 (1.2)		2.6 (1.4)	2.5 (1.4)	2.3 (1.3)	

<sup>^</sup> Multiple comparisons of means, based on two-sided tests assuming equal variances and adjusted for all pairwise comparisons using the Benjamini-Hochberg correction

\*\* p<.01, \* p<.05

Similarly, except for subject-specific interest, students' motives for choosing teaching do not differ relative to their religiosity level. Regarding subject-specific interest, secular students' motive for choosing teaching (4.5) were found to be higher than conservative (4.4) and orthodox (4.3) students.

In addition, Table 22 summarizes the results of correlation analyses of students' motives for choosing teaching career and students' age, learning stage, and economic status. According to the analysis, students' motives for choosing teaching are not associated with their economic status. However, students' age was found to be negatively correlated with their expectation of teaching studies not to be difficult ( $r=-0.139$ ,  $p<.05$ ), their financial utility ( $r=-0.143$ ,  $p<.05$ ), and personal utility ( $r=-0.257$ ,  $p<.01$ ) motives. Similarly, students' learning stage (year) was found to be significantly and negatively correlated with all motives, but for their perception regarding their fit for teaching.

**Table 22: Pearson correlations of Students' motives for choosing teaching career and students' age, learning stage, and economic status**

Students' motives for choosing teaching career	Age	Learning stage	Economic status
Ability	0.013	0.039	0.039
Low Difficulty	-.139*	-.131*	-0.037
Educational Contribution	-0.042	-.114*	-0.009
Subject-Specific Interest	-0.034	-.193**	-0.030
Financial Utility	-.143*	-.228**	-0.064
Personal Utility	-.257**	-.152**	-0.030
Social Influence	-0.085	-.126*	0.013

\*\*  $p<.01$ , \*  $p<.05$

Similar findings emerge from regression analyses of students' motives for choosing teaching career as dependent variables on respondents' background characteristics as independent variables (see Table 23). In these analyses, the reference group is of secular Jewish students.

Only three regression models were found to be significant. In the first significant model subject-specific interest is the dependent variable ( $F_{(8,305)} = 2.30, p < .05, R^2 = 0.06$ ) in which, relatively to secular Jewish students, this motive is lower with religiously orthodox students ( $b=-0.26, p<.05$ ) and it decreases as students advance in their studies ( $b=-0.10, p<.01$ ).

In the second significant model financial utility is the dependent variable ( $F_{(8,305)} = 6.90, p < .01, R^2 = 0.15$ ) and, relatively to secular Jewish students, this motive was found to be higher in Druze ( $b=1.14, p<.01$ ), Muslim ( $b=0.65, p<.01$ ), and Christian and other students ( $b=0.48, p<.05$ ). Students' financial utility motive for choosing teaching was found to be decreasing with their learning stage ( $b=-0.19, p<.01$ ).

In the third significant model personal utility is the dependent variable ( $F_{(8,305)} = 4.48, p < .01, R^2 = 0.11$ ). According to this analysis, Druze students' personal utility for choosing teaching is higher than secular Jews ( $b=0.70, p<.01$ ), and it decreases with age ( $b=-0.04, p<.01$ ) and learning stage ( $b=-0.10, p<.05$ ).

**Table 23: multiple regressions of Students' motives for choosing teaching career (dependent variables) on Background Characteristics (independent variables)**

Independent Variables	Students' motives for choosing teaching career (Dependent Variables)						
	Ability	Low Difficulty	Educational Contribution	Subject-Specific Interest	Financial Utility	Personal Utility	Social Influence
	<i>Coefficients (b)</i>						
Intercept	3.71	2.23	4.76	4.75	2.81	4.19	3.05
Druze	0.15	0.10	0.00	0.09	1.14**	0.70**	0.35
Muslim	0.01	0.24	-0.12	-0.06	0.65**	0.37	0.06
Christian	-0.01	0.36	-0.05	0.01	0.48*	0.06	-0.22
Conservative	0.00	-0.08	0.05	-0.05	0.16	0.11	-0.12
Orthodox	-0.09	0.13	-0.15	-0.26*	0.31	0.13	-0.23
Age	0.00	-0.02	0.00	0.00	0.00	-0.04**	-0.01
Learning stage	0.03	-0.08	-0.05	-0.10**	-0.19**	-0.10*	-0.11
Economic status	0.05	-0.01	-0.03	-0.06	-0.07	0.00	0.02
F <sub>(8,305)</sub>	0.21	1.92	1.06	2.30*	6.90**	4.48**	1.25
R <sup>2</sup>	0.01	0.05	0.03	0.06	0.15	0.11	0.03

\*\*p<.01, \*p<.05

Overall, these findings suggest that, for the most part, only extrinsic motives (financial and personal) and subject-specific interest are influenced by students' background characteristics.

In this context, students' learning stage is negatively associated with their motives for choosing teaching career, suggesting that as students advance in their studies their motivation to practice teaching diminishes.

In addition, extrinsic motives (i.e., financial, and personal utilities) for practicing teaching are more prevalent in minority ethnic population groups (especially, Druze and Muslims). In contrast, religious Orthodox are less motivated by their personal interest in the academic content of education studies than other students (especially secular Jewish students).

### **5.1.3 Perceived academic learning experience and background characteristics**

As summarized in Table 24, students' perceived experience of their learning as directed at enhancing disciplinary understanding is higher among Druze (4.1) and Muslim (4.1) than among Jewish (3.1) and Christian and others (3.4) students. Similarly, student's perceived feedback from their teachers as constructive is higher among Druze (3.9) and Muslim (3.7) than among Jewish (3.3) and Christian and others (3.3) students. Additionally, students' perception of learning as promoting critical thinking among Druze (4.0) is higher than among Jewish (3.4) students. These findings imply to ethnicity's role in the context of students' perceived learning experience. Conversely, students' perceived learning experience do not differ relative to their religiosity level.

The results of correlation analyses of students' perceived academic experience and their age, learning stage, and economic status are summarized in Table 25. According to the analysis, students' perceived academic experience dimensions are not associated with their age. However, students' learning stage was found to be significantly and negatively correlated with all perceived academic learning experience, but for critical thinking. These finding might suggest that overall academic experience diminish as students advance in their studies. Still, however, their advancement is not accompanied by a better view of their learning as promoting critical thinking.

As summarized in Table 25, students' view of their learning as promoting professional alignment is positively correlated with their economic status ( $r=.114$ ,  $p<.05$ ), as well as their perceived feedback from their teachers as constructive ( $r=.137$ ,  $p<.05$ ).

**Table 24: Students' perceived Academic Experience by Ethnic group and religiousness level**

Perceived Academic Experience		Ethnic Group				Multiple comparisons of means <sup>^</sup>	Religiousness level			Multiple comparisons of means <sup>^</sup>
		Jewish (A)	Druze (B)	Muslim (C)	Christian and others (D)		Secular (A)	Conservative (B)	Orthodox (C)	
	N	235	24	30	25		145	119	50	
Teaching for understanding	M (SD)	3.1 (1.0)	3.5 (1.0)	3.6 (1.0)	3.2 (1.0)		3.3 (1.0)	3.1 (1.0)	3.2 (1.1)	
Supportive teaching	M (SD)	3.6 (1.0)	3.9 (.9)	3.9 (.9)	3.7 (.8)		3.7 (.9)	3.6 (1.0)	3.7 (.9)	
Disciplinary understanding	M (SD)	3.1 (1.1)	4.1 (.6)	4.1 (.7)	3.4 (.8)	B>A**,D** C>A**,D**	3.4 (1.1)	3.3 (1.1)	3.2 (1.1)	
Alignment	M (SD)	3.5 (.9)	3.7 (.7)	3.6 (1.0)	3.6 (.9)		3.7 (.8)	3.5 (1.0)	3.4 (.8)	
Peer Support	M (SD)	3.8 (1.0)	3.9 (.7)	3.9 (.9)	3.8 (.8)		3.9 (.9)	3.7 (1.0)	3.9 (.6)	
Constructive Feedback	M (SD)	3.3 (1.0)	3.9 (.8)	3.7 (.7)	3.3 (.8)	B>A*,D* C>A*,D*	3.4 (.9)	3.4 (1.0)	3.5 (.9)	
Critical Thinking	M (SD)	3.4 (1.0)	4.0 (.6)	3.8 (.9)	3.8 (.7)	B>A*	3.6 (1.0)	3.5 (.9)	3.5 (.9)	

<sup>^</sup> Multiple comparisons of means, based on two-sided tests assuming equal variances and adjusted for all pairwise comparisons using the Benjamini-Hochberg correction

\*\*p<.01, \*p<.05

**Table 25: Pearson correlations of students' perceived academic experience and students' age, learning stage, and economic status**

Perceived Academic Experience	Age	Learning stage	Economic status
Teaching for understanding	-0.009	-.179**	0.084
Supportive teaching	0.017	-.254**	0.081
Disciplinary understanding	-0.100	-.214**	0.078
Alignment	-0.014	-.190**	.114*
Peer Support	0.032	-.167**	0.052
Constructive Feedback	0.016	-.143*	.137*
Critical Thinking	-0.083	0.060	0.102

\*\* p<.01, \* p<.05

Regression analyses of students' perceived academic experience as dependent variables on respondents' background characteristics as independent variables (see Table 26) clarifies the afore mentioned ethnicity and learning stage influence on students' perceived academic experience.

Except for the model for students' perceived peer support, all other models are significant. Furthermore, relative to secular Jewish students, Muslims report better perceived academic experience regarding their view of teaching as aimed at their understanding (b=0.57, p<.01) and supportive (b=0.44, p<.05), their learning as aimed at disciplinary understanding (b=1.02, p<.01), feedback as constructive (b=0.47, p<.01), and their learning as promoting critical thinking (b=0.41, p<.05). Similarly, , relative to secular Jewish students, Druze report better perceived academic experience regarding their view of teaching as supportive (b=0.45, p<.05), their learning as aimed at disciplinary understanding (b=0.93, p<.01), feedback as constructive (b=0.63, p<.01), and their learning as promoting critical thinking (b=0.50, p<.05).



As summarized in Table 26, students' perceived academic learning experience is also negatively correlated with their learning stage, specifically with their view of teaching as aimed at their understanding ( $b=-0.14$ ,  $p<.01$ ) and supportive ( $b=-0.19$ ,  $p<.01$ ), their learning as aimed at disciplinary understanding ( $b=-0.17$ ,  $p<.01$ ) and professional alignment ( $b=-0.13$ ,  $p<.01$ ), feedback as constructive ( $b=-0.11$ ,  $p<.01$ ). However, no significant correlation was found between their perception of learning as promoting critical thinking and their learning stage.

**Table 26: multiple regressions of students' perceived academic experience (dependent variables) on Background Characteristics (independent variables)**

Independent Variables	Students' perceived academic experience (Dependent Variables)						
	Teaching for understanding	Supportive teaching	Disciplinary understanding	Alignment	Peer Support	Constructive Feedback	Critical Thinking
	<i>Coefficients (b)</i>						
Intercept	2.89	3.22	3.12	3.47	3.59	2.76	3.35
Druze	0.39	0.45*	0.93**	0.16	0.17	0.63**	0.50*
Muslim	0.57**	0.44*	1.02**	0.12	0.15	0.47**	0.41*
Christian	0.18	0.22	0.32	0.13	0.02	0.02	0.37
Conservative	-0.18	-0.10	-0.07	-0.18	-0.14	-0.03	-0.13
Orthodox	0.00	0.12	-0.17	-0.19	0.12	0.18	-0.01
Age	0.01	0.02	0.00	0.00	0.01	0.01	-0.01
Learning stage	-0.14**	-0.19**	-0.17**	-0.13**	-0.12	-0.11**	0.04
Economic status	0.16	0.14	0.16	0.16	0.09	0.23**	0.17
F <sub>(8,305)</sub>	3.31**	4.84**	7.87**	2.65**	1.94	3.86**	2.73**
R <sup>2</sup>	0.08	0.11	0.17	0.07	0.05	0.09	0.07

\*\* $p<.01$ , \* $p<.05$

Overall, these findings suggest that, for the most part, minority ethnic population groups (i.e., Muslim and Druze) report better perceived academic learning experience, including a better view of learning as promoting critical thinking.

In this context, students' learning stage is negatively associated with their perceived academic learning experience (not including critical thinking), suggesting that as students advance in their studies their perceived academic learning experience diminishes.

#### **5.1.4 Students' Approach to Learning and background characteristics**

As summarized in Appendix 2, students' ATL are not influenced by their background characteristics.

According to the analyses of students' Approach to Learning comparison by ethnicity and religiousness (Table 39 in Appendix 4), students' ATL do not differ with either ethnicity or religiousness. Similarly, correlation analyses of students' ATL and their age, learning stage, and economic status (Table 40 in Appendix 4), do not indicate of any significant correlation.

Regression analyses of students' ATL as dependent variables on respondents' background characteristics as independent variables (see Table 41 in Appendix 4) confirm these findings, as all three models are not significant.

These findings may indicate that students' ATL are not innate capacities, or even an early acquired propensity, but rather a decision made by students in the context in which studies take place, both in terms of perception of the studies at the socio-cultural

level (i.e., cultural dimensions), in terms of the subjective motivation to study (i.e., the motives for choosing teaching profession) and in terms of the nature of the perceived academic experience. These insights are examined as part of the research hypotheses analyses, as reviewed in the chapters below.

## 5.2 Research hypotheses

### 5.2.1 H1: Students in teachers' training institutions' motives for choosing to become teachers are related to their culture dimensions

The relationships between students' cultural dimensions and motives for choosing teaching career were first examined through their correlation coefficients, as summarized in Table 27 below.

Overall, the analyses suggest several expectancy motives (i.e., low difficulty), extrinsic motives (i.e., financial and personal utilities), and social influence motives for choosing teaching are mainly associated with students' power distance and masculinity orientation, while intrinsic motives (i.e., educational contribution and subject-specific interest) are mainly associated with students' uncertainty avoidance, collectivism, and long-term orientations.

Specifically, the analyses suggest a significant and positive correlations between Power Distance cultural dimension and low difficulty ( $r=0.201$ ,  $p<.01$ ), financial utility ( $r=0.233$ ,  $p<.01$ ), personal utility ( $r=0.154$ ,  $p<.01$ ), and social influence ( $r=0.148$ ,  $p<.01$ ) motives. Similarly, Masculinity is significantly positively correlated with low difficulty ( $r=0.179$ ,  $p<.01$ ) and financial utility ( $r=0.150$ ,  $p<.01$ ) motives.

Conversely, the analyses suggest educational contribution motive is significantly positively correlated with the cultural dimensions of Uncertainty Avoidance ( $r=0.243$ ,  $p<.01$ ), Collectivism ( $r=0.203$ ,  $p<.01$ ), and Long-term Orientation ( $r=0.257$ ,  $p<.01$ ), and that similar significant and positive correlations exist between subject-specific interest motive and the cultural dimensions of Uncertainty Avoidance ( $r=0.230$ ,  $p<.01$ ), Collectivism ( $r=0.183$ ,  $p<.01$ ), and Long-term Orientation ( $r=0.191$ ,  $p<.01$ ).

Additionally, the analyses suggest that Masculinity is significantly and negatively correlated with the motives of educational contribution ( $r=-0.143$ ,  $p<.05$ ) and subject-specific interest ( $r=-0.154$ ,  $p<.01$ ).

Lastly, ability motive for choosing teaching is positively correlated with Long-term Orientation cultural dimension ( $r=0.145$ ,  $p<.05$ ).

**Table 27: Pearson correlations of students' Cultural dimensions and motives for choosing teaching career**

Cultural Dimensions	Motives for choosing to become a teacher						
	Ability Motive	Low Difficulty motive	Educational Contribution motive	Subject-Specific Interest motive	Financial Utility motive	Personal Utility motive	Social Influence motive
Power Distance	0.009	.201**	-0.035	0.053	.233**	.154**	.148**
Uncertainty Avoidance	0.040	-0.056	.243**	.230**	-0.003	-0.011	-0.003
Collectivism	0.082	-0.023	.203**	.183**	-0.017	0.082	-0.007
Long-term Orientation	.145*	-0.077	.257**	.191**	-0.044	-0.034	-0.005
Masculinity	0.004	.179**	-.143*	-.154**	.150**	0.105	-0.001

\*\* $p<.01$ , \* $p<.05$

Accordingly, Table 28 summarizes regression analyses of students' motives for choosing teaching career (dependent variables) on background characteristics and cultural dimensions (independent variables).

The regression models for subjective teaching ability beliefs was not significant. However, the analysis for students' low difficulty motive ( $F_{(13,300)} = 2.549$ ,  $p < .01$ ,  $R^2 = .10$ ) was found to be positively related to their Power Distance ( $b=0.18$ ,  $p<.05$ ) and Masculinity ( $b=0.17$ ,  $p<.01$ ) orientation.

Accordingly, hypothesis **H1.1**, which argued that students' studies expectancy considerations are positively related to their power distance and masculinity orientation, **is only partially supported** regarding students' expectations that teaching studies will not be difficult (but not in relation to their subjective teaching ability beliefs).

Conversely, the models for intrinsic motives (i.e., educational contribution and subject-specific interest) were both significant yielding similar results. Specifically, educational contribution motive ( $F_{(13,300)} = 4.011, p < .01, R^2 = .15$ ) was found to be negatively related to students' learning stage ( $b = -0.06, p < .05$ ), but positively related to their Uncertainty Avoidance ( $b = 0.16, p < .01$ ), Collectivism ( $b = 0.13, p < .01$ ), and Long-term Orientation ( $r = 0.22, p < .01$ ). Similarly, subject-specific interest motive ( $F_{(13,300)} = 4.249, p < .01, R^2 = .16$ ) was found to be negatively related to students' learning stage ( $b = -0.10, p < .01$ ), but positively related to their Uncertainty Avoidance ( $b = 0.18, p < .01$ ), Collectivism ( $b = 0.12, p < .05$ ), and Long-term Orientation ( $r = 0.17, p < .01$ ). Additionally, students' subject-specific interest motive was found to be negatively related to their Masculinity orientation ( $b = -0.09, p < .05$ ).

Overall, these findings **support H1.2**, which argued that students' intrinsic considerations are positively related to their uncertainty avoidance, collectivism, and long-term orientation cultural dimensions.

Students' financial utility motive ( $F_{(13,300)} = 5.525, p < .01, R^2 = .19$ ) was also found to be positively related to their Power Distance ( $b = 0.23, p < .05$ ) and Masculinity ( $b = 0.16, p < .01$ ) orientation, but in addition it was also higher for Druze ( $b = 1.13, p < .01$ )

and Muslims ( $b=0.57$ ,  $p<.05$ ) and decreasing with students' learning stage ( $b=-0.18$ ,  $p<.01$ ).

Students' personal utility motive ( $F_{(13,300)} = 3.570$ ,  $p < .01$ ,  $R^2 = .13$ ) was also found to be higher for Druze ( $b=0.73$ ,  $p<.01$ ) (but not Muslims) and decreasing with students' age ( $b=-0.04$ ,  $p<.01$ ). Students' personal utility motive was not found to be related to their cultural dimensions, which means that students' background characteristics mediated the relationship between their power distance orientation and personal utility motive (see Table 27 above).

Accordingly, hypothesis H1.3, which argued that students' extrinsic considerations are positively related to their power distance and masculinity orientation, **is only partially supported** regarding students' financial utility motive (but not in relation to their personal utility motive, which was mediated by their background characteristics).

Finally, the regression model for social influence was not significant. Accordingly, hypothesis **H1.4**, which argued that students' social influence considerations are positively related to all cultural dimensions **can not be supported**.

**Table 28: multiple regressions of students' motives for choosing teaching career (dependent variables) on background characteristics and cultural dimensions (independent variables)**

Independent variables	Motives for choosing teaching career (Dependent variables)						
	Ability	Low Difficulty	Educational Contribution	Subject-Specific Interest	Financial Utility	Personal Utility	Social Influence
<i>Background characteristics coefficients (b)</i>							
Intercept	1.95	2.01	2.75	2.85	1.94	3.65	2.69
Druze	0.19	0.09	0.02	0.08	1.13**	0.73**	0.26
Muslim	0.07	0.15	-0.05	-0.03	0.57*	0.30	-0.03
Christian	0.08	0.32	0.06	0.07	0.46	0.07	-0.31
Conservative	-0.03	-0.11	0.05	-0.03	0.12	0.10	-0.11
Orthodox	-0.12	-0.01	-0.09	-0.19	0.17	0.07	-0.26
Age	0.00	-0.01	0.00	0.00	0.00	-0.04**	-0.01
Learning stage	0.03	-0.07	-0.06*	-0.10**	-0.18**	-0.09	-0.10
Economic status	0.04	-0.04	-0.04	-0.08	-0.11	-0.03	-0.01
<i>Cultural Dimensions coefficients (b)</i>							
Power Distance	0.02	0.18*	-0.02	0.06	0.23*	0.10	0.26
Uncertainty Avoidance	-0.02	-0.06	0.16**	0.18**	0.01	-0.01	-0.04
Collectivism	0.07	-0.02	0.13**	0.12*	-0.01	0.17	-0.06
Long-term Orientation	0.32	-0.03	0.22**	0.17*	0.02	-0.11	0.05
Masculinity	0.04	0.17**	-0.07	-0.09*	0.16*	0.13	-0.02
F <sub>(13,305)</sub>	0.748	2.549**	4.011**	4.249**	5.525**	3.570**	1.215
R <sup>2</sup>	0.03	0.10	0.15	0.16	0.19	0.13	0.05

\*\*p<.01, \*p<.05



### **5.2.2 H2: Culture dimensions are related to students in teachers' training institutions' perceived academic learning experience**

The relationships between students' cultural dimensions and their perceived academic experience were first examined through their correlation coefficients, as summarized in Table 29 below.

According to the analysis, there is a significant and positive correlation between students' power distance orientation and their experience of teaching as promoting their understanding ( $r=0.207$ ,  $p<.01$ ). students' perception of teaching for understanding was significantly correlated with other cultural dimensions. Similarly, students' view of teaching as supportive was only correlated with their uncertainty avoidance orientation ( $r=0.209$ ,  $p<.01$ ).

Conversely, students' view of their studies as promoting disciplinary understanding were found to be significantly and positively correlated with their power distance ( $r=0.194$ ,  $p<.01$ ), uncertainty avoidance ( $r=0.187$ ,  $p<.01$ ), and long-term orientation ( $r=0.158$ ,  $p<.01$ ).

Students' view of their studies as promoting professional alignment was found to be significantly and positively correlated with their uncertainty avoidance ( $r=0.158$ ,  $p<.01$ ) and long-term orientation ( $r=0.136$ ,  $p<.05$ ).

As stated in Table 29, students' view of peer support was found to be significantly and positively correlated with their power distance ( $r=0.165$ ,  $p<.01$ ), uncertainty avoidance ( $r=0.179$ ,  $p<.01$ ), and collectivist orientation ( $r=0.182$ ,  $p<.01$ ). Similar correlations were documented with students' view of their teachers' constructive feedback

and their power distance ( $r=0.162$ ,  $p<.01$ ), uncertainty avoidance ( $r=0.176$ ,  $p<.01$ ), and collectivist orientation ( $r=0.199$ ,  $p<.01$ ).

Finally, students' view of their studies as promoting critical thinking were found to be significantly and positively correlated with their power distance ( $r=0.143$ ,  $p<.05$ ), collectivist orientation ( $r=0.145$ ,  $p<.01$ ), and long-term orientation ( $r=0.128$ ,  $p<.01$ ).

**Table 29: Pearson correlations of students' Cultural dimensions and perceived academic learning experience**

Cultural Dimensions	Perceived academic learning experience						
	Teaching for understanding	Supportive teaching	Disciplinary understanding	Alignment	Peer Support	Constructive Feedback	Critical Thinking
Power Distance	.207**	0.109	.194**	0.063	.165**	.162**	.143*
Uncertainty Avoidance	0.104	.209**	.187**	.158**	.179**	.176**	0.102
Collectivism	0.064	-0.020	0.015	0.061	.182**	.199**	.145*
Long-term Orientation	0.069	0.105	.158**	.136*	0.084	0.105	.128*
Masculinity	0.011	0.095	-0.038	-0.025	0.033	0.025	-0.053

\*\* $p<.01$ , \* $p<.05$

Accordingly, Table 30 summarizes regression analyses of students' perceived academic learning experience (dependent variables) on background characteristics and cultural dimensions (independent variables). As stated, all models are found to be significant.

According to the analyses, students' view of teaching as promoting their understanding is higher for Muslim students ( $b=0.54$ ,  $p<.01$ ), decreasing with students learning stage ( $b=-0.13$ ,  $p<.01$ ), and increasing with students' power distance orientation ( $b=0.23$ ,  $p<.01$ ).

Students' view of teaching as supportive is higher for Druze ( $b=0.49, p<.05$ ) and Muslim ( $b=0.51, p<.01$ ), decreasing with students learning stage ( $b=-0.18, p<.01$ ) but increasing with students' age ( $b=0.02, p<.05$ ). It is also increasing with students' uncertainty avoidance ( $b=0.27, p<.01$ ) and long-term orientation ( $b=0.23, p<.05$ ).

Disciplinary understanding was found to be higher for Druze ( $b=0.90, p<.01$ ) and Muslim ( $b=1.07, p<.01$ ) and decreasing with students learning stage ( $b=-0.16, p<.01$ ). It was also found to increase with students' power distance ( $b=0.19, p<.05$ ), uncertainty avoidance ( $b=0.22, p<.05$ ) and long-term orientation ( $b=0.42, p<.01$ ).

Students' view of their studies as promoting professional alignment was not affected by students' ethnicity. However, it was found to decrease with students' learning stage ( $b=-0.31, p<.01$ ), but increase with their long-term orientation ( $b=0.24$ ). Students' peer support perception was found to increase with their power distance ( $b=0.16, p<.05$ ), uncertainty avoidance ( $b=0.19, p<.05$ ) and collectivist orientation ( $b=0.17, p<.05$ ).

Students' view of teachers' feedback as constructive is higher for Druze ( $b=0.65, p<.01$ ) and Muslim ( $b=0.47, p<.01$ ) students and is decreasing with students learning stage ( $b=-0.10, p<.01$ ). However, constructive feedback was found to increase with students' uncertainty avoidance ( $b=0.18, p<.05$ ) and collectivist orientation ( $b=0.20, p<.01$ ).

Finally, compared to secular Jewish students, students' view of their studies as promoting critical thinking is higher among Druze ( $b=0.50, p<.05$ ), Muslim ( $b=0.42, p<.05$ ), and Christian and other students ( $b=0.43, p<.05$ ). Students' view of their studies as promoting critical thinking was not affected by students' learning stage, and it was found to increase with students' long-term orientation ( $b=0.24, p<.05$ ).

In summary, students' uncertainty avoidance and long-term orientation was found to be positively associated with better learning experience regarding supportive teaching, promoting disciplinary knowledge, constructive feedback, and peer support. However, students' long-term orientation was also found to be associated with students' view of their studies as promoting professional alignment and critical thinking.

These findings **support hypothesis H2.1**, which argue that better perceived academic learning experience is positively related to short-term orientation, higher uncertainty avoidance, and collectivism.

Conversely, students' power distance orientation was found to be positively associated with students' view of teaching as promoting understanding while students' masculinity orientation was not associated with students' perceived academic learning experience. These findings are inconsistent with hypothesis H2.2, which argued that better perceived academic learning experience is negatively related to higher degree of Power Distance and Masculinity. Thus, **hypothesis H2.2 cannot be supported**.

**Table 30: multiple regressions of students' motives for choosing teaching career (dependent variables) on background characteristics and cultural dimensions (independent variables)**

Independent variables	Motives for choosing teaching career (Dependent variables)						
	Teaching for understanding	Supportive teaching	Disciplinary understanding	Alignment	Peer Support	Constructive Feedback	Critical Thinking
<i>Background characteristics coefficients (b)</i>							
Intercept	1.02	1.08	0.19	1.61	1.46	0.39	1.21
Druze	0.35	0.49*	0.90**	0.18	0.17	0.65**	0.50*
Muslim	0.54**	0.51**	1.07**	0.18	0.12	0.47**	0.42*
Christian	0.18	0.30	0.39	0.20	0.07	0.10	0.43*
Conservative	-0.19	-0.17	-0.12	-0.21	-0.13	-0.03	-0.13
Orthodox	-0.03	-0.02	-0.24	-0.22	0.12	0.20	0.01
Age	0.01	0.02*	0.01	0.01	0.01	0.01	-0.01
Learning stage	-0.13**	-0.18**	-0.16**	-0.13**	-0.11**	-0.10**	0.05
Economic status	0.13	0.11	0.13	0.14	0.04	0.19*	0.14
<i>Cultural Dimensions coefficients (b)</i>							
Power Distance	0.23**	0.05	0.19*	0.04	0.16*	0.12	0.13
Uncertainty Avoidance	0.10	0.27**	0.22*	0.15	0.19*	0.18*	0.08
Collectivism	0.01	-0.10	-0.09	0.00	0.17*	0.20**	0.13
Long-term Orientation	0.21	0.23*	0.42**	0.24*	0.08	0.13	0.24*
Masculinity	0.00	0.11	-0.01	0.01	0.01	0.01	-0.02
F <sub>(13,305)</sub>	3.198**	5.019**	7.634**	2.625**	3.069**	4.463**	3.089**
R <sup>2</sup>	0.08	0.14	0.22	0.06	0.08	0.13	0.08

\*\*p<.01, \*p<.05

### **5.2.3 H3: Students in teachers' training institutions' motives for choosing to become teachers are positively related to their perceived quality of academic experience**

The relationships between students' motives for choosing teaching career and their perceived academic experience were first examined through their correlation coefficients, as summarized in Table 31 below.

Generally, the analyses suggest that students' motives for choosing to become teachers are positively correlated to their perceived quality of academic experience.

Specifically, students' experience of teaching as promoting understanding was found to be positively correlated with all motives, and students' experience with constructive feedback was found to be positively correlated with all motives but for their expectation of their studies not to be difficult.

Students' experience of their studies as promoting disciplinary understanding and critical thinking were both positively correlated with all motives but for their expectation of their studies not to be difficult and personal utility.

Additionally, students' experience with supportive teaching was only found to be positively correlated with their intrinsic motives - educational contribution ( $r=.200$ ,  $p<.01$ ) and subject-specific interest ( $r=.249$ ,  $p<.01$ ) – and social influence motive ( $r=.160$ ,  $p<.01$ ).

Students' experience of their studies as promoting professional alignment was found to be positively correlated with their expectation of their studies not to be difficult ( $r=.111$ ,  $p<.05$ ), both intrinsic motives of educational contribution ( $r=.186$ ,  $p<.01$ ) and

subject-specific interest ( $r=.280$ ,  $p<.01$ ), financial utility motive ( $r=.189$ ,  $p<.01$ ), and social influence ( $r=.126$ ,  $p<.05$ ).

Students' experience with peer support was found to be positively correlated with both intrinsic motives of educational contribution ( $r=.248$ ,  $p<.01$ ) and subject-specific interest ( $r=.302$ ,  $p<.01$ ), financial utility motive ( $r=.184$ ,  $p<.01$ ), and social influence ( $r=.198$ ,  $p<.01$ ).

**Table 31: Pearson correlations of students' motives for choosing teaching career and perceived academic learning experience**

Motives for choosing to become a teacher	Perceived academic learning experience						
	Teaching for understanding	Supportive teaching	Disciplinary understanding	Alignment	Peer Support	Constructive Feedback	Critical Thinking
Ability	.122*	0.108	.147**	0.106	0.060	.115*	.203**
Low Difficulty	.149**	0.066	0.031	.111*	0.060	-0.033	-0.074
Educational Contribution	.235**	.200**	.290**	.186**	.248**	.186**	.248**
Subject-Specific Interest	.326**	.249**	.356**	.280**	.302**	.289**	.321**
Financial Utility	.262**	0.100	.219**	.189**	.184**	.166**	.141*
Personal Utility	.138*	0.077	0.097	0.026	0.101	.118*	0.106
Social Influence	.150**	.160**	.198**	.126*	.198**	.131*	0.091

\*\* $p<.01$ , \* $p<.05$

Accordingly, Table 32 summarizes regression analyses of students' perceived academic learning experience (dependent variables) on background characteristics, cultural dimensions, and motives for choosing teaching (independent variables).

As stated, all models are found to be significant. However, students' background

characteristics, cultural dimensions, and motives were found to affect students' students' perceived academic learning experience differently.

Students' ethnic origin was found to affect their perceived academic learning experience. Relative to secular Jewish students, Druze students were found to experience better supportive teaching ( $b=0.50$ ,  $p<.05$ ), disciplinary understanding ( $b=0.80$ ,  $p<.01$ ), and constructive feedback ( $b=0.55$ ,  $p<.01$ ). Similarly, Muslim students were found to experience their teaching to be more understanding oriented ( $b=0.46$ ,  $p<.05$ ), supportive ( $b=0.56$ ,  $p<.01$ ), directed at disciplinary understanding ( $b=1.08$ ,  $p<.01$ ), and promoting critical thinking ( $b=0.40$ ,  $p<.01$ ). Compared to secular Jewish, critical thinking was also higher among Christian students ( $b=0.42$ ,  $p<.05$ ).

Students' learning stage was found to be negatively related to students' perceived academic experience of supportive teaching ( $b=-0.16$ ,  $p<.01$ ), disciplinary understanding ( $b=-0.11$ ,  $p<.01$ ), and professional alignment ( $b=-0.08$ ,  $p<.05$ ). Conversely, age was found to be positively related to their supportive teaching experience ( $b=0.02$ ,  $p<.05$ ).

The analyses also documented a surprising contribution of students' economic status to their perceived academic experience of teaching for understanding ( $b=0.18$ ,  $p<.05$ ), professional alignment ( $b=0.18$ ,  $p<.05$ ), constructive feedback ( $b=0.22$ ,  $p<.01$ ), and critical thinking ( $b=0.17$ ,  $p<.05$ ). These findings mean that economic background affect students' perceived academic experience.

Regarding students' cultural dimensions, students' power distance was found to be positively related to their perceived academic experience of teaching for understanding ( $b=0.16$ ,  $p<.05$ ), students' uncertainty avoidance was found to be related to their perceived academic experience of supportive teaching ( $b=0.22$ ,  $p<.01$ ), students' collectivism was found to be related to their perceived academic experience of peer



support ( $b=0.14$ ,  $p<.05$ ) and critical thinking ( $b=0.17$ ,  $p<.05$ ), students' long-term-orientation was found to be related to their perceived academic experience of disciplinary understanding ( $b=0.30$ ,  $p<.05$ ), and students' masculinity was found to be related to their perceived academic experience of supportive teaching ( $b=0.14$ ,  $p<.05$ ).

Regarding students' motives for choosing teaching career, students' perceived academic experience of critical thinking was found to be positively related to their subjective teaching ability belief ( $b=0.12$ ,  $p<.05$ ), but negatively related to their expectancy of low difficult studies ( $b=-0.14$ ,  $p<.01$ ). These findings suggest that students' expectancy components affect their perceived academic learning experience of critical thinking in opposite ways.

Additionally, while students' intrinsic subject-specific interest was found to be positively related to all aspect of their perceived academic experience (except for supportive teaching), students' intrinsic educational contribution was not significant, meaning that students' background characteristics, cultural dimensions, and other motives for choosing teaching career mediate students' intrinsic educational contribution relation to their perceived academic experience (see Table 31, above).

Regarding extrinsic considerations, financial utility was found to be positively related to students' perceived academic experience of teaching for understanding ( $b=0.14$ ,  $p<.05$ ) and professional alignment ( $b=0.14$ ,  $p<.05$ ), whereas personal utility was found to be negatively related to students' perceived academic experience of professional alignment ( $b=-0.11$ ,  $p<.05$ ). Thus, these findings suggest that students' extrinsic components affect their perceived academic learning experience of professional alignment in opposite ways.

**Table 32: multiple regressions of students' Perceived academic learning experience (dependent variables) on their background characteristics, cultural dimensions, and motives for choosing teaching career (independent variables)**

Independent variables	Perceived academic learning experience (Dependent variables)						
	Teaching for understanding	Supportive teaching	Disciplinary understanding	Alignment	Peer Support	Constructive Feedback	Critical Thinking
<i>Background characteristics coefficients (b)</i>							
Intercept	-0.64	0.02	-1.28	0.74	0.20	-0.58	-0.11
Druze	0.15	<b>0.50*</b>	<b>0.80**</b>	0.03	0.05	<b>0.55**</b>	0.36
Muslim	<b>0.46*</b>	<b>0.56**</b>	<b>1.08**</b>	0.12	0.10	0.46*	<b>0.40*</b>
Christian	0.08	0.34	0.38	0.11	0.05	0.10	<b>0.42*</b>
Conservative	-0.18	-0.15	-0.11	-0.19	-0.13	-0.02	-0.14
Orthodox	0.04	0.06	-0.14	-0.17	0.19	0.27	0.09
Age	0.01	<b>0.02*</b>	0.00	0.00	0.01	0.01	-0.01
Learning stage	-0.06	<b>-0.16**</b>	<b>-0.11**</b>	<b>-0.08*</b>	-0.06	-0.06	0.09*
Economic status	<b>0.18*</b>	0.12	0.16	<b>0.18*</b>	0.08	<b>0.22**</b>	<b>0.17*</b>
<i>Cultural Dimensions coefficients (b)</i>							
Power Distance	<b>0.16*</b>	0.04	0.15	-0.03	0.11	0.09	0.10
Uncertainty Avoidance	0.03	<b>0.22**</b>	0.15	0.11	0.13	0.13	0.00
Collectivism	-0.03	-0.13	-0.13	0.00	<b>0.14*</b>	<b>0.17*</b>	0.08
Long-term Orientation	0.12	0.16	<b>0.30*</b>	0.18	0.01	0.07	0.13
Masculinity	0.00	<b>0.14*</b>	0.04	0.01	0.03	0.05	0.02
<i>Motives for choosing teaching career coefficients (b)</i>							
Ability	0.05	0.06	0.08	0.05	-0.01	0.05	<b>0.12*</b>
Low Difficulty	0.07	-0.01	-0.08	0.07	-0.02	-0.10	<b>-0.14**</b>
Educational Contribution	0.00	0.08	0.14	-0.11	0.10	-0.11	0.01
Subject-Specific Interest	<b>0.40**</b>	0.19	<b>0.31**</b>	<b>0.33**</b>	<b>0.24*</b>	<b>0.37**</b>	<b>0.37**</b>
Financial Utility	<b>0.14*</b>	-0.07	0.07	<b>0.15**</b>	0.09	0.05	0.07
Personal Utility	-0.02	0.02	-0.07	<b>-0.11*</b>	-0.03	0.01	0.00
Social Influence	0.03	<b>0.09*</b>	<b>0.11**</b>	0.04	<b>0.11**</b>	0.06	0.04
F <sub>(13,305)</sub>	4.475**	4.498**	7.983**	3.364**	3.750**	4.456**	4.791**
R <sup>2</sup>	0.23	0.24	0.35	0.19	0.20	0.23	0.25

\*\*p<.01, \*p<.05

Finally, students' social influence motive was found to be positively related to their perceived academic experience of supportive teaching (b=0.09, p<.05), disciplinary understanding (b=0.11, p<.01), and peer support (b=0.11, p<.01).

Overall, **these findings support H3.**

#### **5.2.4 H4: Students in teachers' training institutions' Approach to Learning is related to their cultural dimensions**

The relationships between students' ATL and their perceived academic experience were first examined through their correlation coefficients, as summarized in Table 33 below.

According to the analysis, none of the students' cultural dimensions was found to be significantly correlated with Surface ATL, and similarly, students' power distance cultural dimension was not significantly correlated with their ATLs.

In contrast, students' uncertainty avoidance was positively related to Achieving ATL ( $r=.202$ ,  $p<.01$ ) and Deep ATL ( $r=.181$ ,  $p<.01$ ), and similarly students' long-term orientation dimension was also positively related to Achieving ATL ( $r=.236$ ,  $p<.01$ ) and Deep ATL ( $r=.178$ ,  $p<.01$ ). Students' collectivism dimension was positively correlated with Deep ATL ( $r=.166$ ,  $p<.01$ ), while students' masculinity dimension was found to be significantly and negatively correlated with Deep ATL ( $r=-.139$ ,  $p<.05$ ).

**Table 33: Pearson correlations of students' Cultural dimensions and their Approach to Learning**

Cultural Dimensions	Approach to Learning		
	Achieving Approach	Deep Approach	Surface Approach
Power Distance	-0.007	0.087	0.027
Uncertainty Avoidance	.202**	.181**	0.034
Collectivism	0.066	.166**	0.045
Long-term Orientation	.236**	.178**	-0.007
Masculinity	-0.009	-.139*	-0.084

\*\*p<.01, \*p<.05

Accordingly, Table 34 summarizes regression analyses of students' ATLs (dependent variables) on their background characteristics and cultural dimensions (independent variables).

According to the results of the analysis, the regression model for Surface ATL is not significant, meaning that students' Surface ATL is affected by cultural dimensions. Additionally, students' ATL were affected by their background characteristics.

Moreover, long-term orientation was found to positively related to both Achieving ATL ( $b=0.27$ ,  $p<.01$ ) and Deep ATL ( $b=0.19$ ,  $p<.05$ ), while uncertainty avoidance was only positively related to Achieving ATL ( $b=0.15$ ,  $p<.05$ ). However, masculinity was found to be negatively related to Deep ATL ( $b=-0.09$ ,  $p<.05$ ). According to the analyses, power distance and collectivism were not significantly associated with students' ATL.

**Table 34: multiple regressions of students' Approach to Learning (dependent variables) on background characteristics and cultural dimensions (independent variables)**

Independent variables	Approach to Learning (Dependent variables)		
	Achieving Approach	Deep Approach	Surface Approach
<i>Background characteristics coefficients (b)</i>			
Intercept	2.26	2.06	3.43
Druze	0.19	0.25	0.28
Muslim	-0.24	0.30*	0.33
Christian	-0.06	0.07	0.10
Conservative	0.08	0.05	-0.02
Orthodox	-0.03	-0.04	-0.31
Age	0.00	0.01	-0.01
Learning stage	-0.04	-0.05	-0.04
Economic status	0.01	0.04	-0.11
<i>Cultural Dimensions coefficients (b)</i>			
Power Distance	0.00	0.07	-0.01
Uncertainty Avoidance	0.15*	0.11	0.07
Collectivism	0.01	0.10	0.06
Long-term Orientation	0.27**	0.19*	-0.06
Masculinity	0.02	-0.09*	-0.06
F <sub>(13,305)</sub>	2.550**	3.247**	1.226
R <sup>2</sup>	0.10	0.12	0.05

\*\* p<.01, \* p<.05

In summary, hypothesis H4.1 argued that students' Deep ATL is positively associated with Uncertainty Avoidance, Collectivism and Long-term orientation and is negatively associated with students' Power Distance. However, the findings suggest that students' Deep ATL is positively associated only with Long-term orientation. However, the findings also suggest that long-term orientation and ethnicity mediate student' Deep ATL positive association with Uncertainty Avoidance and Collectivism cultural

dimensions, thus **providing only partially support for H4.1**. The findings also suggest students' Deep ATL are negatively associated with their Masculinity, which was not hypothesized.

Hypothesis H4.2 argued that students' Surface ATL is positively associated with Power Distance, Collectivism and Masculinity and is negatively associated with Uncertainty Avoidance and Long-term orientation. However, according to the findings, students' Surface ATL was not associated with any of their cultural dimensions, thus **hypotheses H4.2 is not supported**.

Hypothesis H4.3 argued that students' Achieving ATL is positively associated with all cultural dimensions but for Power Distance. According to the findings, students' Achieving ATL is positively associated with Uncertainty Avoidance and Long-term Orientation, thus **H4.3 is in only partially supported** in this sense.

#### **5.2.5 H5: Motives of students in teachers' training institutions for choosing to become teachers are related to their Approach to Learning**

The relationships between students' ATL and their motives for choosing teaching career were initially examined through their correlation coefficients, as summarized in Table 35 below.

Students' subjective ability for teaching belief was found to be positively correlated with students' Deep ATL ( $r=.206, p<.01$ ). However, no significant correlations were documented regarding Surface and Achieving ATLs. Moreover, students' expectations that teaching studies will not be difficult were not significantly correlated with students' ATL.

Both intrinsic considerations were found to be positively correlated with Deep and Achieving ATLs, but not with Surface ATL. Specifically, educational contribution was significantly and positively correlated with students' Achieving ( $r=.170$ ,  $p<.01$ ) and Deep ( $r=.208$ ,  $p<.01$ ) ATL, and similarly students' subject-specific interest was significantly and positively correlated with students' Achieving ( $r=.134$ ,  $p<.05$ ) and Deep ( $r=.205$ ,  $p<.01$ ) ATL.

Students' personal utility motive was found to be positively correlated with Surface ATL ( $r=.226$ ,  $p<.01$ ). Other than that, students' extrinsic considerations were not correlated with their ATLs.

No significant correlations were documented between students' social influence motive and their ATLs.

***Table 35: Pearson correlations of students' motives for choosing to become teachers and their Approach to Learning***

motives for choosing to become teachers	Approach to Learning		
	Achieving Approach	Deep Approach	Surface Approach
Ability	0.104	.206**	-0.026
Low Difficulty	-0.033	-0.080	0.012
Educational Contribution	.170**	.208**	-0.068
Subject-Specific Interest	.134*	.205**	-0.070
Financial Utility	0.020	0.041	0.108
Personal Utility	0.038	0.060	.226**
Social Influence	0.060	0.085	0.110

\*\*  $p<.01$ , \*  $p<.05$

Accordingly, regression analyses of students' ATLs (dependent variables) on their background characteristics, cultural dimensions, and motive for choosing teaching career (independent variables) are summarized in Table 35. According to which, all ATL regression models are significant.

According to the analyses, except for higher Deep ATL among Muslim students ( $b=0.32, p<.05$ ), students' background characteristics are not associated with their ATLs.

Furthermore, in this setting, except for a significant positive relation between students' long-term orientation and their Achieving ATL ( $b=0.24, p<.05$ ), students' cultural dimensions are not associated with their ATLs. This means that students' motives for choosing teaching career mediate the associations of students' cultural dimensions and their ATL (see Table 34 above).

According to the analysis, there is a positive relation between students' subjective ability for teaching belief and their Deep ATL ( $b=0.11, p<.01$ ). However, no other significant relations were documented between other expectancy considerations and students' ATLs. Thus, **hypothesis H5.1 is only partially supported**, regarding students' subjective teaching ability beliefs and Deep Approach to Learning.

Furthermore, according to the analyses, students' ATL are not associated with any intrinsic consideration (i.e., subjective educational contribution and education specific interest). Thus, **hypothesis H5.2 is not supported**. These findings also suggest that long-term orientation mediate the association between students' Achieving ATL and their intrinsic considerations for choosing teaching career, and that students' subjective ability for teaching belief mediate the association between students' Deep ATL and their intrinsic considerations for choosing teaching career (see Table 35 above).



**Table 36: multiple regressions of students' Approach to Learning (dependent variables) on background characteristics and cultural dimensions (independent variables)**

Independent variables	Approach to Learning (Dependent variables)		
	Achieving Approach	Deep Approach	Surface Approach
<i>Background characteristics coefficients (b)</i>			
Intercept	1.94	1.60	3.45
Druze	0.19	0.24	0.20
Muslim	-0.23	0.32*	0.29
Christian	-0.05	0.10	0.15
Conservative	0.07	0.04	-0.04
Orthodox	-0.01	-0.01	-0.34
Age	0.00	0.01	-0.01
Learning stage	-0.04	-0.05	-0.04
Economic status	0.00	0.03	-0.13
<i>Cultural Dimensions coefficients (b)</i>			
Power Distance	0.01	0.08	-0.01
Uncertainty Avoidance	0.14	0.10	0.11
Collectivism	0.00	0.07	0.06
Long-term Orientation	0.24*	0.13	0.01
Masculinity	0.03	-0.07	-0.09
<i>Motives for choosing teaching career coefficients (b)</i>			
Ability	0.05	0.11**	-0.03
Low Difficulty	-0.03	-0.07	-0.04
Educational Contribution	0.11	0.09	-0.05
Subject-Specific Interest	-0.03	0.01	-0.16
Financial Utility	-0.01	-0.02	-0.03
Personal Utility	0.01	0.02	0.19**
Social Influence	0.03	0.03	0.04
F <sub>(20,293)</sub>	1.868*	3.101**	1.818*
R <sup>2</sup>	0.11	0.18	0.11

\*\* p<.01, \* p<.05

The analyses further document a positive relation between students' personal utility motive and Surface ATL (b=0.19, p<.01). However, no other significant relations

were documented between other extrinsic considerations for choosing teaching career (i.e., financial and personal utilities) and students' ATLs. Thus, **hypothesis H5.3 is only partially supported**, regarding students' personal utility motive and Surface ATL.

Finally, according to the analyses, as students' social influence are not related to their ATLs, **hypothesis H5.4 is not supported**.

#### **5.2.6 H6: Pre-service teaching students' perceived academic experience is related to their Approach to Learning**

The relationships between students' ATL and their perceived academic learning experience were initially examined through their correlation coefficients, as summarized in Table 37 below.

According to the analyses, students' Achieving and Deep ATL are significant and positively correlated with all aspects of students' perceived academic learning experience.

Conversely, students' Surface ATL is significantly and negatively correlated with the students' perceived academic learning experience of teaching for understanding ( $r=-.173$ ,  $p<.01$ ), supportive teaching ( $r=-.173$ ,  $p<.01$ ), professional alignment ( $r=-.192$ ,  $p<.01$ ), and critical thinking ( $r=-.156$ ,  $p<.01$ ).

**Table 37: Pearson correlations of students' perceived academic learning experience and their Approach to Learning**

perceived academic learning experience	Approach to Learning		
	Achieving Approach	Deep Approach	Surface Approach
Teaching for understanding	.217**	.327**	-.173**
Supportive teaching	.233**	.290**	-.173**
Disciplinary understanding	.207**	.357**	-0.090
Alignment	.314**	.302**	-.192**
Peer Support	.154**	.210**	0.019
Constructive Feedback	.226**	.376**	-0.065
Critical Thinking	.349**	.466**	-.156**

\*\*p<.01, \*p<.05

Accordingly, regression analyses of students' ATLs (dependent variables) on their background characteristics, cultural dimensions, motive for choosing teaching career, as well as their perceived academic learning experience (independent variables) are summarized in Table 38. According to which, all ATL regression models are significant.

Generally, according to the analyses, students' ATL are not associated with their background characteristics. However, students' Deep ATL was found to decrease with students' learning stage ( $b=-0.06$ ,  $p<.05$ ), and students' Surface ATL was found to be higher among Muslims ( $b=0.43$ ,  $p<.05$ ) and lower among Orthodox students ( $b=-0.39$ ,  $p<.05$ ).

Similarly, in general, students' ATLs are not associated with their cultural dimensions. However, Achieving ATL was found to be positively related to students'

long-term orientation ( $b=0.19, p<.05$ ), and students' Deep ATL is negatively related to masculinity dimension ( $b=-0.08, p<.05$ ).

Similarly, students' motives for choosing teaching career are generally not associated with their ATLs. However, Deep ATL was found to be positively related to students' subjective teaching ability belief ( $b=0.07, p<.05$ ), and students' Surface ATL is positively related to personal utility motive ( $b=0.18, p<.01$ ).

Regarding the research hypotheses, according to the analyses, Achieving ATL is positively related to students' perceived academic learning experience for professional alignment ( $b=0.15, p<.05$ ) and critical thinking ( $b=0.26, p<.01$ ). Similarly, Deep ATL is positively related to students' perceived academic learning experience for critical thinking ( $b=0.24, p<.01$ ). As such, professional alignment and critical thinking experiences mediate all other relations between students' Deep and Achieving ATL and their perceived academic learning experience (see Table 37 above), thus **confirm hypothesis H6.1**.

In contrast, Surface ATL is negatively related to perceived academic learning experience regarding supportive teaching ( $b=-0.17, p<.05$ ). This relation mediates all other relations between students' Surface ATL and their perceived academic learning experience (see Table 37 above). In this manner, **hypothesis H6.2**, who argued that better perceived academic learning experience, in which teaching is supportive, promoting disciplinary knowledge and understanding, and fostering critical thinking, is negatively related to Surface Approach to Learning, **is partially confirmed**.

**Table 38: multiple regressions of students' Approach to Learning (dependent variables) on background characteristics and cultural dimensions (independent variables)**

Independent variables	Approach to Learning (Dependent variables)		
	Achieving Approach	Deep Approach	Surface Approach
<i>Background characteristics coefficients (b)</i>			
Intercept	1.76	1.65	3.54
Druze	0.15	0.11	0.27
Muslim	-0.29	0.17	0.43*
Christian	-0.15	-0.01	0.26
Conservative	0.14	0.09	-0.11
Orthodox	-0.02	-0.05	-0.39*
Age	0.00	0.01	0.00
Learning stage	-0.06	-0.06*	-0.06
Economic status	-0.06	-0.03	-0.07
<i>Cultural Dimensions coefficients (b)</i>			
Power Distance	-0.01	0.04	0.00
Uncertainty Avoidance	0.12	0.08	0.14
Collectivism	-0.03	0.05	0.01
Long-term Orientation	0.19*	0.08	0.08
Masculinity	0.02	-0.08*	-0.07
<i>Motives for choosing teaching career coefficients (b)</i>			
Ability	0.01	0.07*	0.00
Low Difficulty	-0.02	-0.04	-0.03
Educational Contribution	0.13	0.09	-0.06
Subject-Specific Interest	-0.17	-0.13	-0.06
Financial Utility	-0.05	-0.05	-0.01
Personal Utility	0.02	0.02	0.18**
Social Influence	0.02	0.02	0.05
<i>perceived academic learning experience coefficients (b)</i>			
Teaching for understanding	0.04	0.05	-0.13
Supportive teaching	0.03	0.02	-0.17*
Disciplinary understanding	-0.08	-0.01	0.03
Alignment	0.15*	0.03	-0.14
Peer Support	0.02	0.02	0.10
Constructive Feedback	-0.03	0.06	0.12
Critical Thinking	0.26**	0.24**	-0.14
F <sub>(27,286)</sub>	3.515**	5.134**	2.527**
R <sup>2</sup>	0.25	0.33	0.19

\*\* p<.01, \* p<.05

## **Chapter 6: Discussion, conclusions and recommendations**

At the core of this research is the concept of Approach to Learning as a comprehensive metacognitive learning processes framework that mediates students' intention and motivation to learn as well as their learning strategies (Biggs, 1988; de la Fuente et al., 2020, p. 3) in the context of academic studies of Israeli students in teachers training institutions. Specifically, I refer to three contextual key aspects in light of which students' Approach to Learning was examined: Israeli students' unique socio-cultural society composition, their motives for choosing the teaching profession, and their perceived academic learning experience during their studies.

While students' Approach to Learning (ATL) is often used as a proxy for students' subsequent quality of learning outcomes and academic achievements (Artlet et al., 2003; Biggs, 1987; Burton et al., 2009; Teoh et al., 2014), little is known about how culture affects ATL (Manikutty et al., 2007). This issue is important because education, particularly higher education, is a means of empowering individuals' cultural capital (Bourdieu, 1979, 1999, 2005) and social capital (Putnam, 1993, 2000) and a means of social mobility. Therefore, it is especially important to examine how culture affects the approach to learning of students in teachers' training institutions as they are the agents of tomorrow's socio-cultural change (Pantić & Florian, 2015).

An overview of Israeli society reveals great complexity, which makes it difficult to characterize Israeli society coherently and unequivocally. The diverse Israeli population groups differ in many aspects – ethnically and religiously, according to the stage of demographic change they achieved, as well as economically. These differences have profound implications for poverty, employment, family structure, the nature of the community, and even the residential preferences of Israel's residents. As discussed in

Chapter 2, the expanding socio-cultural fragmentation in Israel is reflected in widening disparities between the various population groups, which constitute a challenge to the continued existence of the State of Israel. As more Israeli population groups exhibit declining participation rates in the labor force, the scope and applicability of poverty and, with them, social, cultural, and religious segregation are deepening. Israeli society is heading for an oblique future in which current trends are unsustainable (Even, 2021; Rivlin, 2015; Soffer, 2016; Stiglitz, 2012).

In the context of current research, Israeli socio-cultural fragmentation is reflected in its' education, according to which Israeli population groups differ by their educational goals, the nature of education, and the structure of the educational system (see Chapter 3). The complexity and problematic nature of Israel's socio-cultural drift is mirrored in the field of education. The structure of the Israeli education system, for example, is heterogeneous and fragmented in many aspects, including administratively, budgetary allocations, policymaking and education content, the nature of supervision, and political affiliation. This complexity is designed to address the needs and characteristics of different groups in the population. However, one of its salient features today is the notable gaps in achievements and different qualities of education of the various population groups. Particularly, these gaps are related to the socio-economic background of Arabs and ultra-Orthodox Jews – two prominent cultural, social, and economic groups in Israeli society.

These issues are also reflected in Israel's higher education system, where participation rates and academic achievements are often associated with student's family background and socio-economic status. Since background and status differences are

expressed not only in resources but also in values, expectations, norms, language, and behavior, they influence academic performance (Harkabi & Mendel-Levi, 2014).

Thus, despite Israeli higher education institutions, including teachers' training institutions, experiencing marked growth and an expansion of socio-cultural diversity of students, it turns out that the quality of higher education of many graduates has not significantly increased and failed to bring about significant socio-cultural change in Israeli society (see chapter 2.3.2). These trends are also reflected in the characteristics of the Israeli teaching staff. As discussed in Chapter 3.2, the teaching profession in Israel suffers from several structural problems. According to international comparisons, these problems are, among others, that Israeli teaching staff is female-dominated, both in terms of representation and in terms of characteristics and composition of wages. Further distortions indicate that the system lacks young teachers, and it requires teachers to maintain a very long career to exhaust full seniority rights and reach salary peaks, resulting in high desertion of novice teachers on the one hand, and on the other hand, burnt out and frustrated veteran teachers who are mainly concerned with accumulating seniority and less with pedagogy (Arar et al., 2019; Bank of Israel, 2019, Blass, 2019).

One means of dealing with the dismal state of the Israeli education system, and particularly in light of Israel's challenging socio-cultural composition, is through a change in teacher training. For example, through reinforcement of teachers' training programs at all stages of their training on issues related to academic, emotional, and socio-cultural differences, including promoting critical thinking, deep pedagogy understating, and encouragement to implement various models and learning (Harkabi & Mendel-Levi, 2014).



Therefore, it is important to characterize dedicated students who strive for understanding, mastery, skill, and professionalism in teaching and in the process, characterize teaching students' intention and motivation to learn as well as their learning strategies (i.e., their Approach to Learning) in general and the factors that influence these characteristics. Accordingly, this research aimed to examine students in teachers' training institutions in Israel's Approach to Learning in view of their cultural dimensions, career choice motives, and perceived academic learning experience.

The rationale for the examination of students' ATL, and indeed for the entire research model, is that examining students' ATL cannot ignore the experiential context of the studies themselves (Baeten et al., 2010; Lindblom-Ylänne et al., 2019; Smarandache et al., 2021; Van Petegem et al., 2005), and similarly that their cultural orientation and personal preferences influence this experience (Entwistle, 2018; Manikutty et al., 2007; Stover & Holland, 2021). Overall, it was argued that better perceived academic learning experience, in which teaching is supportive, promoting disciplinary knowledge and understanding, and fostering critical thinking, is positively related to students' Deep and Achieving ATL and is negatively related to Surface ATL. Below are the results of the study in this regard.

For this purpose, the discussion initially provides an in-depth discussion of Israeli students in teachers' training institutions Approach to Learning and the way in which cultural orientation, motives and perceived academic learning experience are intertwined and reflect these approaches to learning. The discussion then continues by providing a concise description of Israeli students in teachers' training institutions characteristics regarding their background, cultural orientation, their motives for choosing teaching as a profession, and their perceived academic learning experience.

## **6.1 Students in teachers training institutions' Approach to Learning**

Students' ATL scores suggest a hierarchy between the three ATL. Students scored high on Achieving Approach to Learning (Achieving ATL), while their scores reflect medium high Deep ATL and medium Surface ATL. This suggests that students in teachers' training institutions consider their learning as goal-oriented directed to achieve the best outcomes and are more occupied in organizing their learning than in disciplinary understanding. Moreover, students' ATL is in accordance with their cultural long-term orientation and perceived academic learning experience which promotes professional alignment (Entwistle, 2018; Lindblom-Ylänne et al., 2019).

Students' ATL scores are also correlated. Correlations analyses suggest students' Achieving ATL is positively correlated with Deep ATL and, conversely, negatively correlated with Surface ATL. However, no significant correlation was documented between Deep ATL and Surface ATL. These findings place Achieving ATL as a pivotal approach to learning, as it embodies some of Deep ATL's most desirable aspects and diminishes undesirable aspects associated with Surface ATL (Entwistle et al., 2001; Joshua, 2017; Richardson, 2015). Many of the desirable aspects of Deep ATL, such as active learning, flexible and critical thinking, and learning engagement, are associated with efficient and effective learning approach. As students' Achieving ATL is not directly associated with their background characteristics or their motives for choosing to become teachers, this also reinforces Achieving ATL as intrinsically, rather than extrinsically, motivated. Accordingly, this portrays Surface ATL as extrinsically motivated, mostly driven by fear of failure and minimum effort strategy (Bunce & Bennett, 2019).

Furthermore, these findings from the correlations analyses also suggest that Deep and Surface ATL are not associated with one another, and specifically that these

approaches are not opposites but rather two independent dimensions of students' Approach to Learning (Kelly, 2019). As reviewed in Chapter 1.1.3, these implications correspond to previously documented studies (Gurlen et al., 2013), and may indicate a large variation in the quality of the courses and the nature of teaching in them, as students' ATL varies across courses in accordance to their perceived relevance, both in the context of personal interest and in the context of the course's professional and academic contribution (Coertjens et al., 2016).

### **6.1.1 Achieving Approach to Learning**

Three major factors were found to be associated with Achieving ATL. Achieving ATL was found to be positively associated with a perceived academic learning experience that corresponds to professional alignment and promotes critical thinking. Regarding cultural orientation, Achieving ATL was found to be positively associated only with students' long-term orientation. In addition, and no less importantly, the findings did not document any significant association between students' Achieving ATL and their motives for choosing the teaching profession. Furthermore, the aforementioned associations mediate all the other influences of cultural background, cultural dimensions and career choice motifs on students' Achieving ATL.

As reviewed in Chapter 1.1, the reference to students' Achieving ATL mainly emphasized the ways students organize their learning (Vanthournout et al., 2013) and particularly revolves around allocating time and effort resources to learning, in a manner that leads them to achieve better or best outcomes (Biggs, 1987 and Entwistle, 1992 as cited in Manikutty et al., 2007; Entwistle, 2018; Lindblom-Ylänne et al., 2019). Thus, the presented research findings suggest that students' Achieving ATL is driven by a

cultural dimension characterized by future rewards, postponed gratifications, and investment of effort and preparation for the future. But, for this to take place students must perceive their academic learning experience as promoting critical thinking as well as professional alignment.

Accordingly, such interpretation suggests that students' Achieving ATL share some aspects of Deep ATL, in which learning is intrinsically motivated striving to promote disciplinary understanding and is characterized by students' involvement in the study material, both of which are an outgrowth of critical thinking. In this aspect, Achieving ATL embodies several desirable aspects of learning (Entwistle et al., 2001; Joshua, 2017; Richardson, 2015) and, unlike Joshua (2017), it indicates that predominantly choosing Achieving ATL reflect students' pursuit for comprehensive understanding (see Chapter 1.1.2 for a more extensive review of Achieving ATL).

Additionally, the findings suggest that students' Achieving ATL is associated with their perceived academic experience as promoting professional alignment. That is, students' Achieving ATL is promoted when students' academic experience is aimed at specialization as well as at compliance and adherence, the results of which are adopting an operational approach focused on completing learning goals and achievements. This corresponds to a common view of students' Achieving ATL as strategic (Entwistle, 2018) or goal-oriented (Manikutty et al., 2007). In fact, these findings may also be interpreted as indicating that, for the students in teachers' training institutions, the purpose of studies as well as the strategic goals of learning are professional alignment. Indeed, the association of students' Achieving ATL and their perceived academic learning experience was found to mediate any motivational considerations for choosing the teaching profession and, furthermore, students' Achieving ATL was found to be

positively associated with their cultural Long-Term orientation. In this sense, students' Achieving ATL manifests a socio-cultural orientation (see also chapter 1.2 above).

In this manner, students in teachers' training institutions who scored high on Achieving ATL consider teaching and teaching positions as embodying explicit and implicit future rewards which are, at least to some extent, a result of professional characteristics and professional union-enabled benefits (Arar et al., 2019; Bank of Israel, 2019). Thus, on one hand, such students are predominantly oriented toward long term considerations in their learning, for instance by attributing their success to effort or by viewing education as a means to prepare for the future (Hofstede, 2011, p. 15). However, on the other hand, in order for them to enjoy these future rewards, students better adapt their way of thinking and norms (Masry-Herzallah & Da'as, 2020) and adhere to common accepted professional conduct, thus they will be inclined to experience their studies as focused around professional alignment. Hence, it makes sense for such students to approach their learning as motivated by maximizing achievements and by organizing their learning appropriately – that is by identifying relevant assessment criteria and applying continuous effective and purposeful efforts and control over their learning (Manikutty et al., 2007). Therefore, Achieving ATL reflect students' rational and efficient decision making aimed at successful regulation of and coping with their studies (Stover & Holland, 2021).

### **6.1.2 Deep Approach to Learning**

Three major factors were found to be associated with Deep ATL. Most importantly, Deep ATL was found to be positively associated with an academic learning experience that promotes critical thinking; - this is the only experiential aspect that was

found to contribute to students' Deep ATL. Similarly, regarding motives for choosing the teaching profession, Deep ATL was positively associated only with students' perceived ability and from a cultural orientation aspect, Deep ATL was found to be negatively associated only with masculinity.

The analyses in relation to students' Deep ATL revealed that this learning approach is influenced by a learning environment that promotes critical thinking. This finding is consistent with the research literature on the subject (see Chapter 1.1.2), which identifies Deep ATL as characterized by high levels of critical thinking (Kelly, 2019; Manikutty et al., 2007; Entwistle, 2018). Since no significant contribution was found to other aspects of the students' academic learning experience, promotion of critical thinking during studies and especially in the students' learning experience is a very important tool for encouraging and enhancing students' Deep ATL. In fact, the findings imply that critical thinking is the only academic learning experience attribute that is relevant to encourage Deep ATL, while other experiential academic learning aspects and especially aspects related to teaching (e.g., supportive teaching, teaching for understanding, disciplinary understanding, and constructive feedback) are irrelevant in this aspect.

Interestingly, students' Deep ATL was also found to be positively associated with their subjective teaching ability belief. As students' academic learning experience that promotes critical thinking was also associated with their subjective teaching ability belief (as well as their subject-specific interest and lower a-priori expectancy of their studies not to be difficult), this means that subjective teaching ability plays a key role in promoting students' Deep ATL, both directly and indirectly.

These findings confirm the original concept of Deep ATL, which sees critical thinking as one of the salient features of this approach (Biggs, 1993; Entwistle, 2018). Learning, according to this view, is characterized by an active involvement of students in the learning process, in search for meaning of and during learning, in high thinking levels that seek to connect current knowledge with prior knowledge, as well as to apply current knowledge in other contexts, and in the ability to design and construct new knowledge (Kelly, 2019). The findings of the present study add to this, as they indicate that Deep ATL is intrinsically motivated as it is also a result of students' subjective ability.

Furthermore, like Tanriverdi's (2012) findings who suggested that students' ATL is related to their epistemological beliefs and that learning depends on innate ability, the presented study also illustrates that students' Deep ATL decreases as their studies progress (Tanriverdi, 2012). As reviewed in Chapter 1.1.3, teaching students are not alone. A decrease in students' Deep ATL was also documented with regard to other professional studies (Amiri, 2019; Ward, 2011) as, during their advancement in their studies, students' may lose interest, find it hard to keep their initial enthusiasm, or simply find it hard to keep up with the cumulative and ongoing requirements.

Regarding cultural orientation, the presented study sets out to meet the challenge set by Manikutty et al. (2007). That is, to validate empirically the association between cultural dimensions and students' approach to learning. However, the findings provide only partial insights in this regard. Since the teaching profession sees their future character as a role model for their students, students in teachers' training institutions were expected to acquire broad professional and technical knowledge, as well as to demonstrate innovation, open-mindedness, involvement, and a sincere interest and

understanding of the field of knowledge, as embodied in their Deep ATL (Gibbs & Coffey, 2004; Tsang, 2019).

In contrast, the findings suggest that students' Deep ATL is primarily related to the investment of effort in studies as an investment and as a means of preparing for the future; both aspects are embodied by a long-term orientation dimension. In addition, it follows that long-term orientation cultural dimension, in the context of teaching studies, suggests that teaching students are apt to reject immediate gratification in favor of future rewards and at the same time are willing to accept norms relevant to this professional field (Masry-Herzallah & Da'as, 2020). In this sense, these aspects contrast with the aggressiveness, materialism, competitiveness, and social conservatism that underlie the masculinity dimension (Amzaleg & Masry-Herzallah, 2021; Hofstede, 2011), and indeed the study findings provide support for the rationale that Deep ATL decreases with masculinity cultural orientation.

It is interesting to note that the findings imply an association between students' Deep ATL and two cultural orientation dimensions: uncertainty avoidance and collectivism. That is, higher Deep ATL scores were associated with students' emotional need for rules and structure and a desire for security and avoidance of ambiguity as motivational factors (uncertainty avoidance), as well as preferences for conformity and social order (collectivism). Still, the findings suggest that these associations of Deep ATL and cultural aspects are formed at an earlier layer or phase of ethnic and cultural origin, which in turn affects the role of cultural orientation in students' ATL (see also Chapters 1.1.3 and 1.2).

An examination of the relations between students' cultural dimensions and students' Deep ATL reveal that the positive correlations (i.e., the direct connections)



between students' Deep ATL and the dimensions of uncertainty avoidance and collectivism were completely mediated by the long-term orientation cultural dimension and students' ethnicity.

As students' Deep ATL decreases with students' masculinity cultural dimension, students' Deep ATL might be hindered with masculinity implied inclination (e.g., aggression, materialism, competitiveness, and social conservatism). Thus, students' Deep ATL is adversely characterized by their masculinity cultural orientation, while the contribution of students' long-term cultural orientation to their Deep ATL is mediated by their motives for choosing a teaching career and perceived academic learning experience. As masculinity orientation is associated with socio-cultural characteristics, most of which are concerned with religion and religiousness, this raises questions regarding the role that teaching training plays in certain socio-cultural contexts and their perception of the essence of the education profession.

### **6.1.3 Surface Approach to Learning**

Two aspects were found to be associated with students' Surface ATL. First, Surface ATL was found to be positively associated with personal utility motives for choosing to become teachers. Second, Surface ATL was found to be negatively associated with students' experiencing their academic learning as promoting supportive teaching. Overall, the two aspects mediate all other experiential and motivational factors as well as any students' cultural orientations.

The analyzes document a positive association between students' personal utility motive and Surface ATL. That is, Surface ATL scores were higher as students were more inclined to attribute their choice of teaching career to motives that support more familial and leisure time. Students' personal utility expresses the students' a-priori expectation that they will be able to combine their personal life and career demands. Thus, according to the findings, choosing a teaching career based on the expectation that this choice will allow allocating more time and resources to personal needs and wants is also reflected in students' approach to learning, that is, an approach that is least demanding in which student engagement is minimal. As reviewed earlier (see Chapter 1.1.3), similar findings were documented by Kelly (2019) who argued that Surface ATL reflect students' non-academic priorities.

Hence, the higher students' motivation to choose teaching because of personal utility considerations, the higher their inclination to adopt Surface ATL in which, accordingly, their learning approach is intended to meet the minimum learning requirements, succeed in “surviving” the studies and generally be less interested and engaged with their studies (García et al., 2016; Spada & Moneta, 2012, 2014). As reviewed in Chapter 1.1.2, Surface ATL is characterized by passive, unengaged and unreflective learning, which is manifested by rote learning, trying to memorize rather than understand, attempting to get passing grades, focusing on trying to find the "right answers" without analysis, or learning with no intention or ability to use new knowledge in other contexts (Kelly, 2019), and is commonly referred to as the least academically desirable ATL (Entwistle et al., 2001; Joshua, 2017; Richardson, 2015). The findings suggest that personal utility motivated teaching students approach their academic learning in a less desirable manner.

The analyses of the findings in relation to students' Surface ATL also indicate that this approach is negatively associated with a perceived academic learning experience characterized by supportive teaching, and that this effect mediates negative effects of other aspects of perceived academic learning experience. These findings suggest that teacher support in the learning process may minimize the negative aspects attributed to Surface ATL (Spada & Moneta, 2012, 2014). It also suggests that supportive teaching, rather than other experiential teaching aspects (i.e., teaching for understanding, constructive feedback, disciplinary understanding, professional alignment), and specifically peer support and critical thinking, holds the potential for diminishing students in teachers training institutions' undesirable approach to learning.

Additional findings suggest that students' background characteristics affect their Surface ATL. First, Surface ATL was found to be lower among ultra-Orthodox Jewish students. A possible explanation for this association is a socio-cultural bias for choosing the teaching profession among the Jewish religious population (see Chapter 2.2.1). Among this population group, certain social limitations, such as women that cannot teach boys or illegitimacy of some religious educational institutions to include core subjects (i.e., Mathematics, Science, English, and Hebrew language and literature) in their curriculum, contribute to the worsening of existing distortions in teachers' allocation in the education system (The State Comptroller and Ombudsman, 2019). Such distortions are reflected in a simultaneous significant overall surplus of religious teachers on the one hand, and on the other hand in a shortage of teachers in core subjects (The State Comptroller and Ombudsman, 2019). Thus, looking to improve their prospects to acquire a teaching position after graduation, religious students cannot approach their learning superficially.

Another possible explanation for the relatively lower prevalence of Surface ATL among ultra-Orthodox Jewish students can be attributed to the nature of their education with a deep affinity for the religious tradition and a tendency to prefer the strict ruling in halakhic literature (Friedman, 1991). The Jewish ultra-Orthodox way of life requires students to devote time and effort to engage in religious studies (Cahaner, 2009). Jewish ultra-Orthodox education is characterized and encourages investing in halakhic issues and as such opposes rote memorization of the religious interpretation and practice (Barth et al., 2020; Malach & Cahaner, 2020; Perry-Hazan, 2018, Blass, 2019, 2020), thus, purposefully, discouraging them from pursuing Surface ATL.

Still, both explanations are only partially satisfactory, since relatively lower prevalence of Surface ATL among ultra-Orthodox Jewish students was not reflected in relatively higher scores on either Achieving or Deep ATL of these students. This suggests that, with Jewish ultra-Orthodox students, socio-cultural considerations have only limited influence on students' approach to learning. Whether through social conditioning, their career choice, or by directing them to discourage Surface ATL, these issues should be further investigated in future research.

Second, Surface ATL was found to be higher among Muslim students. Since the model did not document any other significant effects of students' cultural background or of cultural dimensions on students' Surface ATL, it can be conjectured that higher prevalence of Surface ATL among Muslim students conceal other pedagogical issues. For instance, a review of the education system indicates significant and persistent sectoral gaps to the detriment of Arab education in Israel (see Chapter 3.1). According to the review, after weighting socio-cultural and socio-economic background, elementary and

high-school Muslim students underperform when compared to students in OECD countries, to Jewish students, or to other Arab students in Israel (i.e., Druze and Christians) (Balas, 2019, 2020; Fuchs, 2017; National Authority for Measurement and Evaluation in Education, 2016). Dropout rates among Muslim students are higher (Chernovitsky & Feldman, 2018) and their achievements in mathematics, science, English and literacy were lower than other population groups (Ofek-Shanny, 2019; Blass, 2019).

This led some to suggest that the Muslim education system does not prepare its' students well enough to cope with the challenges of the modern labor market (Ofek-Shanny, 2019). For instance, there are some indications that Muslim students relatively do not cope well with high stake tests as significantly higher proportions of these students rely on cheating and inappropriate assistance by teachers during exams; they put less effort in preparing and succeeding in comparative tests and, generally, ascribe less importance to such tests (Ofek-Shanny, 2019; Balas, 2019). Together with indications that family background is most influential on students' achievements, and more so with regard to academic degrees than with students' matriculation certificates (Miaari et al., 2021), this might mean that some aspects of Muslim education in Israel do not discourage Muslim students from assimilating undesirable learning norms. As reviewed in Chapter 3.1 (see the section concerning the Israeli education system by national sectors), Muslim education lags behind other sectors in Israel, among other things in higher dropout rates and relatively poor performance in international comparison tests, but also in the form of a poorer ability to deal with high stake tests or by diminishing the tests' attributed importance (Ofek-Shanny, 2019). Furthermore, as reviewed in Chapter 1.3.2, it is argued that Muslim educational systems do not provide Muslim students with sufficient or robust basis for higher education due to a limited teaching force and teaching resources,

as well as inadequate teaching methods and learning skills (Lev Ari & Mula, 2017) which are later manifested by students' negative positions toward the institution and higher education in general as well as in students' higher education learning experience and engagement (Culp et al., 2009; Ippolito, 2007; Kharanbeh, 2018; Méndez García & Pérez Cañado, 2005). In this sense, prevailing Surface ATL among Muslim students implies that this approach to learning is widespread and adopted at an early stage of their development. As Muslim students may be more accustomed to Surface ATL, expecting them to approach their learning differently when they attend higher education may be perceived as intimidating and unnatural for them (Zhu & Chang, 2019).

A more concrete argument to the higher Surface ATL among Muslims relates to the language barrier. Higher education studies require students to master the common language, which means that students in Israel are expected to be proficient with verbal conversation, reading, and writing in Hebrew. For many Arab students, not only is Hebrew a second language (or even third), but the patriarchal traditional nature of Muslim households also means that their children are less exposed to Hebrew (Balas, 2019, Khamaisi, 2012). Thus, Muslim students experience their studies as more challenging due to the language barrier (Méndez García & Pérez Cañado, 2005; Kharanbeh, 2018). Hence, higher Surface ATL among Muslims students may be an expression of their fear of failure, lack of understanding, or insufficient clarity regarding learning objectives (Manikutty et al., 2007) which is a result of their language difficulties.

Although these interpretations of the findings are appealing, they should be treated with caution, as these insights should be better examined in future research which will focus on these issues particularly.

## **6.2 Students in teachers training institutions' cultural orientation, motives for choosing teaching profession, and perceived academic learning experience**

### **6.2.1 Cultural orientation and background**

Estimating the cultural dimensions of the teaching students corresponds to most of Hofstede's scores regarding Israeli society (i.e., low Power Distance, medium Masculinity and Collectivism, and High Uncertainty Avoidance). However, high scores of Long-term Orientation portray Israeli pre-service teaching students as exhibiting only small respect for traditions, but also as relatively slow on adapting to novel concepts, with education viewed as a means to prepare for the future, and such that success and failure are attributed to effort (Yalcinkaya, 2008 and Chandrasekaran & Tellis, 2008, both as cited in Bukowski & Rudnicki, 2019).

Moreover, students' long-term orientation is the most apparent factor in students' Approach to Learning, especially to Achieving. While long-term orientation directly contributes to students' Achieving approach to learning it is also positively associated with intrinsic motives of choosing the teaching profession which, in turn, contribute to students' perceived academic learning experience and consequently lead to higher Deep and Achieving Approaches to Learning. Hence, long-term orientation emerges as a central factor that characterizes students in teachers' training institutions and as affecting their approach to learning.

As mentioned above, other cultural dimensions of Israeli students in teachers' training institutions confirm to previous characterizations of Israel's population (see Chapter 1.2.1) and were also associated with intrinsic motives for choosing the teaching

profession which only indirectly affects students' approach to learning. Conversely, masculinity, and to some extent power distance, was found to be associated with higher a-priori expectancy that teaching studies will not be too difficult and higher extrinsic values which were also reflected in lower scores of students' perceived academic learning experience as promoting critical thinking. Thus, masculinity and power distance were found to hinder Deep Approach to learning, both directly and indirectly.

Furthermore, while, generally, pre-service teaching students' cultural dimensions are not associated with their background characteristics, ethnicity was found to play some role in their power distance orientation, and religiousness was found to be positively associated with their masculinity scores.

### **6.2.2 Motives for choosing teaching as a profession**

Students' motives for choosing a teaching career were measured by referring to four components: Expectancy component (i.e., perceived teaching ability beliefs and expectation that teaching studies would not be too difficult), intrinsic values component (i.e., social contribution through education and personal interest in the academic content of education studies), extrinsic value component (i.e., financial and personal utilities), and social influences component which represents the extent to which choosing to become a teacher is a result of others' influence.

The findings suggest that students are relatively highly motivated by intrinsic motives, such as educational contribution and subject-specific interest, as well as by their perceived teaching abilities belief. Students' choice of teaching was only moderately influenced by extrinsic motivational factors, such as financial and personal utilities, while their motivation to choose to become teachers due to others' influence (i.e., social



influence), as well as their expectancy that their studies would not be difficult were relatively low.

In this context, students' learning stage is negatively associated with their motives for choosing a teaching career, suggesting that as students advance in their studies their motivation to practice teaching diminishes. Changes in students' attitudes towards their choice throughout their studies is a documented phenomenon (Amiri, 2019; Ward, 2011). In this sense, the findings imply to the change of perspective experienced by the students in relation to the teaching profession and their choice of it as they progress with their studies.

The findings also suggest that students' choice of a teaching profession is affected by socio-cultural considerations as extrinsic motives (i.e., financial, and personal utilities) for practicing teaching are more prevalent in minority ethnic population groups (especially, Druze and Muslims), while religious Orthodox are less motivated by their personal interest in the academic content of education studies than other students (especially secular Jewish students).

### **6.2.3 Perceived academic learning experience**

Students' perceived academic learning experience reflect a good experience. The findings suggest that minority ethnic population groups (i.e., Muslim and Druze) report better perceived academic learning experience, including a better view of learning as promoting critical thinking. However, students' learning stage is negatively associated with their perceived academic learning experience (not including critical thinking), suggesting that as students advance in their studies their perceived academic learning

experience diminishes. This decrease in students' perceived learning experience is a result of a decrease in their interest to become teachers, both on account of their subject specific interest in pedagogy as well as on personal and financial perceived utilities in choosing this profession. Moreover, the decrease in students' interest in teaching and education as they advance in their learning stages is also apparent in a decrease in their Deep approach to learning.

### **6.3 Conclusions and practical implications**

To understand the findings of the study and their implied meanings, one must understand the context in which this study was conducted. First in the socio-cultural context of Israel. Economically, Israelis enjoy relative prosperity due to the secular and liberal nature of the state, a high technological level of many workers and successful higher education institutions. However, Israeli society is fragmented and divided in many aspects – ethnically, religiously, according to the stage of demographic change they achieved, as well as economically.

In recent years, there have been increasing signs that the trend of segregation of the weakest population groups is growing. This trend is reflected in separate residential areas of the various communities, the existence of separate education systems, some of which are almost unregulated by the state and most of which lag the official education systems in their education quality and performance, with low labor force participation and high poverty rates requiring significant and increasing state support. An analysis of demographic trends leads to the conclusion that the current situation is unsustainable (Even, 2021; Rivlin, 2015; Soffer, 2016; Stiglitz, 2012), and that one of the means to change it is through influencing the future education system in Israel.

This issue is important because education, and particularly higher education, is a means of empowering individuals' cultural capital (Bourdieu, 1979, 1999, 2005) and social capital (Putnam, 1993, 2000) and as a means of social mobility. Hence it is especially important to examine how culture affects approach to learning of students in teachers' training institutions as they are the agents of tomorrow's socio-cultural change (Pantić & Florian, 2015).

To this end, the study focused on the concept of students' Approach to Learning (ATL), which is often used as a proxy for students' subsequent quality of learning outcomes and academic achievements (Artlet et al., 2003; Biggs, 1987; Burton et al., 2009; Teoh et al., 2014). However, it has been found that research on how culture affects students' ATL is quite limited (Manikutty et al., 2007), as is research on students' Surface and to Achieving ATL (Bunce & Bennett, 2019; Lindblom-Ylänne et al., 2019; Dennehy, 2015).

Examining the relationship between cultural dimensions and students' ATL among teaching students in Israel's complex and unique socio-cultural context made it possible to shed some light on both theoretical aspects related to measuring variables and practical aspects related to this important population. The research rationale behind the examination is that the students' ATL examination cannot ignore the experiential context of the studies themselves (Baeten et al., 2010; Lindblom-Ylänne et al., 2019; Smarandache et al., 2021; Van Petegem et al., 2005). Similarly, their cultural background and personal preferences influence this experience (Entwistle, 2018; Manikutty et al., 2007; Stover & Holland, 2021).

The study allows drawing the following conclusions:

- Students in teachers training institutions in Israel scored high on Achieving ATL, while their scores reflect medium high Deep ATL and medium Surface ATL.
- Students' Achieving ATL is pivotal, students' Achieving ATL is positively associated with Deep ATL, and negatively associated with their Surface ATL.
- Both students' Achieving and Deep ATL are positively associated with learning environments that promote critical thinking. Thus, critical thinking is the main experiential aspect to promote desirable aspects of learning such as high levels of thinking and the ability to connect concepts and build new knowledge.
- However, while Deep ATL is also associated with their epistemological beliefs that learning depends on their innate ability, students' Achieving ATL is not associated with any subjective motive but rather with perceived academic learning experience of professional alignment.
- Accordingly, students' Deep ATL is intrinsically motivated, in which material and competitive considerations (Masculinity) have only little value. However, students find it hard to maintain high levels of Deep ATL as they progress with their studies.
- While students' Achieving ATL is also intrinsically motivated, it should be better viewed as a long-term, strategic oriented learning designed for professional alignment.
- In general, students' Surface ATL is not related to their cultural dimensions. However, students' ethnic and religious background characteristics (i.e., Muslims and Jewish ultra-Orthodox students) can be attributed to some of students' Surface ATL variation.

- Supportive teaching may help minimize the negative aspects attributed to Surface ATL, such as rote memorization, reproduction of content, and meeting the minimum requirements of learning.
- As Surface ATL was associated with personal utility motives (i.e., combine their personal life and career), Surface ATL embodies undesirable aspects of learning.

These findings embody significant practical meanings:

- The cultural dimensions of Long-Term Orientation and Masculinity are most persistent with regard to students' in teachers' training institutions perceived academic learning experience and their ATL. A better understanding of the sociocultural characteristics of students may help higher education institutions to formulate more effective policies and goals to influence the conduct of students during their studies and help them get the most out of their studies.
- The most significant aspects of students' perceived academic learning experience, in the context of students' Deep and Achieving ATL, are critical thinking and professional alignment. These aspects mediate other aspects of the learning experience in teacher training institutions, and therefore action should be taken to empower them to promote better quality learning. At the same time, supportive teaching may provide and minimize undesirable students' Surface ATL.
- Although previous research is inconclusive regarding the nature of students' Achieving ATL, the research findings suggest that this approach to learning promotes understanding and involvement in the study material, both a result of critical thinking. However, students' Achieving ATL can be promoted in a learning

environment aimed at specialization, the results of which are in the adoption of an operational approach that focuses on completing learning objectives and achievements.

- Cultural dimensions of students in teachers training institutions in Israel correspond to most of Hofstede's scores (i.e., low Power Distance, medium Masculinity and Collectivism, and High Uncertainty Avoidance), except for higher scores of Long-term Orientation.
- Students are relatively highly motivated by intrinsic motives, such as educational contribution and subject-specific interest, as well as by their perceived teaching abilities belief. Extrinsic motivational factors, such as financial and personal utilities, were found to be only medium, and their motivation to choose to become teachers due to others' influence (i.e., social influence), as well as expectancy that their studies would not be difficult, were relatively low.
- Students perceived academic learning experience reflect a good experience, with minority ethnic population groups (i.e., Muslim and Druze) reporting better perceived academic learning experience.

#### **6.4 Recommendations for future research**

The presented research's findings fill an existing knowledge gap regarding the relationship between students' cultural dimensions and their ATL. The findings indicate high prevalence of Achieving and Deep ATL among students in teacher training institutions in Israel, and it documents the central role of critical thinking and the cultural dimension of long-term orientation in shaping these learning approaches. The research

model emphasizes the significance of cultural dimensions in shaping students' decisions to choose a teaching career, as well as in their perceived academic learning experience and in their ATL during their studies in teachers training institutions.

However, I would like to suggest another point for thought. Following Manikkuty et al. (2007) and Salamonson et al. (2013), it was implied, albeit indirectly and implicitly, that students' ATL rests on a desirable perception of learning. According to them, students learn out of a desire to know and understand, their learning is characterized by creative and critical thinking, as well as by considerable engagement and real interest in their professional field. This is mainly embodied through the concept of students' Deep ATL. However, such a "natural" conception of learning does not attest to the quality of student training in teachers training institutions. In simpler terms, the research findings may be good for use by teachers' educators in teachers training institutions, but they do not provide any indication regarding the quality of training and the quality of students as future teachers. Similarly, the findings do not provide any indication of specific aspects of teachers' training that are related to their background and cultural dimensions, their motives for choosing their teaching profession and academic learning experiences that may contribute to more desirable characteristics of graduates in their future role as teachers.

In view of this, it is advisable to include, in a continuous study, additional sources of information related to aspects of teacher training and the functioning of good teachers (i.e., during and after their internship period) related to the research variables. These aspects include factors such as students' perceptions of personal and professional self-efficacy, their resilience to deal with conflicts inside and outside the classroom, their pedagogical beliefs, their character as leaders and their function as social leaders.

Similarly, the study did not address additional variables, which may shed light on the relationships documented in the study. Such factors, for example, may relate to students' personality traits while others may address performance metrics. Among other things, the latter may relate to academic success and satisfaction with the choice of career path and institution of study. Although these performance metrics convey some hindsight perception of students' choices and conduct during their studies (including their ATL), they can be beneficial in understanding the extent to which students' ATL may be used as a measure of academic success as well as a means for examining the quality of assessment in teachers training institutions. A better understanding of the teachers' training process, and in particular characteristics related to the teaching of these students, may turn out to be an important improvement, both in the academic sense, as in any institution of higher education, and in the practical sense of teachers training.

At the methodological level, the research findings are based on cluster sampling which limits the generalizability of the research conclusions. The cluster sampling was based on pluralistic and secular students' training institutions in northern Israel. This sample was an adequate representation of the socio-cultural diversity among teaching students in Israel, but the extent to which it represents the entire population of teaching students in Israel is more limited, as many of the students learn in "dedicated"<sup>75</sup> and socio-culturally homogeneous institutions (Israeli Council of Higher Education, 2019, 2021). Expanding the sample base to include additional areas in Israel, as well as additional institutions in further research may meet this limitation. It is important to note

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<sup>75</sup> I use the Israeli Council of Higher Education (2019, 2021) terminology of "dedicated" institutions to address Religious-Jewish institutions, Religious-Muslim's institutions, and specialized institutions (e.g., sports) which are restricted in their nature, both with regards to the character of the training and curriculum and with regards to employment opportunities of their graduates (see chapter 4.3).



that the generalization of the sample to include dedicated teacher training institutions may also shed light on potential differences between types of institutions (secular-pluralistic versus socio-cultural and dedicated homogeneous) and the nature of the implied teachers' training in terms of possible variety in their cultural dimensions, choice of motifs, perceived academic learning experience and students' ATL.

Another methodological limitation concerns the use of structured and closed research tools (questionnaires), which inherently limit the ability to an in-depth exploration of the meanings associated with the research variables and populations. To promote such deeper understanding of the subject, with its broader implications, it is appropriate to incorporate in future research the use of additional research approaches, such as qualitative approaches based on in-depth interviews and focus groups. These recommendations may contribute to the expansion of the knowledge regarding teachers training and the contribution of culture orientation to this process.

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# Appendices

## Appendix 1 Research questionnaire

Proficiency and knowledge

### *Section a (Cultural dimensions)*

To what degree do you agree with the following statements.

	To what degree do you agree with ...	1	2	3	4	5
		(1=Strongly disagree, 5=strongly agree)				
PO1	People in higher positions should make most decisions without consulting people in lower positions.	1	2	3	4	5
PO2	People in higher positions should not ask the opinions of people in lower positions too frequently.	1	2	3	4	5
PO3	People in higher positions should avoid social interaction with people in lower positions.	1	2	3	4	5
PO4	People in lower positions should not disagree with decisions by people in higher positions.	1	2	3	4	5
PO5	People in higher positions should not delegate important tasks to people in lower positions.	1	2	3	4	5
UN1	It is important to have instructions spelled out in detail so that I always know what I'm expected to do.	1	2	3	4	5
UN2	It is important to closely follow instructions and procedures.	1	2	3	4	5
UN3	Rules and regulations are important because they inform me of what is expected of me.	1	2	3	4	5
UN4	Standardized work procedures are helpful.	1	2	3	4	5
UN5	Instructions for operations are important.	1	2	3	4	5
CO1	Individuals should sacrifice self-interest for the group.	1	2	3	4	5
CO2	Individuals should stick with the group even through difficulties.	1	2	3	4	5
CO3	Group welfare is more important than individual rewards.	1	2	3	4	5
CO4	Group success is more important than individual success.	1	2	3	4	5

	<b>To what degree do you agree with ...</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
		<b>(1=Strongly disagree, 5=strongly agree)</b>				
CO5	Individuals should only pursue their goals after considering the welfare of the group.	1	2	3	4	5
CO6	Group loyalty should be encouraged even if individual goals suffer.	1	2	3	4	5
LT1	Careful management of money (Thrift)	1	2	3	4	5
LT2	Going on resolutely in spite of opposition (Persistence)	1	2	3	4	5
LT3	Personal steadiness and stability	1	2	3	4	5
LT4	Long-term planning	1	2	3	4	5
LT5	Giving up today's fun for success in the future	1	2	3	4	5
LT6	Working hard for success in the future	1	2	3	4	5
MA1	It is more important for men to have a professional career than it is for women.	1	2	3	4	5
MA2	Men usually solve problems with logical analysis; women usually solve problems with intuition.	1	2	3	4	5
MA3	Solving difficult problems usually requires an active, forcible approach, which is typical of men.	1	2	3	4	5
MA4	There are some jobs that a man can always do better than a woman.	1	2	3	4	5

***Section b (Motives for learning)***

The following statements describe reasons for people to become teachers. For each such reason, please state how much it is important **for you**.

	<b>I chose to become a teacher because...</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
		<b>1=totally disagree, 5=totally agree</b>				
AB1	... I can explain information well	1	2	3	4	5
AB2	... I can convey subject content in an interesting way	1	2	3	4	5

<b>I chose to become a teacher because...</b>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
		<b>1=totally disagree, 5=totally agree</b>				
AB3	... I have been told repeatedly that i explain things comprehensibly	1	2	3	4	5
LD1	... I think the university studies of teacher education are easy to manage	1	2	3	4	5
LD2	... it is easier than other courses	1	2	3	4	5
LD3	... the study is not as strenuous	1	2	3	4	5
EI1	... it is important for me to contribute to the education of children and adolescents	1	2	3	4	5
EI2	... I enjoy shaping the education of children and young people	1	2	3	4	5
EI3	... I would like to pursue a profession in which I can help educate young people	1	2	3	4	5
SPI1	... I find the content of my subjects interesting	1	2	3	4	5
SPI2	... I would like to acquire a lot of knowledge in my subjects	1	2	3	4	5
SPI3	... i like to deal with the content of my subjects	1	2	3	4	5
FI1	... as a teacher i get a fixed salary	1	2	3	4	5
FI2	... as a teacher i get a good salary	1	2	3	4	5
FI3	... as a teacher i am financially secure	1	2	3	4	5
PI1	... as a teacher, i have the possibility to care for my family	1	2	3	4	5
PI2	... i also want to have time for family, friends, and hobbies in additionto my job	1	2	3	4	5
PI3	... as a teacher, i can combine family and career	1	2	3	4	5
SI1	... my family advised me to commence with my teacher education	1	2	3	4	5
SI2	... i think that my family and my friends consider teaching as a profession to be best suited to me	1	2	3	4	5
SI3	... i was advised by friends and acquaintances to start teacher education	1	2	3	4	5



*Section c (Quality of the Academic Experience and Approach to Learning)*

Here are 22 statements describing different aspect of your studies. Please state how much these statements describe your experience or are relevant to you (1=not at all, 5=very much).

		1 Not at all	2	3	4	5 Very much
TE1	This programme encouraged me to relate what I learned to issues in the wider world.	1	2	3	4	5
TE2	I could see the relevance of most of what we were taught in this programme.	1	2	3	4	5
TE4	Staff helped us to see how you are supposed to think and reach conclusions in this subject.	1	2	3	4	5
TE5	The teaching in this programme helped me to think about the evidence underpinning different views.	1	2	3	4	5
TE6	This programme has given me a sense of what goes on 'behind the scenes' in this subject area.	1	2	3	4	5
TE7	Staff tried to share their enthusiasm about the subject with us.	1	2	3	4	5
TE8	What we were taught seemed to match what we were supposed to learn.	1	2	3	4	5
TE9	Staff were patient in explaining things which seemed difficult to grasp.	1	2	3	4	5
TE10	The feedback given on my work helped me to improve my ways of learning and studying.	1	2	3	4	5
TE11	The feedback given on my set work helped to clarify things I hadn't fully understood.	1	2	3	4	5
TE12	The set work helped me to make connections to my existing knowledge or experience.	1	2	3	4	5
TE13	I found I could generally work comfortably with other students in this programme.	1	2	3	4	5
TE14	Students supported each other and tried to give help when it was needed.	1	2	3	4	5
TLE15	Talking with other students helped me to develop my understanding.	1	2	3	4	5
TE16	It was clear to me what was expected in the work assessed for this programme.	1	2	3	4	5
TE17	I could see how the set work fitted in with what we were supposed to learn.	1	2	3	4	5

		1 Not at all	2	3	4	5 Very much
TE18	It was clear to me what I was supposed to learn in this course unit.	1	2	3	4	5
TE19	I regularly received feedback from teachers on my set work.	1	2	3	4	5
CT1	I have learnt to analyze and organize information.	1	2	3	4	5
CT2	I have learnt to evaluate issues critically.	1	2	3	4	5
CT3	I have learnt to apply theoretical knowledge to practice.	1	2	3	4	5
CT4	I have learnt to develop new ideas	1	2	3	4	5

How well do you think you are doing in your overall studies as a whole?

1            2            3            4            5            6            7            8            9  
rather      very  
badly      well

***Section d (Approach to learning)***

Here are 10 statements describing students' approach to learning. Please state how much these statements describe your learning or are relevant to you (1=not at all, 5=very much).

		1 Not at all	2	3	4	5 Very much
LA1	On the whole, I've been quite systematic and organized in my studying.	1	2	3	4	5
LA2	I've generally put a lot of effort into my studying.	1	2	3	4	5
LA3	I've organized my study time carefully to make the best use of it.	1	2	3	4	5
LA4	I've looked carefully at the evidence before reaching my own conclusion about what I'm studying.	1	2	3	4	5

		1	2	3	4	5
		Not at all				Very much
LA5	Ideas I've come across in my academic reading often set me off on long chains of thought.	1	2	3	4	5
LA6	When I've been communicating ideas, I've thought over how well I've got my points across.	1	2	3	4	5
LA7	If I've not understood things well enough when studying, I've tried a different approach.	1	2	3	4	5
LA8	I've often had trouble in making sense of the things I have to remember.	1	2	3	4	5
LA9	Much of what I've learned seems no more than lots of unrelated bits and pieces in my mind.	1	2	3	4	5

## **Appendix 2 Students' Approach to Learning and background characteristics analyses results**

The analyses of students' Approach to Learning comparison by ethnicity and religiousness is summarized in Table 39. According to the analysis, students' ATL do not differ with either ethnicity or religiousness. The results of correlation analyses of students' ATL and their age, learning stage, and economic status, which are summarized in Table 40, do not indicate of any significant correlation.

Regression analyses of students' ATL as dependent variables on respondents' background characteristics as independent variables (see Table 41) confirm these findings, as all three models are not significant.

**Table 39: Students' Approach to Learning by Ethnic group and religiousness level**

Students' Approach to Learning		Ethnic Group				Multiple comparisons of means <sup>^</sup>	Religiousness level			Multiple comparisons of means <sup>^</sup>
		Jewish (A)	Druze (B)	Muslim (C)	Christian and others (D)		Secular (A)	Conservative (B)	Orthodox (C)	
	N	235	24	30	25	145	119	50		
Achieving Approach	M (SD)	4.1 (.7)	4.3 (.6)	3.8 (.9)	3.9 (.7)	4.0 (.8)	4.1 (.7)	4.0 (.9)		
Deep Approach	M (SD)	3.8 (.7)	4.1 (.6)	4.1 (.6)	3.9 (.4)	3.9 (.6)	3.9 (.7)	3.8 (.8)		
Surface Approach	M (SD)	2.9 (1.1)	3.3 (.9)	3.3 (1.0)	3.1 (1.0)	3.0 (1.1)	3.0 (1.0)	2.7 (1.1)		

<sup>^</sup> Multiple comparisons of means, based on two-sided tests assuming equal variances and adjusted for all pairwise comparisons using the Benjamini-Hochberg correction

\*\* p<.01, \* p<.05

**Table 40: Pearson correlations of Students' Approach to Learning and students' age, learning stage, and economic status**

Students' Approach to Learning	Age	Learning stage	Economic status
Achieving Approach	-0.055	-0.092	0.030
Deep Approach	-0.012	-0.100	0.053
Surface Approach	-.120	-0.065	-0.058

\*\* p<.01, \* p<.05

**Table 41: multiple regressions of students' perceived academic experience (dependent variables) on Background Characteristics (independent variables)**

Independent Variables	Students' Approach to Learning (Dependent Variables)		
	Achieving Approach	Deep Approach	Surface Approach
	<i>Coefficients (b)</i>		
Intercept	4.23	3.72	3.58
Druze	0.16	0.26	0.29
Muslim	-0.32	0.28	0.33
Christian	-0.16	0.03	0.10
Conservative	0.11	0.03	-0.04
Orthodox	0.01	-0.11	-0.36
Age	-0.01	0.00	-0.01
Learning stage	-0.05	-0.05	-0.04
Economic status	0.02	0.05	-0.11
F <sub>(8,305)</sub>	1.50	1.57	1.76
R <sup>2</sup>	0.04	0.04	0.04

\*\* p<.01, \* p<.05