



Comparative Analysis of Teachers' Assessments on the Traditional and Digital Educational Activities in a Resilient School

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Accepted: 12 December 2023

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Abstract

This research aims to explore the potential for enhancing students' motivation and practical skills within a resilient learning environment through digital technologies. The concept of the unity of education and nature was employed to examine the theoretical foundations of a school's functioning regarding external conditions that influence overall learning productivity. The practical part of the research involved the application of a quasi-experimental method in which three schools in the Central District of the Russian Federation were selected. General sample consists of 354 people. The primary research method employed was the surveying of the teachers and administration of these educational establishments. The analysis was based on the random sampling approach. The findings revealed that a regular school exhibits slightly more democratic characteristics: 60% of teachers in the resilient school and 70% in the regular school adhere to the protocol-based teaching methodology. Of utmost importance is the indicator of the significance of integrating digital technologies into the educational process. A total of 78% of teachers confirmed the necessity of this measure, while 80% agreed that it would enhance student motivation. This study will contribute to the formulation of essential principles to advance studying process in resilient schools in the future, paying additional attention to the question of the need of learning process digitalization, as 90% of teachers believe in its effectiveness. For instance, this could involve the implementation of specialized educational platforms and applications (Google classroom, Kahoot, Educative Education World Wide, etc.) on the seminars and practical lessons. The results also can be used by the government to implement better schools programs in accordance with school sustainability aspects. Additionally, the question of the impact of a resilient environment on an individual's success after receiving education (such as in job search and employment) remains an interesting and unexplored area for further experimentation.

Keywords Adverse educational conditions · Application of digital technologies · Motivation for learning · Practical skills · Resilient learning environment

Introduction

Recent research by British scholars has demonstrated that the majority of educational reforms implemented in the education system have shown limited effectiveness (Cavioni

et al., 2018). In contemporary times, there has been a notable increase in the number of occupations that necessitate a profound level of general literacy and proficient utilization of computer equipment, surpassing the figures observed at the onset of the current century. However, the number of employees capable of performing such work at a high level has remained the same (Fraillon, 2018). This indicates a substantial shortage of qualified personnel with a high level of professional and digital competence.

American scholars argue that to address the challenges arising from the rapid development of the Fourth Industrial Revolution, general education, much like the economy, must undergo digital transformation (Geisinger, 2016). The first and second industrial revolutions laid the groundwork for the emergence of accessible public schooling, while the third stimulated the transition to universal secondary education

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(Gerick, 2018). According to the projections of European researchers, the outcome of the fourth industrial revolution should entail the establishment of an individualized and specialized educational model, with the primary goal of acquiring professional skills within a highly motivating learning environment. Enhancing the quality of school education in the era of digitalization has become a pressing global issue (Hatlevik, 2017).

According to Martin et al. (2020), digital technologies that include a large scope of educational instruments (learning management systems, audio and video tools, gamification, simulation, mobile learning) should really be engaged in educational process but also according to the basic pedagogical goal that consists of three pillars—importance, competence, and motivation. Without following this rule, no result can be traced.

If the rule is followed, the option of digital literacy arises (Durriyah & Zuhdi, 2018). It can be explained as a scope of several characteristics: finding digital content, working with digital content, and disseminating it. Therefore, students can receive all the scope of complex skills and abilities.

The primary focus of educational digital transformation extends beyond the mere provision of computer labs or continuous internet access during classroom sessions, as these are merely secondary outcomes resulting from the broader process of globalization. The focus should be on shaping and expanding the scope of new models for educational establishments. The main results of integrating digital technologies into the educational process should revolve around the development of highly effective pedagogical practices, successfully implemented within the digital learning environment and based on the utilization of digital tools. This should be accompanied by continuous professional development for teachers, enhanced student motivation, and the cultivation of skills and abilities through the use of novel digital instruments (Henderson & Milstein, 2003).

The understanding of the resilience aspect can be named something relatively new to humanitarian sciences. It is much more common for the personal characteristics rather than generalized phenomenon. Speaking about children, their resilience is connected with becoming more stable to negative environmental influences. Such a stable effect can be reached by creating an appropriate goal-oriented environment with teachers, social workers, psychologists, etc. Such a target environment is named a resilient or sustainable school. It can be named some kind of manifest that children can achieve any goals if a convenient medium is created (Elliot & Hulleman, 2017).

The recognition of the imperative to provide support to resilient schools, characterized by low educational outcomes, and the implementation of systematic collaboration with these establishments has emerged as a durable educational trend, propelled by the dynamic transformations taking

place across all levels of the education system (Howard et al., 2021). However, this supportive stance towards schools with low academic performance has methodological and technological limitations, as a greater number of determining negative factors must be taken into account (such as the lagging educational technologies compared to scientific and technological progress, social conflicts within the school, false literacy, teacher disengagement, emotional exhaustion and excessive workload, low functional literacy, and low student motivation). To minimize the impact of these factors, educational efforts should be directed towards main concepts such as prioritizing creative activities, implementing distance learning technologies, maintaining a balance between differentiation and individualization of education, and integrating robotics and virtual reality into students' practical activities (Mohammadinia et al., 2018).

These factors contribute to contemporary trends in the development of primary and secondary education, which, in turn, significantly impact the growing need to enhance the quality of education, the necessity of education in the face of increasing uncertainty, and the pace of digitalization in the socio-economic environment (Johnson et al., 2023). Thus, the aspect of motivation and skill development among students in working with modern technologies within a resilient environment remains insufficiently explored. The question of the feasibility of digitalization in the context of a resilient school remains open. It is precisely this aspect that receives maximum attention within the scope of the conducted research.

Through this experiment, it will be possible to obtain information on how the methodology of teaching in the resilient schools can specifically change the results of sustainable education. The analyzed factors and developmental trends can be utilized in the development and implementation of core educational programs, thereby enhancing the resilience level of the younger generation.

Literature Review

The Concept of School Resilience

The concept of resilience, recently borrowed from the realm of physical sciences, refers to the ability of entities to spontaneously restore their original configuration after the cessation of external influences (Mullen et al., 2021). It has gained considerable popularity in the humanities in recent times. This widespread usage can be attributed to the dynamic nature of the current situation in the field of modern digital technologies. The more volatile the conditions of our activities, the more appealing stability and constancy become (Mishra & Mehta, 2017). On the other hand, achieving sustainable outcomes in any endeavor

constitutes a fundamental concept of professionalism, where the actual result is shaped by internal characteristics of the activity rather than contingent external conditions (O'Connell et al., 2016).

Resilience in education was initially regarded as an individual positive quality, subject to deliberate development, and was interpreted as a meta competence of the learner, reflecting their ability to achieve high academic outcomes despite external constraints (Ossiannilsson, 2021). The first scientific studies on the exploration of individual resilience date back to the latter half of the twentieth century. Research indicates that resilience to negative external factors is an acquired quality rather than an innate characteristic (Özmuşul, 2017). It correlates with individual traits, providing flexibility and stability in situations of risk, stress, and crisis, facilitating the rapid restoration of physical and mental well-being, and enabling continued effective development (Jiménez-Mijangos et al., 2023). The field of research on resilience has seen significant studies focused on identifying the mechanisms underlying resilience (Rabbane et al., 2019). Furthermore, the support provided by teachers in nurturing students' abilities and motivation emerges as a crucial factor in fostering individual resilience (Sharma et al., 2022).

In several studies conducted by American psychologists, teacher psychological resilience has been examined as the ability to cope with extreme professional situations or effectively manage the everyday challenges of teaching (Petko et al., 2016). Empirical research has identified professional, motivational, social, and emotional aspects of teacher resilience (Olszewski & Crompton, 2020). Regarding students themselves, the internal (personal) resources that influence their resilience in the learning process encompass motivation, self-efficacy, personal moral purpose, social competence, and emotional competence (Schleicher, 2018).

Resilience within the school context, viewed as the ability to effectively function in adverse conditions (in complex social contexts where students represent a challenging student body), has only recently become the subject of discourse (Snow et al., 2018), despite the long-standing examination of "organizational resilience" and its various aspects by scholars from different countries. Collectively, these studies underscore the continued relevance of investigating the resilience of educational organizations (Tondeur et al., 2017). Considering the specific nature of education, where the product is not goods or services but rather transformed individuals, it is justified that the content and mechanisms ensuring the resilience of schools should have a different foundation compared to organizations in the production or service sectors. In the digital society, this issue has become even more acute since the emergence and widespread adoption of information technologies and gadgets (Xia, 2023).

Students' Motivation Perception

Researchers recognize the importance of school resilience as a crucial factor for achieving high educational outcomes. They emphasize the need for teachers to focus on student's motivation levels, the potential for active school-parent interactions, the use of effective teaching methods, including digital approaches, and the creation of a positive school climate (Wright, 2016).

It is quite important to understand that student motivation is quite a complex phenomenon connected not only with personal achievements but also with external factors (Ryan & Deci, 2019). Two basic types of motivation are basically distinguished: intrinsic and extrinsic. Beginning with the intrinsic one, scientists can define that it is concerned with the personal desire to achieve a set goal. In such a case a person itself is only one who can enact the behavior and influence the result (Csikszentmihalyi et al., 2014). At the same time extrinsic theory is concerned with the external factors that do not depend on the student behavior (Wigfield et al., 2017).

Thus, by considering school resilience as a concept derived from the natural sciences and examining its characteristics through the lens of education as an organizational endeavor, a compelling need for enhancing resilience arises to improve educational phenomena. By doing this, educators can interpret school resilience not only as an integrative indicator of the effectiveness of educational establishments but also as a means to identify optimal approaches for improving their performance in the context of the digital society (Xia, 2023).

Problem Statement

The issue of enhancing the sustainability of school education in the rapidly evolving modern world remains highly relevant and becomes even more pressing with each subsequent generation. This is particularly evident within the context of resilient schools, where student achievement is influenced not only by teaching methods and technologies but also by external factors. Significantly addressing the minimization of negative aspects' impact on the quality of school education is of utmost importance (Xia, 2023).

This research aims to analyze and compare the teachers' opinion on the implementation of traditional and digital educational activities in a resilient and regular school. The implementation of this aim entails the following tasks:

- Observe the level of administration involvement in the studying process
- Analyze if teachers support rising of students' motivation (answer additional questions, help in after-school time, communicate with parents)

- Explore the attitude of teachers towards digital technology usage
- Examine the main negative factors influencing the resilience of the school environment

Method

Research Design

The examination of school functioning about external conditions that influence overall learning productivity entails the utilization of the concept of the unity of education and nature as the theoretical foundation for this research. This approach allows for considering the issue of resilient schools not from the perspective of contrasting components such as the learning environment, teachers, and students in a negative context but rather as equal components of the educational process based on various current and prospective measures. The methodological potential of the theoretical part of the study was further enhanced by adopting a *synergistic approach*, positing the openness of the educational system as a fundamental condition for its development and emphasizing the orientation towards self-organization of educational impact within the structure of the individual through a complex system of interaction with the world, bordering on chaos and sustained by positive feedback. The practical part of the research involved the application of *mixed methods (both qualitative and quantitative): a quasi-experimental method*, where three schools from the Central District of the Russian Federation were selected. The primary research method employed was the *surveying* of the teaching staff and administration of these educational establishments. For this purpose, a *random sampling* method was additionally used.

Sample

The specific interpretation of resilience through the stability of results served as the basis for the first stage of the research, which involved identifying schools with consistent performance. At this stage, three schools in Russian Federation within the same municipal district were included in the sample, ensuring principled equality of working conditions for educational establishments in a strategic sense while acknowledging their tactical differences, which signify the actual “unfavorable conditions.” Including educational establishments from different municipal districts, let alone different regions and countries, in the aggregated sample would require analyzing additional variables related to the specificities of educational systems in a broader context. In describing the schools, their official names were replaced with more general terms: “Regular Middle School” and “Rural Resilient

School,” assigned random numbers for identification purposes. There were 354 participants in the conducted survey. They were chosen randomly by asking about the desire to take part in the research process.

During the second stage, a list of “unfavorable conditions” that pose challenges to the functioning of schools was established, drawing upon the findings of the educational resilience study. Compiling this list did not pose difficulties, given the lack of significant disagreements on the identified issue. However, the question of the extent to which each of these conditions influences the effectiveness of the school’s educational activities remained open.

Survey

Based on the compiled information, schools that exhibited results exceeding the expected level of performance were identified. The final stage of the research involved a detailed analysis of these schools to identify the characteristics that have contributed to high student motivation and the successful integration of digital technologies into their operations. To achieve this objective, the researchers developed questionnaires for the teachers in the abovementioned three schools. A total of 354 participants were surveyed, including 350 teachers (grades 5–11) and administration staff. The survey was conducted using Google resources based on a random sampling approach. The obtained results enabled the determination of the relevance ratio for each of the conditions that negatively influence the outcomes of the school’s educational activities. It included 11 questions for teachers and administration staff. Four questionnaires were inappropriately filled or almost empty. Among other 350 questionnaires 8 contained answers which did not correspond with the specific of research. Therefore, the external validity of the research is 98.1% while the reliability of it equals 96.7%.

Statistical Processing

During the experiment, a large amount of statistical data was obtained, primarily related to the results of the general survey and the administration questionnaire. The STATISTICA data analysis software was used for data collection and analysis. The findings are presented in schematic figures.

Ethical Issues.

To the data confidentiality policy, no personal information of the participating teaching staff from all schools involved in the survey was utilized. The tests themselves were anonymous, and the presented results reflect the average measurement of the sample. Thus, the information cannot be used for purposes other than statistical reporting and conclusions.

Research Limitations

Strict time constraints became a significant limitation during the research process. In analyzing motivation and academic

achievement in resilient and typical general educational environments, only the survey method was employed as the primary practical research approach, targeting teachers and administration. To broaden the scope of the experiment, it would be advantageous to include surveys from the students themselves and preferably involve their parents as well.

Results

According to the results of the conducted survey (Appendix), it became possible to get statistical information about education environment in resilient schools and organize it into a Table 1.

Therefore, teachers in the resilient (rural) school exhibit a greater subject-oriented approach, considering that “Developing metasubject skills contributes to a better acquisition of subject knowledge” (68% compared to 32%). On the other hand, teachers in the regular mainstream school tend to believe that “A proper understanding of the subject implies purposeful development of metacognitive skills” (75% compared to 25%).

A significant portion of teachers, when asked if there are requirements for lesson protocols (lesson plans) in their school, responded affirmatively—60% in the resilient school

and 73% in the regular school. “There are certain requirements, but few adhere to them,” noted 10% of teachers in resilient schools and 8% of teachers in regular mainstream schools. The option “There are general recommendations, but they are not mandatory” was chosen by 20% of resilient teachers and 10% of teachers in the mainstream school, respectively. The option “We periodically discuss these issues, but each individual chooses which option to use” was selected by 22% of teachers in the regular school and 10% of teachers in the resilient learning environment.

Teachers in resilient schools tend to attend their colleagues’ classes more frequently than teachers in regular middle schools. This additional involvement enhances student motivation by creating the perception of additional external monitoring. While the frequency of “once a week” visits in the resilient environment is slightly lower than in the regular middle school (6% vs. 3%), the “once a month” visits compensate for this lag significantly, with 45% compared to 30%. The rates for “once every six months” are 33% and 45%, respectively, while the option of “even less frequently” is chosen by 16% and 22% of teachers, respectively.

A similar pattern is observed regarding the school administration’s classroom inspections. School leaders attend teachers’ classes and events with the following frequencies: “once a week,” 5% of resilient school teachers and

Table 1 The results of teachers’ survey

Survey questions	Regular middle school		Resilient school	
	Yes	No	Yes	No
1. Developing metasubject skills contributes to a better acquisition of subject knowledge	32%	68%	68%	32%
2. A proper understanding of the subject implies purposeful development of metacognitive skills	75%	25%	25%	75%
3. There are requirements for lesson protocols (lesson plans) in the school	73%	27%	60%	40%
4. There are general recommendations, but they are not mandatory	10%	90%	20%	80%
5. There are certain requirements, but few adhere to them	8%	92%	10%	90%
6. We periodically discuss these issues, but each individual chooses which option to use	22%	78%	10%	90%
7. Teachers tend to attend their colleagues’ classes once a week	6%	93%	3%	97%
Teachers tend to attend their colleagues’ classes once a month	45%	55%	30%	70%
Teachers tend to attend their colleagues’ classes once a 6 months	33%	67%	45%	55%
Teachers tend to attend their colleagues’ classes even less frequent	16%	84%	22%	78%
8. When a student approaches the teacher for help with the study material to improve skills and overall understanding they will help	20%	80%	32%	68%
When a student approaches the teacher for help with the study material to improve skills and overall understanding they will help if they have time	50%	50%	57%	43%
When a student approaches the teacher for help with the study material to improve skills and overall understanding they will explain how to cope with it independently	30%	70%	11%	89%
9. Whether digital technologies would enhance overall student motivation for learning	90%	10%	70%	30%
10. Teachers in schools believe that students enjoy their subject	37%	63%	25%	75%
11. Would students refuse if offered a diploma without attending school	87%	13%	30%	70%

Source: Elaborated by the author

4% of middle school teachers; “once a month,” 44% and 40%; “once every six months,” 47% and 42%; and “even less frequently,” 4% and 10%. In the resilient school, no one chose the option of “did not attend,” although this indicator reached 4% in middle school.

In situations where a student “approaches the teacher for help with the study material to improve skills and overall understanding,” 32% of resilient school teachers and 20% of middle school teachers find time to assist them. The response option “I try to help immediately if I have time” was chosen by 57% and 50%, respectively, while “I explain how the student can cope with the material independently” was selected by 11% and 30%. The options “Most of the time, I don’t have time for this...” and “I have no time for extra lessons at all” did not receive any affirmative responses in both cases.

When asked about the need to implement digital learning in resilient school classrooms, 78% of school teachers responded unequivocally in the affirmative. The response “I doubt it, but why not?” was expressed by 18% of respondents, and 4% of teachers found it difficult to answer this question. Regarding whether this would enhance overall student motivation for learning, 80% of teachers responded affirmatively (Fig. 1).

At the same time, parents of students in resilient schools are less responsive to teachers’ requests for assistance in their children’s education and upbringing. In response to such requests, parents always respond at a rate of 20% compared to 55% in regular middle schools. The answer “in most cases, they help if asked” was given by 49% compared to 31% of teachers regarding the parents of students in the mentioned schools, as mentioned above.

The following questions addressed student motivation for learning. Thus, teachers in schools believe that students enjoy their subject: 25% and 37% (respectively, as mentioned above); teachers believe that students mostly enjoy it, 73% and 55%, and are unsure of the answer, 2% and 8% of teachers, respectively (Fig. 2).

In resilient schools, teachers are inclined to believe in students’ motivation. When asked, “What would students do if offered a diploma without attending school?”, 26% unequivocally responded, “Refuse, as they know that education guarantees a bright and successful future.” This response was chosen by 10% of regular middle schools. The option “Most students would refuse, but some would agree” was selected by 61% compared to 20% (regular vs. resilient schools). Some respondents were uncertain (“This cannot be true”)—13% and 70%, respectively.

By comparing the survey results, statistically significant differences were found in the performance of schools with a high resilience coefficient compared to traditional middle schools. These differences are primarily related to students’ motivation for education and digitizing the learning environment.

Discussions

Recognizing the school’s ability to achieve resilient performance as one of the main manifestations of its resilience, which characterizes an educational organization, American authors primarily utilized results that influenced the school’s ranking (Snow et al., 2018). Therefore, from a statistical perspective, the resilience of a school is primarily determined by the standard deviation of the reported educational

Fig. 1 Question on the necessity of implementing digital learning in resilient school classrooms. Source: Developed by the author

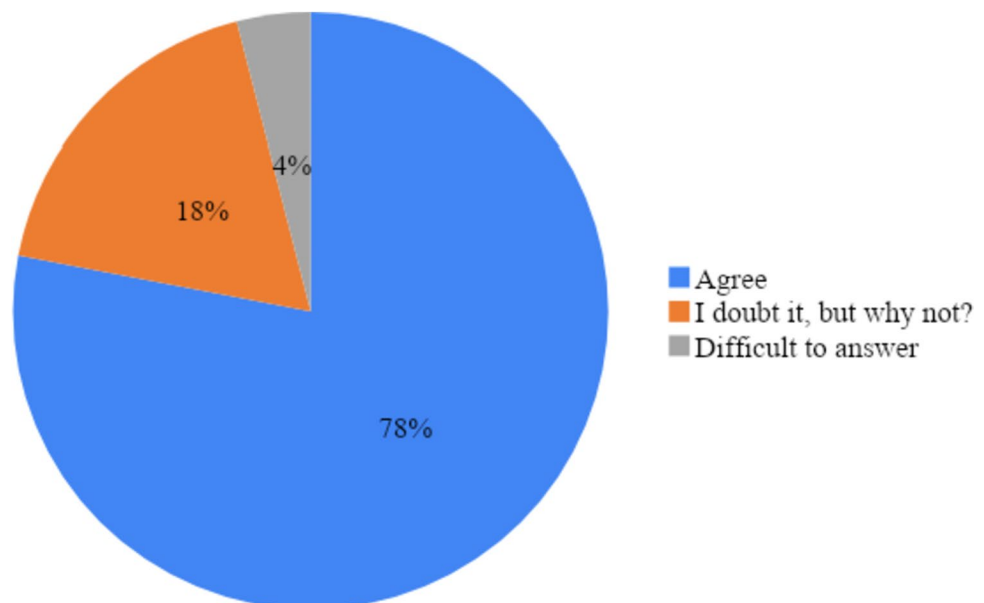
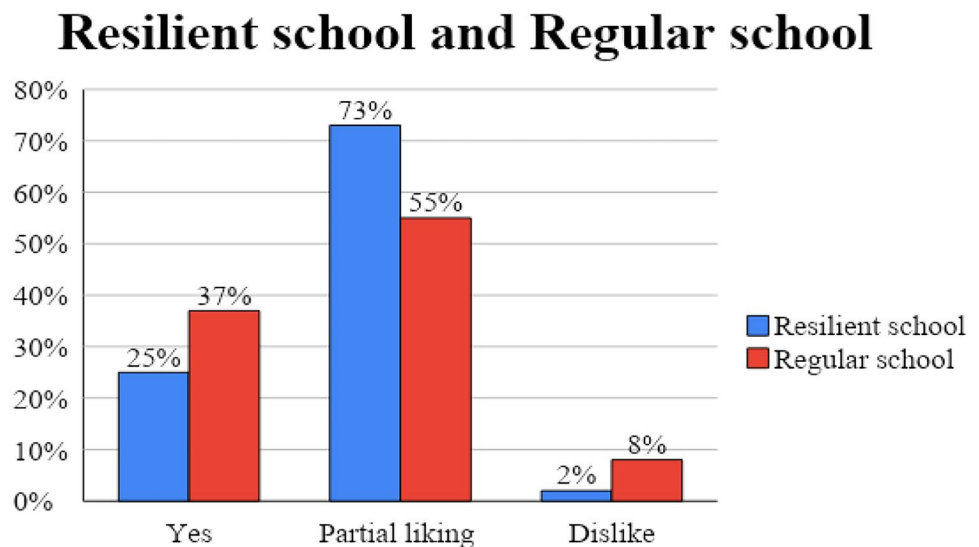


Fig. 2 Student motivation for learning. Source: Developed by the author



outcomes within the sample (Sharma et al., 2022). As for the conducted study, it was found that teachers observe nearly equal levels of student interest in their respective disciplines, with academic performance showing no significant differences. Teachers in schools believe that students enjoy their subject: 25% and 37% (resilient and typical school respectively, as mentioned above); teachers believe that students mostly enjoy it, 73% and 55%, and are unsure of the answer, 2% and 8% of teachers, respectively. So, the difference between answers of different establishments is not critical.

In the context of resilience being understood as the attainment of a state closely resembling its initial value, it is evident that a school exhibiting persistent low educational outcomes is unequivocally subjected to pronounced influences emanating from its management structures (Heine et al., 2023). For instance, in the USA, there is a system of School Improvement Grants (SIG), which threatens schools with dissolution, replacement of the principal, or replacing up to 50% of the teaching staff in cases of low student achievement (Gerick et al., 2017). In the UK, low-performing schools become the focus of intervention, resulting in changes to the school's name, teaching staff, and principal (Petko et al., 2016). In some cases, partnerships are formed between low-performing and high-performing schools to facilitate the exchange of experience and best teaching practices. Similar measures are implemented in countries with well-developed education systems. As the study revealed, academic performance and student motivation did not significantly differ between regular schools and resilient establishments. Moreover, the latter demonstrated a higher level of accountability in terms of administration and teaching staff oversight. In resilient schools, teachers are inclined to believe in students' motivation. A total of 26% of teachers claimed that children would refuse to receive

diploma without attending school. This response was chosen by 10% of regular middle schools. The option "Most students would refuse, but some would agree" was selected by 61% compared to 20% (regular vs. resilient schools).

Punitive measures lack support from the professional community. However, returning to the initial physical analogy of resilience, an elastic object cannot be bent but can be broken (Heine et al., 2023). In the context of educational establishments with consistently low learning outcomes, it is the pedagogical collective and the socio-psychological climate that represents the resilient core, which in this case is being replaced and (or) fractured. Acknowledging the presence of negative resilience in a school entails the recognition that emergency measures become the sole effective tool for addressing the identified issues (Fraillon et al., 2019). It is precisely the recognition of the teaching staff as the fundamental core of the educational institution that underlies the experiment, thereby determining the key research method. The underlying significance of negative school resilience lies in the causes and mechanisms that ensure educational progress stability. These factors should also be consistent, assuming that the phenomenon of school resilience has a consistent nature regardless of the specific outcomes (Ercikan et al., 2018). Hence, the examination of negative resilience offers substantial support in the progression toward an effective school and its scholarly substantiation. It can be minimized by implementing digital technologies into the process of studying. Option of implementing digital learning in resilient school classrooms provoked affirmative response of 78% of school teachers. The response "I doubt it, but why not?" was expressed by 18% of respondents, and 4% of teachers found it difficult to answer this question. Regarding whether this would enhance overall student motivation for learning, 80% of teachers responded affirmatively.

Positive resilience applies to a school operating in unfavorable conditions yet achieving higher outcomes compared to those schools presumed to be the best under such circumstances (Ainley, 2018). This pattern was identified during the experiment conducted to compare the academic performance of regular schools and resilient schools. To clarify the abovementioned, it does not necessarily have to be a top-ranking result (in the top third of the list). It simply needs to exceed expectations. The more pronounced this difference, the more resilient the school proves to be. Thus, the issue of the scale of school deprivation about adverse conditions becomes relevant.

The abovementioned conclusions align with the current trend that resilience is a dynamic and adaptable process. American researchers believe that digital resilience is a product of the dynamic interaction between an individual (such as their personality) and their environment (such as social support). Digital resilience, therefore, is a dynamic personal asset that grows through digital activation, i.e., by utilizing relevant online opportunities rather than through isolation and safe behavior (Cordeiro, 2021). This demonstrates that the degree to which someone can be resilient will fluctuate over time and heavily depends on the context. To determine the timing and frequency of assessing digital resilience, plans for future research can be taken into consideration.

Conclusions

Summarizing the survey results of teachers and school administration participating in the experiment, it is worth emphasizing that the professional attitude towards work and colleagues is slightly more pronounced among teachers and students in schools characterized by a high degree of resilience. These individuals constantly experience negative influences from a significant number of educational subjects. Among school teachers in such conditions, trustful and friendly relationships are less pronounced compared to an average school operating in more favorable conditions. As it was mentioned in the results, teachers assumed that 69% students preferred when teachers were ready to help in after-school time and answer their additional questions. A conventional school is somewhat more democratic and student-oriented in terms of lesson design while also exercising greater control over students. To provide an example, 60% of teachers in resilient schools and 70% in conventional schools adhere to teaching methodology by following protocol requirements. Consequently, students attending resilient schools experience a notable increase in the amount of feedback received from teachers, leading to a corresponding enhancement in their motivation to engage in their studies. Parents from both educational establishments are nearly unanimous in assessing the methods of motivating their

children's academic performance, its meaningful components, and ways of assisting children facing learning difficulties. The implementation of digital technologies in the educational process is of utmost importance. A total of 78% of teachers affirmed the necessity of this measure, while 80% agreed that it would enhance student motivation.

The observed differences are not statistically significant. The quantitative differences in results data are random and do not imply a fundamental distinction between educational organizations.

The findings of this research shed light on the specificity of studying process organization in the regular and resilient educational environment, catalyzing boosting student motivation and fostering their engagement in various disciplines. This study will contribute to the formulation of essential principles to advance studying process in resilient schools in the future, paying additional attention to the question of the need of learning process digitalization, as 90% of teachers believe in its effectiveness. For instance, this could involve the implementation of specialized educational platforms and applications (Google classroom, Kahoot, Educative Education World Wide, etc.) on the seminars and practical lessons. The results also can be used by the government to implement better schools programs in accordance with school sustainability aspects.

Additionally, the question of the impact of a resilient environment on an individual's success after receiving education (such as in job search and employment) remains an interesting and unexplored area for further experimentation.

Appendix

Survey Questions for Teachers

1. What influences the development of metasubject competencies?
2. What contributes to better assimilation of subject knowledge?
3. Are there unified requirements for lesson protocols (lesson plans) in your school?
4. How often do you attend colleagues' classes?
5. How often does the school administration attend classes?
6. What do you do when a student approaches you for help with study materials to improve their skills and overall understanding of the material?
7. Do you consider the implementation of digital learning necessary for resilient schools?
8. Can it enhance overall student motivation to learn?
9. Do parents respond to your requests for assistance in the education and upbringing of children?

10. Do you believe that students enjoy your subject?
11. What would students do if offered a diploma without attending school?

Acknowledgements Irina Leontyeva, Egor Gromov, and Alexey Panfilov have been supported by the Kazan Federal University Strategic Academic Leadership Program. Khaleel Al-Said is grateful to the Middle East University, Amman, Jordan for the financial support granted to cover the publication fee of this research article.

Data Availability Data will be available on request.

Declarations

Conflict of Interest The authors declare no competing interests.

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