Introduction

“Innovation” is an oft-used word. Almost everywhere in the world, every day, articles, books, and programs are published with the word “innovation” in their title—to the point of making it an muddled catch-all term. In educational discourse, too, innovation has become an inclusive name for many programs, defined in different ways by different educators.

There is no doubt that innovation and entrepreneurship today are essential amid the changing realities of life; their importance and necessity are unchallenged (OECD, 2008). Nevertheless, the question is: What actually lies behind this concept? How can it serve the educational endeavor? And what are the implications of the use of this concept in an education system that caters to so many pupils who have diverse needs, a heterogeneous population from different backgrounds?

This chapter attempts to define innovation on the basis of twenty interviews that present the points of view of Palestinian teachers who work in the Israeli education system, while clarifying the role of innovation education as they see it. The chapter also attempts to explain why teachers often refrain from embracing innovation with open arms, asks whether this state of affairs is necessarily negative, and examines possible recommendations for encouraging the adoption of innovative education.

Educating to be Innovative

Human history abounds with instances of technological, artistic, political, religious, scientific, and pedagogical innovation. In fact, they have surfaced in every area of human activity since the dawn of history. Innovation is a cardinal issue in the public and academic discourse in Israel and around the world. The importance of research and discourse in this field flows from the preeminence of innovation for the success of organizations of all kinds. Without innovation, after all, survival is impossible.

Innovation is a relatively new concept in education. Most researchers tend to invest it with psychological characteristics and link it to creativity and entrepreneurship. Creativity may be defined as the ability to generate ideas and alternatives and innovation as the ability to render these ideas into useful applications that lead to change and/or improvement in both learning and society. Goldsmith and Foxall (2003) propose three measures of innovation: it must be new, fresh, and outside the familiar. Thus viewed, the expression “innovative pedagogy” defines the goals of education and the desired image of the twenty-first-century learner and describes the curriculum, the processes of teaching, learning, and evaluation, and the scholastic environment that the twenty-first-century school should offer. The aspiration is that, by means of these changes, students will gain cognitive and meta-cognitive knowledge and capabilities that they can use to cope with a changing and self-innovating world (OECD, 2008).

In recent years, innovative education can be seen as a prime factor in the education system, emphasized in education ministry programs and recommendations worldwide, including in Israel. The research literature points to achievements in innovative education as crucial for the success of educational organizations (Seely Brown & Adler, 2008). Pedagogical innovation appears to lend meaning to, and concurrently to facilitate, educational activity in school.

Many studies stress the immense importance and advantage of using innovative pedagogy (OECD, 2019). Assimilating innovation, however, appears to be a serious matter that entails meaningful learning and deep attention to the process; it cannot happen on its own just by introducing this or that technology. Fullan (2001) identifies factors that influence the application of an innovation, including the characteristics of the school (principal, teachers, pupils), its oversight (parents and counselors), and its environment (policies, resources, culture). Thus, whenever a change is introduced, it is also essential to reinforce the willingness and capacity of the surroundings to accept it. The evidence in the field of education suggests that it is an immense challenge to adopt a discourse of innovation in educational work. What is more, the challenge is shrouded in a thick fog that this chapter wishes to dispel by making room for the voices of teachers who, in great part, are willing to implement innovation programs.

The Study

Twenty Palestinian teachers who work in the Israeli education system were interviewed for this study. For its purposes, a semi-structured interview was developed in which the teachers were asked to tell “their personal story of educational innovation.” The data-gathering process began with the creation, using the snowball method, of a list of thirty Palestinian teachers countrywide. From the list, twenty teachers were chosen as an inferior sample to be interviewed. These teachers participated in in-depth interviews that were designed to elicit answers to the research questions, which included the specific definition of innovation, how teachers perceive this definition, the way innovation programs are applied in the education system, the effects of the method used, and the opportunities and challenges that the application of these programs pose. The data analysis was based on a qualitative method that sought to construct and understand the characteristics of the individual and of his or her environment by examining and analyzing the interview narratives. The analysis began with the transcription of each interview, after which the interview was read in its entirety. In the last stage, the author attempted to identify main topics and themes that repeated in the participants’ remarks (Giorgi & Giorgi, 2008).

Findings and Discussion

The Challenge of Innovation

The importance of innovative education is unchallenged. All the interviewees indicated that innovation is necessary and important. It seems, however, that innovation in many schools has become an end and not a means. Most interviewees said that they perceive a gap between the willingness to innovate and what actually happens in school. One teacher, for example, remarked: “We all know that education has to make progress and ‘adjust to the twenty-first century,’ but in practice, in the field, innovativeness isn’t assimilated quickly and teachers don’t always greet the innovations with open arms.” Teachers even claimed that many programs that appropriate the word “innovation,” as in “Education in Innovation,” “Educational Innovation,” and so on, are no different from other programs that do not actually produce innovation.

To probe this sense of stagnation in the face of innovation processes, this section of the study begins by presenting reasons for the challenges that arise in implementing processes of innovation in the education system, as perceived by the teachers interviewed.

First, the interviewees stressed that innovation has become a buzz word in the education system. Consequently, many schools have adopted it in order to respond to demands from the system and to prove that they are implementing one reform or another and keeping parents satisfied; some even flaunt their pro-innovation credentials on social media. This finding corresponds to that of Perrotta (2013), who claims that innovativeness in education may often be part of a strategy—a medium for self-promotion and marketing of the school—as opposed to a true wish to effect change. One of the interviewees, for example, argued: “To put an innovation program to work […] it felt fake to me, taking pictures of activities and computerization to show the world and the local newspaper. […] None of it is really true, nothing of principle.”

In the course of the interviews, some participants stated that implementation is difficult due to a sense of murkiness and vagueness that accompanies the process and not because of a wish to market the school. Every teacher, principal, teaching faculty, and education department defines innovation differently, they claimed. This lack of clarity has given rise to confusion and difficulty in applying programs. Several teachers, for example, stated that they did not understand what was expected of them when innovation programs were announced or even when they attended in-service activities on the topic. Thus, a woman interviewee remarked: “Innovativeness has this nebulous feeling. […] It isn’t understood. […] It gives the illusion of being understood […] but really it isn’t. […] Each us grasps it in a totally different way. […] What it is still isn’t clear. […] Lots of principals sign up for anything that has the word ‘innovation’ in its title without any personal or organizational criticism. In fact, a covert rivalry begins—who will do the most to make the school more innovative?”

Many teachers believe that this competition in their schools has crowded them out of the process and undermined their roles. Innovation processes in school, which are usually determined by senior school faculty without consulting with the teachers, have made teachers feel as though they are spear-carriers instead of partners. Thus one of the teachers alleged in his interview: “There’s no process of shared thinking about how to assimilate an innovation collectively and optimally, in a way that will help us as a team, as educators, and in the learning and teaching process. So really, we’re just following instructions that we don’t really understand. If so, there’s no way we can do the job optimally. Without partnership, nothing gets done.”

These remarks make it seem that, according to the teachers, the disregard of these processes precludes serious assimilation. The authors propose that a deep understanding of teaching and learning processes would be helpful in assimilating changes that would cope with this problem. According to the teachers, however, knowledge that can be acquired via training activities is not enough; knowledge, norms, and skills that are essential for better implementation are also needed, and these may be acquired through practice and shared team discourse.

Another explanation for the difficulty in applying innovation programs, also related to the sense of non-partnership (see, for example, Fullan, 2001), centers on the mismatch between the proposed path of a given innovation and classroom practice. Many innovations fail to take account of educators’ priorities and pupils’ needs. One of the teachers said as much: “I’m supposed to be an expert for my class. […] The moment they don’t consult with me, there’s no doubt that the program won’t be a good fit for the needs of the class. It’s no surprise that innovation, at the end of the day, is really a process of preservation.”

The assimilation of innovation is also impeded by teachers’ internal inhibitions. Given that teachers are the professionals ultimately responsible for assimilating change in class, their attitudes are critical in the success or failure of changes in teaching (Fullan, 2001). In respect of integrating technology into education, for example, our research shows that teachers understand the need for change and consider it important to make progress by adopting innovative technologies and teaching methods, but are not confident enough in these technologies and in their own ability to assimilate them to assure meaningful change. Consequently, the process of assimilation is impaired.

The difficulty that the education system and its stakeholders—pupils, teachers, principals—encounter in adjusting to rapid changes in communication, technology, and global innovation in the internet era is associated with the bureaucracy that pervades the education system and makes change at the local and national levels difficult. No less, however, all players in the system suffer from a mental block that impedes them in seeing how the role of teaching and the learning process should take place and should be seen as taking place.

Another challenge is the way parents perceive the innovation processes. According to the teachers who were interviewed, many parents want to see change in learning methods and pursue this cause relentlessly. From their standpoint, however, innovation boils down to technology-based teaching methods and no more. In this spirit, parents meddle in the educational work and present demands and even complaints to teachers who, they say, fail to encourage innovation. One of the women teachers said as much: “I’m not against a parent getting involved, but he mustn’t interfere. And there’s this vanity: They say that everything technological is new. It’s innovative education. Parents often come up to me and complain that I’m not a good enough teacher […] because I don’t encourage innovation […] innovation as they perceive it, of course.”

Despite the general consensus about parents’ ability to challenge innovation processes, several interviewees pointed to a challenge flowing from their Palestinian national background. Five interviewees indicated that even as the State of Israel is considered a leader in the field of innovation (Barber, Donnelly, & Rizvi, 2012), its Arab population is sometimes left out in budgeting, as Blass (2018) documents. Inequality in education also manifests itself, according to the interview findings, in specific innovation-promoting programs. Teachers asserted that Arab schools face exclusion in budgeting, causing the possibilities of promoting innovation processes to dwindle if they exist at all. A woman interviewee remarked, “Really, there’s no way to accept all the programs. […] Everything requires budgeting. Even if I want to go ahead with an innovation program, it’s not really up to me. Palestinian schools don’t get the same support.”

Many interviewees offered a different interpretation, one related to the social and economic characteristics of the Palestinian population in Israel. As they see it, poverty is the main challenge. Most pupils in the Arab education system are of low socioeconomic status: more than two-thirds of Arab children in Israel (68.9 percent) as against 23.7 percent of Jewish youngsters (National Insurance Institute, 2013). A poor population, the interviewees explained, sometimes lacks the emotional and economic inclination to assimilate an innovative process. One teacher expressed it thus: “A poor child has no spare room for innovation […] at least not the kind that we offer. So if I bring in computers […], get a budget, and give a computer class even though I know that the pupils in my class are poor, that they don’t have computers […] what have I accomplished? Innovation? I’ve done the opposite: I’ve made them feel bad.”

These challenges indicate that when we wish to analyze the process of innovation in education, we should treat it like teaching a new language in a standard and culturally sensitive way, which would accommodate the range of the various consumers of innovation—such as students or society at large, as well as those who deliver it, such as teachers or the education system—a language that speaks to the needs and singularities of each education system and of every society that has one.

Innovation as a Language

Despite the immense challenge that the teachers found in assimilating the language of innovation, they offered recommendations that may help the process along in any school—with emphasis on Palestinian schools in Israel—and that may even mobilize every teacher as a partner and make innovation programs more likely to succeed.

First, the teachers regard innovation as a comprehensive process that addresses itself to all systems and programs at the school and not as just another project or scheme. Innovation, they say, is a language that schools and teachers should adopt, a language that should correspond to the needs of society and, within it, the education system. Without such a language and such a process, they insist, every innovation program is doomed to fail.

The interviews explained that to impart a language of innovation, a preliminary process is needed and the entire educational team should be mobilized for it. In this process, a language of full partnership should be created and the question of the content and, foremost, the purpose of the innovation should be discussed. This is the overarching question in assimilating an innovation; it should be the point of departure from which the path forward should be paved and on which any innovation program should be built. One of the teachers expressed this point: “Before we introduce any innovation program, we have to ask why? What? Whom does it really serve? This should be the language of innovation—in fact, this is the innovation.”

The teachers said that, to carry out educational innovation, preparatory steps are needed and an organizational culture should be created that allows its participants to broach ideas, learn from each other, learn from errors and successes, and leave room for experimentation even if there is no assurance that the experiment will succeed. These aims resemble the argument raised by Hargreaves & Giles (2002), who looked into the conditions that innovation processes need if they are to persevere. Just the same, the interviewees realized that instilling a new cultural language comes at a steep price. They are fully aware that assimilating innovation, educational entrepreneurship, and start-up conduct as essential values in education entails continual investment and intensive involvement in learning, development, evaluation, and feedback (OECD, 2019).

The investment should be proportionate to an internal difficulty that many teachers have: the feeling that adopting an innovation means abandoning their existing working methods. This belief, along with the sense of dire threat that it engenders, shows that teachers are afraid of changes and what they may imply for their status (Zimmerman, 2006). The interviewees maintained that if the process is gradual, sensitive to teachers’ needs, and drawn from existing forces, an innovation program may be successfully assimilated. One teacher presented it thus: “It should be explained to teachers who are afraid that adopting one language does not have to mean giving up the other language; instead, it means adding new words to our lives […] that are adjusted to our culture.”

The meaning of “adopting a language” is that every teacher must ask him or herself whether the innovation is suitable in terms of pedagogy, values, and the advancement of his or her goals. To answer, teachers should examine the program in depth to see whether it is suited to the pupils and to themselves and, if they do find it suitable, should determine in what way it is suitable and promotes their values. The interviewees claimed that the current definition of innovation serves neither their own values nor disadvantaged population; on the contrary, it may widen disparities. This perception causes them to experience a sense of failure.

One of the teachers said, “Today, the innovation programs serve only the strong […] not the excluded; therefore, they need to be really overhauled.” According to the literature, innovation studies have the declared goal of equipping pupils with “twenty-first-century skills.” The focus on these skills indicates that an ideology originating in global economic and social changes has made its way into the educational discourse, a circumstance that is instructive of the influence of political and economic power centers (Ben-Peretz, 2009). Most of the interviewees wondered, as one of them said, “Who’s defined as a twenty-first-century person? Is the definition tailored to different cultures and doesn’t it widen the gap?”

The interviewees’ feeling that innovation widens disparities troubles many researchers, entities, and countries. For example, the OECD is running a comprehensive innovation project in response to the need to deal with disempowered social groups that lies at the bottom of the income scale. Its purpose is to show how innovation may be of utility to these groups by reconciling existing technologies, goods, and services with their specific needs (OECD, 2015).

In view of this argument, there is something unique in the definition of innovation that should be considered when an attempt to assimilate a process of pedagogical innovation is made. About half of the interviewees mentioned the need, first of all, to clarify the meaning of innovative education as teachers and other stakeholders in the process see it. Most of those interviewed agreed that innovation means making learning more intriguing, better adjusted to our changing world, more enjoyable, and, no less important, encouraging of the exalted goal of creating a better world and making students the agents of social change. As one teacher said, “I want to change the world by means of innovative education. […] I want to create a world that children will be prepared for […] maybe not totally, but they should know how to solve existential problems such as poverty, the environment, etc. […]. That’s a twenty-first-century person, isn’t it?”

It is the teachers’ belief that education, in its broad sense, is meant to promote the creation of a more enlightened world. In the opinion of many teachers, even when technology is used to create innovation in school, the aim in doing so is to narrow gaps, save lives, encourage peacemaking, and promote other causes. Many teachers also wish to restore the crucial and important role of the teacher: instead of being a mere communicator of knowledge, teachers should revert to being educators for life by engaging in educational activity that will encourage future generations to think outside the box, be creative, and have the audacity to believe that they can change the future for the better, particularly in view of the many changes under way and the sense that humankind is facing multiple perils.

“We teachers are educators before everything else. We’re not just founts of information; we impart values. That’s our mission: to teach values such as equality, responsibility, and acceptance of the other, that will allow humankind to progress. […] This is really how our efforts will create the greatest utility. It’s also true in the pedagogy that we bring to the classroom. This, too, should be included in deep thinking about what’s appropriate in value and pedagogical terms. If we adopt this approach, we will restore the lost luster—a teacher for life,” said one of the participants.

In the past few decades, the community of educators has embraced the belief that a school should aim to prepare pupils for life in a knowledge-based society and should equip them with the skills to be perpetual learners, which will help them adjust to a changing world (Fisher, 2000). In practice, this means revising activities and instrumentalities such as curricula, learning materials, organizing of learning, lesson plans, tools, and resources, so that all these reflect the philosophy of preparing for a life of continual learning. Romero (2009) warns against squandering the wealth of knowledge that hides behind the enormous quantity of anonymous local educational initiatives. In her opinion, new practices will lead to radical and non-gradual change that will attenuate effects such as socioeconomic and culturally inequality, giving both the deprived and the non-deprived better access to the experimentation and knowledge that are crucial to the creation of equal opportunity and participation—issues that are largely disregarded.

According to our interviewees, innovative education is possible even without advanced technology, robots, or any resource-intensive program in class. The school, they claim, exemplifies the fact that what matters in innovative learning, more than modern technology and sophisticated resources, is change in thinking about what learning is, under what conditions it is optimally implemented, and how and for what purpose teachers should teach. One of the teachers whom we interviewed exemplified this: “It seems that we’ve forgotten why we’re teaching. We want to repair the world and education is the way to do it.”

Some of the teachers singled out innovation as an especially important tool for a Palestinian population that is considered excluded in many ways, including budgeting, particularly in view of its singular social and economic characteristics. Innovation is much more important in the Palestinian context, the teachers say, because it can create a better future for the new generation. In this context, the purpose of innovation changes accordingly. One teacher said, “I think I bear a heavy responsibility as a Palestinian teacher. If I can teach my pupils that there’s hope and that they can solve social problems […] I’ve enabled them to dream […] an ability that many of my pupils have already lost.”

Comparative local and international studies, such as Israel’s national evaluation tests, indicate that the socioeconomic gaps in Israel are producing disparities in education that are wider than those in other developed countries (Chanan, Casali, & Herskovitz, 2013). Our study shows that the lower the student’s personal socio-economic background, his or her parents’ schooling, and the household’s per-capita income, the weightier and more important the education system and the school become as potential agents of success in studies, assimilation of positive values and rules of behavior, and narrowing of socioeconomic disparities. Given the grim background of most Palestinian schoolchildren, the weight of the education system as a possible agent of scholastic success has grown immensely, and the young increasingly rely on the education system to facilitate and pave their way to attain education, schooling, and optimal occupational and social integration (Belikoff, 2014). This argument, in fact, may explain the way Arab teachers perceive innovation programs as possible vehicles of improvement in Palestinian children’s future and, perhaps, in all of Israeli society, in view of its multiple challenges.

These data contradict the claim, expressed by some of the interviewees, that innovation programs are hard to implement among a disempowered and low-income population group. Several teachers argued that the vague definition of innovation has created the illusion of zero innovation in Israel’s Palestinian schools. The moment one understands the importance of innovation specifically for a struggling population group such as the Palestinians, they say, at a time when teachers are allowed to be partners who can define innovation in their own way and in accordance with the needs of the population and can extend the definition of innovation to a broader horizon, one can find evidence of innovative pedagogy that aims to serve society.

The interviewees did specify local innovative initiatives that are meant to serve students and the population by improving their social, economic, and environmental situation. This finding corresponds with Widden’s (1995) distinction between two types of innovations: those at the inclusive (national or regional) level and those at the local one. At the local level, some programs are meant to encourage reflective professional identity and strengthen sensitivity to social justice. One of our teachers raised this kind of argument: “If we examine our innovative initiatives, we’ll see lots of projects. […] If they define innovation correctly […] that is, creating a better world and equipping children with tools that will improve their future, we’ll see that many teachers are doing tremendous, even life-saving work that no one thinks is really innovative. […] But when you define innovation as identical to the introduction of technology, few schools would qualify as innovative.”

This finding corresponds to that of Leadbeater (2012), who reports that innovation in education often takes place precisely in resource-constrained venues. Radical innovation, he asserts, often comes specifically from places where resources are desperately lacking, demand is intense, and the resources that would allow traditional solutions to work do not exist. Leadbeater then explains that education should begin with inducing change in the definitions of those being taught.

Conclusion

Education is the key to narrowing social disparities between center and periphery in Israel. Therefore, it is specifically in the periphery that the most profound and vigorous educational thinking and work should take place. Additionally, thought should be given to how to implement ideas of educational innovation and entrepreneurship in order to mobilize them for the cause of narrowing disparities, thereby giving these ideas a more social dimension.

In this context, the literature does propagate the assumption that innovation is merely the integration of technology into teaching. However, it also refers to teaching methods that encourage active and processive study that creates critical thinking, among its other benefits (Gibson, 2010).

Belikoff, M. (2014). *Sikkuy report 2014: Gaps between Jews and Arabs in the education system—physical infrastructure.* Jerusalem and Haifa: Sikkuy Association (in Hebrew).

Endeweld, Miri; Heller, Oren; Barkali, Netanela; & Gottlieb, Daniel (2013). *Poverty and social gaps report for* *2012*. Jerusalem: National Insurance Institute (in Hebrew).

Leadbeater, Ch. (2012). Innovation in Education: Lessons from Pioneers around the World. London: Bloomsbury Academic.

The school must take account of specific cultural-identity elements that exist in its operating environment and tailor its curriculum to them.

Blass, N. (2018). *The education system: an overview.* Jerusalem: Taub Center for Social Policy Studies in Israel (in Hebrew).

Zimmerman, J. (2006). Why some teachers resist change and what principals can do about it. NASSP Bulletin, 90 (3), pp. 238-249.

Giorgi, A. and Giorgi, B. (2008). Phenomenological psychology. In C. Willig and W.Stainton-Rogers (Eds.), *The Sage Handbook of Qualitative Research in Psychology.* London: Sage, pp. 165-179.

Lieblich, A., Tuval-Mashiach, R. and Zilber, T. (1998). Narrative Research: Reading, Analysis, and Interpretation. Vol. 47. Thousand Oaks, CA: Sage.

Gibson, R. (2010). The “art” of creative teaching: implications for higher education. *Teaching in Higher Education,* 15(5), 607-613.

Wideen, M. F., & Grimmett, P. P. (1995). Teacher education at the crossroads. In M. F. Wideen &P.P. Grimmett (Eds.), *Changing times in teacher education: Restructuring or reconceptualization*? pp. 1-16. London, UK: Falmer Press.

Ben-Peretz, M. (2009). Policy-making in education: A holistic approach responding to global changes. Lanham, MD: Rowman & Littlefield.

Education for social justice

Sensoy, O., & DiAngelo, R. (2017). *Is Everyone Really Equal? An Introduction to Key Concepts in Social Justice Education,* Second Edition. Multicultural Education Series. Teachers College Press.

OECD (2015). *In It Together: Why Less Inequality Benefits All.* Paris: OECD Publishing.

Chanan, S., Casali, N., & Herskovitz, A. (2013). Is Israel's rank on international achievement tests really surprising? Jerusalem: the Hebrew University of Jerusalem, School of Education.

Romero, M. (2008). Situated pedagogies, curricular justice and democratic teaching. In *Innovating to Learn, Learning to Innovate*. OEDC: Center for Educational Research and Innovation.

Barber, M., Donnelly, K. & Rizvi, S. (2012). *Oceans of Innovation*. London: IPPR. 115-135.

Bibliography

[**https://www.oecd-ilibrary.org/docserver/9789264229488-en.pdf?expires=1552902305&id=id&accname=oid057488&checksum=ED85A02706105E8602A7AA51C451A8B6**](https://www.oecd-ilibrary.org/docserver/9789264229488-en.pdf?expires=1552902305&id=id&accname=oid057488&checksum=ED85A02706105E8602A7AA51C451A8B6)

[**https://www.google.com/search?safe=strict&biw=1280&bih=610&ei=pnKeXK6dK4bYwAKIxZCoCw&q=PERROTA+2013+IMPERATIVES+&oq=PERROTA+2013+IMPERATIVES+&gs\_l=psy-ab.3...88248490.88273595..88274556...8.0..0.326.7075.0j16j16j1......0....1..gws-wiz.....6..0j0i10i42j0i10j0i30j0i13i10i42j0i13i10j0i13i30j0i13j35i39j0i131j0i67j0i22i10i30j0i13i5i30j0i8i13i30j33i160j33i21.b792jXMLLyc**](https://www.google.com/search?safe=strict&biw=1280&bih=610&ei=pnKeXK6dK4bYwAKIxZCoCw&q=PERROTA+2013+IMPERATIVES+&oq=PERROTA+2013+IMPERATIVES+&gs_l=psy-ab.3...88248490.88273595..88274556...8.0..0.326.7075.0j16j16j1......0....1..gws-wiz.....6..0j0i10i42j0i10j0i30j0i13i10i42j0i13i10j0i13i30j0i13j35i39j0i131j0i67j0i22i10i30j0i13i5i30j0i8i13i30j33i160j33i21.b792jXMLLyc)