



# IMPACT OF COGNITIVE-PSYCHOLOGICAL BARRIERS ON THE IMPLEMENTATION OF PEDAGOGICAL INNOVATION

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<b>Received:</b> 26 <sup>th</sup> July 2023 <b>Accepted:</b> 28 <sup>th</sup> August 2023 <b>Published:</b> 30 <sup>th</sup> September 2023	This article covers the features of the influence of cognitive-psychological barriers in the teacher on the creation, assimilation and implementation of pedagogical innovations.
<b>Keywords:</b> cognitive-psychological barrier, implementation, pedagogical innovation, regulatory psychological barriers	

## I. INTRODUCTION

The creation of innovations in the field of education, their implementation in the process of teaching and upbringing are one of the important topics of interest to many researchers. Literature on the interaction of the educational sphere and innovations indicates a differentiation between fundamental concepts in the field of innovation in the pedagogical field, theories among countries in accordance with the directions of scientific research, scientific-cultural identity.

Pedagogical innovation is a change aimed at improving the development, education and training of schoolchildren. A synonym of the concept of "pedagogical innovation" is the concept of "innovation in education".

Teaching innovation has been understood and practiced in various ways. Among them, technology is an element commonly found, and is often adopted as a support mechanism for the delivery of new teaching methods (Zhu et al., 2013). Examples include cloud-based applications and electronic whiteboards (Lee, 2011); student response systems in the classroom (Choi et al., 2018; Lantz, 2010); mobile devices for in-class and out-of-class activities (Li, Lee, Wong, Yau and Wong, 2018); and learning analytics to evaluate and improve teaching effectiveness (Wong, 2017). Zhu et al. (2013) specified technological competence as one of the four major competencies required in innovative teaching, in addition to learning, social and educational competence.

Psychological barriers refer to states generating from different stimuli and deposits in the individual's personality that hinder achieving his goals including psychological adjustment. These barriers may be external due to some social and mental pressures or internal barriers due to psychological stress from various states such as rumors in the individual's life. Aljawhari (2009) defined barriers as things that stand

between the individual and his goals either physically like a wall, socially like fear of blame, or psychologically like fear of failure. They are mental states negatively affecting the individual's life. They hinder him to be influenced by the surroundings and prevent performing certain actions (Choucair, 2002). Shaker (2015) pointed out that psychological barriers are a mental psychological phenomenon that affects players in training or competition. They hinder the player from achieving his goals and affect his performance negatively. Besides, Khokhlova et al. (2020) described these barriers as the factor that activate or inhibit the activity.

## II. RESEARCH METHODOLOGY

Semi-structured interviews were conducted with a total of 26 educators working in schools in Uzbekistan, with the aim of collecting information on the innovative teaching practices in their institutions and their views on them. About 51 per cent of the interviewees were academics involved in frontline teaching, 28 per cent were in management and the remainder were IT experts and research support staff. The interviewees were affiliated to 4 schools, of which 100 per cent were publicly-funded. All the schools were located in Uzbekistan.

The interviews had three parts, namely, factual information – aims, start date, and context of implementation – on the most recent teaching innovation in which an interviewee had been involved; the features of the innovation and its evaluation method; and the views of the interviewees on the teaching innovation in terms of its importance, difficulties encountered, possible improvements and the effectiveness of the evaluation method.

## III. LITERATURE REVIEW

Zhu (2013) investigated the extent of innovation in teaching and learning in the schools in two



Asian cities (Beijing and Hong Kong) as perceived by their teachers and students. On the dimensions of technology, pedagogical orientation and cultural environment, they found an overall high level of technology use in the schools, but a low level of its use for collaboration and a low level of pedagogical innovation. It was concluded that the teachers and students did not perceive their schools as innovative, despite the existence of innovative elements in their teaching and learning strategies. Hofman et al. (2011) presented the differences between school leaders and teachers in their perceptions of hindrances to innovations. They showed that teachers regarded the factors – such as the lack of sufficient support, the lack of proper educational tools and the unfit organizational structure for the innovation – as more of a bottleneck than the school leaders did. They claimed that such kinds of bottlenecks would be more visible in institutions in developing countries with a shortage of resources and teachers.

Another category of related studies has focused on the drivers of successful innovations. Smith (2011) identified external and institutional rewards, as well as recognition, as the key drivers of innovation in learning and teaching. Support from senior management and the availability of technical support, for both short-term and long-term projects, are also important for the sustainable development of institutional innovation. Lunde and Wilhite (1996) identified the characteristics of teachers who are innovative, showing that passion, persistence in improvement, being attentive to students, the use of active learning, risk taking and keeping themselves vital are the key characteristics. Lee (2011) investigated how teaching innovation and the integration of information technology into teaching contribute to learning effectiveness.

The results showed that both these factors had direct, positive and significant effects on students' learning effectiveness. The teaching innovations described by the interviewees can be categorized into two main groups – those that involved the use of technology and those that did not (Wong, 2018)

Reflection in the creation, implementation of innovations in the educational process psychological tumors occur, which are conditioned by the development of a low level of ability.

Xon (A.M. Xon, 1986) distinguished two different psychological barriers show: cognitive and regulatory. Cognitive psychological barriers about innovation lack of knowledge comes from a high level of sensitivity to the new one, and passive causes resistance. Cognitive skills to be able to solve the problem it is part of the structures, for this reason educators in the educational institution in standard and

non-standard situations so that it can carry out innovative activities the ability to make decisions is necessary. Regulatory psychological barriers in distrust of initiators, management, the novelty itself it is manifested, and often the interests of teachers, values and attitudes creates an active resistance to the introduction of influencing innovations.

1. Strategic level. The reason for not innovating at this level is due to the administrative-collective mechanisms of management have their own characteristics ("from high" reforms, over-centralization), with the consequence being "in places the Absolute s of interest in novelties is the self-efficacy of educational systems the level of development is B manifested by the lack of formation.

2. Level of educational systems. Reform of influence, innovation at this level the reason for the "non-infection" has reigned for many years (certain elements are still present preserved) departmental monopoly of management structures, key elements of the innovative cycle effect in the area (informative infrastructures, small innovative forms) underdeveloped; educational the structure of unification at all levels; within the socio-cultural spheres "closeness" of the educational system; "intermediary" between science and educational practice the scarcity of organizations; the cadres in the higher qualification, especially in the management his indifference to innovation is explained by the fact that he is not affected.

3. Educational institution level. The reason for the lack of innovation at this level first of all in the pedagogical staff in practice, including educational institutions psychological preparation for innovations in their leaders seems to be in progress.

In today's conditions, this is the demand for many scientific ideas in educational practice one of the main reasons for its lowness.

Aiding or abetting the implementation of pedagogical innovations among the reasons distinguish external (relative to the teacher) and internal (personal) barriers will be displayed. External barriers high standing bodies, educational institution the administration is composed of factors such as the public opinion of the pedagogical community.

External reasons - these are the conditions of life of the teacher, the possibilities of life, his state of health and etc. But in innovative situations, the teacher not only the influence of external causes on behavior is observed: at certain levels he is also influenced by personal and professional- personal traits formed in the teacher falls, it is marked with it.



#### IV. FINDINGS AND RESULTS

The teaching innovations described by the interviewees can be categorized into two main groups – those that involved the use of technology and those that did not. Table I shows the pedagogical innovations involving the use of advanced technologies, most of which were internet or mobile-oriented. The participants emphasized that real-time communication is a key advantage. MOOC and flipped classrooms, as two examples relying heavily on the internet, have become popular and have demonstrated their effectiveness in improving students' learning performance.

Table II lists the innovations where technology was not a core part. The most frequent one was related to students' active learning, followed by the use of videos in classroom teaching and interdisciplinary collaboration between students. A characteristic of this category of innovation is that it not only focused on students'

learning but also other aspects such as teaching and students' feedback.

Figure 1 presents the level of the teaching innovations, more than half of which were implemented at a course level. The innovations covered a broad range of 8 disciplines, such as accounting and language, chemistry, economics, biology, mathematics and English. This is consistent with the situation described in the literature, namely, that teaching innovations are often employed on a discipline-specific rather than an institution-wide scale, possibly due to disciplinary differences in study content.

Figure 2 shows the number of years that the pedagogical innovations had been implemented, with the average being 2.3 years. About half of the innovations had been practiced for 2 years or more. Also, about 90 per cent had been practiced for more than two years.

1-table.

Pedagogical innovations that involve advanced technologies

Pedagogical innovations	Frequency
Use of online materials or software tools	2
Use of mobile technology	2
Massive open online course	3
Flipped classroom	2
Simulation	1
Total	8

2-table.

Pedagogical innovations that did not mainly involve advanced technologies

Pedagogical innovations	Frequency
Active learning	5
Use of videos in classroom teaching	3
Interdisciplinary collaboration between students	1
Sharing of teaching and learning resources among teachers	2
Survey of student feedback	1
Mutual class observation among teachers	4
Total	16

#### V. CONCLUSION

The results obtained showed that in the implementation of pedagogical innovations in schools, which require the involve of advanced technologies, their knowledge and philosophy of education in relation to these technologies and their application in teaching matter. Cognitive-psychological will be primarily due to the teacher's lack of knowledge in the matter of innovation, in which systematic analysis is not formed by the skills of creative thinking.

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