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STUDY

INNOVATION IN THE FINAL ASSESSMENT OF STUDENT LEARNING OUTCOMES (REPORT CARDS): THE PROCESS OF CHANGE AND ITS IMPACTS ON SCHOOL PRACTICE

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ABSTRACT

In this paper, we examine the development of a change process in implementing a new approach to the final assessment of student learning outcomes (report cards) in the Czech Republic. The study investigates the development and impacts of the implementation process in primary and lower secondary school. The qualitative research investigation, conducted through repeated interviews with 23 teachers and school leadership, showed that after a year and a half of working with the innovative report card, it had been accepted by teachers in primary school and had significantly influenced the culture of teaching and learning. There was a gradual transformation of the student assessment and self-assessment system and a more profound interconnection between formative and summative assessment. For now, lower secondary school teachers have rejected the innovative report card, although the culture of teaching and learning has been positively influenced.

KEYWORDS

report card; process of change; formative assessment; summative assessment; learning outcomes

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Introduction

Systematic assessment of student learning and outcomes has long been an important topic addressed by experts in international and national contexts (e.g. Black & Wiliam, 1998; Earl, 2003; Guskey & Bailey, 2001; Kratochvílová, 2011, 2012, 2015a, 2015b; Nitko & Brookhart, 2014; Slavík, 1999; Starý & Laufková, 2016; Wiliam, 2011a). Many factors influence the demands for changes in assessment: curriculum transformation (requirements for the revision of the Framework Education Program), distance learning due to the pandemic (2020-2022), an increased number of students with a different native language (e.g. Federičová, 2019; Laufková & Novotná, 2018; Münich & Protivínský, 2022; Zatloukal et al., 2021, 2022; Žlábková & Rokos, 2013), and the requirements of strategic documents such as Strategy 2020 and Strategy 2030+ (cf. Fryč et al., 2020; Ministry of Education, Youth and Sports, 2014).

The emphasis on changing the assessment of student learning and outcomes in Czech primary and lower secondary schools has sparked numerous discussions not only among curriculum developers, legislators, and strategists at the national level, but also among teacher educators, teachers in schools, parents, and researchers. The reason for this is the complexity of this change, both in terms of the demands on teachers' professional competencies for assessment and the challenges of implementing the change process among various stakeholders, including parents. As previous research findings show, parents are interested in detailed, high-quality, and understandable final assessments of student learning outcomes that include information about their children's learning process (Guskey & Bailey, 2001; Klement, 2019; Swan et al., 2014; Tomanová, 2014). Nevertheless, the traditional approach to assessment still dominates in primary and lower secondary schools in the Czech Republic. This approach has been criticized for more than a decade by the authors of the OECD report on educational assessment in the Czech Republic (Santiago et al., 2012). According to the findings of the Czech School Inspectorate, teachers still prefer the grading form (five-point numerical scale) for both ongoing and final assessment of student learning outcomes (Zatloukal et al., 2022).

In view of the strategic educational goals of the Czech Republic (Strategy 2030+), the results published in the annual reports of the Czech School Inspectorate, and the revision of the curriculum (Framework Education Program), which emphasizes a competency-based, personality-development model of education, there is a growing need to change the approach to student assessment in the Czech Republic. This change is not a minor adjustment, but rather a significant innovation of the final assessment (report card) offered to teachers, parents and their children, which would also transform the ongoing assessment.

The research is a part of the project "Development and Implementation of a Pilot Design for Report Card: Innovation in Final Assessment of Primary and Lower Secondary School Students in Connection with Comprehensive Developmental Assessment," supported by the Technology Agency of the Czech Republic (TL05000360), which attempted such a change in the concept of the report card. In the course of the three-year project, we observed the process of implementing the report card innovation in four primary and lower secondary schools in the Czech Republic. The present study is a part of this project. Our study is unique within the European context, building on the pilot American study by Swan et al. (2014) and responding to the call by Trumbull and Gerzon (2013) for explicit accounts of teachers' professional development in the area of formative assessment and its impact in local contexts. Furthermore, we identify opportunities for further research on this topic in both European and global contexts.

The data used in this paper were originally collected for a master's thesis (Grombířová, 2023). The thesis focused on the responses of all participants in the educational process, including teachers, students, and parents, to the innovative report card. For the purposes of this paper, the dataset was narrowed down to focus solely on the data gathered from teachers and school leadership. The data was then subjected to analysis with a particular emphasis on the change process involved in implementing the innovative assessment of student learning outcomes.

In this paper we follow the process of change in one selected primary and lower secondary school. The aim of the study is to describe the development of the process of changing the final assessment of student learning outcomes at this selected primary and lower secondary school and its impacts on school practice. We frame this within the concept of the Five Stages in the Decision-Making Process of Innovation (Rogers, 1983). Spurná (2019) conducted an analysis of existing theories that address the process of change. The analysis revealed that Rogers' (1983) theory provides a comprehensive and holistic view of the change process. Spurná (2019) highlights that the key strength of Rogers' theory lies in its comprehensive understanding of the innovation transfer process, which Rogers (1983) conceptualized as a form of social change occurring under specific conditions and within a defined timeframe. In the present case, this refers to the process of implementing the innovative report card in the school, which was the focus of our research.

1 Legislative requirements for student performance assessment in the Czech Republic and the need for change

Primary and lower secondary education (ISCED 1 and ISCED 2) in the Czech Republic is mostly organized within a single system of nine-year primary and lower secondary schools. These schools are divided into first and second levels, with the age of students typically ranging from 6 to 15 years (European Commission, 2024).

The mandatory requirements placed on teachers in the Czech Republic with regard to the assessment of students are set forth in legislative acts. These include Act No. 561/2004 Sb. and Decree No. 48/2005 Sb., which provide the legal framework within which teachers are obliged to operate. These requirements elucidate the extant concept of student assessment in the Czech Republic, which is reflected in the attitudes and practices of teachers. According to the findings of research and evaluations, there is a clear necessity for change. This is based on the assessment of the level of achievement of the learning outcomes for each individual subject in a school's educational program, as outlined in §14 of Decree No. 48/2005 Sb. The legislation does not provide a comprehensive framework for ongoing assessment. The assessment of behavior and academic performance in individual subjects on the report card (§§15–16, Decree No. 48/2005 Sb.) is of particular focus, with teachers permitted to utilize narrative feedback, grading, or a combination of both. This system was implemented in the Czech Republic in 2005. Subsequently, in 2012, the OECD conducted a review of the assessment and evaluation system in the Czech Republic. With regard to student assessment, several significant issues were identified, including the dominance of summative assessment, the early stages of development of assessment for learning, insufficient attention to student self-assessment, inadequate development of professional competencies in assessment during teacher pre-service training, limited communication of information to parents, and the absence of a comprehensive system for assessing learning and students learning outcomes in schools (Santiago et al., 2012). These findings indicate the need for reform in the field of student assessment.

The need for change also applies to the final assessment of student learning outcomes. The final assessment is conveyed by a document called the report card, which is issued to students at the middle and end of the school year. The content and form of the school report card are regulated by Decree No. 3/2015 Coll. Despite significant changes in both the planned and implemented curriculum for primary and lower secondary schools (standards-based curriculum), which now include key competencies as the main goal of primary and lower secondary education in the Czech Republic (Ministry of Education, Youth and Sports, 2023), the concept and form of the report card

have remained largely unchanged over the past 100 years (Bartošová & Fryč, 2011). It is therefore not surprising, as data from the Czech School Inspectorate show, that the assessment of student learning and outcomes in the Czech Republic still relies primarily on a grading system (Zatloukal et al., 2022), and that the broader implementation of ongoing formative assessment in teaching has not been successful.

Overall, it can be summarized that the legal requirements for student assessment are not comprehensively defined in a way that would serve as a tool to support student learning, contribute to their school success, and be in line with current assessment trends in the European and global context (Kratochvílová, 2013). Our assessment lags behind the general global trend, which distinguishes between outcome – what a student knows and can do at a given time, providing sufficient information about the strengths and weaknesses of the student's performance in various areas, indicating areas for improvement; process – how the student achieved these learning outcomes, including their effort, responsibility, work habits, etc., and a very important aspect of assessment – the student's progress (cf. Black & Wiliam, 1998; Earl, 2003; Guskey & Bailey, 2001; Guskey, 2011; Pollard et al., 2014; Tomanová, 2014).

Report cards in the Czech Republic do not offer a corresponding form that is aligned with ongoing student assessment and appropriately uses the information that can be conveyed through the report card to support further student development (Grombířová, 2023; Guskey, 2011). This situation presents a significant challenge – to offer teachers, parents and their children an innovation in the final assessment (report card), which would also transform the ongoing assessment.

2 JINAK report card – part of comprehensive developmental assessment of student learning and outcomes

The JINAK report card represents a significant innovation in the approach to the final assessment of student learning outcomes in primary and lower secondary schools in the Czech Republic. This initiative follows the transformation of teaching and learning culture in the Czech context, which was associated with the events of 1989 and marked the beginning of numerous changes following the political regime change. This paper does not aim to describe in detail this innovation's development, form, or content. However, to understand the subsequent text and the fundamental change it represents in the context of summative assessment on report cards, we will briefly describe the JINAK report card.

The JINAK report card combines two assessments. First, a summative assessment of student learning outcomes based on the curriculum outputs of the assessed subjects (analytical criteria-based assessment on a written scale), along with optional subject grading (holistic assessment of the subject) twice per school year (January, June) with written descriptive feedback. This feedback provides students and parents information about the student's behavior and learning outcomes in relation to the expected learning outcomes of the educational subjects in the school's educational program, highlighting the student's strengths and weaknesses, including recommendations for further development. Second, a heteronomous assessment by teachers combined with autonomous assessment by the student (Kratochvílová et al., 2024).

The report card uses a combination of descriptive feedback, criterion-based and numerical assessments. For the first time in the history of report cards in the Czech Republic, a criteria-based assessment of expected learning outcomes is officially used. This is the first time that subject outcomes are assessed analytically with the support of assessment criteria (see Appendix 1 and 2), rather than holistically with a single grade (MUNI PED, 2024).

The JINAK report card offers two completely different four-level scales for assessing behavior and expected learning outcomes, in contrast to the traditional five-level grading scale long used in the Czech Republic. The level of acquired competencies is newly assessed on a four-level scale according to established criteria and indicators. Descriptions expressing the frequency and degree of the students' independent application of the relevant skill are used to convey the achieved level for clarity and easier understanding.

The report card template uses abbreviations of words from the scale. Movement on the scale is represented by an arrow, visually emphasizing the processual aspect of learning, the student's progress, and their potential for further development (growth mindset). The assessment of character education subjects introduces another innovation: it does not include the grading scale or any other scale, but only provides space for descriptive feedback. The goal of this assessment is to support the student's development. For the first time, the report card includes a space for the student's self-assessment. The last page of the report card is dedicated to this purpose. Schools can create their own instruments for pupil self-assessment, so the format remains the choice of the school and teachers (Kratochvílová et al., 2024).

The above changes are so fundamental that the report card cannot be implemented in practice without systematic and continuous work by teachers and students in line with the report card concept. This means that the report card serves as a catalyst for changing the culture of teaching and learning. The report card provides comprehensive information on student educational progress and achievement for a given period of time on a biannual basis.

It is part of an assessment system that is used systematically and continuously over time. The report card takes a holistic view of the student, focusing on the assessment of knowledge, skills and attitudes relevant to life in relation to the key competences set out in the Framework Education Program and integrating formative and summative purposes. Its aim is not only to summarize students' learning outcomes, but also to offer opportunities for further development and to guide students towards taking responsibility for their own learning. This change in the culture of assessing student learning and outcomes is encapsulated in the concept of comprehensive developmental assessment, as defined by Kratochvílová (2012). This concept is adapted to the context of the Czech educational system and curriculum and emphasizes the following: collaboration among educational stakeholders in assessment, the use of different types and forms of assessment, the integration of formative and summative assessment, and a focus on educational goals as the objects of assessment. Comprehensive developmental assessment combines assessment for learning, assessment as learning, and culminates in assessment of learning (Earl, 2003; Hutchinson & Young, 2011; Pollard et al., 2014; Wiliam, 2011b). It follows that research monitoring the implementation of this innovation in schools is an important opportunity to understand the process of change in schools and to support its dissemination.

The implementation of the report card in schools addresses the discrepancy between reform efforts to support the development of students' personalities, the long-standing unsatisfactory state of assessment in our schools, and the traditionally applied and valid report card forms according to Decree No. 3/2015 Sb. The results of the project for developing the report card have attracted the interest of institutions, including the Ministry of Education, Youth and Sports of the Czech Republic, the National Pedagogical Institute, and the Czech School Inspectorate. These institutions have expressed interest in innovating legislation in line with the strategic and curricular goals in the Czech Republic.

3 Process of changing the final assessment of student learning outcomes

The process of changing the final assessment of student learning outcomes is a complex one. Fullan and Miles (1992) aptly characterized the relationship between change and the process of change within the educational system, stating that "education is a complex system, and changing it is even more complex." They defend this assertion, stating that even with seemingly simple changes, "the number of components and their interrelationships involved in the change is enormous and overwhelming." Furthermore, educational

changes are challenging due to the fact that a significant proportion of current practice is based on tradition rather than solid evidence of effectiveness. This is particularly evident in the case of grades and report cards (Guskey & Bailey, 2001). This is also the case in the Czech Republic (Münich & Protivínský, 2018).

The focus of experts in this field is on the process of change and its management, both in general (e.g. Daft, 1989; Donnelly et al., 1997; Kotter, 2009, 2015; Rogers, 1983; Urban 2003; Veber et al., 2016) and in the context of education (Fullan, 2007; Fullan & Miles, 1992; Goldenberg, 2004). We understand the process of change as a learning process, as aptly described by Fullan and Miles (1992, p. 745): "Change is a process of coming to terms with new personal meaning, and thus, it is a learning process." The learning process is closely linked to the professional development of teachers (Avalos, 2011; Fullan & Hargreaves, 1992) and the formation of a learning community (Shulman & Shulman, 2004; Stoll et al., 2006), which has the potential to emerge and evolve during times of change, thereby providing significant support to the successful implementation of innovations. In their study, Fullan and Hargreaves (1992) established a direct link between professional development of teachers and the process of innovation implementation, emphasizing the need for increased attention to this issue. As demonstrated by Avalos (2011), this transition is occurring gradually. Trumbull and Gerzon (2013) offer a comprehensive overview of the professional development of teachers in the field of formative assessment, emphasizing the complexity and importance of this area. It is insufficient for professional development to rely on a few workshops; it must be based on meaningful content, providing teachers with opportunities to practice, collaboratively reflect and refine their methods. In this context, a change in the final assessment of student learning outcomes can be seen as a complex process, which requires the implementation of an ongoing professional development program that is carefully designed and meaningful. This includes a process of reflection and experience exchange among the participating teachers, which serves to foster mutual enrichment and facilitate the gradual creation of a shared system that aligns with the school's overall vision and local context. The implementation of an innovative report card represents a process of change, a learning process within the school environment. All participants in the educational process – including school leadership, teachers, students, and parents – are involved in the change of the final assessment of student learning outcomes. The extent of involvement is subject to contextual factors that influence the process. It is therefore crucial to acknowledge the distinctive nature of each educational system, as well as the specific characteristics of individual schools and their current circumstances and capabilities.

It is nevertheless possible to identify certain patterns and key aspects that recur in the processes of change. The description of the stages of the change process or its key aspects is addressed in the following works: Bentley (2010), Daft (1989), Donnelly et al. (1997), Fullan and Hargreaves (1992), Kotter (2009, 2015), Lazarová (2005a, 2005b), Lunenburg (2010), Mareš (2018), Rogers (1983), Pol et al. (2013), Senge (2007), Snyder (2017), Tichá (1999), Veber et al. (2016) and Zimmerman (2006). A common element in the concept of the change process is the emphasis on the implementation of change, which Daft (1989) discusses in detail. The author presents strategies for successfully managing change, including identifying the actual need for change, the development of an idea that meets that need, the provision of support to organizational leadership, the implementation of change in a gradual manner, the planning of strategies to overcome resistance to change, the formation of teams to address different parts of the change, and the involvement of a change supporter (e.g. a volunteer who fully trusts the change, a change proposer, or a change promoter). Daft's (1989) recommendations are strongly indicative of the significance of change management and teachers' attitudes toward change. Similarly, Berkovich (2011) posits that teachers' attitudes toward change are a significant determinant of its success. The negative attitudes of Czech teachers toward change are addressed in the works of Lazarová (2005a, 2005b) and Mareš (2018). These authors, along with Průcha (2002), consistently recommend that this issue should receive more attention. The significance of attitudes towards innovations during their implementation is also reflected in Rogers' (1983) work, which emphasizes the compatibility of innovations with values and professional beliefs.

In our paper, we draw on Rogers' (1983) concept of the change process, which he refers to as the "Model of the Innovation-Decision Process." According to the author, the process of implementing innovation has five stages: (1) Knowledge; (2) Persuasion; (3) Decision; (4) Implementation; and (5) Confirmation. These stages determine the course and development of the change process. The results are then discussed in relation to these stages.

4 Methodology

4.1 Research Questions

The aim of the study is to examine how the process of implementing an innovative final assessment (report card) of student learning outcomes is developing at a selected primary and lower secondary school and what its impacts are on school practice. **The main research question is: How is the process of implementing the innovative report card developing in**

a selected primary and lower secondary school and what are its impacts on school practice?

This primary research question is complemented by three sub-research questions (SRQs) formulated to capture the development of individual concepts:

- SRQ 1: What contextual factors significantly influence the process of change regarding the final assessment of student learning outcomes?
- SRQ 2: How are teachers' attitudes toward the change in final assessment of student learning outcomes evolving, and how do they perceive the impacts of this innovation?
- SRQ 3: How do teachers describe their work with the innovative report card?

4.2 Research design

To comprehensively investigate the evolution of the change process during the implementation of the innovative report card, we employed a qualitative research design in the form of a case study. Unique cases are relatively uncommon, distinctive, and innovative. Mareš (2015) defines the case study as a descriptive and exploratory approach to research, which is used to provide a detailed and comprehensive description of a real-life phenomenon within its natural context. As defined by Creswell and Poth (2018), a case study is a research method that examines a specific case, bounded by a real-life system over time, through detailed data collection from multiple sources. The resulting data is then used to describe the case in question. The case study is an appropriate approach for mapping processes (Creswell & Poth, 2018; Mareš, 2015; Sedláček, 2014) and allows for an in-depth understanding of complex social phenomena in relation to contextual factors (Maxwell, 2013; Sedláček, 2014; Yin, 2018). In terms of case study typology, the process of implementing the innovative report card at the school under study exhibits the characteristics of a unique case (cf. Creswell & Poth, 2018; Mareš, 2015; Sedláček, 2014).

4.3 Research sample

The school in which the research was conducted was purposively selected from among schools piloting the innovative report card, based on the characteristics of the school. It is the largest comprehensive school (representing the category of large schools in the project, with more than 600 pupils), which has been implementing various innovations for a long time, but its experience with formative assessment is applied mainly at the primary school level, especially in the lower grades. The selection of this school allows us to understand the process of change in a large school where many different participants influence the process.

This is a fully organized primary and lower secondary school with a long-standing interest in educational innovation. It has bilingual classes and uses the "Step by Step" method at the primary school level. The school's requirements for the assessment and self-assessment of students in the primary level classes are described in detail and clearly in the School Code. Students in Years 1 and 2 are assessed through verbal and written feedback, while students in Years 3 to 9 are assessed using a traditional grading scale. The rules for the assessment and self-assessment of students at the secondary level are also described in detail in the School Code and are consistent across all grades, reflecting a traditional approach to assessment. The aim of the school leadership in taking part in this research was not only to support the change in assessment in the first and second grades, but also to extend this change to the higher grades. The current format of the report card in the first and second grades (narrative feedback in the form of letters) no longer fully satisfies the teachers. The school expects the following outcomes from its participation in the research: a) to extend the assessment reform to all grades and to unify the assessment rules within the school, b) to change the collection of evidence of learning for ongoing assessment and its use in the report card, c) to make the report card clearer for parents, d) to change the report card system across the school.

The school leadership discussed participation in the pilot project with the teachers as a group and individually. Participation was not mandatory, and the development of the report card was time consuming for the teachers; for example, teachers had to write two report cards over three semesters: the official one, valid according to the current legislation, and the experimental one. For these reasons, the school leadership decided to include selected primary and lower secondary grades in the pilot of the innovative school report card, which also became the research sample.

Participants in the study included primary school teachers ($n = 3$), lower secondary school teachers ($n = 20$) teaching in classes piloting the innovative report card, and school leadership staff ($n = 2$). Their previous training in formative assessment consisted of short online webinars.

The characteristics of the teachers who were interviewed individually, including their training in formative assessment, are presented in Appendix 3. In Appendix 4 the list of other teacher pseudonyms we used is presented.

4.4 Data collection

The data collection process was conducted in three stages over a period of 14 months, from January 2022 to March 2023. This was done in conjunction with the development of the innovative report card form, as depicted in Figure 1.

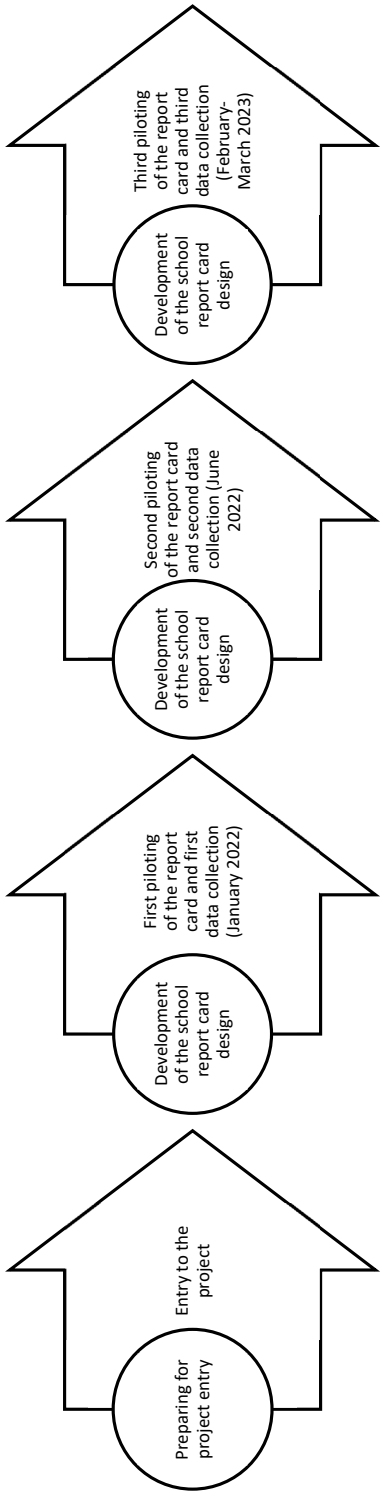

Figure 1
Stages of data collection

The initial two data collections were conducted via semi-structured group interviews. In each instance, the interviews were conducted by two members of the project team. The interviews included teachers from both the primary and secondary school levels, as well as school leadership personnel ($n = 25$). The objective of the interviews was to gain insight into the teachers' experiences with the initial and subsequent iterations of the innovative report card, and to elucidate the process of implementing the change. The interviews were conducted in person and recorded for subsequent analysis.

In the third stage of data collection, individual semi-structured in-depth interviews were conducted with two primary school teachers, two lower secondary school teachers, and the principal. The objective was to facilitate a profound reflection on the teachers' experiences with the third iteration of the innovative report card and to delineate the evolution of the implementation process. The participants were selected by the principal at the request of the research team. The interviews were conducted according to the same interview scheme, via the online platform ZOOM, and were recorded.

Data from the group and individual interviews became the data corpus and provide evidence of the progression of each stage of the change process. A total of 532 minutes of recordings were obtained. All interview recordings were transcribed in accordance with established transcription rules (Švaříček, 2014). All data were anonymized, and respondents were informed about the purpose, content, and anonymization of the interview prior to its commencement. The respondents were afforded the opportunity to inquire about the process and content of the interview. In the case of individual interviews, respondents were also assured of anonymity through email correspondence prior to the interviews. Written consents were included in the project documentation.

4.5 Data analysis

All the data were analyzed in several stages after the completion of data collection. During the analysis we carefully distinguished between the different stages of the change process. First, we proceeded inductively. In the first phase, we coded all interviews using the method of open coding – pencil and paper – and applied in vivo codes (Šeďová, 2014). As Merriam (2009) asserts, at this stage the researcher remains open to all possible explanations, which allows for a comprehensive representation of the change process and captures all phenomena that occur within it. In total, we generated 595 codes. In the second phase, we grouped the inductively generated codes into subcategories ($n = 31$) and categories ($n = 25$) based on thematic relationships. Then, in the third phase, we grouped the categories into main categories ($n = 3$), which addressed the sub-research questions leading to the main

research question (Šeďová, 2014). Finally, we organized the main categories, categories and subcategories into schemas, which helped us to interpret the data. Through this interpretation, we answered the research questions and captured the development of the change process from the perspective of primary and secondary school teachers and school leadership. The results indicated that the change process in the school reflected Rogers' (1983) model of the stages of the change process; therefore, in discussing the results, we proceeded deductively, relating our findings to his Model of the Innovation-Decision process. We also discussed our findings with regard to the findings of other authors.

4.6 Study limits

It is important to note that our study has a few limitations. The first is that in the third phase of data collection, the school principal selected the respondents. She was asked to choose teachers with positive and negative attitudes. However, the final choice was up to her, so we don't have the views of all the teachers. The second limitation is that this study focuses only on the perspectives of teachers and school leadership. Although data reflecting the views of other actors in the educational process—such as parents and students —were part of the wider research, we focused here more closely on the process of change among the main stakeholders implementing the innovative report card, using data from group and individual interviews. There are other ways we were able to collect more data, such as conducting classroom observations, analyzing the completed innovative report card forms, or getting quantitative data from questionnaires.

5 Research findings

The research questions are answered through the interpretation of the data. The development of the change process was observed from the perspective of primary and lower secondary school teachers.

5.1 Development of the context of the change process

Given the unique nature of each change process occurring in a school and the distinct characteristics of each school, our initial focus is on describing the contextual factors that enter into and influence the change process.

During the study, primary and lower secondary school teachers delineated a number of contextual factors that emerged during the three stages of the change process. These factors were grouped into the categories "Factors Facilitating the Change Process" and "Factors Hindering the Change Process."

5.1.1 Factors Facilitating the Change Process

The data analysis indicates that the entire process of implementing the innovative report card was significantly supported by: a) A system of teaching organization: knowledge of students; b) Experience with formative assessment: long-term work with formative assessment and student self-assessment in previous years; c) Collegial sharing: from chance meetings to regularity; and d) management of the change implementation process.

a) System of teaching organization: Knowledge of students

Teachers identified knowledge of students as a subcategory that significantly influences the acceptance of innovation in practice. Primary school teachers consistently highlighted the significance of the teaching organization at the primary school, which determines the more extensive time spent with students. An extensive time frame permits teachers to gain a comprehensive understanding of their students, enabling them to conduct both formal and informal diagnostic assessments, which are crucial for a thorough grasp of the students' abilities and needs. The results of these diagnostic activities provide substantial support for formative assessment and for gathering information to formulate the final assessment in the innovative report card.

> *Without this, I would have been unable to accomplish the task. From September to January, I simply recorded the names of the students, their competencies, and their participation in group work, using a system of tick marks. I also made notes regarding my interactions with the students. This notebook serves as a repository for observations, which are then graded. This was the most important aspect for me. (Jane)*

The organization of teaching in lower secondary school differs significantly from that in primary school. Teachers in lower secondary school are typically less familiar with of their students and lack the data necessary for providing descriptive feedback on innovative report cards. Teachers Susan and Anne indicated that their role as class teachers facilitated their ability to work with the innovative report card in comparison to other teachers who do not have as frequent contact with their students.

> *It was beneficial to have a deep understanding of the students. (Susan)*

The results underscore the disparate pedagogical structures at the primary and lower secondary levels, which shape the extent of teacher-student contact and influence the receptivity to change.

b) Experience with formative assessment: Long-term work with formative and self-assessment of students in previous years

Previous experience was a significant factor for primary school teachers in working with the innovative report card. The teachers placed a high value on their extensive experience with the use of both formative and summative

written feedback in their pedagogical practice. Previously, report cards were written in the form of letters, representing narrative feedback. According to the teachers, these were often lengthy and lacked structure. The transition to a different innovative report card was not as challenging for them.

Indeed, the process of filling in the report card was relatively straightforward. (Mary)

The introduction of the innovative report card prompted the educators to streamline their narrative feedback, reduce its length, and engage in more profound reflection on how to capture the essence of their students' achievements more succinctly, as evidenced by their responses in the interviews.

Additionally, both Mary and Jane had considerable experience with a similar four-point scale utilized on the innovative report card. A comparable scale was employed for both student assessment and self-assessment in an assessment tool, namely a book designed for the systematic documentation of assessments and self-assessments of students.

That made the process somewhat more straightforward, as we had previously utilized similar rating scales. Two of us worked with that particular student book. (Jane)

Teachers at the lower secondary level had limited experience with formative assessment or any other assessment scale beyond the official grading scale. However, the school leadership provided ongoing professional training for teachers to acquire new knowledge and skills to support formative assessment and provide quality feedback in the classes. This professional development was positively received by the teachers:

It helps me. The seminars on formative assessment are helpful... (Susan)

The results clearly show that previous experience or lack thereof with formative assessment in practice, narrative and descriptive feedback, and using scales other than the standard grading scale proved to be significant factors that either supported or hindered teachers' work with the innovative report card.

c) Collegial sharing: From chance meetings to regularity

A prominent theme in the change process for primary school teachers was the importance of collegial support through the sharing of ideas and practice. Primary school teachers initiated meetings to discuss challenging topics, including behavior assessment and systematic evidence collection.

Gradually, they began to share their experiences on a regular basis. In the third stage of the project, collegial support and the associated development of guidelines and materials for student assessment and self-assessment at the school became systematic and regular.

For me, this was one of those things where we had to sit down, we had to put it together, and we talked about how it should work. So, it was more like professional guidance… (Mary)

In the third stage of the change process, the school leadership stated that they also supported collegial sharing at the lower secondary level, but were aware of the difficulty of finding free time for collegial meetings at the secondary level. An expert committee was created to share experiences with the innovation. Lower secondary school teachers were inspired by the guidelines for the primary level, as mentioned by the principal:

> *At the lower secondary school, we created a committee, an expert committee, and teachers meet there and create a guideline for assessment for the lower secondary school as well.*

During the implementation of the innovative report card in practice, it became clear how important it is to share experiences and support each other when difficulties arise. Collegial sharing evolved into regular meetings and the gradual development of an internal assessment system.

d) Management of the change implementation process

The implementation of the innovative report card involved a significant degree of change management within the school. This was carried out by the school leadership, comprising the principal and her deputies. Initially, the school leadership did not disseminate the methodological support received from the project team to the teachers. However, over time, teachers came to recognize and appreciate the role of the management in creating conditions conducive to the implementation of the innovative report card. These conditions included: a) Support for collegial sharing: Regular teachers' meetings**;** b) Involvement of a respected staff member: A member of the teaching staff was engaged to provide support for change management among teachers. c) Ongoing professional development in formative assessment: Professional development activities were conducted for lower secondary school teachers. d) Sufficient time allocation: Adequate time was allotted for the explanation of the innovative report card to students, which facilitated their understanding of the new report card form. e) Communication with parents: Information about the innovative report card was disseminated to parents through various channels, including instructions for communication, sample emails, sharing of videos from the innovative report card website, and posting information on the school website.

5.1.2 Factors hindering the change process

A data analysis revealed that the process of implementing the innovative report card was hindered by several factors: a) Novelty factor: lack of advance knowledge of the final form of the innovative report card and the assessment scale; b) Teaching organization system: lack of familiarity with the students; c) Assessment of key competencies (behavior area); d) Instructional guideline for the innovative report card as a support tool**.**

a) Novelty factor: Lack of advance knowledge of the final form of the innovative report card and assessment scale

The initial version of the innovative report card was developed gradually between June and December 2021. The form for the innovative report card was distributed to schools in early December, and teachers began filling in the first innovative report cards in January. This timing significantly impacted the implementation of the innovation.

The date, according to the teachers, resulted in a lack of understanding of the content of the innovative report card form and prevented the integration of assessed objectives into monitoring student development during the first half of the 2021/2022 school year and planning the teaching process. As one teacher stated:

> *I had a problem with getting it so late. I spent half the summer imagining what I would do and what evidence of learning I would have. (Mary).*

Teachers were thus confronted with the reality (despite having been kept informed of the development of the template) that its design, particularly the assessment criteria, were a new element for teachers for which they had not purposefully gathered evidence of learning. In the second and third stages of the change implementation, primary school teachers accepted the form. Lower secondary school teachers, however, did not fully accept the assessment criteria, as they differed from their original expectations.

Another significant innovation in the report card form was the assessment scale. While some primary school teachers were already familiar with the scale, others found it challenging. For instance, Lily, a primary school teacher, initially perceived it as a novel element with which she had no prior experience. However, she gradually became more comfortable with it, stating:

> *I don't really work with the scale: not yet mastered, partially acquired, fully acquired. It doesn't quite fit for me personally.*

In later stages of the innovative report card implementation, primary school teachers no longer focused on the scales and did not mention them in the interviews, suggesting that they had accepted the new system. Lower secondary teachers did not mention the scale in the interviews.

b) Teaching organization system: Lack of familiarity with the students

While primary school teachers perceived knowing their students as an advantage, the process of changing the final assessment of student learning outcomes at the lower secondary school level was repeatedly hindered by a lack of knowledge about their students. This issue was further compounded by the limited time allotted for some subjects, which ranged from one to two lessons per week. In some cases, lower secondary school teachers were unable to recall the names of all their students in multiple classes.

I am a physical education teacher; I do not recall the names of my students. (Petr)

Consequently, lower secondary school teachers lacked sufficient high-quality evidence of student learning and adequate materials to formulate the final assessments for the innovative report card.

Moreover, I lacked the evidence of students' learning. (Betty)

In contrast, class teachers had a different experience, as previously mentioned. They concurred that an understanding of their students was beneficial when filling in the innovative report card.

c) Assessment of key competencies (behavior area)

The conflict regarding the assessment of key competencies (referred to as "Behavior" on the innovative report card) was particularly prominent among teachers at the lower secondary school level. For these teachers, the introduction of key competencies on the innovative report card represented a significant change from previous practice. Prior to this, teachers at the lower secondary school had not employed this option, which presented a conflict and potentially a threat. Despite the Czech Republic's primary and lower secondary education curriculum (Framework Education Program) emphasizing the acquisition of key competencies (Ministry of Education Youth and Sports, 2023), the system lacks the capacity to support their systematic assessment. Moreover, their assessment is not mandatory on the graded report cards. Teachers may utilize an additional form for narrative feedback, wherein they describe students' levels of key competencies. However, this practice is exceedingly uncommon, and the school had no prior experience with this form of competency assessment. Teacher Martin posited that assessment reform should be accompanied by curriculum reform. He strongly opposed the assessment of key competencies:

No one from the implementation team in 2005 ever mentioned that key competencies should be quantified, ranked, or measured in any way. It seems completely absurd to me.

Consequently, the team largely rejected the assessment of key competencies. This rejection was also due to some teachers' lack of clarity regarding the place and significance of key competencies within the curriculum hierarchy.

Therefore, these key competencies should be cross-curricular. How is a teacher to recognize that? I must confess that I am uncertain. (Petr)

They repeatedly rejected the possibility of a meeting among several teachers to discuss the assessment of key competencies:

In view of the number of other teachers involved, a discussion would be necessary in order to have a full and accurate assessment. However, neither I nor the other teachers have the time to devote to such a discussion. (Mary)

In addition, the time required to discuss each student in every class would be considerable. This is an issue that primary school teachers did not address. Could their responses be influenced by the opinions of their colleagues from lower secondary school?

d) Instructional guideline for the innovative report card as a support tool

In order to facilitate the implementation of the innovative report card, the project team developed instructional guidelines for teachers. The instructional guidelines were disseminated to the school leadership for distribution among teachers at the beginning of December, in advance of the preparation of the first term innovative report cards (January 2022). The instructional guidelines provide comprehensive guidance for the completion of the innovative report card, including descriptions of assessment scales and illustrative examples. However, due to an organizational oversight, teachers did not receive the instructional guidelines from the school administration during the initial stage of the change process, which became a significant limiting factor, as openly described in interviews following the second stage of the pilot:

We didn't really have it in the first semester… (Jane).

In the second stage of the change process, teachers were given access to the instructional guidelines and began to utilize them. Primary school teachers mainly used the methodology for the assessment of behavior, a new element on the innovative report card, as previously mentioned.

I primarily utilized the instructional guidelines for those competencies. (Lily)

Additionally, some teachers at the lower secondary school level began using the instructional guidelines. For instance, Megan closely adhered to the instructional guidelines, which validated her approach.

I was pleased to find that my practice was similar to that described in your instructional guide, which gave me confidence that I had followed the correct approach.

Additionally, Susan provided commentary on the instructional guidelines in the final stage. According to her, the instructional guidelines should include a detailed description of the process of creating an assessment system and its implementation in the school, rather than merely providing support for filling out the final assessment form of the innovative report card. Despite the sharing of experiences among teachers from various schools during the implementation of the innovative report card, Susan offered a critical observation:

This is not a critique of this specific innovative report card or this pilot, but rather a comment on the lack of guidance provided by the university. As a large school with at least 14 teachers involved in each class, we require assistance in implementing this in practice.

We summarize the factors facilitating and hindering the process of change in the final assessment of student learning outcomes in Table 1, providing an overview of these factors and their positive (+), negative (–), early (0) or absent (X) charge in relation to whether they were primary or lower secondary school teachers at each stage of the change process.

Table 1
An overview of the factors influencing the change process and their dynamics

Factor	Primary school teachers (Stage 1)	Primary school teachers (Stage 2)	Primary school teachers (Stage 3)	Lower secondary school teachers (Stage 1)	Lower secondary school teachers (Stage 2)	Lower secondary school teachers (Stage 3)
Instructional Guidelines for the Innovative Report Card as a Support Tool	0	+	+	–	–	–
Assessment of Key Competencies (behavior area)	0	+	+	–	–	–
Teaching Organization System: Lack of Understanding the Students	X	X	X	–	–	–
Lack of Advance Knowledge of the Final Template of the Innovative Report Card and Assessment Scale	–	X	X	–	X	X
Management of the Change Implementation Process	0	+	+	0	+	+
Collegial sharing	0	+	+	0	0	+
Experience with Formative Assessment	+	+	+	0	+	+
Understanding of the students	+	+	+	X	X	X

In summary, the development of contextual factors in the change process was related to the duration of the change process. The development of their influences was particularly evident in the first and second stages of the change process, and it continued to intensify in the third stage.

5.2 The development of teachers' attitudes towards the change in the final assessment of student learning outcomes and the perceived impacts of this change

According to Berkovich (2011), teachers' attitudes toward change are crucial in the process of its implementation. During the interviews, primary and lower secondary teachers described their attitudes, which fell into two categories: a) Attitudes Toward Student Assessment; b) Attitudes Toward the Innovative Report Card. These attitudes, together with their overall conception of the innovative report card and its implementation in school practice, had a wide range of positive impacts and contributed significantly to fostering a productive culture of teaching and learning. In the following section, we present the development of these attitudes and the perceived impact of the change, focusing on: a) The development of attitudes and perceived impacts of the change among primary school teachers; b) The development of attitudes and perceived impacts of the change among lower secondary school teachers.

a) The development of attitudes and perceived impacts of the change among primary school teachers

From the beginning, the primary teachers agreed on the need for change in the final assessment of student learning outcomes. In the first stage of the change process, they expressed positive attitudes towards the innovative report card, recognizing the benefits of the innovation and predicting that long-term use of the report card would lead to pupils understanding its content and the assessments it contained.

> *I think if a child starts using it from the first year and knows what each section means, it will be good, but it also includes the work before and after... (Lily)*

In the second stage, primary teachers' attitudes remained consistently positive and became more entrenched. They embraced the comprehensive concept of the innovative report card, were willing to collect evidence of learning to formulate final assessments, and indicated that long-term use of the report card would improve its quality. The innovation was gradually integrated into their work system. The only exception was Mary, who disagreed with the idea that the report card should include recommendations for the student's future development:

> *I don't think that belongs in the final report card. I just want to tell them where they are now and I can tell them about their development separately or sometime during the process.*

However, recommendations for further development are required by Decree No. 48/2005 Coll. as part of the narrative feedback.

In the third stage of the change process, the attitudes of primary school teachers remained stable and positive, which was reflected, for example, in their appreciation of the structure of the innovative report card. Despite this long-standing positive attitude, teachers in the third stage were concerned

about the use of the innovative report card in grades 3-5, where several teachers are involved in a class. This led to challenges in sharing information about how students performed, particularly regarding behavior:

> *It felt like the problems they have in lower secondary school, like getting assessments from colleagues who teach in my class. Forcing them to do what I'm doing. Or somehow getting it out of them. (Mary)*

Primary school teachers have accepted the complex concept of the innovative report card and their attention has gradually shifted to student self-assessment and the wider positive impacts of working with the innovative report card. These impacts, which can be summarized as impacts on the primary school, impacts on the lessons, and impacts on individual teachers, are shown in Table 2.

Table 2
Summary of the impacts of the implementation of the innovative report card in primary school

Impacts on primary school	**Impacts on the lessons**	**Impacts on teachers**
extension of collegial support	support for self-regulated learning	better consistency in the collection of evidence of learning
vision and development of materials for graded student self-assessment	improving work with pupil self-assessment	keeping written records of formative assessment and pupil self-assessment
changing the frequency of assessment (School Code)	supporting work with objectives in teaching	a comprehensive view of the pupil
vision to create a system of assessment at primary school	focusing teaching on the development of pupils' key competencies	systematization of assessment work
collaborative development of assessment materials and methodologies	promoting formative assessment	individualization of written feedback
regular assessment meetings (once a month)		better consistency in the collection of evidence of learning
extension of collegial support		keeping written records of formative assessment and pupil self-assessment
		improving the quality of written feedback on report cards
		acceptance of assessment scales

b) The development of attitudes and perceived impacts of the change among lower secondary school teachers

Attitudes towards the need for change in the final assessment of student learning outcomes varied among lower secondary teachers. While some teachers agreed with the need for change, others felt that the traditional grading system was sufficient, as described by Petr:

For me the numbers are enough. That's all I need.

However, in terms of their attitudes towards the innovative report card, lower secondary teachers shared similar views. Their main concern was the time it would take to fill in the final assessment into the innovative report card form and to assess key competencies. These negative attitudes were influenced by several factors: some lower secondary teachers did not agree with keeping detailed evidence about students, assumed that parents would not be interested in the innovative report card, and did not accept the standardized criteria-based assessment derived from the national curriculum, as they had their own ideas about assessment criteria. As Karin explained:

We all agreed – I didn't assess any of the students in this class because I don't teach there, I teach in the other class, but it doesn't matter. We agreed with the Czech teachers that the categories of grammar, literature and composition don't suit us at all. ... We initially proposed some more specific categories and we think that the ones we have formulated, although we could still discuss them, better reflect what we actually do in class... (Karin)

In the second stage of the change process, teachers in lower secondary schools had a strongly negative attitude towards the innovative report card. They disagreed with the behavior assessment, felt that the innovative report card was only suitable for small schools, and objected to the time and cognitive demands of formulating the final assessment in the innovative report card form:

Yes, so that it's not more formal than the actual space for teaching. (Megan)

This negative attitude towards the innovative report card was explained by lower secondary teachers with various arguments – they mentioned time demands, school size and overall workload. Betty was an involuntary participant in the innovative report card pilot:

... just at the personal request of someone I respect.

Petr, on the other hand, felt that publishing the educational objectives on the school's website was sufficient and that there was no need to communicate them further to students and parents.

That's what the school plans on the website are for, the child knows, right. Those who want to know will find it, and those who don't care won't be interested.

Lower secondary school teachers have not yet embraced the innovative report card. However, in the third stage of the change process, Susan and Anne characterized its positive impacts. The implementation process supported professional development, work with formative assessment, the systematization of student learning outcome assessments, and the development of descriptive feedback.

> *...so, I really tried to make sure that some of the feedback was more descriptive and not judgmental. (Anne)*

In addition, the innovative report card provided them with a comprehensive view of the student.

The attitude of primary and lower secondary teachers towards the innovative report card was stable throughout the pilot phase. Primary school teachers, together with the school leadership, adopted a positive long-term attitude toward the innovation. Based on this attitude, primary school teachers have successfully integrated the innovative school report into their work system and have gradually started to diffuse it to other primary school teachers through collaborative teacher groups focused on student assessment. As they described, this integration has had extensive positive impacts. Lower secondary teachers, on the other hand, maintained a long-term negative attitude towards the innovation, which has not yet been overcome, resulting in the innovation being largely rejected by lower secondary teachers. Nevertheless, the experience with the process of change of the final assessment of student learning outcomes has had positive impacts.

5.3 Development of work with the innovative report card from the perspective of teachers

The work with the innovative report card is specific and requires a high level of professional competence of the teachers. This section captures the development of work with the innovative report card, based on descriptions from teachers at different stages of the change process: a) Development of work with the innovative report card from the perspective of primary school teachers; b) Development of work with the innovative report card from the perspective of lower secondary school teachers.

a) Development of work with the innovative report card from the perspective of primary school teachers

In the first stage, primary and lower secondary teachers completed the innovative report card in its entirety, except for the student self-assessments. A wide and diverse range of evidence of learning proved essential for working with the innovative report card. In this stage, primary school teachers used diagnostic records, student self-assessments, narrative and descriptive

feedback, and intuition, especially for assessing key competencies. The new element of the innovative report card – the expanded behavioral assessment (key competencies) and the absence of instructional guidelines may have led primary school teachers to rely primarily on intuition to assess key competencies:

We didn't get a chart for these competencies. So, I kind of deduced it intuitively. (Mary)

In the second stage, the primary school teachers expanded their portfolios of ways to collect evidence of learning. There was a change in the source of behavioral assessment; Mary no longer cited intuition, but memory:

I think about it and then I say: "yes, Honzík..." (They also worked on understanding the content and assessments filled in by students and their parents in the innovative report card.)

In the third stage, the primary school teachers used the complete form of the innovative report, including the student self-assessment and the possibility of parental feedback. They continued to systematize the collection of evidence of learning, focusing on working with students to help them understand the innovative report card. As a result, the primary school teachers integrated the rating scale into the continuous assessment and self-assessment of the students, gradually worked on assessment tools, mapped the students' attitudes towards the innovative report card, and explained their personal position to the students.

b) Development of work with the innovative report card from the perspective of lower secondary school teachers

Teachers at the lower secondary school lacked a sufficient amount of evidence of learning. A new element for them in the innovative report card was the space for written descriptive feedback, which complemented the criterion-based assessment. This innovation was mostly rejected by lower secondary teachers. As some of them mentioned, they copied texts for several students and justified it with the number of students in the class:

Well, everyone got the same sentence. Everyone got the same sentence because I didn't have time to do it differently. (Martin)

Teachers at the lower secondary school continued to work with the innovative report in a similar way during the second stage of the change process. Some began to use criteria developed by subject committees in the school to collect evidence of learning, while others used grades. Many reported that they did not have enough evidence of learning:

And I didn't have the materials. (Betty)

Lower secondary school teachers also found it increasingly challenging to formulate descriptive feedback for the innovative report card.

In the third stage of the change process, Susan focused on collecting evidence of learning, which consisted primarily of teacher assessment records, student self-assessments, and peer assessments. Susan also worked with student progress:

> *...because I approached it responsibly and really wrote personalized comments in this report card... Each child has something different from me; I don't copy anything. I compare it to the first semester...*

However, Susan was an exception at the lower secondary level, as most lower secondary teachers did not systematize their collection of evidence of learning during the three stages of the pilot.

For both primary and lower secondary teachers, having sufficient quality learning evidence was crucial to working with the innovative report card in all three stages of the change process. Primary teachers worked systematically on collecting learning evidence and gradually started to use the full innovative report card form. In contrast, lower secondary teachers often filled out the innovative report card formally, paying little attention to its quality and potential.

5.4 Summary

In the present case study, we focused on a two-year change process – the implementation of the innovative report card concept into school practice. We identified key contextual factors that significantly influenced the implementation process, either positively (understanding of students, experience with formative assessment, collegial sharing, change management) or negatively (timing of receiving the template, lack of understanding of students, assessment of key competencies (behavior), insufficient work with the instructional guidelines). We then focused on teachers' attitudes towards the innovation, which played a crucial role in its acceptance (primary school) or non-acceptance (lower secondary school). These attitudes were influenced by teachers' perceptions of the final form of the innovative school report card and its complexity. We then characterized the development of work with the innovative report card and found that having sufficient high-quality evidence of learning was essential for its use. Changing the final assessment of student learning outcomes takes time, but as shown, it can have a significant positive impact on the productive culture of teaching and learning. In the case of the primary school, we have identified impacts that demonstrate this. Furthermore, even though the innovative report has not yet been adopted in the lower secondary school, it has had a positive impact on this culture.

6 Discussion and conclusion

The study characterized the development of the process of change in the final assessment of student learning outcomes and its perceived impacts on a selected primary and lower secondary school from the perspectives of teachers and school leadership. The school was chosen because of its characteristics as one of the pilot schools for the innovative report card. The focus was on the contextual factors of the change process, the attitudes of the teachers, the work with the innovative report card and the impacts of the innovative report card. The change of the report card is a new phenomenon in the Czech Republic. Current professional and public discussions related to the strategic intent of Strategy 2030+ indicate that this is a highly relevant issue. In this chapter, we summarize and discuss our research findings in relation to the model of the Innovation Decision-Making Process (Rogers, 1983), comparing them with findings from other researchers.

Rogers (1983) states that in the first stage of the change process, **Knowledge** is essential. Teachers seek and acquire information about the innovation, its advantages and disadvantages: What is it? How does it work? Why does it work? This step preceded the initiation of the implementation process of the innovative report card into school practice. The point of conflict became the assessment of key competences and the requirement for descriptive feedback, specifically for lower secondary school teachers. The findings revealed a discrepancy between the state curriculum's requirements (key competencies as one of its objective domains), legislative requirements (the absence of legislative foundation for assessing key competencies), and the innovative demand to monitor the development of key competencies and officially assess them on the report card. Lower secondary school teachers did not consider the assessment of key competencies to be a priority educational objective. In contrast, primary school teachers demonstrated greater acceptance of the assessment of key competencies. The crucial role of pedagogical content knowledge in transforming assessment practices at the primary school level is also a primary finding of Jones and Moreland (2005) case study. The importance of knowledge in implementing innovation in school environments was similarly highlighted by Avidov-Ungar and Eshet-Alkakay (2011) and Roehrig and Kruse (2005). In their study, Avidov-Ungar and Eshet-Alkakay (2011) examined the implementation of innovative technologies in primary schools and concluded that the coexistence of a learning organizational culture within the school, along with teachers' high level of technological-pedagogical knowledge, plays a crucial role in fostering positive attitudes and successful implementation. Roehrig and Kruse (2005) investigated the importance of beliefs and knowledge in adapting reform-based curriculum in high school chemistry class. Their findings align with

ours in showing that content knowledge was a critical factor for the successful adaptation of innovation. Additionally, knowledge of change as a process is essential, as demonstrated in management-focused works (e.g., Daft, 1989; Donnelly et al., 1997; Kotter 2009, 2015; Rogers, 1983; Urban 2003; Veber et al. 2016). Findings by Washington and Hacker (2005) show that managers who understand the change process are more open to changes and are likely to be invested in successful implementation. Analysis of our data showed that the school leadership made efforts to support the change process. The support system was gradually developed during the process of implementing the innovation.

In the second stage, which Rogers (1983) calls **Persuasion**, the process involves exploring how the innovation works, with teachers experimenting or imagining how it might work: What will happen if I accept it? They seek support, reassurance, and answers from others and various sources, and they evaluate the pros and cons of the innovation. This stage coincides with the first stage of introducing the innovative report card into school practice. After the initial stage of getting acquainted with the innovation, primary and lower secondary teachers were engaged in identifying their needs and ideas about the innovative report card. Kotter (2009, 2015) considers this stage of the change process (creating a sense of urgency for change) to be the most important. While primary school teachers began to consider refining the current assessment system, lower secondary school teachers, even in this first stage, began to oppose the innovation for various reasons – the assessment of key competencies, the rejection of the proposed assessment criteria, the time-consuming process of gathering evidence and completing the innovative report card form. This phase was significantly affected by the lack of information summarized in the methodology, which was supposed to support them but was not provided in time. It becomes clear that the different phases of the change process are interrelated and that the information phase cannot be underestimated.

The third stage of the change process, according to Rogers (1983), is **Decision**. The individual engages in activities that lead to acceptance or rejection of the innovation (active rejection: considering acceptance, experimenting; passive rejection: outright rejection of the innovation). The attitude of the teachers towards the innovation is important for this decision. In the school, this stage occurred during the second experience with the innovative report card. For primary school teachers, their positive attitude was the main issue. For lower secondary school teachers, their negative attitude towards the innovative report card significantly deepened. The research results clearly indicate that both the successful and unsuccessful implementation, adaptation and diffusion of the change were primarily influenced by these positive/negative attitudes of teachers towards the

innovation, reflecting their value orientation. Lazarová (2005a) in her review also points to the crucial importance of value orientation to the innovation during its introduction. The process of changing teachers' beliefs and attitudes in educational change is operationalized by Guskey (1985) in A New Model of Teacher Change, in which he presents that sustainable change in teaching practices occurs only after teachers' beliefs and attitudes have changed. Their change occurs as a result of improvements in student learning outcomes that result from changes in teaching practices. In the context of our findings, it is possible that lower secondary school teachers have not yet seen these changes in student learning outcomes and therefore their attitudes have not changed over the time period we investigated.

The review showed that researchers investigate teachers' beliefs in the context of change (Ham & Dekkers, 2019; Haney et al., 2002; Lebak, 2015; Richards et al., 2001; Roehrig & Kruse, 2005) rather than their attitudes (Anghelache & Benţea, 2012; Maskit, 2011). Anghelache and Benţea (2012) examined high school teachers' level of resistance to change and Maskit (2011) focused on primary school, junior high school and high school teachers' attitudes towards pedagogical change at different stages of their professional development. They unanimously concluded that resistance to change is related to the stage of a teacher's career – teachers at later stages of their career tend to have more negative attitudes towards change. Our findings differ significantly from the conclusions of these authors. In the research we present, these were lower secondary school teachers, regardless of their career stage. This confirms the words of Mareš (2018) and Průcha (2002) that we lack more comprehensive research on this area, with only sub-research studies available, which is a great opportunity for further educational research.

The fourth stage, according to Rogers (1983), is **Implementation**. The innovation is put into practice and answers to further questions are actively sought. Needs such as sharing, mentoring, and stability arise. This stage began at the primary school during the third stage when the innovation was successfully adapted and disseminated throughout the primary school. This successful adaptation was supported by the management of the change process, including strategies for effectively managing it – gradually implementing the change, creating teams to work on different parts of the change, and involving a change supporter, as recommended by Daft (1989) in his theory. This approach resulted in significant positive impacts. These positive impacts are considered one of the key findings of our research, as they highlight the specific benefits of introducing the innovation – the innovative report card – into school practice. Gradually, the primary school began to move into the fifth stage, which according to Rogers (1983) is **Confirmation**. In this stage, there is stabilization, but there can also be regression due to conflicting reports about the innovation. In the primary

school, doubts arose based on the experiences of colleagues in the lower secondary school and the problem of not sharing information among colleagues. They considered whether it would be possible to use the innovative report card in the upper classes. In the lower secondary school, the fourth and fifth stages of the change process did not occur as a result of negative attitudes, although positive impacts of the innovation on school practice were identified.

The context of the research suggests that changing the (final) assessment is a current challenge for the Czech education system, even in the context of the ongoing so-called Big Revision of the Framework Educational Programs by the National Pedagogical Institute (2024), which should include the elimination of grading in grades 1-3 of primary school. The innovative report is presented as a suitable alternative in this case. But the problem goes deeper. Despite the curricular reforms, there have been no significant changes in school assessment (Straková et al., 2013; Zatloukal et al., 2020, 2021). This change in the assessment of learning and student learning outcomes, which will support the learning process and the quality of each student's life, will be a long and challenging process, but it can bring significant positive impacts, as the presented study shows. The negative effects of the current assessment system in the Czech Republic have been described by Federičová (2019) and Münich and Protivínský (2018, 2022). Therefore, there is evidence for the need to change the system of assessment learning and student learning outcomes in the Czech educational context.

The innovated report card has already influenced the change to Decree No. 48/2005, which explicitly added the criterial assessment. An update to Decree No. 3/2015 is currently being prepared to include the innovative report card. The legislative requirements for the assessment and the possibility of using the innovative report card in practice are therefore gradually changing. The experience described in this paper can be an inspiration for teachers and schools in the implementation of the innovative report card in practice, which is the result of the transformation of continuous assessment that supports the learning of our students.

The success of the change requires:

a) Rethinking not only student assessment but also the organization of instruction, especially in the lower secondary schools. Block scheduling could provide more time for monitoring student progress, supporting self-assessment, and collecting evidence. In addition, it is worth considering the use of teachers who could teach multiple subjects in a single class, thereby gaining a more comprehensive understanding of students across subjects.

b) Thoroughly understanding the form of the innovative report card, and understanding both the criteria and the rating scales. In-depth study of the instructional guideline is essential. Knowledge and understanding are the foundation for implementing change in practice. The initial stage of learning about the innovation should not be underestimated.

c) Carefully planning the management of the change process, creating time for collegial sharing, which should be planned and systematic. School leadership must demonstrate the need for change and provide management for others.

d) Identifying the benefits of the change and its impact as a source of justification for implementation, alongside the weaknesses perceived by teachers, such as the lack of time to collect evidence of learning, particularly in subjects with low weekly time allocation.

e) Reflecting continuously on the experience of the change and responding promptly to situations that affect the still unstable attitudes of teachers to the detriment of the change. Responding to these situations and strengthening the impacts of the change in the short and long term are essential.

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In this paper, partial results from a case study conducted as part of the thesis are presented: Grombířová (2023). Teachers', students', and parents' reactions to the change in final assessment – case study [Master's thesis, Masaryk University]. Archive of Theses, MUNI. https://is.muni.cz/auth/th/od2o2

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