The challenge of innovation:
Elements that make a difference in Hungarian context

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Project funded by the European Union's Horizon 2020 research and innovation programme
under the Marie-Sklodowska-Curie grant agreement number 676452
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Introduction

Within the framework of the Learning Teacher\(^1\) and the broader research programme of *Transformative teacher learning for better student learning within an emerging European context* (“EDiTE – European Doctorate in Teacher Education,” n.d.), this paper supports the specific scientific strand that covers teacher learning in innovative school environments. This said, the paper contributes to the growing knowledge base currently being undertaken across five academic institutions in Europe, as well as to the research fields of innovation in education and school development.

Innovation has been considered as a challenging and complex concept that pierces all sectors of the society. As such schools have not been an exception. Even though it is not yet a survival necessity in the lower levels of education and it often loosely interpreted as any form of change (Hannon, 2007), innovation in the public sector is being substantially rewarded and stimulated by private and public funding. In the countries of Central and Eastern Europe, innovation as a modernisation strategy came hand in hand with transition towards market economy (Halász, 2003; Radó, 2001) and this is true also for the Hungarian education system – the contextual case that is the focus of this article.

As many countries in Europe, Hungary has been challenged by a changing socio-economic reality as well as by the growing demand for addressing ongoing changes at all public-sector levels. This today also adds up to the situation of somewhat incomplete transitions that the country is still experiencing (Halász, 2007). Yet, Hungarian education system had seen different approaches in responding to the educational and societal demands, including public and private investments and targeted agendas for schools nation-wide. Over the last two decades, schools have received amounts of support especially in attempts to modernising the classrooms and developing teachers’ professional skills (Fazekas, 2017).

This article explores the challenge of educational innovation in the Hungarian context; with this construction, innovation is seen as a challenge for the education system, as a challenge for schools that are used to operating in traditional provisions or in transitional modes, as a challenge for schools that stood unequipped for change in terms of staff, skills and resources, and a as a challenge for teachers burdened by work and / or lacking confidence and competence. From these perspectives the article tries to understand how schools succeed in bypassing the above-mentioned challenges and embrace innovations through lucrative knowledge creation and professional learning communities. Thus the paper will reflect on those elements that made a positive difference in the Hungarian

\(^1\) The Learning Teacher research framework is the specific scope of research within the EDiTE (European Doctorate in Teacher Education) developed and implemented by ELTE University. The research framework encompasses three individual research elements, of which one is *Teacher learning in schools as innovative learning environments, in the context of curriculum reforms and educational development interventions*. For more information, please see: [http://www.ppk.elte.hu/nevtud/horizon2020/edite](http://www.ppk.elte.hu/nevtud/horizon2020/edite)
schools, by exploring the investments and the efforts to modernise Hungarian schools and how they have reflected on developing effective innovative solutions. Furthermore, the author will validate the fact that impetus for successful school development does not come only externally but is very tightly embedded into the culture of a school and, in particular, the ambitions of school leaders and school teachers, patterns of knowledge creation and sharing.

The core question that this paper tackles is related to understanding what specific elements made schools in Hungary successful in embracing the opportunities that came with a number of targeted developments, operationalising change through innovative practice and working alongside challenges and constrains.

Thus, the theoretical underpinnings shall rest on the body of knowledge around school development and implementation of innovative interventions, as well as around notions of teacher learning and school leadership supporting knowledge generation. With such analytical framework, the intention of this article is to pinpoint conclusions related to how innovations infiltrated the classrooms of Hungarian schools and what made the interventions successful and sustainable. This may hopefully open a discussion relevant for schools, research communities and relevant policy departments.

**Theoretical considerations about educational innovation**

From the perspective of the theoretical framework, this paper will take into consideration a mixture of approaches that will reflect on development interventions tackling pedagogical innovations, as well as introducing novel methodological approaches in classrooms. Equally important is the topic of teacher learning in terms of on-job professional development, as well as the intricate field of school leadership. The aim of this section will be to give an overview of the educational hardships that are related to innovation in schools which were already mentioned as challenges in the introduction part. The binding element that shall embrace the entire theoretical part shall revolve around the notion of successful school development and approaches to schooling of the 21st century, which will give the ultimate rationale for the importance of innovation in education.

**Interventions fostering innovation**

Ever since the mid 1970’s and the inputs from the Rand Change Agent Study, public policy interventions, and particularly those inspiring innovative practices, shifted towards being more appreciative and understanding of local, grass-root processes (McLaughlin, 1990). The Rand analysis found out that within the implementation process and in cases where innovation has successfully rooted the school culture, adoption of the intervention was merely a beginning. Thus, adoption of the innovation needed to be followed by a strong localised adaptation of the proposed changes which might not be easily visible within the greater picture (McLaughlin, 1990). It can be argued, and this statement will be picked up at a later stage as well, that the processes that follow localisation of an
innovative intervention from a macro level to the micro involve and depend on the elements of teacher learning and school leadership.

Furthermore, the ways in the school will react to the implementation process was well elaborated by Snyder et al (1992) who worked with a pre-existing idea of polarised perspectives, including fidelity perspective and mutual adaptation perspective. The third dimension was brought in that is formulated through “evolving constructions of teacher and students enactment” of the proposed curricular change (Snyder, Bolin, & Zumwait, 1992, p. 402).

The table 1 illustrates the important differentiations between the three implementation perspective which particularly focus on the teachers and their role.

<table>
<thead>
<tr>
<th>Fidelity perspective</th>
<th>Mutual adaptation perspective</th>
<th>Curriculum enactment perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Produced by experts and specialists for teachers to implement through given instruction</td>
<td>Teachers given instruction on how to implement content</td>
<td>Curriculum provided by an external body / institution</td>
</tr>
<tr>
<td>• Heavily structured approach</td>
<td>• Alterations can be made during the procedures</td>
<td>• There is no strict instruction</td>
</tr>
<tr>
<td>• Role of teacher: passive recipient who is / will be trained to transmit the content</td>
<td>• Involves a compromise between the developers and the implementers</td>
<td>• The syllabus and the material considered as tools for both teachers and learners when they engage in enacted classroom experience</td>
</tr>
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The idea that the role of teacher is of particular significance for the implementation of curricular change is rather obvious; from the perspective of being a passive receiver of an instruction to the concept in which the instructions, including the syllabus, are used as tools for creating new working and learning experiences, it is the teacher that initiates and transitions the idea and the working morale to the classroom.

Another important aspect of assessing the processes of innovative interventions and their implementation is through defining them from a perspective of macro, mezo and micro levels. INNOVA research\(^2\) has developed a framework which recognises 4 types of innovative interventions regarding their source, how they develop and spread. Two types are categorised as emerging through a top-down process and they include external public development interventions (supported and promoted by national governments and other public bodies) and external non-public interventions (initiated by charities, academies, private bodies, etc.). The other two types reflect a bottom-up approach to innovation development, including occasions of internal and external incentives at the single institution level. These two have been sub-categorised into (Halász & Fazekas, 2016):

- Internal incentive innovation development based on a conscious experimentation

\(^2\) For more information visit: http://www.ppk.elte.hu/nevtud/innova
• Internal ad hoc solutions to problems faces in practice
• Externally stimulated and inspired practices without aimed coordination or networking
• Externally stimulated and inspired practices coordinated through frameworks such as different school networks and partnerships.

By looking at the INNOVA framework through the ideas of willingness to innovate (Schleicher, 2015) it is clear that the most intrinsic and possibly best stimulated school-level innovations appear in the two latter types of bottom-up approaches, notwithstanding the fact that even in a top-down style willingness to innovate and/or to embrace innovations is possible. In light of that, it is important to remind of the processes of implementation and absorption of innovative interventions (McLaughlin, 1990; Snyder et al., 1992). While this strongly connects to the capacity of creating 21st century learning environments, through collaboration, coherence and opportunities to innovate (Schleicher, 2015), but also to the capacity of creating professional learning communities (Giles & Hargreaves, 2006; Andy Hargreaves, 2007). Therefore, school’s disposition towards knowledge is a critical element that determines its innovative aptitude, and it is argued that this specific environmental characteristic is closely connected to the ways schools are managed and led, as well as to the quality of the teaching staff.

The study conducted in Hungary in the period of 2012-2016 under the title The impact of EU-funded development interventions on teaching practice in Hungarian schools has provided valuable additions to overall understanding of implementation of innovations in Hungary. The study has confirmed the ideas that innovative interventions had the strongest impacts in schools described as knowledge-intensive, and that some of the elements that support such schools are high level of teacher learning and horizontal cooperation, climate of trust and school leadership that is oriented towards knowledge creation and sharing. Additionally, as important was the element of continuous collection and analysis of data, and openness towards social environment. Schools that calibrate well with the notion of having distributed leadership and active involvement in overall school development set the best examples of successful schools in Hungary under the support of European Social Fund interventions (Fazekas, 2017).

Teacher learning

The teacher community is the most numerous and arguably one of the most important element of school functioning and innovation implementation. It is not possible to talk about school change without teacher learning and innovation, as broadly they might be defined. Innovative intervention and teacher learning go hand in hand, for an obvious reason – to embrace the innovation a teacher needs to modify, change, learn how to apply whatever s/he has been doing so far to the new circumstances. And vice-versa to innovate is to think outside of the routine, to seize something new, adopt something was not there before, learn and apply a different skill. In innovative environments,
every activity may lead to “a change in knowledge, beliefs or practices even when a teacher did not have the intention to learn from that activity” (Bakkenes, Vermunt, & Wubbels, 2010, p. 536).

Yet, while innovations might be difficult to pinpoint, teacher learning is not much easier either. There are two important starting points for teacher learning: first it is necessary to see teacher learning as a continuum (Beijaard, Korthagen, & Verloop, 2007; Cochran-Smith & Demers, 2010) and, secondly, teacher learning comes with a high level of complexity that demands one to understand both why and under which circumstances learning occurs (Opfer & Pedder, 2011).

Bakkens et al (2010) propose six categories of learning activities and four categories of learning outcomes. It showed that teacher learn from:

- Experimenting
- Considering own practice
- Experiencing friction
- Struggling not to revert to old ways
- Getting ideas from others
- Avoiding learning.

It is important to mention that Bakkens and her colleagues derived these six categories of learning activities by studying how teacher develop under an innovative intervention suggested from the government in a top-down manner. It is also worthwhile noticing that two of the most common that account for around 2/3 of the situations were considering own practice and experimenting. Other two categories that were also relatively highly represented among teachers were getting ideas from others and experiencing friction, while avoiding learning was the least frequent. Even though the research team has not explicitly mentioned, it is quite possible to have a combination of activities at one time. It is not unlikely that while getting ideas from others one can also consider their own practice. These conclusions on learning activities came after examining a specific school setting that underwent a national innovation reform, and while it is important to understand that Bakkens et al study focuses on teacher learning under the auspices of an innovation intervention, some of the ideas about teacher learning can be applicable even in the routine-based educational provisions.

Aiming at teacher learning in knowledge-intensive environments also incorporates an element of understanding what type of knowledge the teachers are obtaining and distributing. Cochran-Smith and Lytle (1999) have elaborated on three types of teacher professional knowledge and the Table 2 below provides their basic features.

<table>
<thead>
<tr>
<th>Knowledge FOR practice</th>
<th>Knowledge IN practice</th>
<th>Knowledge OF practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classical explicit knowledge</td>
<td>Tacit / implicit knowledge</td>
<td>Implicit knowledge</td>
</tr>
<tr>
<td>Declarative and easily shared</td>
<td>Usually unattainable</td>
<td>Rarely considered</td>
</tr>
<tr>
<td>Serves for improving practice</td>
<td>Serves for doing the practice</td>
<td>Serves teachers to teach well</td>
</tr>
</tbody>
</table>
This typology of professional knowledge leaves considerable implications for teacher learning; investing in mechanisms for sharing the knowledge in practice and knowledge of practice might not always follow an easy clear path. And this learning path can also mean rather different learning activities for individual teachers. It has been studied that different professional learning activities suit different teachers, namely while some achieve great learning outcomes from experimenting, others might be more adept to gathering information on their own, or collaborating and working with others (Henze, Driel, & Verloop, 2009). Providing sufficient time and attention to development of a good knowledge creation strategy within a school, thus, makes a significant difference. This was noted to be the central feature of innovative learning environments (OECD, 2015b).

School leadership and management

With the growing challenges and pressures that schools today face in terms of adapting to the novel models of teaching, learning and functioning, effective school leadership and management has been placed to a spotlight as one of the core elements that support successful school development and change (Andrew Hargreaves, Halász, & Pont, 2007). This parallels with the fact that the concept of school leadership and management has raised ample academic interest in the last decades, especially in relation to school effectiveness and success as well as with a growing body of evidence that there is a strong relation between the two (Halász, 2011). And while management can be understood as a competency, the capability can be defined as “a social activity, which should enable others to rise to their individual challenges and meet them with necessary measures” (Schley & Schratz, 2011). In a comprehensive study of school leadership impacts, it was argued that it is unlikely that there is one single model of effective school leadership (Day et al., 2009). Yet, what Day and his colleagues also concluded was that it is possible to “identify a common repertoire of broad educational values, personal and interpersonal qualities, dispositions, competencies, decision making processes and a range of internal and external strategic actions” (p. 2). Additional to this, the studies also showed the immense importance of understanding the contextual elements of the school as well as properly diagnosing the individual needs of the school collective, thus building a strategy accordingly.

Furthermore, Day et al (2009) suggest that different kinds of leadership are important for different phases of school development, thus creating a notion of layered development. The study of the impacts of school leadership on pupil outcomes showed that school principals not only have a very strong significant connection with the success of their students, but also affect the entire school well-functioning. For instance, school head’s impact on teaching commitment has proven to be significant in three different ways, as teachers’ commitment to their work, to their school and to their
professional development (Day et al., 2009). The study also revealed school leadership’s significant influence on four dimensions related to their practices, namely setting the directions, developing people, redesigning organisation (external strategies) and use of data. And while there is a determined positive relation between principals and teachers, through trust and encouragement, successful school leadership is also determined by leaders understanding the needs of the school and the leadership approach most appropriate to the situation. This input from Day et al (2009) strongly connects to accepting and adapting to an innovative intervention and changing the school culture towards a learning organisation (Giles & Hargreaves, 2006). Thus, leadership gains a prominent role in both processes of innovation and teacher learning in a school setting.

Schleicher (2015) argues that a formula for a responsive 21st century school needs to include effective school leadership. In his comprehensive report *Schools for 21-st Century Learners* the author points out three important dimensions that need to be taken into consideration for schools of today and tomorrow:

1. Promoting effective school leadership
2. Strengthening teachers’ confidence in their own abilities
3. Innovating to create 21st century learning environments.

It is important to understand that under this framework leadership is not restricted to only school principals but also incorporates head teachers or other teaching and non-teaching staff that actively supports leadership in a school, thus orienting towards distributed leadership. Yet, principal play a key role as it is outlined in Chapter 2. Thus, it is stated that leaders of 21st century schools need to understand how best to “empower teachers to play a role in decision making at the school level”, how to provide valuable opportunities for their own continuous development, including receiving training (Schleicher, 2015, p. 9).

It is also emphasised that in-school relationships make a difference when it comes to teacher performance in classrooms, thus focusing on collaboration and open communication is suggested as a crucial element that connects leadership and student outcomes. Next to this, a higher job-related satisfaction comes from school staff being more involved and having greater number of opportunities in decision-making processes (Schleicher, 2015).

This agrees with ground-braking theories of successful leadership and management proposed by Nonaka and Konno (1998) by which is argued that leadership “must come to the realisation that knowledge needs to be nurtured” (Nonaka & Konno, 1998, p.55). Looking from the lenses of a very specifically Japanese concept of *ba*, the notion of inspiring school leadership is an important element of knowledge-intensive schools where innovation flourishes. As pointed out by the authors:

“[B]a can be thought of as a shared space for emerging relationships. […] What differentiates *ba* from ordinary human interaction is the concept of knowledge creation. *Ba* provides a platform for advancing individual and/or collective knowledge” (p. 40).
The essential connection that Nonaka and Konno (1998) make between leadership enhanced with the concept of *ba* and knowledge that resides within is significant in order to understand the implicit and intangible ties that leadership has with both innovation in education, teacher professional development and, overall, successful school functioning and development.

**School development**

As a logical conclusion of this theoretical overview, the paper briefly looks into the ideas and concepts around school development. School development naturally connects to innovation and teacher learning, as well as effectiveness in school leadership, as those are some of the main drivers that nurture school success and provide better learning outcomes and better working conditions.

However, the literature suggests that in order to better tackle the challenges that the school face today, rethinking and redesigning some of its elements is a must. For instance, one set of features of successful schools derived from a large selection of case studies prepared for evaluation of OECD’s Innovative Learning Environment (ILE). Thus, a “7+3 framework” was developed that focus on seven learning principles and three organisational dimensions. Among the seven principles it is stated that learning should become central of school as an institution, promoting it both within and externally with partners. Sensitisation towards learning comes in a well-made package with the three organisational elements, the first being “to innovate the pedagogical core”, followed by strong learning leadership and development of partnership (OECD, 2015b).

Another valid point that needs mentioning is that the world of educational change which urges and inspires innovations at a school level is also driven by educational trends, in particular those that connect to the key competences for the 21st century (Ananiadou & Claro, 2009; UNESCO, 2015). Frequently both educational change in general and school success at the micro level are related and connected to outcomes that support the development of the 4Cs: communication, collaboration, creativity and critical thinking. In addition to this, some resources add problem solving and decision making (Ananiadou & Claro, 2009).

Thus, having a school environment that is willing to innovate and to respond to the needs of the 21st century has been identified as one of the core elements to school success. In fact, Schleicher (2015) labels willingness to innovate as one of the three ingredients for a responsive 21st century school. The other two are teacher confident in their ability to teach and a strong school leaders focused on enabling innovative and knowledge-oriented school setting. Kovacs & Gregorzewski (2017) have attempted to build on these and other perspectives related to school development, and piloted a model that also included effective school leadership, accompanied with teacher learning, knowledge sharing and effective implementation of innovative interventions. This implied almost the same set of important factors, with specifying that creating a learning environment based on innovation is a process of successful implementation of a change intervention. Mattila & Silander (2015) compare the
change of the operational culture of schools through a metaphor of the washing machine: “[t]he hotter
the wash, the cleaner and more in-depth the result, but the washing time is correspondingly longer”
(Mattila & Silander, 2015, p. 3). In their model of school success, they incorporate also technology
and capacity building.

Thus, the idea of school development is an integral one that reminds what are the aims of
implementing an innovative intervention, investing in teacher professional learning, changing the
patterns of school functioning and management, opening up leadership, as well as engaging into
partnerships and wider collaboration.

**Brief methodological consideration**

Following a qualitative design the main method of inquiry was a targeted semi-structured interview
that was modified with regards to the type of the interviewee, their background and expertise, as well
as to the type of information that needed to be collected. The following consideration were taken into
account for the data collection:

- The expert interviewees are selected based on their background and proximity to the topic;
among the expert interviewees at least one person needs to have a good overall understanding
of the education system in Hungary, at least one has to have a deep knowledge of the
innovations in education in Hungary
- The principal interviewees need to come from schools that are in one way or another
operating in a non-routine manner and can be described as innovative

With this in mind, the data for this article has been collected from a selected number of field experts
and school leaders. The data collection took place in the second half of 2016 in Hungary and
incorporates a total of seven interviewees. Three interviews were made by educational experts
employed in academic research from a state university and national research agency. Two of these
three experts have been heavily involved with previous research on Hungarian development
interventions and school developments. All three experts also had a greater overview of the schooling
system, together with a good field understanding and proximity to the Hungarian research in
education sector.

The remaining four interviewees have been selected from EDiTÉ Hungarian partner schools3 and they
all have a position of a school principal. The main reason of their selection followed the criteria that
they are all known for their outstanding practices in school development including innovative
practices, peer-to-peer learning strategies, intelligent leadership provisions and diversification of
school responsibilities. Two schools have also been analysed as innovative learning environments in

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3 EDiTÉ has a network of external partners among which schools are included. For more information please
OECD publications (OECD, n.d.-a, n.d.-b). In terms of school information, all four schools are integrated primary and lower secondary schools operating within different socio-economic environments and with different target populations, hence one school works with around 70% Hungarian Roma population and one school has a SEN integrated programme with approximately 2-3 differently-abled students per each class. Two of the schools are based in Budapest, while two are in villages close to smaller Hungarian cities one to the east of the country and the second being rather central (south of the capital). They are maintained by public funds and to a smaller extent some of them receive financial support from parental contributions. The schools are different in size, ranging from 200 to 800 pupils and 15 to 65 teaching staff. The interviewed school principals had all been in managerial positions and education with experience ranging from 15 to 40 years. In terms of innovative interventions and approaches all four schools have their own methodologies.

The presented outline in how interviewees where profiled and selected helped in gaining a wide picture that has been constructed by gathering very different pieces of puzzle. Four interviews have been conducted in English and three were translated to Hungarian. All three Hungarian interviews came in a written form and were subsequently translated to English before being analysed. Face-to-face interviews took around one hour in length. The approach used semi-structured open-ended interviewing questions and they were grouped into four large categories with follow-up sub-questions. The categories were:

- Opinions of the Hungarian education system
- Opinions on Hungarian teachers (for principals there was also a distinction between teachers in other schools and in their own school)
- Ideas about educational innovations in Hungary
- Aspects that make a school successful

These broad categories included questions that could draw out most significant set of information from the interviewees, thus for instance principals were asked for their own experiences in their schools while the experts were rather questioned for general opinions and those that refer to their specific expertise.

The data from the interviews was analysed following the theoretical ideas presented in the previous chapter. Emphasis was given to the elements that support the idea of school development, as well as those that hinder it.

Limitations

Due to time, language and resource restrictions, the study recognises several limitations which were kept in mind during the analysis. First, the research does not include a complete and comprehensive data collection at this point. It was intentionally narrowed to collect opinions and information from a
selected group of interviewees that give one or two perspectives into the topic of innovation challenges, teacher and school development. This said, it is noticeable that this article did not include the opinions and realities of the school teachers or other stakeholders that might be relevant. Additional to this, the interviews conducted at this phase, especially with the principals, are the initial data collection. This is a very important note for the paper as it means that the interview guide did not go deep into exploring multiple layers and issues that surround the topic of leadership in innovative schools, but rather focused on the first initial step of gathering basic information and opinions. Even though it is stated here as a limitation, this was purposefully and knowingly done by the researcher with the aim to continue further gathering of data in the following two years.

**Innovative developmental interventions in Hungary**

Hungarian education falls under the mandate of the Ministry of Human Resources, which has the responsibility of determining to a large extend the school curriculum and functioning (OECD, 2015a), and most of the government-led innovative curriculum interventions are funded from the European Social Funds which Hungary accessed in 2004 by joining European Union. A major alteration has been introduced to the school system after 2011 with a change of government and legislation that placed schools under strict, centralised governance of the state-appointed authorities. This shift came after two decades of decentralisation and had encapsulated schools and teachers with less autonomy to make decisions about curricular matters, student assessment and ways the school functions.

Hungarian education system was almost unanimously described by the interviewees as one that has been shaped and bruised by turbulent and frequent changes for the last 30-40 years. The interventions that the interviewees referred of have tackled curriculum and teacher development, with introducing new practices, new digital technologies and new sets of learning goals (Fazekas, 2017). Illustrated in Figure 1 below is the historical outline of innovative interventions from 1970s until the end of 2000s.

*Figure 1 Timeline of the major innovation interventions in Hungary*
The information that is exposed in the figure above was collected during briefings with the educational experts and represents an overview of educational interventions in Hungarian schooling system that can provide a better understanding of both the state of education and the ideas behind successful schools. In early 1973, still under communist rule, a new type of school has been introduced to the public called experimental schools. They were very different from the mainstream schools and, even though rare, they opened the doors for the next phase which happened in the second half of 1970s. For the first time in Hungarian history, the state ordered further research on innovation in education. At the beginning of 1980s new legislation was ruled in by the government that allowed schools to take so-called particular solutions. Under this legislation, schools could decide to deviate from the core curriculum and apply experimental solutions that were particular to their own situations. This followed a major movement in educational research and practice in which schools would take on alternative pedagogies in order to address the needs of heterogeneous classrooms. In 1988, the first national Innovation Fund was established with a main goal to provide additional monetary support to school-based innovation. At the time, this state-led intervention was rather unique in the region that was in the midst of the collapse of Soviet Union. An interesting additional information that explains the situation at that time in Hungary is that the Innovation Fund came with a legal structure that was at the same time restricting, thus creating a double-binned regulation. The beginning of 1990s saw blossoming of alternative movements in education and at the level of initial teacher education every
student-teacher was introduced with courses on alternative pedagogies such as Waldorf and Montessori. Few years after, schools were thrown into deep waters with a national provision that obliged every public education institution to create their own curriculum. The legislation, introduced in 1996 by the liberal government, gave each school a time period of two years, and by 1998 all of them had to have a school-level educational solutions to whatever was perceived as a social problem. Additional to this, 1990s were characterised by large monetary investments from non-state sources, in particular from Soros Foundation and the education modernisation programme. This investment in Hungarian education was much larger than anything the state was able to offer at the time, and under these provisions a programme of school self-development was established. In a period of just few years and under funding of Soros Foundation, 100 schools were trained to prepare self-diagnoses and develop their own school-level strategies that actively tackle issues identified by the school leadership. This was then spread through a horizontal school-to-school training method, thus creating institutionalised networks that support school development.

At the beginning of the new century, Comenius 2000 national programme was introduced to the Hungarian education sector, under which 1500 schools were given the opportunities to hire quality leadership and management consultants, many of which came from the industry sector. As a large investment at that time in Hungary, this enabled schools to receive training on self-analysis and strategy development. This brought along more interest in management and leadership training, and management of innovations in education was officially seen as a part of the formal training. With joining 2004, Hungary has accessed the European Social Fund through which a national TÁMOP programme was initiated. In particular, TÁMOP 3.1.4 was devoted to development of innovation in schools through which schools were encouraged to apply for funding with innovative solutions. The very final step in the outline is the formulation of the sectoral innovation strategy.

This brief historical outline is necessary to understand the ideas about innovation that have been formed in the schools, as well as their origins. Almost all schools in Hungary, including the ones that were selected for this study, have passed through these processes and have gained from them. It is important to emphasise that according to Halász (2007) the transformation of education in Hungary can be seen from nine different aspects including: (1) aims and functions, (2) management and administration, (3) financing, (4) structural issues, (5) quality control, (6) school autonomy, (7) teaching profession, (8) support structures, and (9) social aspects. The selected interviews provide information on only some aspects, and we can refer to two main distinctions among the collected data. On one side, there is information on aims and functions, quality control, social aspects, support structures and to some extend structural issues that was touched upon by the expert interviews, while on the other side, the interviews with school principals mainly focused on management and administration, structural issues, school autonomy and support structures, and to some extend social aspects. This was evident in the fact that four interviewees (two experts and two principals)
mentioned how Hungarian education system still does not address properly inequalities that are greatly embedded in Hungarian society. However, for the interviewed principals it was up to the individual school to address and tackle this social aspect by offering an intelligent solution to inclusion and create opportunities for every student.

This comes with a positive aspect mentioned more than twice in the interviews that Hungarian teachers have the freedom to choose their own methods in their classrooms, as well as that the school can operate in the organisational structure of their own making and choice. It was noted by the interviewees that the education in Hungary shifted towards competence-based, and this happened in the waves of above-mentioned curricular interventions, especially those followed by the European Structural Funds. Most of the interviewed principals expressed positive opinions of the effects of the interventions to the overall school development, as well as to the development of teachers’ pedagogical and subject-related knowledge.

By going one step further and observing the opinions of the interviewees through the lenses of Snyder et al (1992) and curriculum implementation perspectives, it might be concluded that there is a progressive shift from fidelity perspective towards curriculum enhancement. While it is premature to say that there is an absolute co-construction of knowledge between teachers and students in the Hungarian classrooms, there is definitely a clever adaptation of curricular interventions to suit the needs of the school and the diverse populations of students. On the other hand, applying the Rand Analysis outcomes for innovative interventions (McLaughlin, 1999), it is for a fact that the interviewees recognised the necessity of “localising” the intervention and making it suit the needs of the school community. Interestingly, the school principals did not necessarily focus on the roots of the interventions in their schools, as it seemed more important to stress the processes that were necessary for the innovative interventions to get into the classrooms and for teachers to accept the changes and the challenges. Furthermore, the innovative intervention is only one and sometimes even marginal element in making a school a successful innovative environment. Thus, the following part will introduce an analysis of what makes the school development successful according to the data collected in this initial part of the research.

**Elements for successful school development under innovative interventions**

The interviews clearly indicated that for school to develop into a successful learning environment for both the students and the educational staff, there are several elements that need to be included and considered. Relying only on the innovative interventions to propel the school is not enough, and interviewees argued that effective school leadership and a strong teaching community are two key elements for an innovation to get embedded into the school culture. Based on answers given by the
principals, a figure was developed to examine the probability of innovative intervention succeeding in a school. Figure 2 below presents an overview of these thoughts.

*Figure 2: Innovative interventions simplified procedures*

Even though it might be tempting to think that introducing an innovative intervention to a school can be as simple as ticking several “yes” or “no” boxes, the principals interviewed in this phase of the study summed up a few elements that are truly important to be considered. Fazekas (2017) reminds us by analysing innovations in Hungarian schools that the procedures of implementing innovations are rarely linear and clearly structured, and Figure 2 does not want to oppose to this.

Figure 2 indicates that there are elements that can support and hinder innovation, thus considering such elements can indicate the successfulness of innovation and in general of school development.

From the data collected in the interviews, if the school leadership does not see the sustainability in the innovation intervention and takes is just as an additional resource for survival of the school, it is unlikely that anything from the innovation will remain after the intervention. Furthermore, interviewees mentioned that schools in which school principals or teachers are working alone with the innovation, and have no concrete plan how to capitalise from the intervention, are schools where the development is usually impaired or blocked.

The interviewed school leaders pointed out that school leadership is a key starting point in absorbing the innovation and distributing the ideas through a shared and common decision-making process with
the rest of the school staff. In the words of one of the leaders: “the head of school is important, her/his character, attitude and mentality are very important because the rest of the school, and particularly the teachers, will follow this mind-set, so it is necessary to show a good example”. Innovative schools indeed seemed to reflect a very good set of skills and attitudes from leadership, one that is open for discussion and can provide support to the teachers encouraging the change towards a more innovative perspective.

For instance, the simplified figure above can be also illustrated on an example of one of the innovative interventions in the selected Hungarian schools.

*Box 1: Example of the KIP innovation*

**The KIP innovation**

A very wide instructional innovation called Komplex Instrukciós Program⁴ (also known as KIP or the Hejokeresztúri Model) was introduced to Hungarian schools first in 2001. At the head of this grass-root initiative was a school leader that developed the intervention following the example from Stanford’s Complex Instruction Program. The initial one-school intervention grew over years into a horizontal knowledge sharing innovation that by the time of the interview for this article incorporated a network of 60 schools.

It was clear from this example that the importance of school leadership taking the instructional innovation of the KIP seriously meant developing a school-wide professional uptake of the methodology and its corresponding knowledge sharing philosophy. Among the schools that followed the KIP teacher development programme, there were however those that did not fully embrace the innovation, and according to the opinion of the leader of the programme – the main difference was indeed the attitude of the management and how this reflects to the culture of the teacher staff and the culture of the school.

The example in Box 1 provides evidence that leadership enjoys a crucial role in determining the school environment and providing space for innovation to be further negotiated, maintained and supported within the context of teacher learning. This, therefore, reflects on the simple fact that is emphasised in both Figure 2 and Box 1, which indicates that for intervention to get absorbed in a school culture, there needs to be a proactive stance among the school leadership, collaboration within the school about how the intervention can be best processed, then a proactive teacher community and an indication that different types of knowledge need to be created and shared.

Following the suggested pattern in the Figure 2, teachers also need to be proactive and agile when it comes to accepting the change in their routines. When asked about the teacher collective in Hungarian schools, the interviewees talked about a spectrum that incorporates a very heterogeneous group. It was

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⁴ [http://tempus.tpf.hu/goodpr/index/show/27](http://tempus.tpf.hu/goodpr/index/show/27)
clear that there are teachers that prefer to work within their routine and not change much, and those that strive for experimentation and are keen to tinker (D. H. Hargreaves, 1999).

Figure 3: The teacher spectrum

![Teacher Spectrum Diagram]

Figure 3 explores aptitude for innovativeness on one side and open-mindedness of the teacher on the other, as analysed through the data. These two were both mentioned in the interviews and are crucial to have an innovation well-accepted in the school. In particular, the school leaders from the innovative schools have mentioned that their goal is always to have the most of innovative teachers, but that their schools also have those who are not yet there and that it takes time to establish a good professional learning community. Being a very important factor in the equation for school development, both educational experts and school leaders talked extensively about teachers. Admittedly, it was pointed out that there is a large proportion of routine-based teacher that are either not in the situation to experiment and innovate, not open to do it or not aware what they can do. Furthermore, the figure explores the possibility of being in a position to innovate but with the same narrow principals in mind, as well as being very open-minded but not in a position to take advantage of innovations due to challenges and restrictions. For instance, the interviewees agreed that teachers in Hungary lack autonomy over the curriculum and that it is rather important to support initiatives that enhance this part of their practice. One third of Hungarian teachers are also older professionals which sometimes are keen to have last few “quite” years before retirement, as described by one interviewee.

As from the career advancement initiatives, continuous professional development under the legal provisions introduced in 2013, proposes a five-step career development model that is strongly related
to years of service and overall knowledge and skills of the teacher, and thus is reflected in salary and the position one attains (Eurydice, 2015). The model identifies:

1. A “trainee” or “novice teacher” which is the first two years of working in school after graduation and it ends with a qualification exam
2. A “teacher I” which lasts for six years subsequent to the first step
3. A “teacher II” which is another six years that follow

These three steps are in some way inevitable, while the remaining two are optional for those teachers who wish to exceed beyond their duties as only a teacher. Thus, the fourth category is the “master teacher” and in this position the employee is also in charge of mentoring newcomers, trainees and novice teachers. The “researcher teacher” as the ultimate position involves substantial dedication to creating research and participating in activities that are beyond the span of a regular teacher (European Commission, 2015).

The strive to get as many master teachers and research teachers has been significant for the innovative schools, as at this level, the teaching professionals observe their jobs in a different way, also as a challenge and as a dynamic process intertwined with social and economic aspects of a country. Furthermore, the capacity of these teachers to promote innovations and create knowledge communities within schools has been perceived positively as that is also the final step towards having a continuous school development that incorporates innovations.

Finally, in terms of how the elements of successful and innovative school development can reflect to the further learning and schooling outcomes, a visual diagram was carved out to support the findings from interviews.

*Figure 3: Elements and outcomes of innovations targeting school development*
The figure above gives another simplified overview of the elements and what are some of the possible outcomes of the impact of such interventions. Of course, at this occasion it is important to state that this figure is one possible variation that derived from listening to the interviewees, thus it does not intend to restrict other possible outcomes not mentioned here, as well as that it is not necessary that these outcomes will take place. Yet, what needs to be highlighted here is an emphasis on how innovative interventions impact and reflect teachers, feeding into the teacher continuous professional development (CPD) but also on school leadership through impacting strategic development issues. Both can be circular and both lead back to school development. And these processes are illustrated in the left side of the figure, while the right side gives an idea of multiple possible outcomes of such processes. For instance, knowledge sharing and development of learning communities makes a significant change to both to the working environment and the development of the profession. This was strongly emphasised by Cochran-Smith and Lytle (1999) in their three types of teacher knowledge.

Figure 3 also portrays the importance of both processes in relation to innovative interventions. For instance, the interviews disclosed that innovations at the school level are best absorbed when based on a joint decision, when staff is informed and aware of the change suggested and of its repercussions on their work. This already provides an idea that in the selected schools, teachers had a lot of agency and were actively involved in decision making as well as in co-creating the school innovative environment. The school leaders were also mentioning internal knowledge sharing as an element of great importance to the projects and developments that were happening in the school. This demanded for a conscious and thorough planning and implementation strategizing which was actively taken up by the leadership, implying not only a pure administrative and managerial skills but also qualities and competences of balancing resources and human capital without harming the on-going school processes.

This connects to the notion of leadership having a clear vision of the implementation of educational goals and a carefully planned strategy that rests on continuous monitoring, analyses, evaluation and change. As the society changes and the school development, the initial experimentations might not be the best fit for the school ecosystem and this was also stressed out by Day et al (2009) notion of leadership for layered development. As one of the leaders explained, the element of customised evaluation that does not judge teachers according to the national testing but rather according to the efforts and investment in the individual student progress, is helpful for the whole school. The idea that the entire school staff is involve in developing innovative approaches speaks to the importance of the coherence in school development.

*Box 2: Organisational innovation as a glue for school development*

<table>
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<th>Organisation innovation in Szandaszolos</th>
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From the corpus of the interviewees, there was a special example of comprehensive organisational innovation, that was implemented under the leadership of one of the principals interviewed for this study. Operating as an innovative learning environment in Hungary means operating within a non-routine practice for which neither teachers nor school administrators are prepared during their initial teacher education and general tertiary education.

In the school in Szandaszolos village, alongside having a widely distributed leadership pattern the school decided to “re-wire” in a way that the entire staff collective functions in a form of several communities of practice and professional learning communities. This was introduced following two major shifts in how the school operates; primarily, next to their “normal” duties the staff is mixed in teams that deal with different tasks related to continuous school development, which connects to the second shift that involves continuous professional development of everyone in the school. A repository of different types and kinds of in-house evaluations is continuously prepared, implemented and analysed in order to get enough feedback for overall practice improvement. This large data set, called AdatGyüttemény and cleverly abbreviated into “AGY” (translated as “Data Collection” or shortly “BRAIN”), connects to the teachers, students, parents and the community and when analysed provides a valuable input for the school change.

Learning about a practice like the one described above provided further understanding why meaningful and conscious planning is important for implementing a school-based innovation, as well as why entire school community needs to be “on-board” with all decisions. Thus, in defining elements that support the absorption and appropriation of an innovative intervention and that supports continuous school development, joint school-wide awareness of needs, outcomes, analyses and opportunities has been highlighted as of utmost importance.

Concluding remarks

In search for school-level educational innovations in Hungary, one might find that exceptional cases do not necessarily come in large packages. Quite the opposite, they come as humble examples of individual schools that strive for educational excellence. And while, there might be a large number of schools that undertake one or another type of innovation, this article has tried to capture the elements one could find in some of these schools.

This paper has brought forth a series of theoretical concepts, most prominently those related to implementation of innovative interventions, the aspects of school leadership and teacher professional learning, and the overarching element of school development. As it was pointed out through literature and backed up by evidence from the interviews, innovative interventions demand for a localised adaptation in order to immerse into the school culture (McLaughlin, 1990). Furthermore, to understand the contextualised variables, it is important to know also the historical and cultural inputs. Therefore, as it was stated, most of the targeted interventions came to Hungary following two
transition processes, both of which are still in the making. The first one was the shift from a one-party rule and planned economy to parliamentary democracy and the market economy, while the other arrived with Hungarian EU succession in 2004, which shifted the country from an independent state to a European community membership (Halász, 2007). These small-scale political and social earthquakes inevitable resonated within the education sector, which in Snyder et al (1999) classification of intervention implementation still lingered between fidelity and mutual adaptation perspectives. Switching into the third, curriculum enactment perspective, necessitates time and continuity. Yet, nation-wide research confirmed that Hungarian context encompasses four types of innovations by source and format, and thus offers a framework in which diffusion of bottom-up interventions can be recorded (Halász & Fazekas, 2016). Furthermore, other national educational research into the phenomenon of school-based innovations, provides understanding that school development under innovative interventions is not a linear, one-way process but rather a complex and dynamic structure that rest on interaction between different elements (Fazekas, 2017). This was clearly noted through the interviews, backing up the idea of key ingredients for responsive 21st school, such as confident teacher community with a good ability to teach, willingness to innovate and a strong, reflective school leadership (Schleicher, 2015). Therefore, one of the core aims was to understand the breakdown of what makes a difference in Hungary when it comes to successful and innovative schools.

While this corpus of theory, data and analyses gives an interesting outline for understanding innovations in Hungarian schools, as it was noted above, there are limitations that prevent from making strong conclusive remarks at this point. Given that this paper cover only one part of a longer study, based on the findings it is important to consider what would be the next step in examination of mentioned phenomena. Thus, the next step should certainly consider probing further into the leadership aspects of innovative schools by for instance borrowing a framework developed by Day et al (2009) that covers six areas: leadership practice, leaders’ internal states, leadership distribution, leadership influence, school conditions, classroom conditions. The mentioned study attempted to assess the influence of school leadership on effective student learning, thus not all of the categories are useful for the next step of the research. Yet, there are those as leadership practice, leadership distribution, leadership influence as well as school conditions (in particular, the evidence of external partnerships), that are seen as prominent in terms of advancing to the next step of in-depth interviewing.

More importantly, it is utmost necessary to seek for the viewpoints of the teacher collectives in schools that act as innovative learning environments. Given that teachers play an important role in negotiating the innovative curriculum into the classrooms, among students and their working placements (Snyder et al., 1992), their perspective will even further enrich the comprehension of the innovative school and its importance for school development. Additional to this, it is one of the
overall goals of this research to expose a better understanding of transformative power of teacher learning as one the main pinnacle within this research framework, as well as to reflect on its outcomes including both the student better learning and a changing context of the 21st century Europe.

Therefore, importance of understanding what makes a difference in a school has never been more acute than in this century and for this topic. As Resnik et al (2010) point out: “No-where is the challenge of innovation greater than in the education sector, where centuries-old practices of teaching are embedded in political and organisational structures which are resistant to new ideas – even in the face of growing evidence that traditional ways of working are not ‘paying-off’”. With this statement, as well as with all that has been discussed above, it is an inevitable to continue with further exploration on innovative school practices, with fresh perspectives from teachers and other school staff.
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