

Gregorzewski, Malte

**Where teachers learn through work and students work to learn: an empirically informed report on two examples of educational innovations from a German school**

*Studia paedagogica*. 2018, vol. 23, iss. 2, pp. [137]-157

ISSN 1803-7437 (print); ISSN 2336-4521 (online)

Stable URL (DOI): <https://doi.org/10.5817/SP2018-2-8>

Stable URL (handle): <https://hdl.handle.net/11222.digilib/138255>

Access Date: 16. 02. 2024

Version: 20220831

Terms of use: Digital Library of the Faculty of Arts, Masaryk University provides access to digitized documents strictly for personal use, unless otherwise specified.

# WHERE TEACHERS LEARN THROUGH WORK AND STUDENTS WORK TO LEARN: AN EMPIRICALLY INFORMED REPORT ON TWO EXAMPLES OF EDUCATIONAL INNOVATIONS FROM A GERMAN SCHOOL

MALTE GREGORZEWSKI

## **Abstract**

*This empirically informed report presents two innovative approaches to learning through work and working to learn from a secondary school in Germany, with both the school and its innovative development having received the German School Award. In one approach, the school's leadership team deployed the new "Challenges" school project for students' comprehensive educational development. In the other, the school initiated the possibility for teachers to gain practical experience outside the school by working full-time. In addition to their teaching duties, teachers can now work for a limited period in the private sector, thereby gaining valuable experience by shaping their professional stances and influencing their approaches to their students in everyday school life. This empirically informed report is based on desk research complemented by qualitative data gathered during a site visit. These data shall give a deeper understanding of how innovative actions initiated by the school leadership team can contribute to change within an educational system towards advanced teacher learning and transformative school development to achieve better student success.*

## **Keywords**

*teacher learning, student learning, school leadership, educational innovations, German School Award*

## Introduction

The United Nations Educational, Scientific and Cultural Organization revealed in 2012 that “mainstream education institutions still largely practice a more traditional approach to education” (Voogt, 2012, p. 6) as “[c]alibrating the right developmental approach when introducing a new innovative intervention is a complex task for governments, and schools alike” (Kovacs & Tinoca, 2017, p. 73). Educational innovations—which can be understood “as an exception to the general rule that remains otherwise untouched” (Roldão, 2003, pp. 89 et seq.)—“change the [educational] process as a formative tool for schools generating from the ‘experiments’ and informed action within those schools and towards the others they are in contact with” (Roldão, 2003, p. 91). Schools as organizations indeed “tend to be resistant to change and it is necessary to be knowledgeable about them when trying to introduce innovation. If enough support is not provided to change and its agents, conflicts are eminent” (Amaro, 2000, p. 39). Drawing on Lundvall (1992), Benke (2015) argued, that “[a]ccording to research of the innovation process, the essential element of the innovation process is interactive learning ..., which takes place within the framework of evolving interactions between actors” (p. 79). However, Kovacs and Tinoca (2017) stated that “[i]nnovations in perspective of pedagogical mastery are not easily defined, they are highly contextual and extremely dependable on an array of factors” (p. 82).

Throughout this empirically informed report, the term innovation is understood as “the process of making changes, large and small, radical and incremental, to products, processes, and services that results in the introduction of something new for the organization that adds value ... and contributes to the knowledge store of the organization” (O’Sullivan, 2008, p. 5) and it is assumed that educational innovations “are often tried in an effort to make one’s teaching more effective or to tackle an instructional problem or challenge ... connected to an overall desire to improve students’ learning” (Ellis et al., 2011, p. 4 et seq.). Following Senge (2006), “a new idea has been ‘invented’ when it proves to work in the laboratory. The ‘idea’ becomes an ‘innovation’ only when it can be replicated reliably on a meaningful scale at practical costs” (p. 5 et seq.).

Based on her analysis of the interplay of learning and teaching in innovation, Kovacs (2017) explicitly emphasized “the need for spreading the examples of successful pedagogical and technological innovations and further stimulating teacher learning in order to get better results for schools, pupils and societies in the future” (p. 45).

This empirically informed report presents two innovative approaches to learning through work and working to learn within a Berlin school that received the German School Award. The school’s leadership team deployed

a relatively new school project, “Challenges,” as well as the possibility for teachers to gain practical experience outside the school by working full-time within the private sector for a limited amount of time. Qualitative data enable a deeper understanding of how innovative actions by the school’s leadership shaped the entire school for advanced teacher learning and transformative school development in order to achieve better student success. The German educational system is briefly introduced with an emphasis on the system of the Federal State of Berlin and the German School Award because “the work of the German School Prize has shown real leadership” (Shirley, 2016, p. 9) in development of, for, and with schools. Finally, the research scope and the analysis of data is presented before concluding remarks sum up the insights and results of this empirically informed report.

### **The German educational system with an emphasis on the Federal State of Berlin: A brief introduction**

Within the Federal Republic of Germany, education is not unified. “The Grundgesetz of 1949 (Basic Law) stipulates that the traditional federal order be continued in the areas of education, science and culture. Thus, the primary responsibility for legislation and administration in the above-mentioned areas, so called cultural sovereignty (Kulturhoheit), rests with the Länder” (Eckhardt, 2017, p. 11). However, there is an all-German frame of reference among all 16 federal states (Erk, 2003) that lends the educational system in Germany a certain continuity and framework, such as the minimum number of mandatory school years for every child and the apprenticeship system, also known as the dual system (Ertl, 2004; Franz & Soskice, 1994; Lewis, 2007), which is an “institutional arrangement where learning takes place both in vocational schools and through industry partnerships” (Lewis, 2007, p. 464). Typically, the common approach within all 16 federal states of Germany to their respective educational system is based on a three-pillar framework.<sup>1</sup> After attending primary school for four or six years—depending on the legislation in the respective federal state—students continue their secondary education at a university-preparatory *Gymnasium* (advanced secondary education emphasizing academic learning, traditionally educating white-collar workers and leading to the *Abitur*, an A-level-style examination), a *Realschule* (upper secondary school), or a *Hauptschule* (lower secondary school, traditionally educating blue-collar workers) (Eckhardt, 2017).

---

<sup>1</sup> In addition to these three main pillars, there are such schools as interdenominational schools (*Gemeinschaftsschule*) and children with specific needs may attend special education support centers (*Sonderpädagogische Förderzentren*).

The unification process of the Federal Republic of Germany and the German Democratic Republic (GDR) had more than only historical and political impacts. It also led to the GDR struggling in its efforts to implement all necessary changes to its education system in order to quickly adapt them to the requirements in former West Germany. In some respects, the education systems in former West Germany could also have benefited from the experiences of the former GDR education system (Pritchard, 1999), but the exchange was purely unilateral. However, according to Gruber (2006), who analyzed the impacts from the results of the Programme for International Student Assessment (PISA) in 2001 within Germany with reference to Picht (1964), two major educational shock waves hit post-war Germany:

The German PISA results were widely perceived as the second ‘educational catastrophe’, referring to the first ‘Deutsche Bildungskatastrophe’ proclaimed by the German sociologist G. Picht, who in the mid-1960s had argued that the German school system did not produce enough high-caliber secondary school leavers and Germany would therefore be unable to compete successfully with other highly developed nations (Picht, 1964). ... In the common German parlance PISA is firmly established as a household term and has become the universally understood cipher for the under-performance of the German school system. (Gruber, 2006, p. 195)

After the publication of these PISA results in 2001, attention in Germany was drawn to the need to implement changes through both structural and curricular-based reforms, as these results encouraged further (also ideological) debates, such as about the best possible educational model, the effects of internal and external differentiation, and how and at what age separating pupils into different classes by achievement might be reasonable (cf. Baumert et al., 2002; Stanat & Baumert, 2002). For example, a major school reform in Berlin in 2011 redesigned the educational system from the traditional three-pillar approach to a two-pillar one. After six years of primary schooling, it was intended for pupils to attend either a *Gymnasium* or a *Integrierte Sekundarschule* (integrated secondary school), where the *Abitur* and/or other degrees could also be obtained – degrees which in the past had been awarded by a lower secondary school or an upper secondary school (Senatsverwaltung für Bildung, Wissenschaft und Forschung des Landes Berlin, 2009).<sup>2</sup>

<sup>2</sup> Also in Berlin, in addition to these two current main pillars (Gymnasium and integrated secondary school), such schools as interdenominational schools (*Gemeinschaftsschule*) are piloted while children with specific needs may attend special education support centers (*Sonderpädagogische Förderzentren*).

The overall aims of this reform were both the further improvement of school quality and the continuous improvement of equal educational opportunities for pupils of all backgrounds. The specific pedagogical aims incorporated inclusion of pupils with special educational needs as well as improved individual support for all pupils during their school education, thus ameliorating practical and work-related learning in order to better prepare pupils for the job market and their further education.

### **Research with(in) an excellent school**

The studied school was a lower secondary school prior to the school reform in Berlin that faced the hardships and challenges common to low-prestige public schools in problematic, deprived neighborhoods, including infrastructural problems and, in part, demotivated staff. With the school reform, the school became an integrated secondary school in 2010. In the 2016/2017 school year, the school had 436 pupils in 17 classes. There were 47 teachers, four of which were still in their initial training phase. The team also included four social workers as well as numerous external specialists, interns, and educational freelancers who supported the school throughout the school year. The classes ranged from grade 7 (average pupil age between 12 and 13 years) to grade 10 (average pupil age around 16 years). The school understood itself as a place of learning for intensive preparation for a fulfilling private and professional life (Ratzki, 2011).

Additionally, the school can also be interpreted as an excellent school as it received the German School Award. The German School Award was established by the Robert Bosch Foundation and the Heidehof Foundation as a quality label for successful schools. It can be interpreted as a:

network driven by educational professionals who want to rethink and recreate schools. These are educators who do not wait for government to act and they do not model everything they do on successful businesses. They understand the science of teaching and learning, and they exercise the courage and savoir-faire to lead the profession themselves. The six quality areas of the prize ... enable innovation but they also uphold traditional democratic values of education for the public good. (Shirley, 2016, p. 9)

In more detail, “the award was launched to honor educational achievements and help make them usable to improve the quality of schools all over Germany and in German international schools” (Robert Bosch Stiftung, 2018). The award examines six quality areas (Beutel, Höhman, Schratz, &

Pant, 2016): academic achievement, approach to diversity, quality of instruction, responsibility, school culture, and school development, which can be overall understood and interpreted as encouraging “local creativity and innovation” and doing “so in small scaled, humanistic laboratories of democracy that are our schools” (Shirley, 2016, p. 8).

The German School Award recognized the studied school’s commitment to improved student learning, especially facing the major structural reform in 2011 and its active leveraging of this reform to pursue extensive and continuous school development. Despite the hardship it faced as a public school, the school had implemented significant changes at the time it received the award: the introduction of learning offices together with newly installed planning discussions between teachers and students, the launch of logbooks for every student, the implementation of the dual learning concept with its service learning component, collaboration with such external partners as local businesses, and continuous support for the school’s annual internship exchange meeting (Ratzki, 2011, p. 62 et seq.). Moreover, the school allowed a variety of impulses from art and culture to inspire and develop creativity, thus encouraging the adolescents to critically assess familiar, traditional thinking and engage in new situations, both important aspects of discovering one’s own future (cf. Anonymous, 2017).

### **The methodology**

This empirically informed report gathered data from extensive desk research complemented by an exploratory qualitative single case study—understood as a “descriptive case study” (Merriam, 1998, p. 50)—which included a semi-structured one-hour interview with the Dean and her deputy as well as a semi-structured interview of around 45 minutes with one teacher and one social worker, both appointed and directly or indirectly involved in the two innovations, following Stake (2005): “Case study is not a methodological choice but a choice of what is to be studied” (p. 443). With reference to Lamnek (2005), Ammann (2009) argued that a case study is “more of an approach” or rather “access to a field of research than a self-contained and ready-to-use method” (p. 93). Based on prepared and pre-formulated questions about the interplay between learning and work, the two innovations, and their influences on improving student learning, the discussion within the semi-structured interviews was still able to be handled rather flexibly in order to investigate the field of experiences of the interviewees (Attenslander, 2010). A qualitative research approach is commonly the preferred choice to describe an event in its natural setting (Abusabha & Woelfel, 2003) and elucidate the studied subjects in depth (Walsh, 2003). Furthermore, a qualitative research approach is understood as:

the systematic inquiry into social phenomena in natural settings. These phenomena can include, but are not limited to, how people experience aspects of their lives, how individuals and/or groups behave, how organizations function, and how interactions shape relationships. In qualitative research, the researcher is the main data collection instrument. (Teherani et al., 2015, p. 669).

Furthermore, rigorous desk research analyzing both online and offline material formed the foundation of this report along with the data gathered from the interviews. The interviewees were the Dean (SL1) and her deputy (SL2), a teacher (T), and a social worker (SW) – Flick (2005) has reminded us that triangulation supports the approach of including different views and cross-checking data from different standpoints. All interviews were conducted in German and translated into English following transcription. MG represents the author of this paper and appears only to contextualize the given answers for the reader while providing additional information or emphasizing the way the answer was articulated.

Yin (1994) stated that “case studies can be conducted and written with many different motives, including the simple presentation of individual cases or the desire to arrive at broad generalizations based on case study evidence” (p. 15). Choosing a case study design is “the preferred strategy [for the researcher] when ‘how’ or ‘why’ questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context” (Yin, 1984, p. 1). Nevertheless, especially concerning the limited amount of interviews, this report has enormous limitations, such as those regarding the possible generalization and validity of the data, as four interviews could be interpreted as not sufficient (Yin, 1984, 1994). Further critics may “include the charge that case studies provide little basis for scientific generalization, they take too long and result in massive, unreadable documents, and they have no ability to establish causal relationships” (Daughtery, 2009, p. 163). However, this empirically informed paper should not be confused with an empirical paper; it rather focuses on describing each of the presented innovations and documenting their key success factors.

Case selection is very important and needs to be justified (Ammann, 2009, p. 95). For research about successful schools and exemplary innovations transforming staff and student attitudes to and between learning and work, the author developed the criteria listed below following Lamnek (2005, p. 314), who stated that a researcher chooses either an extreme or an ideal case. The latter is arguably the reason for having chosen the current approach for mainly three reasons:



- (1) Having worked as part of the German School Award, I am familiar with the German School Award's ability to distinguish quality. The German School Award identifies successful schools and provides a quality label, which is commonly recognized as significant, reliable, and trustworthy (Beutel et al., 2016).

This framework builds upon the strengths of the traditional structures and cultures of schools but also stretches education in new and often surprising ways. Here is a change network that asks the largest and most important questions, throws students and teachers into new forms of fruitful contact with one another, and opens up schools in a spirit of mutual inquiry and support. (Shirley, 2016, p. 11)

- (2) Within this pre-collection, all schools were identified that explicitly focus on transforming the professional attitude of their staff and students using an innovative approach to learning and work for better student success within school developmental activities.
- (3) The personal knowledge of the author about all of the remaining schools served as the final criterion for choosing this particular school. The author has worked closely with the school's leadership team. The author's deep knowledge and involvement precisely in the transformative actions implemented, including their planning, execution and—in part—evaluation, combined with an excellent professional relationship with the school leadership team, which was and is based on trust and dedication to sustainable school development.

Particularly the last criterion seems problematic as, for example, Lamnek (2005) argued with the “proximity–distance–difficulty” (p. 97, translated) occurring within this kind of research setting. However, in his dissertation, Ammann (2009) approached this difficulty by stating that in fact to carry out a case study it is necessary to “delve deeply into the reality of the case. It seems to be of great advantage that the researcher knows this reality ... : the building ..., the acting persons ... , the region, and the school environment” (p. 97, translated) Furthermore, Ammann (2009) argued that according to Helfferich (2005, p. 102) the idea of the completely neutral researcher is no more than wishful thinking as “objectivity is the delusion of a subject that could observe without itself” (von Foerster, cited by von Glasersfeld, 2005, p. 31, translated).<sup>3</sup> Furthermore, a descriptive case study can be made “only through intimate contact with daily institutional life. ... By departing from traditional lines of inquiry, our exploration of these ... institutions allow us to attempt a multifaceted interpretation of organizational life” (Chaffee & Tierney, 1988, p. 13).

<sup>3</sup> Throughout this paragraph in particular, I am indebted to Markus Ammann for his valuable support and assistance.

## Two educational innovations

Biesta (2012) argued that “[t]he purpose of education is not that children and students learn, but that they learn something and that they do so for particular reasons and with reference to particular purposes” (p. 36). As mentioned above, public schools in Berlin generally follow the regular curriculum given by this federal state, but interpret this curriculum in manners that may differ in many ways from a historic-traditional interpretation of how a school should, for example, organize its weekly schedule, subjects, and school life. However, this paper does not aim to analyze these differences but rather two very recently deployed innovative measures: a project called “Challenges” and voluntary teacher internships.

A “Challenge” in this particular school is prepared throughout the school year mostly by and among a maximum of 16 students with the help of teachers and social workers and is carried out within the last two weeks of each school year.<sup>4</sup> Through taking an active role in a “challenge,” students leave the school context according to their goals—which they set themselves—in order to get a formative life experience. In recent years, students have, for example, cycled to Paris, crossed the Alps, and hiked the Way of St. James. Through this project, experiential pedagogical elements are interwoven with everyday school life and, as a result, the challenges usually take place outdoors, using nature as a learning space – given the natural setting, many challenges inherently include a fairly high level of physical activity. In addition, the activities offer a direct action consequence, which means that the students receive immediate feedback on their progress, which may be triggered by any necessary behavioral changes: the group acts as a catalyst for the desired change (cf. Anonymous, 2017). The overall goal is for the students to overcome their fears and limits to ultimately return to the school learning environment with the experience of self-efficacy as well as the continuous creation of teacher-student relationships (SL1), or as the deputy put it:

*Unfortunately, school much too rarely has anything to do with enthusiasm. This is an important word for me, enthusiasm [particularly stressed; MG]. You can only set goals in life and achieve them if you are enthusiastic. That is what the challenges are about: What do you really want, what is it you are striving to achieve for yourself, and what is it you’ve always wanted to do?*

<sup>4</sup> Arguably, the idea originates from Hentig (1993) and for some years this idea has already been put into practice by different schools in Germany, such as Winterhuder Reformschule (Hamburg) and Evangelische Schule Berlin Zentrum (Berlin).

*In the case of the challenges, there is no pre-structuring by the teacher, as in the classroom, but it is a broad, unencumbered field. ... Our students need to do all planning, develop ideas for their common challenge, withstand crises along all the way, and work hard for the final implementation at the end of each school year. (SL2)*

To successfully complete the chosen challenge, students need to regularly work after school with external partners, for example to receive funding from private or non-private institutions. They need, for example, to apply for grants or find jobs to be able to cover their individual contributions to project-related costs. In addition to the often physical challenges, students also grow through the challenge of thorough planning, whether financial or organizational. Most importantly, however, students develop a sense of their own desires, their own feelings, and their own dreams about what they would love to do and what they are able to achieve: “*In fact, for them [the students; MG], it is sometimes the very first time that they’ve experienced this [e.g., contacting companies and foundations as well as developing ideas for funding opportunities; MG] as meaningful and important for themselves*” (SL1).

The aim of challenges is to positively influence the biography of each student and not just limit this experience to a classroom task or a project trip, but rather learn and work in a different place, where the students experience themselves and their behavior in the group or in difficult situations. The goal is for students to become more mature after mastering a challenge and thus to be stronger and more experienced when facing the next challenge.

*Teachers who accompany the challenge have a completely different relationship with the students: the level of trust among them is sky-high and their common understanding of one another exceeds what you can typically accomplish in the classroom. ... I see on the trip how a child develops; every day is intense and the learning curve is very steep. You are close up and learn what the challenge can trigger in the development process and this benefit is not necessarily immanent in the classic school setting. The student’s personality development is just impressive throughout the journey. (T)*

However, the teacher pointed out the immense responsibility teachers take on themselves when, for example, they build a raft and the students test it on the river – noting both the responsibility and the need for the school leadership to establish a stimulating working environment for teachers, which is key for these kind of projects.

*The raft was built and was of course not TÜV [Technical Supervision Agency; MG] approved. ... Teachers are responsible for their students day and night. The supervision duty in Berlin is within a framework delegable to*

*other adults accompanying the challenge, but the duty of care for the students always remains with the teacher. But our school leadership is able to give us the strong feeling that it will keep potential threats [occurring through possible incidents during the execution of a challenge; MG] away from us. (T)*

The opportunity to gain practical experiences outside the school is provided not only to students, but also to the teaching staff. For the past two years, the school leadership team has actively and successfully sought internships for interested teachers. The intention is for teachers to spend one week full-time in another institution, especially one among the small and medium-sized enterprises located near the school. This should give teachers insight into what they are preparing their own pupils for, be it an internship or their first job. This initiative also comes with managerial challenges and administrative obstacles. The school leadership clearly emphasized how crucial it is for enacting the school program in order to fulfill the school's educational mission.

*We make it very clear that the teacher internship is now part of our school and our school culture. We provide arguments for this position and actively engage in discussions with our teaching staff. Because otherwise we could not and would not be able to successfully introduce such an action. (SL1)*

Nevertheless, it is an integral part of the school program that teachers prepare their students for the world as this fundamental educational goal is rooted within both the pillar of cultural education and the professional and study orientation (Anonymous, 2017). The fast-paced environments of the globalized world of the 21st-century, especially given the vast technological developments, provide in part possibilities to work in settings different from the past – changes that might influence the way teachers need to prepare their students for the emerging future (Scharmer, 2009).

*Many colleagues say, "I don't need an internship!" But we know that teachers are very important in assisting students to choose among further career paths, in addition to the peer group and parents, of course. But teachers don't necessarily automatically know how to apply for jobs nowadays, what kind of new jobs are out there, and how job realities in both established and newly created jobs look. (SL1)*

Through a teacher internship, the school connects to the respective institution on multiple levels. Teachers get first-hand working experience and knowledge about the current situation of, for example, a small business on the job market and generally experience a new working environment. They also experience work ethics, demands, and tension areas, which might be different from the

ones within the school. Furthermore, the teachers establish the first links for their students and open possible future paths for them to get an internship at the same institution at a later point. SL1 explicitly stated that there are indeed many systematic approaches from the authorities, which do not necessarily always really reach out to individual students. The teacher noted the demands for the profession as well as the pivotal role of external partners for the school, which is, as mentioned above, conceptualized in the school program as well.

*The teacher internship can be understood as an additional task for teachers. We have to invest our time and other resources in it. The school leadership's aim is a closer interconnection between the school and the world beyond the school. Therefore, we should be experts and be able to draw on our own experiences while passing this knowledge on to students. This is demanding, but being able to pass on these very experiences is the goal and the added value for the students. In addition, the school's network is strengthened. (T)*

### Analytical discussion

Innovative actions lead to “a change in knowledge, beliefs or practices even when a teacher did not have the intention to learn from the activity” (Bakkenes, Vermunt, & Wubbels, 2010, p. 536). This approach is therefore highly interlinked with the subject of teacher learning, which is understood not as a singular period—e.g., initial teacher training periods—but a continuous process (Beijaard, Korthagen, & Verloop, 2007) significant to and for better student learning (Darling-Hammond, 1998; Yoon et al. 2007) and also highly connected to school development (Stein & Wang, 1988). However, how school leaders actually lead their institution seems to be crucial and pivotal for both teacher learning (Bredeson, 2000; Duze, 2012) and student learning outcomes (Day et al., 2009; Halász, 2011). In this sense, Hattie (2012) pointed out the exceptional importance of teacher–student relationships and their measurable impact on learning outcomes. Having said this, dual learning links cognitive and experiential learning – the term refers to the entanglement of systematic and experiential, practical knowledge (Bayer, 2012, p. 199), thereby emphasizing the relationship of theory to practice in education (Dewey, 1904). Dewey (1961)—known for his “pragmatic philosophy ties knowledge to experience, his progressive political vision connects individual to society, his student-centred educational theory combines reflection with action, and his ethical writing emphasize democracy and community” (Deans, 1999, p. 15)—argued that everyone “is responsible and [...] has to be involved in social affairs” (p. 26).

While talking about the importance of learning and work, the Dean expressed a fundamental pedagogical understanding of education that was reflected in her influence on her school. Learning and working are transformed beyond the aim of preparing students for the job market and/or their continuous formal education.

*Our school concept is built on two equal pillars: broad cultural education [meant as part of Bildung; MG] and the pillar “professional and study orientation.” The latter is quite strong, especially because as a former Hauptschule it was crucial for our students that we be strong on this. We soon came to the idea of important cultural education, although this concept is sometimes a bit spongy – that often upsets us, but that’s the way it is. We try to interlink this artistic, musical education with our professional and study orientation, but this kind of comprehensive approach is very demanding. (SL1)*

Dewey (1961) argued that a student at school becomes “educated” only when he has an opportunity “to contribute something from his own experience, no matter how meager or slender that background of experience may be at a given time, and finally that enlightenment comes from the give and take, from the exchange of experiences and ideas” (p. 36). Moreover, against the background of the two innovations it is significant to highlight the importance for education institutions to enter into “genuinely equitable, reciprocal partnerships with community organizations or communities” (Jacoby, 2009, p. 97).

Both innovations enact a fundamental concept of dual learning in an innovative way within secondary education for both teachers and students: learning through working and working for learning. In order to enable holistic education “Bildung”, Fuchs (2005) argued that it is essential for students not only to set goals and pursue them, but also to face challenging tasks and master them. Experiencing self-efficacy, willingness, and joy of discovery and daring and risking responsibility for the completion of a sophisticated task (Schley, 2003) as well as experiencing self-confidence through self-efficacy (Schunk, 1991) cannot arise through the execution of routines, but presupposes a goal-oriented action with regard to a higher vision and arises from the successful treatment of complex and challenging situations (Schratz & Steiner-Löffler, 1998). According to Jarvis, Holford and Griffin (2003), learning is “the process through which we become the human beings we are, the process by which we internalize the external world and through which we construct our experiences of that world” (p. 8)

The two exemplary innovations follow in part the approach of dual learning (Arnz, 2010; Senatsverwaltung für Bildung, Wissenschaft und Forschung des Landes Berlin, 2009), which is a fundamental part of German vocational

education and training (VET) – known as Germany’s dual system (Federal Ministry of Education and Research, 2015). It connects “experiences derived from the world of work with systematic learning processes at school, both organized in, and regulated by, nationwide training occupations” (Ertl, 2004, p. 118). Within the VET system, dual learning was and is an integral part of this dual system as “the principle of the dualism of theoretical and practical learning (i.e. learning in the work process) is an indispensable and fundamental principle of vocational education and training” (Rauner & Smith, 2010, p. 2), while indeed “teachers found themselves the most competent actors to make decisions what qualifications are needed to teach in VET schools in the future” (Benke, 2015, p. 131). The concept of dual learning, which is characterized by the systemic and systematic liaison of learning in school and learning outside the school building implemented within the school curriculum (cf. Arnz, 2010), is relatively new within secondary education. Gessler and Freund (2015) claimed this means that:

In the institutions or systems of rules, practices have been established to cope with the central questions of teaching, learning, and competence development. Practices are constrained by the boundaries of the institution (intended practices), but also new practices (emerging) occur at this level that are both rule bound to the institutional boundaries and transcend them to create their own and original area for innovation. (p. 9)

However, it is necessary to mention that establishing this concept is a particular goal for each integrated secondary school in Berlin in order to intensively prepare students for the working and professional world and guide young people to develop their own interests and deal with their respective ideas to pursue a career (Bartels & Nix, 2010). The innovative elements presented in this report are relatively “new model[s] of learning partnerships between and among students and teachers, aiming towards deep learning goals” (Fullan & Langworthy, 2014, p. 2), or as Dewey (1904) stated more concretely:

The teacher who leaves the professional school with power in managing a class of children may appear to superior advantage the first day, the first week, the first month, or even the first year, as compared with some other teacher who has a much more vital command of the psychology, logic and ethics of development. But later “progress” may with such consist only in perfecting and refining skill already possessed. Such persons seem to know how to teach, but they are not students of teaching. Even though they go



on studying books of pedagogy, reading teachers' journals, attending teachers' institutes, etc., yet the root of the matter is not in them, unless they continue to be students of subject-matter, and students of mind-activity. Unless a teacher is such a student, he may continue to improve in the mechanics of school management, but he cannot grow as a teacher, an inspirer and director of soul-life. (p. 15)

### Concluding remarks

The opportunity for the integrated secondary school under study, rooted in the structural school reform of around 2011, also brought about an internal transformation (cf. Anonymous, 2017) as “learning involves interpretation of dissonance from latent knowledge and determination to accept complexity of the change process, given that a professional is held accountable for both the existing system and the call for reform” (Kwo, 2010, p. 318). Thus, the school community was faced with the question of what school it wanted to become—drawing on Scharmer (2009), this process could indeed be understood as listening in to and presencing emerging future possibilities—which values and pedagogical principles the school wanted to advocate for and how the school and its staff would enact them (Ball, Maguire, & Braun, 2012). In a moderated audit process, it became clear that the main school and integration experiences should be used, but also that incentives should be created for “educationally interested” families. In short, the school should become a “school for all,” a school that takes individuality and community equally into its pedagogical view (cf. Anonymous, 2017). Clearly, at the very center of the educational work lies a comprehensive understanding of common learning. It therefore comes as no surprise that inclusion is the overarching and unifying principle that affects everyone at the school, while encouraging motivation and individual accompaniment on the part of the educators is important in order to challenge the adolescents to do their personal best (cf. Anonymous, 2017).

The possible introduction of an elective “Challenge” course in grade 8 and the dedication of teaching time to preparing the individual challenge projects might change the character of the project because grades would be awarded for tasks within the preparation framework of the challenge, attendance would be compulsory, and the pupils would also be committed to active participation. Therefore, fundamental questions arise: How can the “Challenges” project be fully implemented into the curriculum? Will it become a traditional subject within the students' regular schedule? If this is carefully planned, will the traditional methods of student assessment prove to be sufficient for this unusual subject – and how can student assessment be



transformed or even considered to be at stake completely? Generally speaking, it seems crucial that innovations become “an ongoing part of the curriculum, pedagogy, evaluation, and ethic of the class or school, and not an add-on, dependent on external funding or the particular philosophical whims of the teacher” (Kraft, 1996, p. 141). Moreover, practical learning could be interpreted as “learning that arises out of reflection from an experience, leading to purposive action in order to set out the hypotheses that arise out of this reflection” (Cano, 2005, p. 2).

Analyzing the presented data against the briefly outlined theoretical background, one might conclude that learning and working, in particular the interaction of knowledge shared across sectors and teacher learning but also the influence of school leadership and curriculum novelties, might be indeed a mix that works for school development (cf. Gregorzewski & Kovacs, 2017; Kovacs & Gregorzewski, 2017). Kozma (1985, p. 302 et seq.) argued that “innovation is [...] the introduction of something new into a system [which then] creates its own press for change.” However, the indispensable role of the school leadership team in the process of implementing and enacting these innovative actions within and in addition to the ordinary school curriculum proves to be crucial.

*We have a very valuable, open-minded staff here. Everyone, teachers, social workers, and all the others who work here, are very much welcomed the way they are, especially by the school leaders. We all belong to this school. And the school leaders are always keen on developing new things and are very open in general. Basically, everyone can approach them [the Dean and her deputy; MG] and say, “Hey, I have a great idea here. Shouldn’t we try it out?” (SW)*

### Acknowledgments

This article is part of the “European Doctorate in Teacher Education” (EDiTE) project that has received funding from the European Union’s Horizon 2020 research and innovation program under Marie-Sklodowska-Curie grant agreement number 676452.

Furthermore, this article originates and has significantly benefited from discourses within the Innsbruck-based research group “Von den Besten lernen: Lernwirksames Schulleitungshandeln an ausgezeichneten Schulen des Deutschen Schulpreises”<sup>5</sup> and in particular from helpful discussions with its

---

<sup>5</sup> Learning from the best: Leadership for learning in schools that won the German School Award.

members Michael Schratz, Markus Ammann, Niels Anderegg, Alexander Bergmann, Werner Mauersberg, and Veronika Möltner. In addition to two anonymous reviewers, the author received valuable support from Markus Ammann, Veronika Möltner, Shaima Muhammad, and Vasileios Symeonidis about a first draft of this report. Furthermore, the development of this paper profited from in-depth discussions with Helena Kovacs during our secondment in Lisbon, Portugal. Finally, the author would like to express his deepest gratitude to the entire team working at the school investigated and in particular the Dean for her unique insights into the school's developments and especially her constant support and permanent enthusiasm for effective school innovations and educational excellence. All possible misunderstandings and/or omissions remain completely the author's responsibility.

Special thanks to Daniela Herdes.

## References

- Anonymous. (2017). *School program*. Unpublished manuscript (as of August 2017).
- Abusabha, R., & Woelfel, M. (2003). Qualitative vs. quantitative methods: Two opposites that make a perfect match. *Journal of the American Dietetic Association*, 103(5), 566–575.
- Amaro, G. (2000). *Curriculum innovation in Portugal: The Área Escola – an arena for cross-curricular activities and curriculum development*. Geneva: International Bureau of Education, UNESCO.
- Ammann, M. (2009). *Stakeholderpartizipation in der Schule. Ein Beitrag zu einer Organisationstheorie der Schule aus mikropolitischer Perspektive*. München: Rainer Hampp Verlag.
- Arnz, S. (2010). Bessere Chancen für alle durch die neue Schulstruktur. *Betrifft: Lehrerbildung und Schule*, 6, 5–11.
- Attenslander, P. (2010). *Methoden der empirischen Sozialforschung*. Berlin: Erich Schmidt Verlag.
- Bakkenes, I., Vermunt, J. D., & Wubbels, T. (2010). Teacher learning in the context of educational innovation: Learning activities and learning outcomes of experienced teachers. *Learning and Instruction*, 20(6), 533–548.
- Ball, S., Maguire, M., & Braun, A. (2012). *How schools do policy: Policy enactment in secondary schools*. London: Routledge.
- Bartels, J., & Nix, T. (Eds.). (2010). *Duales Lernen. Handreichung für die Praxis*. Berlin: Senator für Bildung, Wissenschaft und Forschung.
- Baumert, J., Artelt, C., Klieme, E., Neubrand, J., Prenzel, M., Schiefele, U., Schneider, W., Tillmann, K.-J., & Weiß, M. (Eds.). (2002). *PISA 2000. Die Länder der Bundesrepublik Deutschland im Vergleich*. Opladen: Leske + Budrich.
- Bayer, M. (2012). Innovationsbedarf und Leitlinien für die Facharbeit in globalen Dienstleistungsbranchen. In A. Boes, A. Baukrowith, T. Kämpf & K. Marrs (Eds.), *Qualifizierung für eine global vernetzte Ökonomie* (pp. 195–202), Wiesbaden: Springer Gabler.
- Beijaard, D., Korthagen, F. A. J., & Verloop, N. (2007). Understanding how teachers learn as a prerequisite for promoting teacher learning. *Teachers and Teaching: Theory and Practice*, 13(2), 105–108.

- Benke, M. (2015). New and old partnerships targeting VET in the 21st century. In M. Gessler & L. Freund (Eds.), *Crossing boundaries in vocational education and training: Innovative concepts for the 21st century conference proceedings*. Evaluate Europe handbook series. Bremen: University of Bremen, Institute Technology and Education.
- Benke, M. (2015). The spatial frame of lifelong learning: Learning regions, learning cities, learning communities. *Hungarian Educational Research Journal*, 5(4), 79–86.
- Bredeson, P. (2000). The school principal's role in teacher professional development. *Journal of In-Service Education*, 26(2), 385–401.
- Beutel, S.-I., Höhmann, K., Schratz, M., & Pant, H. (2016). *Handbuch gute Schule*. Seelze: Klett Kallmeyer.
- Biesta, G. (2012). The future of teacher education: Evidence, competence or wisdom? *RoSE – Research on Steiner Education*, 3(1), 8–21. Retrieved from <http://www.rosejournal.com/index.php/rose/article/view/92>
- Chaffee, E. E., & Tierney, W. G. (1988). *Collegiate culture and leadership strategies*. New York: Macmillan.
- Day, C., Sammons, P., Hopkins, D., Harris, A., Leithwood, K., Gu, Q., Brown, E., Ahtaridou, E., & Kington, A. (2009). *The impact of school leadership on pupil outcomes – Final report*. Retrieved from <http://dera.ioe.ac.uk/11329/1/DCSF-RR108.pdf>
- Darling-Hammond, L. (1998). Teacher learning that supports student learning. *Educational Leadership*, 55(5), 6–11.
- Daughtery, C. (2009). An exercise in rigor: A review of Robert K. Yin's case study research design and method. *The Weekly Qualitative Report*, 2(27), 162–165.
- Deans, T. (1999). Service-Learning in two keys: Paulo Freire's critical pedagogy in relation to John Dewey's pragmatism. *Michigan Journal of Community Service Learning*, 6(1), 15–29.
- Dewey, J. (1904). The relation of theory to practice in education. In C. A. McMurry (Ed.), *The third yearbook of the National society for the scientific study of education. Part I.* (pp. 9–30). Chicago: The University of Chicago Press.
- Dewey, J. (1961). *Philosophy of education: Problems of men*. New Jersey: Littlefield, Adams & Co.
- Duze, C. (2012). The changing role of school leadership and teacher capacity building in teaching and learning. *Journal of Emerging Trends in Educational Research and Policy Studies*, 3(1), 111–117.
- Eckhardt, T. (Ed.). (2017). *The education system in the Federal Republic of Germany 2014/2015*. Bonn: Secretariat of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany. Retrieved from [https://www.kmk.org/fileadmin/Dateien/pdf/Eurydice/Bildungswesen-engl-pdfs/dossier\\_en\\_ebook.pdf](https://www.kmk.org/fileadmin/Dateien/pdf/Eurydice/Bildungswesen-engl-pdfs/dossier_en_ebook.pdf)
- Ellis, D., Bissonnette, C., Furion, S., Hall, S., Kenyon, T., McCarville, R., Stubley, G., & Woudsma, C. (2011). *The task force on innovative teaching practices to promote deep learning at the University of Waterloo: Final report*. Retrieved from [https://uwaterloo.ca/centre-for-teaching-excellence/sites/ca.centre-for-teaching-excellence/files/uploads/files/Task%20Force%20Report%20on%20Deep%20Learning\\_0.pdf](https://uwaterloo.ca/centre-for-teaching-excellence/sites/ca.centre-for-teaching-excellence/files/uploads/files/Task%20Force%20Report%20on%20Deep%20Learning_0.pdf)
- Erk, J. (2003). Federal Germany and its non-federal society: Emergence of an all-German educational policy in a system of exclusive provincial jurisdiction. *Canadian Journal of Political Science*, 36(2), 295–317.
- Ertl, H. (2004). Tradition and reform: modernising the German dual system of vocational education. In G. Hayward & S. James (Eds.), *Balancing the skills question – Key issues and challenges for policy and practice*. Bristol: The Policy Press.

- Federal Ministry of Education and Research. (2015). *Report on vocational education and training 2015*. Bonn: Federal Ministry of Education and Research.
- Franz, W., & Soskice, D. W. (1994). *The German apprenticeship system*. Discussion paper. Paper presented at the 2<sup>nd</sup> Workshop on institutional frameworks and labour market performance, Center for international labour economics (CILE), University of Konstanz, November 18–20, 1993, Nürnberg. Retrieved from <https://www.econstor.eu/bitstream/10419/92436/1/720918545.pdf>
- Flick, U. (2005). Triangulation in der qualitativen Forschung. In U. Flick, E. von Kardorff & I. Steinke (Eds.). *Qualitative Forschung. Ein Handbuch* (pp. 309–318). Hamburg: Rowohlt.
- Fullan, M., & Langworthy, M. (2014). *A rich seam – How new pedagogies find deep learning*. London: Pearson. Retrieved from: [http://www.michaelfullan.ca/wp-content/uploads/2014/01/3897\\_Rich\\_Seam\\_web.pdf](http://www.michaelfullan.ca/wp-content/uploads/2014/01/3897_Rich_Seam_web.pdf)
- Fuchs, C. (2005). *Selbstwirksam Lernen im schulischen Kontext: Kennzeichen – Bedingungen – Umsetzungsbeispiele*. Bad Heilbrunn: Klinkhardt.
- von Glasersfeld, E. (2005). Konstruktion der Wirklichkeit und des Begriffs der Objektivität. In H. Gumin, & H. Meier (Eds.). *Einführung in den Konstruktivismus* (pp. 9–39). München: Piper Verlag.
- Gessler, M., & Freund, L. (2015). Introduction. In M. Gessler & L. Freund (Eds.). *Crossing boundaries in vocational Education and training: Innovative concepts for the 21st century*. Bremen: Institute Technology and Education, University of Bremen.
- Gregorzewski, M., & Kovacs, H. (2017). A mix that works for school development: School leadership and knowledge sharing. In L. Rasiński, T. Toth & J. Wagner (Eds.), *European perspectives in transformative education* (pp. 204–221). Wrocław: Wydawnictwo Naukowe Dolnośląskiej Szkoły Wyższej we Wrocławiu.
- Gruber, K.-H. (2006). The German 'PISA-shock': some aspects of the extraordinary impact of the OECD's PISA study on the German education system. In H. Ertl (Ed.), *Cross-national attraction in Education accounts from England and Germany*. Oxford: Symposium Books.
- Halász, G. (2011). School Leadership and Pupil Learning Outcomes. In T. Barath & M. Szabó (Eds.), *Does Leadership Matter? Implications for Leadership Development and the School as a Learning Organisation*, (pp. 19–31). Szeged: HUNSEM.
- Hattie, J. (2012). *Visible learning for teachers*. London: Routledge.
- Helfferich, C. (2005). *Die Qualität qualitativer Daten. Manual für die Durchführung qualitativer Interviews*. Wiesbaden: VS Verlag für Sozialwissenschaften.
- Hentig, H. v. (1993). *Die Schule neu denken*. Eine Übung in praktischer Vernunft. Eine zornige, aber nicht eifernde, eine radikale, aber nicht utopische Antwort auf Hoyerswerda und Mölln, Rostock & Solingen. München: Hanser.
- Jacoby, B. (2009). Facing the unsettled questions about service-learning. In J. Strait & M. Lima, (Eds.), *The future of service-learning*, (pp. 90–105). Sterling: Stylus Publishing.
- Jarvis, P., Holford, J., & Griffin, C. (2003). *The theory and practice of learning*. London: Routledge.
- Kovacs, H. (2017): Learning and teaching in innovation: why it is important for education in 21st century, *Neveléstudomány*, 5, 45–60.
- Kovacs, H., & Gregorzewski, M. (2017). A mix that works for school development: Teacher learning and school leadership. In L. Rasiński, T. Toth & J. Wagner (Eds.), *European perspectives in transformative education* (pp. 184–203). Wrocław: Wydawnictwo Naukowe Dolnośląskiej Szkoły Wyższej we Wrocławiu.
- Kovacs, H., & Tinoca, L. (2017). Unfreeze the pedagogies: introduction of a new innovative measure in Portugal. *Revista Tempos e Espaços em Educação*, 10(23), 73–86.

- Kozma, R. B. (1985). A grounded theory of instructional innovation in higher education. *The Journal of Higher Education*, 56(3), 300–319.
- Kraft, R. J. (1996). Service learning: An introduction to its theory, practice, and effects. *Education and Urban Society*, 28(2), 131–159.
- Kwo, O. (2010). *Teachers as learners: Critical discourse on challenges and opportunities*. Dordrecht: Springer.
- Lamnek, S. (2005). *Qualitative Sozialforschung. Lehrbuch*. Weinheim: Beltz.
- Lewis, T. (2007). The problem of cultural fit – what can we learn from borrowing the German dual system? *Compare: A Journal of Comparative and International Education*, 37(4), 463–477.
- Lundvall, B.-Å. (Ed.) (1992). *National innovation systems: Towards a theory of innovation and interactive learning*. London: Pinter Publishers.
- Merriam, S. B. (1998). *Qualitative research and case study applications in education*. San Francisco: Jossey-Bass.
- O’Sullivan, D. (2008). Defining innovation. In D. O’Sullivan & L. Dooley (Eds.), *Applying innovation* (pp. 3–32). Thousand Oaks: Sage. Retrieved from [https://www.sagepub.com/sites/default/files/upm-binaries/23137\\_Chapter\\_1.pdf](https://www.sagepub.com/sites/default/files/upm-binaries/23137_Chapter_1.pdf)
- Picht, G. (1964). *Die Deutsche Bildungskatastrophe: Analyse und Dokumentation*. Freiburg im Breisgau: Olten.
- Pritchard, R. (1999). *Reconstructing education: East German schools and universities after unification*. New York: Berghahn.
- Ratzki, A. (2011). Primetime: Aufbruch in die Zukunft. In M. Prenzel, M. Schratz & G. Schultebrucks-Burgkart (Eds.), *Was für Schulen* (pp. 62–70). Seelze: Klett Kallmeyer.
- Rauner, F., & Smith, E. (2010). Introduction: Rediscovering Apprenticeship. In E. Smith & F. Rauner (Eds.), *Technical and vocational education and training: Issues, concerns and prospects*, volume 11. Dordrecht: Springer.
- Robert Bosch Stiftung. (2018). *The German school award*. Retrieved from <http://www.bosch-stiftung.de/en/project/german-school-award>
- Roldão, M. C. (2003). Strategies to promote good practice and innovation in schools – The Portuguese case. In *Networks of innovation: Towards new models for managing schools and systems* (pp. 87–97). Paris: OECD Publishing.
- Scharmer, C. (2009). *Theory U: Learning from the future as it emerges*. San Francisco: Berrett-Koehler.
- Schley, W. (2003). Nachhaltigkeit und Wirksamkeit der Schulentwicklung. Eine Glosse zum Alzheimersyndrom der Schulentwicklung. *Journal für Schulentwicklung*, 2, 7–10.
- Schratz, M., & Steiner-Löffler, U. (1998). *Die Lernende Schule – Arbeitsbuch pädagogische Schulentwicklung*. Weinheim: Beltz.
- Schunk, D. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, 26(3–4), 207–231.
- Senatsverwaltung für Bildung, Wissenschaft und Forschung des Landes Berlin. (2009). *Die Berliner Schulstrukturreform*. Retrieved from [http://www.dahmeschule.de/images/pdfs/pdf\\_schulstruktur.pdf](http://www.dahmeschule.de/images/pdfs/pdf_schulstruktur.pdf)
- Senge, P. (2006). *The fifth discipline. The art and practice of the learning organization*. New York & London: Currency Doubleday.
- Shirley, D. (2016). Das Gebot für eine Neugestaltung von Bildung. In S.-I. Beutel, K. Höhmann, M. Schratz & H. Pant, *Handbuch Gute Schule* (pp. 8–11). Seelze: Klett Kallmeyer.
- Stake, R. (2005): Qualitative case studies. In N. Denzin (Ed.), *The SAGE handbook of qualitative research* (pp. 443–466). Thousand Oaks: Sage.

- Stanat, P., & Baumert, J. (2002). PISA-Studie – Deutschland nur im Mittelfeld. Basiskompetenzen von Schülerinnen und Schülern im internationalen Vergleich. *Wirtschaft & Wissenschaft*, 10(2), 42–51.
- Stein, M., & Wang, M. (1988). Teacher development and school improvement: The process of teacher change, *Teaching and Teacher Education*, 4(2), 171–187.
- Teherani, A., Martimianakis, T., Stenfors-Hayes, T., Wadhwa, A., & Varpio, L. (2015). Choosing a qualitative research approach. *Journal of Graduate Medical Education*, 7(4), 669–670.
- Voogt, J. (2012). *ICTs for curriculum change*. Moscow: UNESCO Institute for Information Technologies. Retrieved from <https://iite.unesco.org/pics/publications/en/files/3214717.pdf>
- Walsh, K. (2003). Qualitative research: Advancing the science and practice of hospitality. *Cornell Hotel & Restaurant Quarterly*, 44(12), 66–75.
- Yin, R. K. (1984). *Case study research: Design and methods*. Beverly Hills: Sage.
- Yin, R. K. (1994). *Case study research: Design and methods*. Thousand Oaks: Sage.
- Yoon, K. S., Duncan, T., Lee, S., Scarloss, B., & Shapley, K. (2007). *Reviewing the evidence on how teacher professional development affects student achievement* (Issues & Answers Report, REL 2007-No. 033.) Washington, D.C.: Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Southwest.

**Corresponding author**

Malte Gregorzewski  
 School of Education, University of Innsbruck, Austria  
 E-mail: malte.gregorzewski@uibk.ac.at

