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The Preconditions of Institutional Change in Schools

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The "**Future Challenges to Education Systems in Central Eastern European Context**" (EDUC, https://cps.ceu.edu/research/educ) is a two year comparative research project aiming at assessing the ability of the education systems of five Central-Eastern European countries to adapt to various ongoing changes, such as technological changes and their impact on labor markets, demographic changes, populist politics and autocratic governance, old and new inequalities, changing gender roles, globalization, etc. The research focuses on the adaptability of education systems determined by the interplay between governance and the institutional operation of schools in Poland, Hungary, Slovakia, Serbia and Romania.

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ABOUT THE AUTHORS

Agnes Kende is a research fellow at the Center for Policy Studies of Central European University in Budapest, Hungary, working on the project "Future Challenges to Education Systems in Central Eastern European Context (EDUC)". Her special field of interest is educational policy analysis and evaluation, equity in education and school segregation of Roma students. She can be contacted at kendea@ceu.edu.

The paper was reviewed by **Peter Rado**, research fellow at the Center for Policy Studies, Central European University, Budapest, Hungary.

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CENTER FOR POLICY STUDIES
CENTRAL EUROPEAN UNIVERSITY
Nádor utca 9, 1051 Budapest, Hungary
http://cps.ceu.edu, cps@ceu.edu

THE PRECONDITIONS OF INSTITUTIONAL CHANGE IN SCHOOLS

Agnes Kende

1. CONTENTS

1. INTRODUCTION

EDUC research is focusing on the adaptability of education systems determined by the interplay between governance and the institutional operation of schools in Poland, Hungary, Slovakia, Serbia, and Romania. The overall purpose of the research is to examine global changes in the specific context of the aforementioned Central Eastern European countries in relation to two major questions: 1) what are the major incentives for, and the main obstacles to shifting to a form of education that is more personalized, that is oriented towards the development of adaptive skills, and that is more equitable; and, 2) how much are the various future challenges reflected upon in the educational policy discourse and the education modernization strategies of the respective CEE countries?

This literature review on institutional change in schools will on the one hand focus on the organizational changes in educational institutions that are required due to the challenges education systems need to face. These include the challenge posed by technology and its impact on the needs of and opportunities for work, the challenge posed by globalization, the challenge posed by demographic change, and the challenge posed by migration; on the other hand, we will also summarize the literature regarding the different challenges themselves. The potential response of education to these challenges means that the main education-related goal for every child must be to equip them, by the time they leave school, to face a world significantly different to the setting in which they grew up, with the resilience, adaptability, and courage to find new settings and occupations, however remote, which will offer their own children better prospects as their needs arise (Education 2030, 2017).

In the first part of the paper, the literature review will discuss discourses about the theory of educational change. The widespread understanding of educational change is that it involves large-scale, sustainable school transformation undertaken through the professionalism of educators. The next topic is organizational change in schools, in which change- and development-related efforts in schools and in education systems have been perceived as the primary managerial practice for improving student outcomes, while principal leadership has been identified as a key ingredient of these change interventions in creating positive outcomes in terms of educational change. The chapter on school effectiveness, accountability, evaluation, quality assurance, and school improvements highlights the different concepts. While school *effectiveness* focuses on student outcomes and the classrooms, schools, and systems associated with these outcomes, without looking at the processes that are needed to change the situation in the former, *school improvement*, in contrast, mainly concerns the process of change in classes, and, to a larger extent, in schools, without looking too much at the consequences for student outcomes. In the second part of the paper, I will present the thematic issues that pose challenges to education, such as political influence on education systems and the impact of globalization, gender, digital technology, demographic change, and migration on schools.

2. PROBLEM DEFINITION

Changes in education are dynamic, complex, and non-linear. The world is transforming rapidly due to technological innovation and increased interconnectedness among nations and cultures, despite the persistence of gaps in educational outcomes between and within countries, races, and variations in economic privilege (Garcia-Huidobro et al., 2017). As The Future We Want (OECD Framework, 9-20) underlines, "the educational institutions of our societies now urgently need to enable their students to become effective agents capable of life long self-directed learning, and equipped to communicate and interact with well justified assurance across the wide diversity of their fellow citizens and increasingly with those of other countries" (Education 2030, 2017:9). As Dunn underlines in the related background paper:

> *...our societies will need [...] to view the main aim of this education in a different way: more as the shaping of persons and their capacity for agency than as funding a quotient of units of pre-specified labour or a finite supply of pre-determined skills. The central skill they must generate as widely and amply as they can is the capacity to go on learning boldly across a lifetime. Boldness is rather obviously a property of persons, not of units of labour. It is also often highly disruptive in educational contexts, so schools in the past have often strained to confine it as narrowly as they can, and even now face some temptation to go on doing so. (Education 2030, 2017:9)*

One of the focal goals of our research is to explore the problem of school capacity building through which quality improvements in education are possible. "School capacity building can be defined as a set of coherent, deliberate strategies enacted at a whole school level to positively influence the knowledge, skills, and priorities of individuals" (Ho – Lee, 2016:13). Hopkins (2001) considers school capacity building to be a distinct approach to educational change, because it is designed to strengthen the ability of school members to work together to improve quality by providing them with the skills and knowledge they need to define problems, formulate solutions, and plan ahead.

The other focal target of our research is exploring the different external challenges posed to education systems. As Radó (2020:2) has stated in a theoretical paper:

> *The growing complexity of modern societies – and the introduction of mass education – has increased the number of issues for which we call on education to deliver long-term solutions. [...] Certain changes are ongoing in the societal, demographic, political, economic, and technological environment of schools that are imposing serious adaptation-related challenges on all schools and education systems and which will determine the alignment of strategies for educational change in the forthcoming years. Due to the fast acceleration of the speed of change, the reference points for strategic thinking are often fading into obscurity. In addition to this, the challenge that education systems need to*

> *face is not simply the impact of individual, isolated changes; it is the fundamental overall change created by the combined effects of all the technological, economic, societal and political shifts that are forthcoming in the very near future.*

3. DISCOURSES ON THE THEORY OF EDUCATIONAL CHANGE

3.1. Assumed Universality in Scaling Educational Change

The Programme for International Student Assessment (PISA) was established in 2001. However, while the use of the word "international" in the name indicates the intention of creating an open forum for addressing a plethora of ideas related to educational change (Hargreaves 2000), the work of earlier years was primarily representative of what we may call "the Anglosphere," a collection of English-speaking countries — including the U.K., the U.S.A, Canada, Australia, and New Zealand — that share certain key customs and values (Bennett 2002). Accordingly:

> *They tended to implicitly assume universal relevance, generalizing findings and theories from the Anglosphere to a global arena: a student was generally a student, regardless of nationality, culture, gender, race, social class, or ability; and a school was generally a school whether it was rural or urban, well-funded or under-resourced, or public or private. While 'assumed universality' is arguably a chronic phenomenon across a broad range of academic research, a field that conceptualizes itself as having global applicability (Hargreaves 2000) must continuously reflect upon this tendency. (Garcia-Huidobro et al., 2017:10)*

Generally characteristic of this period was "the big-picture perspective" that theorized how to scale educational change in a sustainable way (Fullan 2000; Goodson 2001; Leithwood et al. 2002; McLaughlin and Mitra 2001). Fullan (2000) argued that sustainable change needs buy-in from educators and the public, because ''they are all shareholders with a stake in the success of the system as a whole'' (Fullan, 2000:23). Goodson (2001) asserted that educational change must consider teachers' beliefs and motivations in order to be sustainable. McLaughlin and Mitra (2001) focused on the sustainable implementation of theory-based reforms developed in lab or university settings. These researchers identified three key hindrances to successful reform, including the design of a form of assessment able to measure the effectiveness of a reform that narrows the curriculum.

The big-picture narratives are related to the sustainability of educational change after decades of unsuccessful reform efforts (in the Anglosphere and elsewhere). During this period, educational change was conceptualized, at its core, as a form of large-scale public intervention, as undertaken in the Anglosphere. However, at this time Finland, South Korea, and Hong Kong had already implemented a series of systemic reforms and achieved the best results in the first PISA assessment, yet their processes were largely overlooked by most of the scientific work from this period (Garcia-Huidobro et al., 2017).

3.2. Emphasizing Equity and Context

This discourse was characterized by questioning the predominant managerial, top-down approaches to educational reform that were taking hold in this era, as well as challenging the presumption of "assumed universality." Work associated with this discourse brought to the fore issues of equity and inclusion and criticized the idea that market-based "New-Public-Management"-type policies would make educational systems fairer.

Giroux and Schmidt (2004) (and similarly, Fink, 2003 and Ainscow, 2005) argued that the emphasis of the No Child Left Behind Act (NCLB) of 2002 on high-stakes testing increased the systemic marginalization of minority and low-income students by "undermin[ing] teacher autonomy, impos[ing] hard restrictions on academic labor, disabl[ing] critical approaches to teaching and promot[ing] pedagogical practices that largely function to 'measure' student progress while simultaneously reproducing a tracking system that parallels… inequalities of the larger society" (Giroux – Schmidt, 2004:223).

Blackmore (2004) (and similarly, Rowan, 2002 and Roman, 2003) criticized such so-called "neoliberal" reforms that forced principals to behave as strategic managers within a competitive education market created by school choice.

Another topic related to this period was the transferability of educational reforms. Hargreaves (2002), Datnow (2002) and Stein et al. (2004) came to similar conclusions: transplanting external reforms without accounting for context tends to be unsustainable.

3.3. The Rise of PISA and the Convergence of Evidence

Leadership, professional learning communities (PLCs), school networks, etc. are the most common themes in this discourse, suggesting an overall shift toward collaboration and professionalism. The related work draws on PISA scores to argue for an increase in the focus on student learning and teacher professionalism in educational change. Schleicher (2007) emphasized that "[t]he competencies that PISA does assess are highly predictive for the future success of students. In addition, PISA provides policymakers and practitioners with useful tools to improve quality, equity and efficiency in education, by revealing some common characteristics of students, schools and education systems that do well" (Schleider, 2017:356).

In line with this idea that PISA provides information about high-performing educational systems, the Finnish educator Sahlberg (2006) criticized Anglo-American reform methods of standardization, high-stakes testing, and competition, arguing that Finland's chart-topping results stemmed from the opposite strategy: building a strong teaching profession, de-emphasizing testing, and encouraging system-wide collaboration.

Work from within this discourse indicated the shift from considering individual educators as the main units of change to analyzing communities of educators working and learning together. For example, Stoll et al. (2006) and Hipp et al. (2008) explored professional learning communities, finding them to be an effective means of creating sustainable change as they help educators to adapt their daily practices. Fullan (2006) stated that good principals are "system thinkers" who build stronger leaders who can take up the charge after them. The educators of this period emphasized the idea that teachers and principals are drivers — not just passive recipients — of change. "The most effective path for educational change lay in investment and trust in teacher/principal professionalism as opposed to

punitive, external controls over schools. This evidence included both educator perspectives and the international evidence provided by the high-performing systems in PISA" (Garcia-Huidobro et al., 2017:15).

3.4. Reflection and Anglo-American Pessimism

Common among this work is pessimism regarding Anglo-American reform practices — primarily those of the USA. Sahlberg (2010) claimed that such reform strategies (which were gaining momentum at the time around the world), together with generalized expectations that the primary function of schools was to further a nation's economic competitiveness, and that teachers and students were "caught in the middle of these…forces," generated a feeling that any opposition to these trends seemed "difficult or meaningless" (Sahlberg, 2010:47). This pessimism was captured well by Hargreaves (2009), who stated that "we are at the end of a disastrous decade of large-scale delusions and disappointments" (Hargreaves, 2009:94).

Many educators explored teachers' networks and organizations and found that collaborative practices for designing and assessing lesson plans had led to improvements in teacher planning and pedagogy, while at the same time increasing leadership and collaboration skills (Perry and Lewis, 2009, Datnow, 2011, Stoll, 2009, Daly – Finnigan, 2010)

Another topic within this discourse was accountability and testing. Educators claimed that accountability systems diminished teacher morale and professionalism, and led to superficial changes in teaching practices (Day – Smethem, 2009, Supovitz, 2009, Stoll, 2009, Sahlberg, 2010). Hargreaves (2009) argued that there was little evidence that test-based accountability had led to improved student outcomes, while Supovitz stated that "[t]he over-riding lesson … is that change in the testing system itself cannot resolve the deeper problems of the educational system. Reform itself has become confused with the instrument used to measure it" (Supovitz, 2009:222).

> *In sum, the works denoted an underlying crisis in the field, centered in an Anglo-American sense of helplessness regarding large-scale educational reform. This general pattern stood in contrast with the main characteristic of the previous period, which was the convergence of evidence around teacher/principal professionalism as the most effective path for educational change (as opposed to test-based external accountability over schools). In this sense, the contrast between the Finnish and the Anglo-American way, repeatedly pointed out by Sahlberg (2010, 2011), was at the heart of this period. (Garcia-Huidobro et al., 2017:17)*

3.5. Emergent Internationalization and Empiricism

Both PISA scores and the "Finnish Way" profoundly influenced the related discourse in this field (Sahlberg, 2011, 2015, Thuneberg et al., 2014).

Regarding empirical studies, Saunders (2013) and Pyhalto et al. (2012, 2014) found that teachers who considered that they played a more active role in the change process had more positive and comprehensive views of the reforms.

Ainscow (2012) described strategies for achieving equity within educational systems. He contended that "under appropriate conditions, greater collaboration within schools is a means for fostering improvements [...] and that collaboration between differently-performing schools can produce polarization within educational systems, to the particular benefit of learners who are performing relatively poorly'' (Ainscow, 2012:296).

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Mainstream educational change theories were initially generalized through Anglo-American perspectives to the rest of the world. Despite this, PISA provided evidence that educational systems that used different strategies to those adopted by the USA and the UK achieved better student learning outcomes, pushing Finnish and East-Asian experiences of educational change to the forefront of discussions in the field (Garcia-Huidobro et al., 2017).

The widespread understanding of educational change is that it involves large-scale, sustainable school transformation through the professionalism of educators. This understanding equates educational change with sustainable school reform. The assumed narrative that educational change involves improvements in teaching and school administration (which emerged as a research focus in the USA around the 1960s) became of global concern due to the economic push for more skilled labor to sustain national competitiveness (Sahlberg 2006). The common factor in theories of educational change is a focus on educators, teachers, and administrators as key actors in educational reform. Fullan unfolds the need to sustain collaborative professionalism throughout schools and to focus on deep learning for all students in order to accomplish reform. The former author also draws ideas from a recent book (Fullan, 2018) to explain how collaborative professionalism is "fueled by both good autonomy and good teamwork," with the aim being for teachers to interact with one another to achieve the best results from the students they work with. Fullan continues by describing how the root of deep learning is linked to six global competencies – character, citizenship, collaboration, communication, creativity, and critical thinking. Character refers to qualities of the individual that are essential for being personally effective in a complex world, including grit, tenacity, perseverance, resilience, reliability, and honesty. Citizenship involves thinking like a global citizen, and considering global issues based on a deep understanding of diverse values with genuine interest in engaging with others to solve complex problems that impact human and environmental sustainability. Collaboration refers to the capacity to work interdependently and synergistically in a team with strong interpersonal and team-related skills, including the effective management of team dynamics, making substantive decisions together, and learning from and contributing to the learning of others. Communication entails mastery of three forms of fluency: digital, writing, and speaking, tailored for a range of audiences. Creativity involves having an "entrepreneurial eye" for economic and social opportunities, asking the right questions to generate novel ideas, and demonstrating leadership that puts those ideas into practice. Critical Thinking concerns critically evaluating information and arguments, seeing patterns and connections, and constructing meaningful knowledge and applying it in the real world. In deep learning work, rather than using sequential thinking (implementing a pilot and then scaling up), the idea of simultaneous learning is utilized through people learning from one another, creating a collaborative culture. The overall objective of Fullan and his colleagues' work is strengthening the middle level (districts) and the bottom level (students and their schools) so that they are less at the mercy of policies from the top. Simultaneously, in the eyes of the former, schools and communities are viewed as proactive partners that move upwards as they take into account and influence policy. While Fullan (2000) argued that

sustainable change needs educators' buy-in, Goodson (2001) stated that teachers' beliefs and motivations must be considered for reforms to be sustainable. The emphasis moves from investing in (and trusting) educators' professionalism to be the most effective path for sustainable educational change to studying teachers' emotional responses to reform in relation to their feeling that they are playing an active role in the latter. Along with the emphasis on educators, the significance of school networks, school districts, and larger educational systems indicates another aspect of the predominant concept of educational change: it assumes a large-scale perspective, linked to organizational and managerial considerations. Taking an opposing stance, Oakes and Lipton (2002) argued that educational change will be neither sustainable nor equitable unless marginalized communities are permitted to articulate their interests and play key roles in driving educational change — considerations that are less emphasized within mainstream educational change approaches such as those of Leithwood et al. (2002).

4. ORGANIZATIONAL CHANGE IN SCHOOLS

Change and development are a prevalent issue for schools and educational systems.

> *Improving and sustaining student outcomes in the face of various forces of change originating from demographic, technological, political, and economic developments have been pushing schools and education systems to undertake frequent change interventions. Depending on the characteristics of individual educational systems [,] change interventions exhibit different natures (pace, linearity, and scale) and origins (top down vs. bottom up). (Beycioglu – Kondakci, 2014)*

The emergence of worldwide PISA movements put organizational change on the top of the agenda for school and education systems. The change and development efforts in schools and education systems have been perceived as the primary managerial practice for improving student outcomes, while principal leadership has been described as a key ingredient of these change interventions for creating positive outcomes in educational change (Beycioglu – Kondakci, 2014).

Cuban (2013) argued that frequent structural, curricular, and cultural changes result in minimal improvements in teaching practices. Educational change interventions have been criticized for failing to bring about system-wide sustained change (Fullan, 2006; Payne, 2008). School change targets improved student outcomes rather than focusing on the change process itself. Additionally, financial limitations, conceptual ambiguity, negative attitudes toward change, a negative history of change, excessive fragmentation, work overload, and a lack of participative practices lead to limited success with educational change interventions (Fullan, 2000; Hargreaves, 2004; Walker and Qian, 2012).

According to several educators, the dominant change perspective, which is characterized as planned, top down, fragmented, and discontinuous, is basically incomplete in terms of the reality of change in organizations (Tsoukas and Chia, 2002; Langley et al., 2013; Orlikowski, 1996; Weick and Quinn, 1999, Gallucci, 2008; Honig, 2008; Louis Seashore, 2008; Stein and Coburn, 2008). Instead of a top-down, fragmented, and discontinuous theory of organizational change, other scholars suggest a continuous change approach, which involves taking a complete and holistic perspective about change

(Jansson, 2013; Langley et al., 2013; Lok and De Rond, 2013; Sandberg and Tsoukas, 2011). For example, Louis Seashore (2008) argued that change occurs incrementally, on a small scale, and mostly in the form of adjustments by organizational members as a response to stimuli. In this regard, change is emergent and unfolds on a continuous basis rather than being a product of planned and top-down effort. Fullan (2006) criticized this individualized and incremental approach to change for being inherently slow and failing to bring about sustained improvements at scale. However, distributed leadership, extensive participative management practices, knowledge sharing, and increased interdependencies among system units eliminate the risk of losing or failing to recognize such individualized, informal, and small-scale changes. Collective capacity and distributed leadership are particularly instrumental for increasing the capacity of organizations to retain small-scale, incremental changes and make them part of ordinary organizational practice. Several scholars have suggested a variety of different managerial practices and tools that are compatible with collective capacity and distributed leadership which can potentially facilitate continuous change in educational organizations. Tolerance of ambiguities and the ability to respond to emergent local needs (Gallucci, 2008), building networks and practice communities (Stein and Coburn, 2008), and sustaining collective learning (Boyce, 2003) are some of these managerial practices (Beycioglu – Kondakci, 2014).

Fullan (2006) indicated the need for a new form of change leadership which goes beyond increasing student achievement and aims at increasing sustainability in organizations. The former claims that accomplishing large-scale change depends on a mastery of leadership in terms of linking sustainability with systems thinking. Interorganizational interaction enables lateral capacity building, and when the latter accumulates among different school leaders, actual change happens. According to Fullan (2006), leading on your own does not represent a meaningful contribution, unless leadership skills are developed on the part of organizational members. Hence, distributed leadership acts as a means of building collective capacity and the capability to accomplish change. The former relies on referent bases rather than role responsibilities. Collective capacity (collective talent and ability within an organization) facilitates collaborative learning and the acquisition of new skills, relies on mutual support, and is motivated to undertake the challenging task of change (Beycioglu – Kondakci, 2014).

Intercultural differences have been under investigated in educational change literature, although they represent a key element of change and development efforts (Louis Seashore, 2006). Applying an intercultural perspective towards educational change is particularly important because of system variety. Although education systems dramatically differ across the world, scholars rely on similar theoretical frameworks for explaining change, and practitioners adopt similar practices in implementing change.

Educational change theories have been developed for decentralized educational systems in which policy makers enjoy extensive authority over decision making and decision implementation. However, the limited effectiveness of dominant educational theory in centralized systems should not mean restraining or compartmentalizing educational change theory and practice into a single system. Rather, as stated by Chen and Ke (2014), experiences in different cultural settings should breed context-sensitive management research that captures contextual features and understands context-embedded logics. The former authors argue that contextual sensitivity can be made possible by understanding leadership and management as cultural constructs and practices (Beycioglu – Kondakci, 2014).

5. SCHOOL EFFECTIVENESS, ACCOUNTABILITY, EVALUATION, QUALITY ASSURANCE, AND SCHOOL IMPROVEMENTS

Objectives and criteria related to the quality of schools are defined in connection with the effectiveness of schools. Problems associated with the development of quality schools can be detected by evaluation processes, while accountability in schools helps with identifying the performance of the institutions. Managing educational change in schools concerns quality assurance related to school improvements. In the next section, I will highlight the literature about the different approaches and perspectives of these interrelated concepts in order to highlight the different elements of educational change in schools.

Research into school effectiveness focuses on student outcomes and the factors of the classrooms, schools, and systems associated with these outcomes without looking at the processes that are needed to change the situation in the related areas. School improvement, in contrast, mainly concerns the process of change in classes, and to a larger extent in schools, without looking too much at the consequences for student outcomes (Creemers & Reezigt, 1997, Reynolds et al., 2000).

5.1. School Effectiveness

Researchers have used several theoretical orientations to help explain why certain factors are associated with student learning outcomes (Scheerens - Bosker, 1997). The economic approach focuses on estimating the relationship between the ‘‘supply of selected purchased schooling inputs and educational outcomes controlling for the influence of various background features’’ (Monk, 1992, p. 308). This approach seeks to produce a function which could explain each pupil’s outcome at a given time (Brown - Saks, 1986). Emerging ‘‘education production’’ models (e.g., Brown & Saks, 1986) are based on the assumption that increased inputs will lead to incremental increases in outcomes.

The psychological perspective involves investigating the process of learning, and mainly focuses on variables at the student level. Educational psychologists focus on students’ background factors such as “learning aptitude,” “personality,” and “motivation,” and on variables that measure the learning processes which take place in classrooms. There has been interest in identifying and understanding the features of effective instructional practices which lead to the development of a list of teacher behaviors that are positively and consistently associated with students’ achievements over time (Creemers, 1994; Brophy & Good, 1986).

The sociological and organizational perspectives on effectiveness focus on factors that define the educational and family background of students, such as SES, ethnicity, gender, social capital, and peer group. Studies from a sociological perspective explore the effect of contextual factors (Opdenakker - Van Damme, 2006) and the extent to which teachers and schools are equally effective with different groups of students (i.e., differential educational effectiveness) (e.g., Campbell et al., 2004). Process variables (such as school climate, culture, structure, and contextual variables) associated with sociological theories of organization have been treated as school-level factors in connection with student

achievement. According to Kyriakides, the structure of procedures (particularly school management) and culture have received the most emphasis in empirical effectiveness research, but the empirical basis for the importance of these factors still needs to be strengthened (Kyrkiades, 2018).

Multilevel integrated models of educational effectiveness were developed in the 1990s to integrate the findings of studies that used different perspectives. These models (e.g., Creemers, 1994; Scheerens, 1992; Stringfield - Slavin, 1992) had a multilevel structure, whereby schools were nested in contexts, classrooms were nested in schools, and students were nested in classrooms or teachers. Although these models made use of organizational theories and theories of learning and referred to multiple factors at different levels, each of them either has a focus on the classroom- (e.g. Creemers, 1994) or the school level (e.g. Stringfield - Slavin, 1992). Depending on the focus, more emphasis is given either to theories of learning or to organizational theories. In contrast, the comprehensive model of educational effectiveness (Creemers, 1994) was considered to be one of the most influential integrated models to be developed in the 1990s (Teddlie - Reynolds, 2000), because the relationship between factors at different levels might be more complex than assumed in integrated models. The interaction effects among factors operating at the classroom and student level reveal the importance of investigating how effectiveness varies and taking into account the dynamic nature of educational effectiveness. According to Kyriakides, effective schooling should be treated as a dynamic, ongoing process (Kyriakides, 2018). The "dynamic model" by Creemers and Kyriakides (2006) builds on the "comprehensive model" of educational effectiveness developed by Creemers (1994). This model has much in common with other integrated, multilevel educational effectiveness models, such as those developed by Scheerens (1992) and Stringfield and Slavin (1992). Common characteristics of these models are that they combine school-level and classroom-level factors that impact achievement, while the level of the larger context of school is sometimes included as well. The basic rationale of these models is taking the primary process of teaching and learning as the core starting point of development. School-level conditions are seen as having the potential to facilitate effective teaching factors, which has led to specific interest in cross-level interaction (Bosker - Scheerens, 1994). Creemers' comprehensive model defines quality, time, and opportunity as the basic ideas behind school- and classroom-level factors (Scheerens, 2013).

Learning outcomes approach

> *The learning outcomes approach has changed the way we design qualifications. Focusing on what a learner is expected to know, be able to do and understand at the end of a programme or course, outcomes-based qualifications provide students, teachers and labour market stakeholders with a common reference point, potentially allowing for improved and active learning processes, better quality teaching and more relevant qualifications. (Application of learning outcomes approaches…, 2016:6)*

The learning outcomes concept (and the closely related concept of competence) is rooted in behaviorist and constructivist theories of learning, which are very different schools of thought (Cedefop, 2010; Keevy and Chakroun, 2015). According to the behaviorist school of thought, knowledge, skills, and competences cannot be treated as isolated or decontextualized entities and subjects, but need to be addressed in the context in which they are situated (Lave - Wenger, 1991). The implications of this for defining and applying the learning outcomes approach is that learning-outcome statements (i.e. intended

learning outcomes) should be descriptive (not prescriptive), holistic, and defined from the perspective of the individual and their abilities (Cedefop, 2010; Anthony, 1996). The former are process- and context-oriented and avoid an overly rigid definition of outcomes. This open-ended approach respects individual diversity and the inherent richness of learning processes, but risks reducing measurability (Prøitz, 2014). On the contrary, the constructivist approach emphasizes the need to focus on outwardly observable ("objective") behaviors as reactions to stimuli. The implication of this perspective for defining, writing, and applying learning outcomes is profound: it requires outcomes to be described in specific (as unambiguous as possible), quantifiable, comprehensive and measurable terms (Application of learning outcomes approaches…, 2016).

Cedefop provides two interrelated definitions of the concept of learning outcomes: (a) learning outcomes are defined as "statements of what a learner knows, understands and is able to do on completion of a learning process, which are defined in terms of knowledge, skills and competence"; and, (b) learning outcomes are defined as "sets of knowledge, skills and/or competences an individual has acquired and/or is able to demonstrate after completion of a learning process, either formal, non-formal or informal" (Cedefop, 2014a:164-165). The relationship between these two definitions can be understood as the relationship – or feedback loop – between intended and actually achieved learning outcomes. The definitions and descriptions of learning outcomes as used in qualifications-related frameworks, qualification standards, and curricula are statements and expressions of intentions or goals. They are not outcomes of learning, but desired targets. Achieved learning outcomes can only be identified by following the learning process, and through the assessment and demonstration of learning in real life – for example, at work. The consistent application of learning outcomes requires continuous dialogue between intended and actual outcomes, with a view to improving stated expectations (intended learning outcomes) based on actually achieved outcomes. This explains why the learning outcomes approach is seen as important for strengthening the accountability of education and training systems. The increasing importance attributed to large-scale international assessments like PISA, the programme for the international assessment of adult competences (PIAAC), and the international comparative assessment of student achievements in mathematics and science (TIMSS), can be explained through this learning-outcomes feedback loop; assessing the actual outcomes of learning provides a basis for improvement and the development of institutions and policies. Further, intense dialogue between the world of education and work is crucial to the successful implementation of the learning outcomes approach; it allows substantial feedback loops on both sides. The focus on actually achieved learning outcomes brings us to the concept of competence, which is defined by Cedefop as follows: Competence is defined as the "ability to apply learning outcomes adequately in a defined context (education, work, personal or professional development)" (Cedefop, 2014a:47). Competence can be understood as actually achieved learning outcomes validated through the ability of the learner to apply knowledge and skills autonomously in practice, in society and at work. Learning outcomes are validated by their relationship to competences (Cedefop, 2012:35).

The whole-school approach (Radó, 2010)

The whole-school approach, one of the pillars of contemporary education governance systems, is the underlying basis for differentiating between the educational and public administration approach to decentralization. One of its major implications is the proposal of a firm boundary between service delivery and the systemic environment of service delivery.

The implications of reconsidered educational goals. Since goals are determined in terms of competencies, it is increasingly clear that their development cannot be assigned to the specific subjects of individual teachers. For example, teachers of language and literature cannot take credit alone for the high level of literacy of students, because this should also be credited to teachers of history, math, and biology, too. This also means that the work of different teachers who educate the same students may amplify (or extinguish) other individuals' impact on the development of certain competencies. Obviously, the outcome of learning is the result of the entire school. The implications of this statement for school operations are tremendous.

It is not only teaching that generates learning in a school. Teaching is not the only contribution of schools to learning. Apart from providing the setting for peer-group relations, the organizational aspects of "living in a school" are intentionally, but often unintentionally, also teaching. For example, this is the case with civic education; what a school models in this regard probably has a much deeper impact on the political socialization of students than when taught as a subject within which various electoral system are studied.

The limits of individual methodological innovation efforts. Our contemporary understanding of "good teaching" is based on the requirement of using a rich toolkit of methods for organizing learning and instruction. There are certain methods that call for a great deal of organizational flexibility. The traditional rigid rules of managing time, human resources, and space in a school are often the major obstacles to any meaningful change.

The limits of individual responsiveness to external expectations. Schools as organizations build on the potential of teachers to cooperate by fulfilling specific roles through a process of joint adjustment. Therefore, while it is increasingly regarded as unfair to define expectations for individuals in relation to their becoming an active part of the required organizational change that are beyond their capacity, expectations towards schools are becoming even greater. This approach has serious consequences as regards the required competencies of teachers. Organizational competencies are also emphasized here, as much as mastery of the methodology of instruction.

The limits of individual learning. Teachers, who are in charge of supporting the learning of others, should be "lifelong learners" too. Therefore, it is not unfair to apply the five conditions of successful learning to teachers:

- Motivated learning: feedback on the results of work, making success visible, and rewarding high performance, reducing additional tasks and duties, etc.
- An individual-level return to learning: career progress, compensation differentiation, etc.
- Access to information: individual performance evaluation, information about learning opportunities, access to good practices, primarily to those of other teachers within the school, etc.
- Access to learning opportunities: a rich offering of and easy access to learning opportunities within and outside of school (in-service training and capacity building embedded into school activities), etc.
- A culture of learning: "learning-friendly school policies," sharing of knowledge among teachers, etc. (Radó, 2010)

Here, it is important to draw attention to the fact that this (rather indicative) list does not contain anything connected to the personality of teachers. Of course, there are teachers who are more ready and able to learn than others for various individual reasons; teachers are as diverse as students. However, the "personality" of the staff of schools is not a governance matter; what is relevant from a governance point of view is the fact that all the aforementioned conditions for teachers' learning are features of an organization within which teachers work together. Therefore, the primary agent that is responsible for ensuring the conditions for teachers' learning is their own institution.

Who holds teachers accountable? As a result of the whole-school approach, individual teachers are increasingly being held accountable by quality evaluation systems. Indeed, many contemporary quality evaluation systems have been reorganized to enable them to hold entire schools accountable. However, in parallel with the withdrawal of state institutions from classrooms, schools should develop those internal mechanisms that hold individual teachers accountable. Ensuring professional accountability in the relationship between schools and their employees – in spite of the diversity of approaches and technical solutions that are applied – has become a basic requirement for schools in almost all European countries.

The poor impact of development. One specific type of experience nurtured a whole-school approach long before governance and management systems took note of the importance of realignment: that of educational development. Experts within various fields and topics of educational development readily acknowledge that schools cannot be "developed" from outside; it is only the self-guided and managed efforts of the management and staff of schools that are able to change anything. In addition, individual-level change is limited and unsustainable. All sorts of innovations that remain isolated within schools are very limited in terms of their scope, very poor in terms of their implementation, and very short-lived. Therefore, effective development (that is, the implementation of innovation of any kind), is, per definition, an organizational process.

All these arguments for going beyond the traditional teacher-centered approach to education drastically reestablish the very foundations of educational governance. The individual teacher is not the primary target of governance of education anymore; it is the school as an organization. Obviously, this calls for reconsideration of the traditional patterns of the organizational settings of schools. Also, all the functional instruments that are discussed in the following section should accordingly be redefined throughout the process of decentralization (Radó, 2010).

5.2. Accountability in the context of school-level change

From the late 1990s onwards there was pressure on the OECD to develop comparative international measures of school system performance (Henry, Lingard, Rizvi, & Taylor, 2001). The OECD response created what has become the annual report *Education at a Glance*, which provides comparative input/outcome measures of school system performance across the OECD member countries. This substantive move came with the OECD's creation of the Programme for International Student Assessment (PISA), first administered in 2000[1] (OECD, 2015).

1 In late 1997, the OECD initiated the DeSeCo Project with the aim of creating a conceptual framework to inform the identification of key competencies and strengthen international surveys measuring the competence level of young people and adults. This project, carried out under the leadership of Switzerland and linked to PISA, brought together experts from a wide range of disciplines who worked with stakeholders and policy analysts to produce a policy-relevant framework. Individual OECD countries were able to contribute their own views and thus inform the process. The project acknowledged a diversity of values and priorities across countries and cultures, yet also identified universal challenges related to the global economy and culture, as well as common values that informed the selection of the most important competencies (Pisa and the Definition of Key Competencies. Executive Summary. 2005. https://www.oecd.org/pisa/35070367.pdf.)

The power of governing was previously, and in many respects solely, exercised by the hierarchical government bureaucracies of nation states under the direction of elected politicians, but over the last few decades, there has been a move from government to governance (Ball & Junemann, 2012; Rhodes, 1997).

> *Central to this move to governance are processes of comparison of performance, the development of associated data infrastructures, and the involvement of non-State actors in the work of the State. Here we can see policy heterarchies and networked modes of governance that bring together a diverse range of government and non-government actors and that stretch beyond both the nation-state and traditional divisions between the public and private sectors. Indeed, the contemporary governance of schooling includes intergovernmental organizations (e.g., the OECD) and various non-governmental bodies, including transnational edubusinesses, philanthropic foundations, and not-for-profit agencies, in processes of policy production, enactment, and evaluation. Indeed, proponents of such networked modes of governance argue that it provides the flexibility, innovation, and external orientation necessary to adjust to changing economic and social conditions, and in ways largely unavailable to top-down bureaucratic government (Eggers, 2008; Scharpf, 1994). While this new arrangement sees government relinquish some of its 'privileged' position, it must be emphasized that "the [S]tate does not 'go away'" (Ozga, 2009, p. 158), but rather that it still possesses the ability to "indirectly and imperfectly steer networks" (Rhodes, 1997, p. 53). (Lingard - Lewis, 2016:390)*

Accountability in the U.S. school system

The most developed instance of top-down, test-driven modes of accountability, and the expression of a strong privatization agenda are found in the USA. The specific policies can be traced back to growing concerns about falling U.S. educational standards from the early 1980s, and the implied national "crisis" that would follow in its wake (Slater, 2014). After World War II, the USA looked purposefully abroad (i.e., "externalized") to international reference societies, supposedly for learning purposes and for the purpose of legitimating domestic educational reforms (Takayama, 2008).

> *Amongst the many recommendations, the foremost consideration was the development of standardized tests of student achievement at major transition phases during K–12 schooling. This was notionally to verify learning outcomes and to identify instances where remedial or advanced tuition was required to achieve more rigorous and measurable standards. Here we see the gradual dominant positioning of student performance testing in the USA, and the commensurate development of state and national regimes to effect such measurements. (Lingard - Lewis, 2016:393)*

Accountability in the Finnish system

Finland has adopted an alternative approach to school accountability that largely avoids the Anglo-American model. Sahlberg (2011) suggests that the latter model emphasizes standardized teaching and learning with a focus on literacy and numeracy, along with a prescribed curriculum framed by

test-based accountability and control, which can be starkly contrasted with the "Finnish way." The latter customizes teaching and learning, with a focus on creativity, risk taking, and learning from the past, within a culture of responsibility and trust for teachers across the entire schooling system, and in the absence of standardized testing. Finland's educational success in terms of its high quality and high level of equity was achieved not through short-term, politically expedient reform measures that were normatively "borrowed" from abroad, but arose from decades of systemic, and mostly intentional, education policy developments that were directed at meeting the specific needs of Finnish society, while paying (relatively) little attention to the dominant education policy trends of market-oriented reforms and standardization (Sahlberg, 2007). In the Finnish system there is high-stakes testing, and schools tend to collaborate rather than compete with each other. Finland basically only has government schools, which are attended by the vast majority of students. There is a high level of trust in teachers and principals based on historical reverence for them and their high academic and social standing, which provides space for professional judgement with reduced political oversight. These trusted teachers largely have a free hand with regard to the curriculum and can thereby recontextualize national requirements locally through professional judgement.

> *Although much 'education tourism' takes place through visits of international educators and policy makers to Finland, the lessons that might be learnt from the Finnish way have not been taken up in the face of the dominant Anglo-American model of schooling accountability. The explanation of this failure to learn from the Finnish way lies in processes of externalization, where reference societies are used largely to justify reforms rather than inform meaningful, and contextually aware, policy learning. (Lingard - Lewis, 2016:398)*

Accountability in most European education systems

The best way to grasp the characteristics of European quality evaluation systems is to make a comparison between the performance-oriented accountability systems in the United States and the quality-oriented accountability systems in Europe. To summarize the differences between the two kinds of accountability systems, performance-oriented accountability systems are based on student performance standards, on testing that is strongly connected to standards, and on consequences connected to the results of testing (Hamilton, 2003). Contrarily, quality-oriented systems are based on quality standards (and within these, performance standards), on the external evaluation of schools and assessment-informing evaluations, and on consequences connected to external evaluation. It should be emphasized that those countries that can be clearly categorized as having one or the other type of system are rather rare; however, on the basis of the key characteristics of quality evaluation systems every country may be more strongly identified with one of these patterns of accountability (Radó, 2007).

In the majority of European countries, the most important agents of educational policymaking are ministries that accumulate the necessary knowledge base and implement their policies according to their own publicly owned and managed agencies. Since policy decisions in Europe involve much more "expert" decisions than in the United States, policies in Europe are much less inclined to equate indicators and the indicated phenomenon (i.e. outcomes). In other words: for educationalists, measured performance is one of many components of the quality of education that matter. Again, this does not mean that cost effectiveness is not an important concern in European countries that are less governed

by lawyers and economists – which is not necessarily an advantage, anyway. We simply suggest that government-owned public agencies that have a monopoly on providing specific services on the basis of their legal mandate (e.g., inspectorates, curriculum and/or qualification-related authorities, national institutes for education, etc.) are much better suited to applying a sophisticated educationalist perspective (Radó, 2010).

> *The top-down, test-based modes of educational accountability that typify the Anglo-American approach have become a globalized localism, with uptake in vernacular, path-dependent ways in many schooling systems around the globe. This move has been complemented by the strengthening influence of the OECD's PISA, both inside the OECD itself as a prototype for other policy developments and more globally. The OECD is strengthening the scope, scale, and explanatory power of PISA, which has become an exceptionally influential education policy tool, used by nations for accountability and reform purposes. The latter has most often been through externalization to justify national reforms already under way. (Lingard - Lewis, 2016:398)*

5.3. School evaluation

> *School evaluation concentrates on key processes such as teaching and learning, school leadership, educational administration, school environment, and the management of human resources. It does so in association with an analysis of student outcomes, both the achievement/progress of students and the equity of student results. It also takes into account inputs such as the infrastructure, funding and characteristics of the school staff. (Synergies for Better Learning, 2013:384)*

> *There is an increasing focus on a need to maximise the benefits of external school evaluation activities, but to minimise the potential burden that these may place on school time. This is often in the larger context of public sector reform to place more emphasis on outcomes and impact, coupled with robust self-evaluation and a reduced, more proportionate approach to external supervision. It is also fundamentally linked to a concern to make more effective use of the resources available for external evaluation. (Synergies for Better Learning, 2013:386)*

The relationship between the internal and external evaluations of educational institutions has been a subject of discussion with regard to thinking about the subject of quality assurance in education. External evaluations in the form of school inspections always appear to have had a somewhat problematic existence. While everyone accepts the need for them, the way in which they have been carried out has always been heavily criticized (Norton Grubb, 1999; Nevo, 2001). For this reason – and also in response to recent trends with regard to decentralization and increasing autonomy for schools – evaluation methods have been developed in many countries which permit more participatory and self-directed forms of evaluation (Robinson - Cousins, 2004; McNamara - O'Hara, 2005). However, although the existence of self-evaluation is welcomed, the quality of this self-evaluation is nonetheless open to question. As long as schools are financed or subsidized by governments, forms of monitoring

will always have to be devised and schools will have to be held to account. The precise form which this ought to take is currently subject to considerable change, however (Van Petegem et al., 2005).

At present, the primary responsibility for educational quality lies with the school. The withdrawal of government is making schools increasingly autonomous in terms of their freedom to formulate and implement their own policy. In return for this autonomy, schools are being required to evaluate their own educational quality and to come up with their own plans for improvement. The parallel existence of these responsibilities has led governments, educational inspectorates, and schools to look for a way in which internal and external evaluations can be harmonized (Vanhoof - Petegem, 2007).

The *Guiding principles for policy development on quality assurance in school education* document issued by the European Commission presents research-based recommendations that point towards a need for greater coherence and synergy in quality assurance approaches – in particular, more effective interplay between internal and external mechanisms – in order to ensure that they effectively support school development and innovation.

> *This includes the Council Conclusions of 2014 on quality assurance in education and training, which called for supporting a culture of quality enhancement and trust. Conditions for effective quality assurance for school development include ensuring ownership of the process through meaningful dialogue and actions, and an opportunity for 'out of the box' thinking and creativity. The challenge for school education systems is to develop and sustain professional learning communities and cultures to support school development, with an emphasis on improvement more than quality 'control'. Whilst the focus here is on the governance of school education systems, the ultimate aim of quality assurance is to ensure that learners have the best learning opportunities possible. (Quality assurance for school development, 2017:1)*

"Quality means complying with expectations" (Harrington & Harrington, 1994). A school can be said to be functioning optimally (in other words, to be providing good quality education) when it meets expectations. These expectations come from both internal as well as external stakeholders. Although these are often parallel or complementary, they can also be contradictory. Quality thus involves meeting expectations in terms of results (i.e. effectiveness). However, effectiveness on its own does not amount to quality. It is not possible to make judgements about the quality of a school without taking into account the process which lead to the attainment of objectives in its entirety. Efficiency, for example, is an integral part of expectations drawn up by various stakeholders (i.e. value for money), but it should be clearly distinguished from expectations in terms of results. Various stakeholders may also have clear expectations with regard to manners in schools, or the didactic approach that is used (Vanhoof - Petegem, 2007).

There is a difference between internal and external expectations for schools. Within the group of school-external expectations, a further distinction is made about expectations which are anchored in the law, and expectations which are not legally anchored. Quality assurance is an umbrella concept which covers all activities undertaken to investigate, monitor, improve – and perhaps also even to make public – the quality of schools.

The difference between internal and external quality assurance essentially comes down to the question of who bears responsibility (Scriven, 1991; Nevo, 2001). If these activities are undertaken by the school itself, this is called internal quality assurance. Internal quality assurance means that the

monitoring, development, and improvement of educational quality takes place within schools, whereas in the case of external quality assurance the initiative for undertaking quality assurance activities lies with persons or institutions outside the school (e.g. an educational inspectorate or accreditation institution) (Nevo, 2001).

External evaluations by an inspectorate usually focus on policy, legislation and regulations, and educational performance (i.e. statutory expectations). Internal evaluation can in principle involve whatever topics the school believes are important. Many of the activities which schools undertake in the context of internal quality assurance are of a self-evaluatory nature.

> *Self-evaluation is a process, largely initiated by the school itself, whereby carefully chosen participants describe and evaluate the functioning of the school in a systematic manner for the purposes of taking decisions or undertaking initiatives in the context of (aspects of) overall school (policy) development. Self-evaluation is therefore not an end in itself, but - as described here - is explicitly related to school development and pupil learning. (Vanhoof - Petegem, 2007:262-263)*

5.4. Quality assurance policies in schools

> *Quality assurance policies, procedures and practices are part of school education systems in order to maintain and improve quality in education and to also meet national quality objectives. [...] Quality assurance is a way to ensure that a school education system is fit for purpose. It aims to support the attainment and maintenance of exiting quality standards in school education and also to enhance those, as well as encompassing the processes and practices which exist to support those aims. (Comparative Study on Quality Assurance…, 2015:22)*

There are two core functions of quality assurance: (1) accountability and maintaining standards; and, (2) improvement.

The standard-setting phase (1): activities related to this phase lead to the definition of quality standards in different areas of the school system such as learning outcomes, teaching standards, standards for learning processes (e.g. curricula, learning methods), standards for pupils' assessments, etc.

The accountability phase (1): activities and tools related to this phase provide information about the performance of individuals, schools, and/or the school system as a whole. Activities and tools include: schools' external and internal evaluations, staff appraisals, pupil assessment, and European and International tests and surveys such as the OECD Teaching and Learning International Survey (TALIS), TIMSS, or PISA

The improvement phase (2): activities and tools related to this phase aim to support quality improvement processes for individuals, schools, and the school system as a whole. They include requirements for the further training of school staff, school development or improvement plans, the provision of supportive material, counselling or methodological support by qualified advisors, networking activities, etc. (Comparative Study on Quality Assurance…, 2015)

"Quality assurance involves the systematic review of educational programmes and processes to maintain and improve their quality, equity and efficiency. While the design of quality assurance

mechanisms (tools, processes and actors) varies across national contexts, their common objective is to improve teaching and learning – with the ultimate goal to support the best outcomes for learners." (Quality assurance for school development, 2017:2)

Quality assurance approaches include external and internal mechanisms for schools. External mechanisms may include national or regional school evaluations and/or large-scale student assessments, and internal mechanisms may include school self-evaluation, staff appraisal, and classroom-based student assessments. Ideally, these support and reinforce each other. "This kind of productive synergy can ensure a clear focus on school development, providing data on aspects such as school climate and the well-being of all members of the school community, effective teaching and learning, and the impact of innovations" (Quality assurance for school development, 2017:2). The focus of quality assurance is not only on improvement but also on innovation that supports quality, equity and efficiency. Approaches to quality assurance may need to be adapted over time to better meet needs for feedback and decision-making across systems (Quality assurance for school development, 2017).

Many countries incorporate evaluations that are both external and internal to schools, which can complement and reinforce each other. School education systems that support the synergy of external and internal quality assurance mechanisms will have more resilience throughout the complex process of change.

The different country-level approaches to quality assurance are apparent not only in how they integrate external and internal mechanisms, but also in how they balance their accountability and improvement functions. There are concerns that "high-stakes" approaches to accountability may undermine school development. High stakes may include the denial of accreditation to schools that do not meet quality assurance standards, financial sanctions for schools, or impacts on teachers' careers or salaries.

Both accountability and improvement are important for ensuring the quality of processes, as well as outcomes. Mechanisms that include a focus on accountability typically include incentives that focus teachers' attention on central performance standards and the need to help all students succeed. Additionally, a focus on improvement ensures that data are used to identify needs, adjust school strategies, and motivate improvements in instruction. While there are concerns that high-stakes approaches may inhibit development and innovation and demotivate staff, countries have engaged in a variety of approaches to moderating their impact and placing greater emphasis on improvement. For example, a number of countries have highlighted the importance of moving away from quality assurance in the form of "control" to more open and "trust-based" approaches.

The balance of accountability and improvement is also relevant to internal quality assurance. At the school level there is some evidence that strong teacher-to-teacher trust, a collective focus on improving instruction and learning, and teacher experience are associated with higher levels of student attainment. In turn, teachers in more successful schools have higher levels of trust, which indicates strong internal control and accountability. Internal quality assurance mechanisms are most effective when they support collective teacher work, and are focused on improving instruction.

Teacher appraisal, which may be conducted externally (inspectors or local administrators) and/or internally (school management or peers), is another area where it is important to balance accountability and improvement. It is important to clearly differentiate between appraisal that is meant to help teachers to improve classroom teaching, and appraisal related to high-stakes decisions related to performance awards and/or career advancement. If teachers feel that there are career consequences attached to an

appraisal process, they are less likely to be open about areas where they feel they need to improve, thus missing out on an important opportunity for feedback and support.

External quality assurance mechanisms aim to provide objective, valid, and reliable data about school performance. For example, school inspectors, who are not part of the school community, may have an objective perspective about the school climate, the quality of development strategies, and teacher performance. As inspectors visit a range of schools, they also have the unique opportunity to share ideas about effective practice among schools. Inspection visits, as well as other inspection processes, appear to have direct, immediate, effects on the quality and responsiveness of school self-evaluation processes, and therefore school effectiveness. National (and international) student assessments provide valid and reliable data about the attainments of the general student population. However, the results of student assessments alone cannot create the more rounded perspective needed to support policy decisions related to resource allocation, programmes for supporting inclusion, curriculum development, and so on. At the school and classroom level, teachers will need to gather more timely and detailed data to adjust teaching to student needs. Different types of assessments (including both summative and formative ones) implemented over time will provide a more rounded perspective about individual student progress and needs.

Internal quality assurance, including school self-evaluation and teacher appraisal, support teachers to take collective responsibility for student learning. While schools may have access to central guidelines for school self-evaluation, staff may need to develop a consensus about goals and criteria for such evaluations. Staff may also need training on how to gather and analyze data (Quality assurance for school development, 2017).

Evaluation and assessment are integral parts of the innovation process. The implementation of educational innovation requires an assessment of the innovation's effectiveness that enables decision-makers to make necessary adaptations. Evaluation and assessment can be a means of validating innovations, and evidence about the impact of new approaches is essential for disseminating and sharing innovation successfully across the wider education system. Furthermore, evaluation and assessment can be a lever for driving innovation in education by signaling the types of learning that are valued. Developing curriculum innovation and innovative approaches to evaluation and assessment is likely to benefit from some discretion at the local and school level. Given the strong retrogressive effect of assessment on learning, evaluation and assessment also need to be brought in line with changes in expectations about what students should achieve, and innovations in curricula, programmes and pedagogy. Innovative programmes face additional barriers if the assessment systems in place do not capture their innovative features (i.e. the former lack the important learning goals that are emphasized in such innovative programmes). The use of ICT in evaluation and assessment may improve the response to pedagogical innovation (OECD: Synergies, 2013).

However, high-stakes assessments may undermine and inhibit innovation in education. The former approach – such as the publication of student assessment results at the school level, or financial rewards for schools and teachers on the basis of student results – are intended to incentivize teachers and schools to focus on the aspects being measured, and to provide information for school improvement. However, these high stakes also discourage the risk-taking necessary for innovation, and may often encourage teachers to "teach to the test." It is interesting to note that some settings such as vocational education schools and alternative schools (e.g. Montessori and Steiner schools), which are typically characterized as low-stakes ones, seem to provide opportunities for innovation. Many of the so-called

"authentic" and formative types of assessment that are used in mainstream and general education today originated in alternative or vocational schools (OECD: Synergies, 2013).

5.5. School Improvement

> *In school improvement research, a school's organisation is commonly understood as reflexive in relation to material and time, and should provide support for students and staff. Further, the school culture should be conducive to conversation and based on ideals of student-centred approaches (Kelley and Dikkers 2016). By this definition, school improvement refers to collectively supporting factors in the organization that enhance students' possibilities for learning in relation to a complex surrounding world. Thus, the focus of learning within the organisation is a central feature in a school improvement process (Harris et al. 2013). (Mogren et al, 2018:1)*

"Effective school improvement refers to planned educational change that enhances student learning outcomes as well as the school's capacity for managing change. The addition of the term 'managing' emphasizes the processes and activities that have to be carried out in school in order to achieve change/ improvement." (Creemers, 2002:3)

According to Creemers and Kyriakides (2009), effective improvement criteria are needed to evaluate school improvement:

- does the school achieve better student-related outcomes?
- does the school manage the change from old to new conditions that are necessary for increasing effectiveness successfully?

There are several educational and social scientific theories that can be used to explain the process of school improvement. These theories explore the importance of using specific strategies and taking into account specific factors for establishing a culture of improvement at the school level, such as shared vision and autonomy as pursued by schools, staff stability, and ownership (Creemers – Kyriakidēs, 2009). The creation of a climate that is encouraging to improving effectiveness is seen as essential for schools which are attempting to introduce interventions that will help them become more effective. The characteristics of the school culture must be satisfactory: schools must have shared goals and feel responsible for success. Other requirements include collegiality, risk taking, mutual respect and support, openness, and a positive attitude towards lifelong learning. Those schools which manage to establish a climate of trust, openness, and collaboration are among the most effective (Freiberg, 1999; Reynolds et al., 2002).

In Creemers and Kyriakides' dynamic model, the importance of the school climate is acknowledged, and, for this reason, not only are those actions taken to improve teaching treated as elements of effectiveness, but actions taken to improve the school learning environment are also considered essential characteristics of effective schools (Creemers & Kyriakides, 2008a). Teachers should be considered an essential lever of change, because such change is explicit in their classrooms and daily practices. "However, for effective school improvement, individual teacher initiatives are not enough. Teachers can succeed in achieving major changes in their classrooms with strong effects on student outcomes,

but these intervention programmes are not expected to have a lasting impact on the school as an organisation" (Creemers – Kyriakidēs, 2009:6-7). The dynamic model builds on the development of school-based programmes that aim to improve the quality of teaching at the classroom and school level, and aspects of the school learning environment that can contribute directly and/or indirectly to improving teaching practice (Creemers – Kyriakidēs, 2009).

One of the main characteristics of the dynamic model is that it is multilevel in nature:

- the teaching and learning situation are emphasized, and the roles of the two main actors (i.e., teacher and student) are analyzed
- school-level factors are considered to influence the teaching-learning situation through the development and evaluation of school policy in relation to teaching, and policy aimed at creating a learning environment at school
- the influence of the educational system is understood in a more formal way, especially through the development and evaluation of educational policy at the national/regional level

The above-described factors as societal values related to learning and the importance attached to education play an important role in shaping teacher and student expectation, as well as in the development of the perceptions of various stakeholders about effective teaching practice. School- and context-level factors have both direct and indirect effects on student achievement since they can influence not only student achievement but also teaching and learning situations (e.g., Kyriakides et al., 2000; de Jong et al., 2004). The dynamic model also assumes that the impact of school-level factors and context-level factors have to be defined and measured in a different way to the impact of classroom-level factors. Policy related to teaching and the action taken to improve teaching practice must be measured over time and in relation to weaknesses that occur in at schools. The assumption is that schools and educational systems which can identify their weaknesses and develop policies that address aspects associated with teaching and the school learning environment are also able to improve the functioning of classroom-level factors and their effectiveness (Creemers & Kyriakides, 2008b). The dynamic model assumes that the relationship of some effectiveness factors with achievement may not be linear. For example, teacher subject knowledge is perceived of as a factor that affects teacher effectiveness (Scriven, 1994), but teachers' subject knowledge has rarely been found to be strongly correlated with student achievement (Borich, 1992; Darling-Hammond, 2000). A negative emotional climate usually leads to a negative correlation in this regard, but a neutral climate is at least as supportive as a warm climate (Soar & Soar, 1979). This implies that factors related to student outcomes have to be identified and optimized, and that different strategies that focus on improving specific factors for each teacher/school could emerge (Creemers & Kyriakides, 2006). The dynamic model also assumes that there is a need to carefully examine the relationships between the various effectiveness factors which have effects at the same level. Therefore, specific strategies for improving effectiveness which are more comprehensive in nature are expected to emerge. Finally, the dynamic model also assumes that different dimensions for measuring the functioning of effectiveness factors are used. "Considering effectiveness factors as multidimensional constructs not only provides a better picture of what makes teachers and schools effective but also helps us develop more specific strategies for improving educational practice" (Kyriakides & Creemers, 2009:11).

5.6. The learning organization and organizational learning

Organizational learning and the learning organisation are two different concepts. Organizational learning is a process that leads to the ideal state of a learning organisation. In fact, all learning organizations have organizational learning as part and parcel of their organizational culture. A learning organisation is one that helps to enhance organizational learning by creating structures, strategic fittings, and strategic crafting (Odor, 2018:5).

According to Peter Senge (1990:3), learning organizations are: "…organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning to see the whole together." Learning organizations are "organization and individuals within it with the capacity to create results that matter" (Senge, 1990:3). What matters in a school is that students learn. Therefore, learning, in interacting with the environment of schools (e.g., by interpreting external expectations), should be aimed at improving students' outcomes (Radó, 2010). Organizational learning is conceptualized as a multilevel process whereby members individually and collectively acquire knowledge by acting together and reflecting together (Jones – Hendry, 1992, Cyert, and March, 1992).

According to Radó, the essence of ongoing changes in education is the growing expectation that education-service-provider institutions should learn for the sake of improving the learning of students. Organizational learning entails three key elements: reflection (the individual and collective interpretation of information), enrichment (intensifying interactions among members of school staff in order to make their learning richer), and action (deliberate follow-up action that makes learning purposeful in the organization). Organizational learning in schools should serve three major purposes: (i) it should promote individual learning in the organizational context; (ii) it should accumulate collective knowledge; and, (iii) it should connect external expectations with results. The characteristics of a school that makes organizational learning possible are: (i) non-hierarchical relationships, (ii) information systems and open communication, (iii) delegation, teamwork, and cooperation, (iv) capacity building, and, (v) incentives and rewards. There are four systems that are essential for promoting organizational learning in schools; these are the professionalization of school management, the professionalization of teachers, the alignment of school programs, and quality management. Promoting organizational learning involves improving the capacity of schools to utilize all sorts of resources effectively (financial and human resources, services, instruments, information, etc.). The absorption capacity of schools includes: (i) the capacity of staff to change, (ii) the willingness of staff to change, (iii) the quality and maturity of organizational processes in the school, and, (iv) professional, legal, and financial accountability (Radó, 2010).

Learning organizations are organizations that are skilled at creating, acquiring and transferring knowledge, and at modifying their behavior to reflect new knowledge and insights (Garrvin, 1993). The learning organisation is a very new concept in the field of management sciences and may be seen as the ideal organisation that promotes and facilitates the learning of all its members (Hussein et al. 2014).

6. THEMATIC ISSUES POSE CHALLENGES TO EDUCATION SYSTEMS

6.1. Political influence on schools

The political dynamics of educational changes involve political factors and complex operational mechanisms and processes that influence educational development, including power players and political processes (Huang et al., 2015). Apple (2004) argues that educational change is concerned not only with what knowledge is of most worth, but also with *whose* knowledge is of most worth. Education is a political act, and ideology is inevitably embedded in and enacted through schooling via explicit and hidden curricula. It is therefore crucially important to analyze the relationship between knowledge and power in educational changes.

European developments and political experiences show how democracy is a concept that can change over time, and is embedded in social, cultural and political power relations (Veugelers et al. 2018). An education system is part of the cultural policy of a country and is strongly embedded in its national, cultural, and political history. The study of the policy of education addresses the role of government in formulating education policy in relation to teaching values. It concerns the governance of education, and in particular, curricula.

> *Goodlad's curriculum level theory is a valuable resource for studying the curriculum in a country (Goodlad, 1979). A curriculum can be formulated at different levels. The first level is that of the idealised curriculum in which policy leaders present their ideas and plans. At the second level is the formal curriculum, which consists of the official guidelines, textbooks and assessments; this is what the education policy expects the schools to teach. The next two levels, namely the interpretive curriculum and the operationalised curriculum, comprise formulations of the curriculum at the level of the school, i.e. what teachers think about the curriculum (their interpretation) and what teachers actually do in practice. The last two levels, i.e. the experienced curriculum and the effected curriculum, express the curriculum in relation to the students, about what they do in the classroom, what they experience, and what they learn. (Veugelers et al., 2018:24).*

Countries differ in the extent to which they steer the educational curriculum and the amount of autonomy they give to schools in terms of implementing educational policy (Veugelers, 2004; Hargreaves & Fink, 2012). The main question in the study of policy and curricula is whether, in the context of normative topics such as teaching common values, the relationship between the steering of a curriculum and the autonomy of schools is important, because the relationship between policy and the autonomy of schools can, in fact, be full of tension (Ball, 2012) "The steering influence of the government, exercised through both the idealised as well as the formal curriculum, can target the teaching of specific subjects in schools, and/or the teaching methodology and learning environments.

In the latter case, the question is whether and how the government sets norms for specific learning activities, learning environments, and teachers' roles" (Veugelers et al., 2018:24).

Education policy and practices are reflections and expressions of cultural struggles between groups and ideas about society and the role education can play in it. Goodson (2005) argues, however, that "in such a culturally-sensitive domain as education in particular, traditions are strong and mixed with new developments. Curriculum policy should therefore be analyzed as a vivid dialogue that responds to societal developments and tries to influence these developments" (Veugelers et al., 2018:25).

Spring (2004) shows how different education ideologies influence national education policies. "Spring distinguishes three important ideologies that influence national education policy: a national ideology that helps in building and sustaining the nation state through a focus on national history, culture and the mother tongue; a knowledge and market ideology that strives to make the national education system competitive in the global world; and a global morality ideology that focuses on democracy, sustainability and other moral values" (Veugelers et al., 2018:25) According to Spring, the first of these ideologies is supported in particular by national governments, the second by international economic organizations like the OECD and IMF, and the third by organizations such as UNESCO and by NGOs, but in education discourses and policy, international developments and national developments frequently interact.

6.2. The impact of globalization on schools

The second wave of globalization that occurred during the previous three decades has transformed all the relevant external references for education. While globalization has various negative side-effects, most of the former stands are based more on ideological disapproval than on evidence-based deliberation. In a sense, this pollutes the discourse about how schools can prepare pupils to live in a globalized world. Despite these difficulties, expectations towards schools are high. In forthcoming decades, all adults should be enabled to engage in offline and online activities in international frameworks at a global scale (Radó, 2020).

Until the 1980s, public education was viewed as a positive social welfare mechanism that could mitigate pressing problems, including poverty and illiteracy, and promote peace, modernization, and development. Beginning in the 1980s, the growing concerns of industrial nations about declining economic growth and economic competitiveness shifted the focus and thought about education as a public good to education as creating the human capital necessary for economic growth (Hanushek - Woessmann 2010). Continuing advances in communications and technology vastly increased the global nature and discourse of educational politics. A focus on the globalization of education politics, policy, and discourse has taken center stage since the 1990s. Early twenty-first-century research emphasizes the growth of market dogma, with an emphasis on privatization, choice, and competition, along with a focus on testing and measurement, "evidence-based" decision making, accountability, and standards. The growth in the number and prominence of global nongovernmental organizations such as the Organisation for Economic Co-operation and Development (OECD) and the World Bank, along with other advocacy networks, plays a large role in shaping global education policy. Mundy and Verger (2015) provide an account of the World Bank's ascendance to its current position as a powerful player in educational agenda setting globally. The OECD Programme for International Student Assessment (PISA)–based ranking system is probably the most influential global player. Meyer

and Benavot (2013) examine the role that PISA plays, and argue that nations such as Finland and Singapore, which perform well on PISA, are frequently identified as high-performing, world-class educational systems that can and should be emulated globally. Developing countries are often forced to adopt standards that demonstrate they are modernizing in order to qualify for economic aid (Steiner-Khamsi, 2010). However, many scholars point out that such convergence on the level of discourse may be superficial or symbolic, and should not be confused with true convergence in terms of policy enactment and educational practice (Verger, 2016). Other studies, such as those of Auld and Morris (2014), question the validity of international benchmarks and whether it is possible that the educational systems of countries with unique cultural, historical, demographic, and economic profiles can or should be blueprints.

6.3. Gender issues in schools

A growing awareness of gender inequalities has increased the pressure on education to prevent them from evolving at an early age, for both boys and girls. Due to changing gender roles in the wider environment of schools, and due to the growing acceptance of a gendered view of societal problems, this pressure is expected to grow further in forthcoming decades (Radó, 2020).

> *Gender analysis is a critical step in the gender mainstreaming of legislation, policies and programmes and, in turn, in achieving gender equality. Gender analysis is necessary to determine the existing gender balance, and to assess the way in which a policy or programme will impact women and men. […] Gender analysis frameworks enable policymakers and practitioners to structure the application of research on gender and conceptual theory into gender-sensitive planning, design, implementation and monitoring and evaluation of development and education interventions. (Gender Analysis in Education, 2012:5).*

Educators increasingly focus on the way in which the schooling system itself contributes to the production and reproduction of gender differences. "Two aspects of the educational system have been identified as key in shaping gender differences in academic outcomes: the nature and timing of differentiation into different courses or tracks, and the approach taken to student assessment" (Smyth, 2007:142).

Buchmann and Charles (1995) argue that when educational choices are made at an early age, they are more likely to be gender-typical, and that this means that gender segregation is likely to be more pronounced in countries with highly differentiated, vocationally-oriented systems. Smyth (2005) points out that educational segregation by gender is more marked in strongly tracked secondary systems, in which students are required to specialize in certain spheres of knowledge relatively early on.

A number of studies have indicated that gender differences in academic performance are, at least in part, related to the nature of the assessment that is used (Sukhnandan et al., 2000; Elwood, 1999, Elwood, 2005, Gorard, 2004, Mackin - McNally, 2006, Sukhnandan et al., 2000, Arnot et al., 2005). "In general, while system-level approaches to differentiation and assessment have emerged as indicative factors in explaining patterns of achievement and course take-up, the extent to which macro-level characteristics of the educational system account for cross-national variation in educational outcomes by gender would appear to represent a potentially fruitful, but under-explored, direction for research" (Smyth, 2007:143).

According to Smyth (2007), teacher expectations about male and female students are seen as differing. Teachers define underachievement in different ways in relation to gender, emphasizing a lack of confidence among girls, but poor behavior and motivation among boys (Jones - Myhill, 2004). Several researchers have confirmed that schools are sites for the construction of masculinity and femininity. These identities are historically and culturally situated, and are actively constructed within the school and other social settings (Connell, 2002; Epstein, 1998; Mac an Ghaill, 1994; Lynch and Lodge, 2002). Although the focus has been on male underachievement in many discussions, inequalities in power are still evident within the classroom: girls act in ways which bolster boys' power at the expense of their own (Reay, 2001).

Smyth (2007) summarizes several pieces of research that indicate the complex ways in which gender interacts with other factors, such as social class background and ethnicity. It has been argued that targeting policy attention at "failing boys" is misdirected, given that the scale of gender differences in performance is much less than differences related to other social factors such as class and ethnicity. A number of researchers have critiqued the use of the terms "male" and "female" as concealing the differences among groups of boys and girls, and have stressed the importance of social class and ethnicity as factors shaping educational outcomes and the way in which they interact with gender to produce student identities (Gillborn - Mirza, 2000, Connolly, 2006).

In any study of gender equity, it is important to examine how the socialization of gender roles takes place (Schwendenman, 2012). Children are socialized by gender from birth onwards, including in schools. By the time students are finished with school, students have learned what characteristics are associated with being boys or girls. Schools are sites of the strong socialization of gender roles. The lessons students learn about gender in school can affect how they think and what they believe about "sex equality" (Cohen, 2008).

6.4. Impact of Digital Technology on schools

> *There is conclusive evidence that digital equipment, tools and resources can, where effectively used, raise the speed and depth of learning in science and mathematics for primary and secondary age learners. There is indicative evidence that the same can be said for some aspects of literacy, especially writing and comprehension. Digital technologies appear to be appropriate means to improve basic literacy and numeracy skills, especially in primary settings. The level of impact is generally similar to other changes to pedagogies which are effective in raising attainment although the use of digital learning has other benefits. Additionally, the extent of the effect may be influenced by the level of capability of teachers to use digital learning tools and resources effectively to achieve improved learning outcomes. More effective use of digital teaching to raise attainment happens when teachers are able to identify how digital tools and resources can be used to achieve improved learning outcomes, as well as having knowledge and understanding of the technology. This applies in all schools. Where learners use digital learning at home as well as school for formal and non-formal learning activities these have positive effects on their attainment. This is due to the extension of their learning time. This is particularly important for secondary age learners. (Literature Review on the Impact of Digital Technology, 2015:2)*

Several pieces of research have examined the impact of digital tools and resources on children's attainment in a range of areas. Higgins et al. (2012) provide a summary of research findings and find a consistent but small positive association between digital learning and educational outcomes. However, the authors report that, in general, analyses show that the impact of digital technology on learning is no greater than that of other teaching-related changes that have been investigated in terms of increasing attainments, such as peer tutoring or offering more focused feedback to learners (Higgins et al., 2012). In an earlier meta-analysis, Liao et al. (2008), considered the effects of digital tools and resources on elementary school learners' achievement in Taiwan. They found an overall moderate positive effect across all studies they examined in this respect. No significant differences were found between subject areas, and the authors suggest that digital learning has the potential to be implemented in many different subject areas. They found that the two subjects in which the effects were strongest were reading and languages. Studies using computer simulations also showed stronger effects. The authors suggest this may be because simulations can provide learners with the opportunity to engage in learning activity which cannot be replicated in a classroom (Literature Review on the Impact of Digital Technology, 2015). Teachers' skills and competences with regard to recognizing how to use digital tools and resources and apply them effectively are very important for improving positive results for learners with additional support needs, or who are disadvantaged in other ways (Literature Review on the Impact of Digital Technology, 2015). Mouza et al.'s (2008) study of a small-scale laptop initiative for secondary age learners from low-income families in the USA found that much of the difference in learners' improvements in competences could be associated with their teachers' skill at redesigning learning. D'Arcy (2012) attributed progress in engaging the children of travelers in learning with a laptop and digital resources after they had dropped out of secondary education to tutors' ability to guide and interest them.

> *There is promising evidence that digital tools can, where effectively used, build skills in interactivity and collaboration, critical thinking and leadership for secondary age learners. These are considered to be vital skills by employers. There is promising evidence too that for secondary age learners, digital resources coupled with digital tools can increase knowledge and understanding of career pathways, applying for work, and working environments. These resources can make it easier for employers to provide help and support to learners. In addition to the skills that teachers require to harness digital tools and resources to build learners' employability skills, it is evident that they need to be prepared to develop learner-centred learning approaches. Support for learners to access digital equipment outside the classroom is also important. (Literature Review on the Impact of Digital Technology, 2015:6)*

To summarize the literature on the impact of digital technology on education, the successful utilization of digital technology depends not just upon sufficient access to equipment, tools, and resources, but also on the availability of sufficient training and knowledge and support networks for teachers. Providing teachers with this support will allow them to understand the benefits and applications of digital technologies and enable them to use digital technologies effectively. If these needs are met, then the literature provides strong evidence that the use of digital technologies can aid learning and teaching, as well as enhance the ability of some children to learn effectively. There is evidence that digital technologies can support educational attainment in general (in maths and science particularly).

It can support educational attainment in literacy, and help close the gap in attainment between groups of learners. Digital technologies can provide assistance for overcoming the challenges faced by some learners; improvements in skills related to employability and knowledge of career pathways; improved communications with parents; and the more efficient use of teachers' time. Regarding the factors that bring about more effective implementation of digital learning and teaching, training and support can help not only with using equipment but also exploiting digital tools and resources for teaching. To overcome teachers' anxieties about digital teaching, the use of different learner-centred pedagogies is important, not only use of technology itself.

> *As a consequence, successful implementation of digital learning and teaching requires support to teachers in the form of opportunities to learn (both formally and informally), embeddingdigital learning in continuing professional development and initial teacher training, direction and leadership within a school, functioning digital equipment and tools, and an environment that gives teachers the flexibility to introduce and use digital learning. (Literature Review on the Impact of Digital Technology, 2015:4)*

6.5. The influence of demographic changes on schools

The significant effect of demographic changes on education is perceived as a triviality. The balance between school capacity and pupil numbers may easily be maintained if the speed of demographic decline or growth is not too fast. However, significant demographic shrinkage or increases that occur over a longer period of time may cause serious adjustment issues and may alter the behavior of the actors of education.

On the other hand, emigration from less developed countries generates – sometimes illusory – pressure on education systems to seal up rifts in the labor market caused by labor drain. In addition, demographic changes and migration are highly politicized matters, heavily polluting the related policy discourse with educational considerations that are not genuine (Radó, 2020).

> *Demographic change is usually perceived as a challenge for modern societies because inherited social structures tend to become inadequate for populations changing significantly in size or age composition. Almost all developed countries face ageing populations, and many European and Asian countries are seeing declining populations as well. Under the assumption of a comprehensive and territorially limited education system with stable participation rates, declining population numbers will lead to less demand for education services (responsiveness-of-demand hypothesis). Under the assumption of political and administrative regard for economies of scale, it is hypothesized that demographic decline creates pressure to economize on oversized education infrastructures (economization-of-supply hypothesis). Nevertheless, retrenchment strategies always have to face politically competing claims of providing equal access to the education system for all. Especially in early childhood and primary education, decentralised service provision is often regarded as a crucial feature of the quality of education services. (Bartl, 2015:161)*

The economization of education systems in the face of demographic decline does not seem very probable (Bartl, 2014). This view is rooted in the traditional description of modern welfare states as

suppliers of equal access to education. On the demand side, the (political) definition of new target groups counterbalances the impact of regional population decline on enrolment. On the supply side, providing access to education is regarded as a public good, which is politically protected by all (or most) political parties. Furthermore, education infrastructure serves as an asset in the competition among localities and regions. From this point of view, developing or maintaining a high supply of education infrastructure for political reasons seems to be probable, even in the face of high unit costs (Bartl, 2015).

6.6. The impact of migration on schools

There is a strong relationship between migration and education. Migrants typically leave their country of origin to improve returns on their productive skills, which in turn reflect their level of education. In some cases, migration takes place to facilitate access to education, while in other cases becoming a student in a host country is a preliminary step prior to gaining admission as a migrant later on. Migrating can also have indirect effects on education. For instance, remittances can be used to fund the education of family members in the country of origin, while successful stories of migration may create incentives to undertake further education in the home country. This mutual influence of intertwining migration and educational choices poses practical problems in terms of unraveling the causal links between them and estimating their effects (Tani, 2017:2).

There is no internationally agreed-on definition of "migrant." On the one hand, this poses problems with respect to data collection and analysis, while on the other hand the absence of an agreed definition distorts public perceptions and debates, as these typically relate to "imagined immigration" (i.e. how each individual imagines immigration, and who is perceived as a migrant), rather than actual immigration (Blinder, 2012).

Dustmann and Glitz (2011) have argued that when immigrants remain in the host country for a considerable amount of time, their children are likely to spend a large part, or possibly their entire childhood, in the host country, going through its educational system and making educational decisions along the way. These decisions have wider consequences for the performance of the second generation of immigrants in both host and home country in the case of return migration, as well as the host country, via immigrants' impact on the fiscal balance (Storesletten, 2000, Algan et al., 2010) or their integration prospects (Constant - Zimmermann, 2008). Literature that focuses on migrants' children tends to find a strong relationship between the outcomes of the former and that of their parents. For example, Algan et al. (2010) show that after some initial convergence, immigrant groups that start with the biggest disadvantage relative to natives in the first generation continue to be the most disadvantaged in the second generation. Dustmann and Glitz (2011) argue that intergenerational correlations suggest that the linkages between immigrants and their native-born children tend to become operationalized through educational choices. Additionally, migrant children's educational choices seem to have consequences on the educational choices of natives. For example, Betts and Fairlie (2003) find that for every four immigrants who enroll in a public high school, one native student switches to a private school, and that this "native flight" is particularly pronounced among white native students, and in response to the arrival of non-English-speaking immigrant children. In contrast, Neymotin (2009) finds that immigration into the USA (namely, California and Texas) does not negatively affect the SAT scores (SAT is a standardized test widely used for college admissions in the United States) of native high-school students.

In conclusion, three research priorities must stand out.

> *The first is the development of a unified theoretical and empirical approach to analyze the effects of migration flows, including by education levels, taking into account recent innovations in econometrics to identify causal effects, which can serve as a blueprint for future research. The second priority is to undertake research focused on the long-term effects of migration (time horizon: 10-15 years). Most studies in the literature address predominantly short-term effects, and this bias may over-weigh resulting concerns in the policy debate. Long-term effects should not be confined to the migrant's private benefit from migrating but include intergenerational aspects concerning educational choices of the second generation, as well as social welfare implications about resources allocation in the education sector in both sending and receiving countries. The third priority is a better understanding of the impediments that reduce the international transferability of human capital, and evidence of policy initiatives that can improve the returns to education acquired in a different country from that of residence. These could include identifiable policy changes, international collaborations among professional associations, and evidence collected through experiments on would-be migrants or prospective employers varying the amount and quality of information available to them and the channels mediating such information. Important but overlooked policy aspects of over-education include whether selecting migrants on observed educational achievement attracts the desired individuals with respect to target economic outcomes, and whether over-educated parents transmit educational preferences to their children, affecting the outcomes of the second generation. (Tani, 2017:34-35)*

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