

# Adapting Curricula and Study Materials for the 21st Century

## Introduction and Summary of Principal Recommendations

May, 2020

### Introduction: The Goals of the School Curriculum in a Rapidly Changing Reality

Alvin Toffler, the noted futurist, coined the term “future shock” to describe a situation wherein “too much change in too short a period of time” results in dysfunction and disorientation in systems and individuals (Toffler, 1990). Arguably, the public education system is in many ways suffering from future shock. While society, economy, culture, science, politics, the environment, and – in particular – technology are changing rapidly, education systems find adjustment difficult. A clear discrepancy has recently emerged between the reality in which the education system must function, and its response to changes in that reality (Eisenberg and Selivansky Eden, 2019). This discrepancy is also apparent in the system’s curricula. Although existing curricula are, for the most part, still relevant, they often reflect outdated ideals, conceptions, teaching methods, and insights. Curricula are updated regularly within the system, yet given the profound societal developments in Israel and worldwide, this is insufficient. What is needed today is an innovative, methodical reexamination of curricula that will provide a rational,

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<sup>1</sup> The following text is an English translation of the introduction and principle recommendations chapters taken from the report of the committee on Adapting Curricula and Study Materials for the 21st Century.

updated understanding. There is thus a patent need to refresh not only the curricula content, but also their goals, principles, and structure, thereby allowing schools to cope with existing conditions, future developments, and a reality in constant flux.

To adjust curricula to our changing world, curriculum designers must operate on three levels.

**First, curricula must be able to adapt to existing conditions.** Current social, political, economic, and technological transformations – many quite drastic (as detailed below) – should be reflected in the curricula so that study programs can equip future citizens with the tools needed to handle and benefit from these changes (Young, 2002). Moreover, we, as educators, must carefully consider *which* changes, innovations, and developments *should* be taken into account, and which can be disregarded. Not every change requires an adjustment to the curriculum, just as not every new technology must be incorporated into schools. We should keep in mind that a school curriculum has a dual role – to prepare students for the future and, at the same time, preserve society’s cultural heritage (ensuring continuity and retaining the beneficial aspects of existing conditions) (Snaza, 2009). It is important to recognize that not every change is welcome and, indeed, in some cases a curriculum should protect students from changes.

Nevertheless, most of the adjustments that have so far been made to curricula are insufficient to match existing conditions and the constantly changing reality, for two main reasons: 1) Study program revisions are mostly unable to keep pace with surrounding changes. This is due to structural limitations (Knight, 2001). While external conditions are evolving freely, curriculum revision is an effort that requires time, thought, and resources, and is therefore much slower; 2) A curriculum should reflect not only current, perceptible reality, but should also prepare students for a future reality – something that cannot be fully foreseen (Eisner, 1983). It is therefore not enough to simply adjust study programs to existing conditions; other coping strategies also need to be implemented.

**Second, curricula should prepare students (i.e. future society) for coping with continuously accelerating change.** However, future changes are uncertain and impossible to foresee. Nevertheless, school curricula can significantly contribute to collective and individual adaptation to changing circumstances by cultivating openness to change and flexibility, and by promoting such skills as independent study, critical thinking, advanced information processing, and creativity (Kress, 2000). Still, the development of such skills must not undermine the acquisition of knowledge and subject matter, and should be in line with the requirements of contemporary reality. Chapter 2 of this report more fully discusses the types of thinking and skills that allow students to successfully cope with change.

**Third, the education system must employ its unique power not only to *respond* to existing conditions, but also to *create, direct, and lead* social, economic, and even technological changes.** Throughout history, the education system has served not only to fulfill existing needs, but also to promote normative views based on a conception of an ideal reality. The historical use of curricula to promote national cohesion is just one example (Gellner & Breuilly, 1983). Thus,

the curriculum should not only respond to changing circumstances, but should also be guided by normative ideals. For example, educational initiatives addressing environmental issues, while constituting a response to an existing problem, can also promote the ideal of the harmonious relationship between man and nature.

The ability of the education system to control future developments is obviously limited, but nevertheless, it does exist. Curricula can serve as powerful tools for cultivating a vision and shaping society and individuals. Their foundations, therefore, should be normative and include a vision for precise long-term goals.

The school curriculum is a critical tool in cultivating a vision and goals based on profound thought regarding the worthy and proper path that society should take. This usually also requires political will.

This document's proposals are based on the understanding that curricula should incorporate the three strategies discussed above: 1) **respond appropriately to existing conditions**, 2) **prepare students (and society) for coping with future trends and uncertainty**, and 3) **guide society and individuals according to a vision of an ideal reality**. Only a fusion of these three principles can allow education to rise to the challenges we face today.

## 1. Time frame

Due to today's accelerated pace of change, major discrepancies may arise between contemporary and future requirements. An entirely different reality may emerge in a matter of years rather than decades. A prime example of such a discrepancy can be found in the job market. According to expert forecasts, the job market will undergo major changes in coming years, and skills that are in high demand today will soon become redundant.<sup>2</sup> In fact, preparation to the job market per se may actually become less important as an educational goal if work – as some of these forecasts predict – becomes generally less central to our lives. Accordingly, those parts of the curriculum addressing the contemporary needs of the job market may become irrelevant within a relatively short period of time. Yet, if we attempt, at present, to prepare our students for a future society in which work no longer plays a central role, we may substantially impair the existing economy and student's employment prospects. Thus, a curriculum must take into account both short-term and long-term needs.

This document will focus on the adjustments we deem necessary in current curricula. The recommendations presented herein reflect our conception of the goals of education, an analysis of existing conditions, and conclusions based on the latest research in the relevant fields. These

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<sup>2</sup> This forecast was presented during a study seminar held by the committee in December 2017. For the agenda of the seminar and lecture summaries see:

<http://education.academy.ac.il/Index/Entry.aspx?nodeId=1035&entryId=21032>.

components have assisted us in proposing the necessary adjustments to school curricula and the ways in which these adjustments should be made. However, many of the committee's recommendations may be relevant to a longer time frame of one to two decades. Naturally, it is difficult to predict the shape of things to come, especially in such a rapidly changing world. Nevertheless, the future direction of long-term processes already in motion can be identified with a high degree of probability. For example, we may assume that the automation of the job market will expand, that leisure time will increase, that material wealth in general will grow, that economic inequality will deepen, that technologies will become more sophisticated, and that environmental issues will continue to preoccupy society at large.

We believe that despite the inherent difficulties, plausible developments over the next two decades should already be given thought. This is especially true in light of research findings showing that successful integration of pedagogical changes in the education system requires a long and gradual process (Zohar, forthcoming) and therefore planning as far as possible into the future, while keeping in mind existing limitations, is preferable to short-term planning. Realizing an educational vision or shaping reality in accordance with normative principles is, for the most part, a long-term process. Thus, for example, strengthening democracy through education is not just a contemporary ideal, but one expected to remain in place as long as the State of Israel retains its current identity. Consequently, many of the committee's recommendations address processes which, according to the best prognoses, are expected to begin or gain strength in the next few years or even over the next two decades.

Furthermore, we believe that it is an expert committee's responsibility to propose a long-term view that is often beyond the scope of educators involved in ongoing planning. The practitioners directing the education system may find it difficult to envision a more distant future, burdened as they are by present-day concerns as well as by political and other constraints (Nir, 1999; Nir & Sharma Kafle, 2013). The recommendations for adjusting curricula, presented below, address contemporary reality while also proposing long-term processes for a future that is, in part, still obscure.

## **2. Global Trends that Need to be Addressed**

As stated above, changing trends and anticipated developments must be identified and studied when designing the education system in general and curricula in particular. A 2016 OECD report detailed global developments that can directly impact the educational field. These include increased globalization, upheavals in the conduct of nation states, changes in family structure, technological progress, urban growth, and the emergence of urban culture (OECD, 2016b). A 2013 Yozma<sup>3</sup> document entitled "Educating for a Society of Culture and Knowledge: Changes in

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<sup>3</sup> Center for Knowledge and Research in Education at the Israel Academy of Sciences and Humanities.

the 21<sup>st</sup> Century and their Implications” (Brandes and Strauss, 2013), also discussed adjustments to the education system in the 21<sup>st</sup> century. The report and offered an in-depth examination of recent changes in the educational sphere, including in Israel. Its authors noted the technological and information revolution, the increasing power of the free market, globalization and pluralism, and the turn towards privatization and accountability as processes that can and will influence the education system. The report also indicated trends unique to Israeli society, such as growing tensions surrounding ethnicity, economic inequality, different conceptions of Judaism, and nationality.

Identifying contemporary conditions and future trends was a major part of the present committee’s work. To this end, we summoned a number of experts from different fields to address developing trends in Israel and worldwide. The recommendations for curricula offered herein largely reflect the committee’s understanding of these developments. However, we chose not to focus on aspects that are discussed in detail elsewhere and only briefly present a number of trends that guided us in considering future curricula. Furthermore, the trends presented below do not exhaust the range of possible changes, nor are they the only ones guiding this committee’s work.

Below we present five developments occurring on a global scale (technological advances, changes in the economy and job market, globalization, new family structures, the concept of truth) and briefly consider two developments unique to Israeli society (changes in the Israeli social structure and the erosion of the liberal ethos). All these are influencing, or are expected to influence, the Israeli education system. Keep in mind, however, that they are all interlinked and reinforce one another and that they are divided into categories only to facilitate the presentation.

### **a. Technological Advances**

Recent technological advances include breakthroughs in computerization, communication, and science. A prominent example is the development of information technologies and the rise of social media (OECD, 2019b). Forecasts indicate an acceleration of technological change in the foreseeable future. Significant advancements in medicine, computing capabilities, artificial intelligence, IoT (Internet of Things), automation, and the autonomization of tools and services are expected to impact almost every aspect of our lives (OECD, 2018c). Though it may be difficult to predict the nature and direction of technological change, the expectation that change will occur is nearly universal: we are moving towards a society in which technology will play an ever-greater role in our daily lives. Education systems everywhere should take this change into consideration.

Israel sees itself as a country positioned on the cutting edge of technology, and therefore these developments are particularly important.

## **b. Changes in the Economy and the Job Market**

The economy in general and the job market in particular are undergoing significant transformations to a knowledge-based economy that emphasizes the production, use, and transmission of knowledge and information, the value of a skilled work force, and research and development (Stiglitz and Greenwald, 2014). Also important is the emergence of a global economy in which many countries are competing with each other at the same time that they are mutually dependent. Furthermore, the knowledge economy and the development of a global economy have joined forces to bring about unprecedented material wealth while at the same time increasing economic inequality. However, it is beyond the scope of this summary to discuss all the consequent changes, including the migration of workers and jobs, the emergence of international corporations, and more (Ben Peretz, 2011).

It is difficult to predict the future with respect to economic trends. A number of plausible scenarios exist (Friedman, 2000). Most of these scenarios present trends (that are generally expected to continue into the near future), leading to greater reliance on knowledge and information, a stronger global economy, and expanding global wealth. These trends, however, will be accompanied by greater socio-economic inequality between those who successfully integrate in developing industries and those who fail to do so (Stiglitz & Greenwald, 2014).

Economic changes may also increase leisure time due to the automation of many tasks. These economic shifts are evident in Israel as well, and require suitable preparation.

## **c. Globalization**

Globalization influences not only economics, but also culture, politics, and society. Technological developments, in particular those related to information technologies, enable the rapid movement of people and information between different regions of the world (Ben Peretz, 2011). This results in global awareness: people the world over are exposed to the same cultural content, purchase merchandise from the same stores, and are engaged in the same issues, from current events to climate change (Singh, 2004). Politically, coalitions are formed between states, the European Union and intergovernmental organizations such as the World Bank and the OECD being only three examples. Simultaneously (and perhaps in reaction to globalization), many countries are increasingly emphasizing the unique attributes of the local culture or struggling to preserve their language and national identity. This juxtaposition of global, unified culture, on the one hand, and the responses it has generated, on the other, pose a complex educational challenge whereby the educational system will have to allow students to join the global culture while preserving their unique cultural heritage (Friedman, 2000). Israeli society clearly demonstrates the tensions felt between globalism and localism.

#### **d. New Family Structures**

The change and diversification of family life is another important change. More women have joined the work force, the age of marriage has risen, the frequency of divorce has increased, and having children outside the institution of marriage has become more common. In addition, alternative family structures have emerged, such as single-parent families and same-sex parenting (OECD, 2016b). There is greater emphasis on children's rights and the issue of parental authority. All these redefine the role of education and the goals the educational system is expected to fulfill.

These processes are clearly evident in Israeli society as well, although their impact is differently expressed in different social groups. For example, the Arab community in Israel has seen a significant decrease in its birth rate over the past decade. Women in both the Arab and *Haredi* (Jewish ultra-Orthodox) communities are joining the work force in growing numbers. The secular Jewish Israeli community is witnessing the introduction of new family configurations. These trends are expected to expand in the future, and the education system must be prepared.

#### **e. The Concept of Truth**

In recent decades, the rise of postmodernism has profoundly challenged and reappraised the concept of "truth." Postmodernism denies the existence of "absolute" truths, casting doubt on the great narratives of Western culture, among them the notion of progress (Lyotard, 1984). Contemporary research indicates a further transformation in the concept of truth in recent years. New studies contend that we are moving towards what has been termed the "post-truth" age, in which the multiplicity of information sources and the difficulty in assessing their trustworthiness have placed personal preferences and emotional appeals above facts and rational arguments (McIntyre, 2018).

The democratization of information, which enables anyone to become a provider of information and content; the idea that all opinions should be treated as equally worthy; and the willingness and ability to create methodical biases with relative ease –have all blurred the boundary between truth and falsehood (Davis, 2017). Even basic scientific truths are put in question – truths that up to now have hardly ever been doubted. This development has increased the ability to shape and control public opinion. The rise of the "post-truth" age has undermined the foundations of education even more than postmodernism did, and this demands a fitting response. In Israel there are indications that post-truth conceptions are increasing, and various agents are involved in addressing this phenomenon (Brams, 2019).

## **f. Israeli Social Structure**

In a famous speech dubbed the “Four Tribes Speech” (2015), Israeli President Reuven Rivlin described a shift in Israeli society wherein, rather than a clear majority alongside a number of minorities, it now consists of four groups of nearly identical size. Rivlin’s four “tribes” are the secular Jewish community (formerly the majority), the *Haredi* community, the national-religious community, and the Israeli Arabs. This is one conceptualization out of several: other divisions view the Druze population or traditional Jews as separate groups (Rubinstein, 2017).

Whether the proposed division contains four groups or more, the emerging scholarly consensus is that Israeli society is indeed changing, with groups formerly defined as minorities becoming more dominant. This shift in demographic processes is accompanied by the intensification – or at the least the surfacing – of deep tensions and rifts. Israel’s major groups are divided with regard to religion, Zionism, culture, and even democracy. In practical terms, the different groups can be said to function separately in many fields, such as education and housing. Presumably, the processes of structural change will continue, and if no new means of action are found, the tensions and conflicts will likely intensify (Rubinstein, 2017).

## **g. Erosion of the Liberal Ethos**

The State of Israel was founded on the basis of a socialist ethos. In its first decades, the state was centralized, with power largely vested in the hands of the government. Beginning in the 1980s, the socialist ethos was gradually replaced by liberalism, which espouses a free market, personal rights, and personal freedoms (Brandeis and Strauss, 2014). This change brought about extensive privatization processes that greatly influenced the educational field. Authority was delegated from the central government to local councils, school principals, and educational staff. Furthermore, elements based on market forces, such as outsourcing and parental choice, took root in the education system (Dahan, 2018). In recent years, though, some components of the liberal ethos have begun to be questioned. While its economic aspects have been retained and even reinforced, its political and ethical aspects are under attack. An alternative based on a national-religious (and, at times, anti-democratic) discourse has been gaining traction in the public sphere (Rubinstein, 2017). These ethical and economic changes challenge the foundations on which the education system is based, requiring response.

## **h. Sum-up**

As discussed above, a curriculum is not obliged to adopt societal changes just because they occur; it can also play a part in preventing change, or in leading it. Nevertheless, it must react somehow to existing conditions. Keep in mind, though, that identifying emerging trends provides, at most, a partial picture of future developments. It is difficult to accurately assess

which trends will intensify and which will weaken and even vanish. Furthermore, it is nearly impossible to predict the rise of new trends, not to mention their future impact.

We can, however, assume – with a relatively high degree of certainty – that in the foreseeable future, the changes presented above will continue and intensify. These shifts require the world's citizens to successfully cope with diversity and complexity. Globalization exposes us to varied influences; technological and economic developments increase the range of choices; and changes in family and social structure offer many alternatives to the conventional lifestyle. Even if the world is not necessarily *more* diverse or complex than in the past, a conceptual change has made diversity and complexity phenomena that must be acknowledged and confronted. The emergence of multiculturalism and postmodernism has shown that cultural and social diversity is not just an inalterable reality, but is also valuable in its own right (Gutmann, 1987). It is also safe to assume that the pace of change will accelerate. All these require a curriculum designed to not only respond to existing changes, but to prepare students for coping with a complex, diverse, and changing world.

### 3. Curriculum Goals

Naturally, the social and cultural transformations presented above will significantly influence educational goals in the 21<sup>st</sup> century and, as a result, the nature of school curricula. While the purpose of a curriculum is to **promote** educational goals, its content usually also **derives from** a certain conception of such goals.

The goals of education are rooted in normative judgments – whether implicit or explicit – particularly those regarding what constitutes a worthy individual or society (Lamm, 2002). Curricula reflect these normative judgments and usually carry an ideological, political, or moral character. For example, every fourth-grade mathematics textbook reflects an implicit judgment regarding what pupils should know at this stage of their life, based on a specific normative conception (Gutmann, 1987). Since today's normative judgments tend to be more steeped in controversy than in the past, the adjustment of the school curriculum to the 21<sup>st</sup> century poses a particularly daunting task.

Although scientific research can assist in designing curricula by providing the tools necessary to achieve certain goals, it cannot define the goals themselves. Adjusting curricula clearly requires making normative judgments. In this part of the summary we present an important aspect of the normative framework guiding our work.

In “Educating for a Society of Culture and Knowledge” (see above), Brandes and Strauss (2013) proposed a list of educational goals that included teaching 21<sup>st</sup>-century skills, improving literacy, enhancing academic achievement, promoting appropriate social behavior, and cultivating the uniqueness of different groups in Israeli society. Yet although their report served this committee

as a point of departure in discussing curricula, the goals of a curriculum cannot be based directly on Brandes's and Strauss's list, due to a number of reasons.

**First**, curriculum goals are not necessarily identical to educational goals. Some educational goals are not – and in some cases *cannot* be – reflected in the curriculum. Issues discussed in the 2013 report, such as the quality of teacher training programs and resource allocation, are thus only indirectly relevant to curriculum design. **Second**, adjusting a curriculum requires focusing on specific goals in the various fields of teaching and learning, which must be broken down into operational steps. In order to design a curriculum it is necessary to define, comprehensively and in detail, the desired objectives in the different fields. **Third**, the aforementioned document focused on adjusting the education system to present reality, whereas this report lays more emphasis on preserving the benefits of the existing system in light of changing reality and is more focused on preparing the system for coping with change and uncertainty. **Fourth**, some educational aspects that were addressed only in passing in the 2013 report are amply discussed in the present document. For example, the issue of developing higher-order thinking skills. Finally, the present report discusses in detail issues linked to educational goals and to curricula, such as use of digital technology, which were not mentioned at all in the 2013 report.

Since it was not possible to base curriculum goals on previous documents when choosing the normative framework for recommending changes, the committee commissioned a review of curricula in a number of key OECD member states. Also, in order to form a clearer picture of Israeli trends, meetings were held with experts on Israeli society, officials from the Ministry of Education, and representatives of different population groups.

Taking into consideration all the preliminary research, the goals of education today can be divided into two main categories (Lamm, 2002), both of which are described more extensively below.

- 1) Goals linked to the advancement of national and social objectives, such as democratic values, social cohesion, national identity, equality, tolerance, civic engagement, and more. These goals are mostly an outcome of political decisions and stem from Israel's existing reality.
- 2) Goals that concern the improvement of quality of life and the promotion of personal wellbeing. Of course, these goals are also based on the specific reality in each country, but for the most part, they are more profoundly influenced by meta-national developments, such as changes in the global economy, technological innovations, and more. They generally concern individual coping mechanisms in a changing world.

Note that the proposed division is not a mutually exclusive dichotomy: social and individual goals are clearly connected and influence each other. Nevertheless, the conceptual distinction between them is valid and beneficial for analytical purposes.

### a. Curricula Goals Focusing on Societal Values

This report does not attempt to create, redefine, or reshape a comprehensive theoretical framework of curricula's social goals, which reflect social, political, governmental, and even inter-governmental agreements. Instead, the committee relied on a number of existing and consensual goals derived from several sources: a) the Compulsory Education Law (and other official documents) concerning educational goals in Israel; b) the conclusions of previous committees that addressed the issue of educational goals, such as the Dovrat Committee and the Yozma committee mentioned above; c) a review of global educational trends; and d) the system's present goals, many of which the committee adopted in its attempt, to address and improve the education system's existing practices. In fact, many of the social goals promoted in this document constitute an integration of contemporary scholarly research on improving education and current practices. Thus, various theoretical conceptualizations of proper teaching and education methods have also influenced and shaped *our* understanding of education's social goals.

Since this document does not propose a new theoretical framework of social goals and draws on a number of sources, this chapter, and indeed the entire document, does not present a *methodical* discussion of such goals. Rather, social goals will be mentioned throughout in context, such as, for example, in the chapter detailing the components of the proposed future curriculum and in the section addressing the use of digital study materials in promoting lifelong autonomous learning. Note that the committee considers the advancement of democracy and democratic values – such as lawfulness, human dignity, liberty, and tolerance – a central task of the education system, in accord with the Compulsory Education Law, as well as with educational policy and practice in many developed countries.

Note, too, that the recommendations of the committee also seek to promote additional social goals. One principal goal is the cultivation of Hebrew and Arabic language skills and the instruction of these languages as mother tongues – a goal that is also part of the Israeli Compulsory Education Law. Its importance is amply discussed in the chapters addressing language and literary studies. Another principal goal, in line with the Dovrat Report, is the enhancement of the Israeli economy. Many of the report's recommendations carry economic significance. Promoting technological literacy, developing critical thinking, and increased education in the sciences can assist in strengthening the economy and are thus listed as goals, even if the rationale behind them is broader than a purely economic outlook. Preserving Jewish cultural heritage and recognizing Arab culture in Israel are also major goals discussed in the chapters concerning language and the instruction of various subjects. Of course, this is not an exhaustive list of the diverse social goals in the proposed curriculum. Other goals, such as protecting the environment (discussed as part of the natural sciences), interdisciplinary studies, introducing new subjects, cultivating social cohesion as an important part of civic-democratic education, and more, are also discussed.

## b. Curricula Goals Focusing on the Individual

The second category of curricula goals focuses on using education to promote the personal wellbeing and quality of life of individuals in the society. The committee commissioned a review which examined the educational goals in a number of key countries, differentiating between narrow and broad approaches to the cultivation of wellbeing through education.

### *The narrow approach to human wellbeing*

This approach perceives wellbeing mostly from an economic perspective. In some countries, Singapore and the United States, for example, education is seen mainly as a means of integrating individuals into the job market so as to increase their income: a greater income being considered key to improving wellbeing and quality of life. On the social level, the emphasis is on economic growth. Thus, the economy is placed at the center of the educational discourse: education is primarily a tool for increasing output by cultivating human capital, and the school curriculum is oriented towards this goal (Cope & I'Anson, 2003; Labaree, 1997). In recent decades, a number of countries, Israel included, have adopted this narrow approach, at least to some degree. Although not mentioned as part of the Compulsory Education Law, this view is reflected in the Dovrat Report, which specifically defines economic development as a central educational goal. Former Education Minister Bennett's plan for increasing advanced-level (5 unit) mathematics studies can be seen as matching this approach.

### *The broad approach to human wellbeing*

The broad approach to education has been taking hold since the beginning of the 21<sup>st</sup> century with the advent of the understanding that the key to wellbeing does not lie solely in economic growth (Layard, 2006) and that personal wellbeing is not measured solely in economic terms but is also a function of numerous and diverse social, emotional, civic, and environmental variables (Easterlin, 2013) that contribute to wide-ranging, comprehensive aspects of citizens' lives. This broad approach is promoted by the OECD and has been adopted by a number of countries, such as Finland (OECD, 2001). Based on this view of wellbeing, curriculum designers attach more importance to increasing the individual's fields of knowledge, thus developing their social, civic, emotional, cultural, and environmental aspects rather than just the economic ones.<sup>4</sup>

Alongside the civic, national, and academic goals of curricula discussed at length in the following chapters, this committee also believes that the promotion of personal wellbeing in the **broad sense** should be one of the overarching goals of school curricula. That is to say, the conception of wellbeing advocated in this document is comprehensive and not limited solely to the improvement of the individual's economic prospects and integration in the job market. This

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<sup>4</sup> Of course, some of these components are related to the first category mentioned above – that is, goals intended to promote national and societal aims.

approach is based on normative value judgments as well as a research-based understanding that considers economic improvement insufficient for ensuring and promoting personal wellbeing, particularly in developed economies.

A wide-ranging corpus of contemporary research literature discusses the concept of personal wellbeing from a normative and philosophical viewpoint. These studies analyze the concept of wellbeing, indicate the drawbacks of the narrow approach, and propose alternative conceptualizations (Griffin, 1986; Sumner, 1996). In addition, contemporary philosophical and conceptual studies indicate the unsuitability of the narrow approach to the educational field (Gilead, 2017; White, 2011).

Indeed, economic research also casts doubt on the validity of the narrow approach. Studies performed by Easterlin (1974) attest that there is no direct relationship between economic growth and life satisfaction. Contrary to expectations, economic growth was not found to lead to an improvement in people's subjective assessments of their quality of life. Follow-up studies that reproduced Easterlin's conclusions, as well as other studies that addressed similar questions, led to the development of alternative measures of personal wellbeing (Stutzer & Frey, 2012). A prominent example is a report commissioned by former President of France Nicolas Sarkozy, in which leading economists, including Nobel laureates, developed new measures for assessing wellbeing, which do not rely solely on economic development (Stiglitz, Sen, & Fitoussi, 2010). In recent years these and other gages have been adopted and developed further by the OECD and other research bodies (OECD, 2013). These measures, and the conception of wellbeing based on them, are becoming increasingly influential in the field of educational policy (Schuller & Desjardins, 2007).

### *Three dimensions of wellbeing*

The approach to wellbeing proposed in this document accords to some extent with that developed by the OECD (2013) and, as we see it, comprises three main dimensions: functional, emotional, and personal growth.

**Functional wellbeing** is the ability of an individual to function properly in their environment. It requires access to at least a basic income, means for protecting health, social skills, the development of cultural identity, the performance of civic duties, and technological skills. The schools fulfill a key role in advancing and achieving these goals.

**Emotional wellbeing** means having positive feelings, good mental health, and more. This dimension will not be discussed at length in this document, since another committee is engaged in these issues.<sup>5</sup>

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<sup>5</sup> The Expert Committee on the Promotion of Social-Emotional Skills in the Education System. For more information on the committee's work, see [here](#) [Hebrew].

**Personal growth and development** refers to the ability to direct one's life autonomously and be allowed to engage in activities that not only society deems valuable, such as culture and science, but that endow the individual with meaning and self-fulfillment. This dimension ventures beyond the conventional framework of personal wellbeing and also involves spiritual pursuits, the importance of which lies beyond their contribution to the sense of personal wellbeing. Thus, personal growth and development has intrinsic value deriving from a normative conception of a worthy life (Nussbaum, 2011). A sense of autonomy can contribute to wellbeing, especially in democratic states that allow – or even demand – that individuals direct their own lives. However, the importance of autonomy is not limited to its contribution to wellbeing; it is valuable in and of itself and is an important aspect of fully expressing one's humanity. Education has always been seen as striving to achieve sublime human ideals, and in this era – perhaps this era in particular – such aspirations should not be cast aside (Lin, 2006). This third dimension also has to do with normative conceptions that go beyond the subjective judgment of individuals regarding their quality of life.

The basic premise of this document is that curricula should address and simultaneously promote all three dimensions, since all three are necessary for wellbeing. Note that the idea of promoting wellbeing as discussed here is almost identical to goals 5 to 9 of the Compulsory Education Law, which focus on the individual and discuss the development of students' talents, establishing their knowledge in the various fields of study, strengthening critical thinking, promoting social integration, and fostering self-fulfillment.

To conclude, the fundamental idea on which this committee's recommendations are based is that, in addition to the promotion of the social goals of education, the curriculum should provide individuals with the tools needed for living a full, meaningful life in which they enjoy a sense of wellbeing, which, we believe is also a basic condition for developing a worthy society that can meet its goals. To this end, curricula should ensure the continued existence of democracy and democratic values. This aspect gains special importance in light of the lessons of the past and current world events.

The school curriculum should equip citizens with tools that will enable them to deal with the technological, social, and economic challenges of today's world. It should encourage openness to other cultures, but at the same it should preserve local culture and language. It should assist students in developing their cultural identity, while also treating the other with tolerance. It should ensure the existence of common ground among individuals and cultures, while also enabling diversity and choice. It should improve access to cultural and spiritual assets and to the achievements of human creativity, as well as encouraging students to engage in fields that society considers valuable, such as literature, art, and science. The curriculum should prepare citizens for change itself and provide them with tools to deal with it. It is our hope that the realization of these recommendations, further detailed in the following chapters, will bring us nearer to the vision presented above.

## Summary of Principal Recommendations

What should Israeli pupils study in schools in the 21<sup>st</sup> century? Which changes should be made to curricula and which study materials used to optimally support learning given the changes described above? The 21<sup>st</sup> century is characterized by rapid changes in many fields of life – migration, globalization, technological development, advances in knowledge and in the job market, and many other factors that are actively reshaping our reality. Some of these changes are global and common to many countries, and some are uniquely Israeli – such as ethical, demographic, and social changes, as well as shifts in social values. In light of all these developments, the requirements of future alumni have evolved, as well as society's expectations of the education system. Formerly, the education system was mainly required to transmit agreed-upon corpuses of knowledge and develop lateral capabilities. Today, particularly in light of society's rapidly changing needs and the uncertainty accompanying these changes, the system must also cultivate educated citizens and democratic citizenship, promote wellbeing, increase motivation for learning, provide tools for the construction of new knowledge, and act optimally for the advancement of individual citizens and of society in general.

To this purpose, and in response to a request from the Ministry of Education, Yozma established an Expert Committee to examine existing research and practical experience in this field so as to offer an original and methodical, up-to-date, judicious, and research-based conception of the curricula that should be offered by the system.

The Expert Committee included nine members, five from the educational field and the rest from other fields. It operated for approximately two-and-a-half years during which the committee underwent a shared process of learning, internal discussions, and discussions with external experts. Its task definition focused on the *cognitive* aspects of curriculum planning (i.e., it did not address *all* the aspects) for adjusting the Israeli education system to the 21<sup>st</sup> century.

Among the issues that the committee sought to address were: urgent changes required for the education system's alumni, and the contradictory requirements that need to be considered (such as in-depth learning vs. a broad scope of knowledge). In light of this complexity, the committee suggests that the current solution for planning curricula involves not so much a list of set recommendations, but rather a dynamic philosophy that comprises several components and that oversees the criteria set out for selecting which of these components are most important in each particular instance.

The Ministry of Education is investing much effort to ensure that the education system rises to present and future challenges and that its future alumni are sufficiently prepared. Many educators throughout the system are also working tirelessly cope with the 21<sup>st</sup> century challenges. This document, therefore, is intended to support this aim and promote a better understanding of key concepts in today's educational discourse and practice.

This document includes **integrative** and **concrete** recommendations on both the pedagogical and structural levels for the revision of curricula and the proper use of digital study materials. It also

suggests major adjustment that we consider necessary to optimally prepare Israeli students for today's challenges. We call on the directors of the Education Ministry and educators at all levels in the system to act energetically and systematically to integrate the changes proposed herein.

## **Main recommendations**

### ***a. Updating goals***

- Since the primary goal of education is to promote wellbeing, the education system should focus on the many aspects of wellbeing, rather than economic wellbeing only. Students should be provided with the means and motivation for maintaining their health, developing cultural identity, nurturing the emotional and social aspects of their lives, performing their civic duties, cultivating spiritual development – which may include engaging in cultural and scientific pursuits – and fostering self-fulfillment.

### ***b. Updating learning programs***

- Retain the acquisition of knowledge and content as a primary goal of school curricula.
- Strengthen the use of teaching methods that promote active learning and in-depth comprehension.
- Focus on imparting dynamic knowledge that can be generalized and broadly implemented. To this end, and as much as possible, concentrate knowledge around major issues, ideas, and principles.
- Promote diverse teaching strategies and modes of thinking. As much as possible, offer students intellectual challenges that will cultivate curiosity and creativity.
- Integrate the development of thinking processes into the various disciplines instead of keeping them as separate issues. Make the development of robust, productive thinking a principal goal based on the epistemic structure of each discipline.
- Instruction of the students' mother tongue should be seen as a primary focus of study, crucial for all other subjects. Therefore, the instruction of spoken and written language should become the responsibility not only of language teachers, but of teachers in all fields.
- Encourage the pedagogical autonomy of educators at all levels in the system.
- Introduce interdisciplinary learning, new fields of study, and local initiatives by practitioners.
- Begin teaching lateral capabilities and general abilities at a young age, in accordance with current research in the field of brain development.

*c. Proposed school curricula planning structure*

Based on our research and to implement the recommendations listed above, the committee suggests including the following five components in curricula design:<sup>6</sup>

**1. Lateral capabilities (necessary in all fields of study):** Develop robust language usage and linguistic literacy skills, thinking skills, civic-democratic awareness (in the spirit of the values stated in the Declaration of Independence and in Section 2 of the State Education Law, 2000), and digital literacy. These abilities should be cultivated in all parts of the curriculum and in each subject of study in accordance with each subject's unique characteristics.

**2. Foundation studies:** These are compulsory studies for which curricula will be developed by the Pedagogical Secretariat. The development of these curricula will involve the planning and reorganization of study programs in the traditional fields of knowledge, as well as the adjustment of the scope, subjects, and methods of study to meet current teaching goals .

**3. Interdisciplinary studies:** Dedicate part of the learning schedule to the creation of integrative knowledge based on a combination of different fields. This type of learning will be achieved, among other things, by posing major, cross-disciplinary questions (such as issues related to immigration, the concept of "leadership," the concept of "freedom," etc.).

**4. New knowledge areas:** Introduce new topics that have not yet been studied systematically in schools, such as sustainability, ethics, or financial education. The choice of these fields will be made carefully and dynamically based on changing local and global demands.

**5. Initiatives and autonomy of schools and teachers:** Dedicate a part of the learning schedule to programs chosen and initiated by the individual schools, teachers, and students themselves, who shall be allowed more freedom to make decisions regarding the subjects of study and its methods.

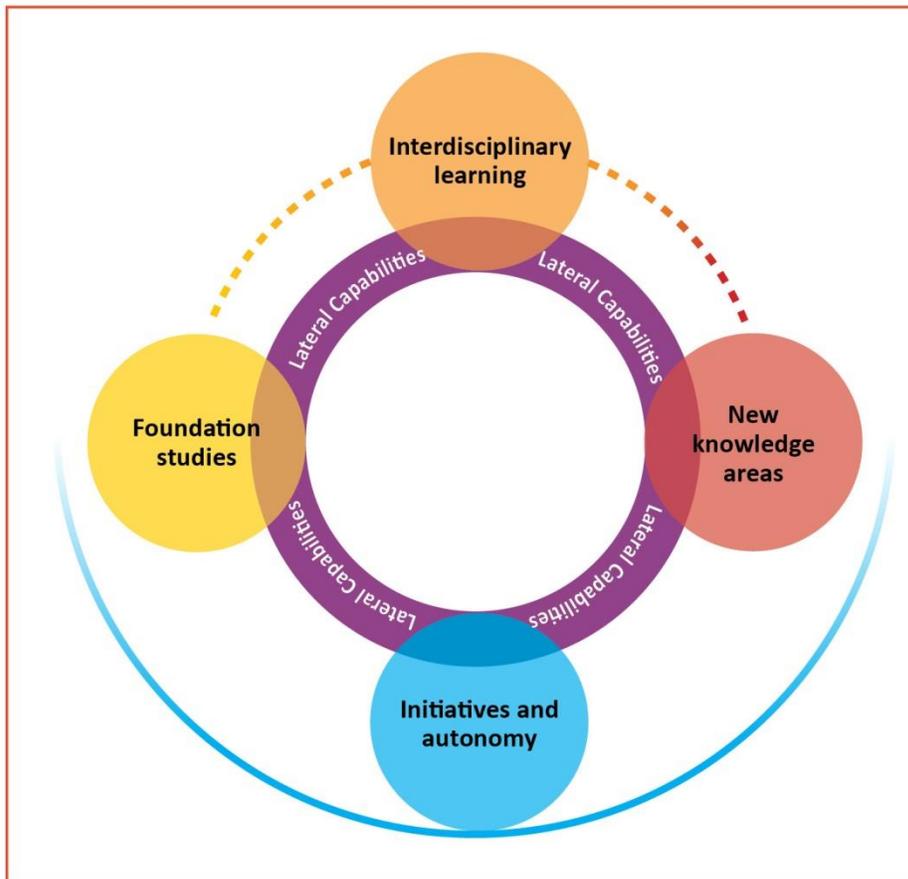
The committee views every educational program as a **dynamic** mosaic (see Figure 1) of these five components. This model is dynamic, since the relative importance of each component and how they are selected will change over time, depending on changing teaching methods, evaluation methods, and future developments in environmental, societal, and technological conditions. To allow judicious decision-making in the future, high-quality curriculum planning will consider the goals of the primary planners.

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<sup>6</sup> Following the recommendations of another committee operating as part of the Yozma – Center for Knowledge in Research in Education, the committee addressing the development of social-emotional skills (SEL), we recommend considering SEL as a sixth major component.

This document also includes criteria on how to examine future changes in curriculum planning that should be considered when implementing the above-mentioned model in different educational contexts.

**Figure 1: curricula planning structure**



**d. Digital study materials**

The rapid development of digital technologies reflects how digital study materials can serve students and teachers, as follows:

- Digital study materials can improve existing learning processes and create new learning methods that can respond to the challenges of the 21<sup>st</sup> century. It is therefore necessary to promote their development and integration into the education system.
- Because the way digital study materials can be integrated into the course of learning is not apparent in all contexts, research is required to determine their added pedagogical value and how their form should be adapted to students' needs.

- The processes of designing and developing digital study materials should be improved, and teachers should be encouraged to make significant and creative use of digital materials.
- Improve the ability of students to use the full range of digital resources available online in an independent, intelligent, and critical manner. Recall that one of the more important roles of schooling in the 21<sup>st</sup> century is to prepare alumni for lifelong learning in a complex and changing digital environment.
- Integrate a diversity of digital sources of information. Promote student autonomy and responsibility in choosing these sources. Cultivate the students' digital reading and digital data literacy skills. Develop their epistemic knowledge with regard to the ways in which knowledge is created, disseminated, and evaluated.
- Policy makers should take into account that the familiar processes used for preparing and approving printed study materials are unsuitable for digital resources. Therefore, *both* the producers and consumers of digital materials should be involved in their selection and evaluation. Encourage and support online teacher communities to curate and evaluate digital study materials and include such skills as a major component in teacher training programs.

*e. System-wide integration*

The committee calls on the education system to invest in a system-wide, high-quality integration of a range of teaching methods to advance critical and analytic thinking and understanding in all fields of knowledge and for all ages.

- In order to integrate the recommendations detailed above, significant organizational changes must be made to the Pedagogical Secretariat, and new bodies must be established that will be responsible for the methodical planning and implementation of the proposed changes in curricula and in study materials. These bodies will set guiding principles, design programs, and monitor their implementation.
- The system should seek to develop a variety of teaching methods that will 1) advance in-depth understanding and thinking; 2) formulate principles for the reorganization of knowledge in the curricula of the foundation studies; 3) develop a program for the instruction of lateral capabilities that will be integrated into all subjects for all ages; 4) develop new fields of study; and 5) integrate the principles of interdisciplinary learning and pedagogical autonomy.
- It is critically important to note that changes to curricula and their planning cannot be implemented without developing teachers' knowledge of the various aspects involved in the design, goals, and methods of curricula (in teacher training programs and in-service professional development programs).
- In addition, the proposed changes to curricula require introducing major adjustments to evaluation methods (in schools and in the entire system).

To sum up, as stated above, studies have shown that the systemic integration of pedagogical changes such as those discussed in this report may take years – and even decades. Other countries have already begun implementing major changes to adjust their curricula to the 21<sup>st</sup> century. Although Israel has taken preliminary steps in this direction, more methodical action is necessary to optimally respond to present and future challenges. Therefore, it is imperative that the Israeli education system begin the process of implementing these recommendations immediately.

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