



MECHANISMS FOR DEVELOPING AN EFFECTIVE STYLE OF PEDAGOGICAL COLLABORATION AND ITS IMPACT ON EDUCATIONAL EFFECTIVENESS

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ABSTRACT

the article examines the socio-psychological nature of teacher-student interaction in the system of general secondary education, as well as the content of pedagogical strategies and their impact on the effectiveness of the educational process. In addition, it provides a scientific analysis of teachers' behavioral styles and communicative activities in the context of modern education.

Objective: to empirically investigate teachers' pedagogical strategies in secondary schools and to identify key factors ensuring effective positive interaction based on factor analysis.

Materials and methods: the study analyzed empirical data obtained through psychodiagnostic methods using factor analysis. As a result, relationships between pedagogical strategies and personal psychological characteristics were identified, and their generalized factor structure was determined.

Conclusion: the findings revealed that the main factor is the "effective positive interaction style," characterized by engaging, flexible, guiding, and explanatory pedagogical strategies. This style is closely associated with teachers' communicativeness, social activity, and self-regulation. At the same time, certain negative aspects were identified, including excessive independence and insufficient diplomatic tact in communication. The results have significant theoretical and practical implications for fostering an effective socio-psychological environment and developing teachers' communicative competence.

Keywords: pedagogical strategies, pedagogical communication, teacher-student interaction, factor analysis, effective positive interaction style, communicative competence, socio-psychological environment, pedagogical behavior.

INTRODUCTION

In the contemporary education system, relationships between teacher and student constitute one of the key socio-psychological factors determining the effectiveness of the educational process. In the context of reforms aimed at improving the quality of education, the content of pedagogical activity is associated not only with the transmission of knowledge, but also with the establishment of effective communication with learners, support for their personal development, and the formation of social collaboration.

In this regard, teachers' pedagogical strategies and the specific features of their communicative behavior require separate scientific analysis as an important component of the educational process. Research conducted in the global education system emphasizes that one of the most significant factors influencing the quality of education is the teacher's personality and his or her collaboration-based activity.

In particular, Wimberley's (2011) study substantiates that effective collaboration among teachers not only contributes to improving students' academic achievement, but also serves as a decisive factor in forming a positive educational environment.

Teachers' attitudes toward collaboration processes and their influence on professional effectiveness were also examined in depth in the study Teachers' Perceptions (2015). It shows that collaboration contributes to improving teachers' morale, strengthens professional commitment, and increases the level of social satisfaction. At the same time, as the authors emphasize, limited time and insufficient organizational resources reduce the effectiveness of collaboration. Consequently, collaboration depends directly not only on social factors, but also on organizational conditions.



The Turkish researcher A. Kırca, examining the school environment within the framework of the “learning organization” theory, identified its relationship with teachers’ morale. According to his findings, the more effectively a school functions as a “learning organization,” the higher the level of teachers’ professional satisfaction and work activity. This position indicates the need to develop a culture of pedagogical collaboration at the level of school management, including within the education system of Uzbekistan. In addition, De Jong’s (2021) study substantiates that teachers’ professional development is largely determined by the forms of their collaboration. Three main forms of effective interaction are distinguished: sharing experience (sharing), testing new methods (experimenting), and joint design (designing). These processes ensure not only the improvement of the effectiveness of the educational process, but also the teacher’s personal development.

The study conducted in Pakistan under the title “Impact of Collaboration on Professional Performance of Teachers in Private HEIs of Karachi” also demonstrated the significant positive influence of collaboration on teachers’ performance effectiveness. According to the findings, when collaboration is lacking, teachers’ creative approach declines, motivation weakens, and students’ learning achievements deteriorate. This circumstance confirms that collaboration in the educational process is not an additional mechanism, but a central one.

At present, although various styles of pedagogical communication and their influence on students’ motivation, activity, and academic outcomes have been widely covered in scientific research, the internal structure of this process, particularly the relationship between pedagogical strategies and their generalized factor structure, remains insufficiently studied. The empirical identification of the relationship between teachers’ pedagogical behavior and their individual psychological characteristics remains an especially urgent scientific problem.

The present study is aimed at addressing this problem. Within its framework, a comprehensive analysis of the pedagogical strategies of teachers in general education schools is carried out, and their internal structure is identified using factor analysis. The scientific novelty of the study lies in the fact that an effective style of positive collaboration is distinguished in pedagogical activity as an independent factor, and its psychological determinants are revealed.

The practical significance of the work is determined by the possibility of developing scientifically grounded recommendations aimed at optimizing the socio-psychological environment of teacher-student interaction, developing teachers’ communicative competence, and increasing the effectiveness of the educational process. In this regard, an in-depth study of pedagogical strategies and the identification of their effective models constitute one of the most important tasks of modern education.

In psychological research, factor analysis is regarded as an effective method for identifying various indicators of the individual, their interrelationships, and hidden structures. This method makes it possible to determine the initial transformations of substantive forms and sets of simple attributes, as well as to reveal deeper logical relationships among indicators measured in the course of the study. In other words, factor analysis provides an opportunity to disclose a number of latent characteristics that can be explained through observations of the respondents’ behavior and their personality traits.

The main task of factor analysis is to generalize a large number of obtained indicators, identify common and specific tendencies among them, and determine the key dimensions reflecting the relationship between pedagogical activity and management styles, on the one hand, and personality characteristics, on the other. Solving this task enables the researcher to identify the main factors that shape a teacher’s professional activity style and influence his or her socio-psychological profile.

In the present study, the results of methodological tests and questionnaires administered to teachers were used as initial parameters. They served as indicators reflecting the teacher’s didactic



and managerial styles, the individual features of his or her interaction with students, and his or her personality-psychological characteristics.

Based on the numerous indicators obtained, a correlation matrix was compiled, after which factor analysis was conducted using specialized statistical software. As a result, structural relationships among styles of activity, management, features of teacher-student interaction in pedagogical situations, and teachers' personality characteristics were identified through the application of the centroid method.

Thus, the factors identified in the study made it possible to determine how the style of professional activity, management style, and socio-psychological characteristics of the teacher's personality are combined, as well as how they manifest themselves in the educational process. This, in turn, made it possible to gain a deeper understanding of the school teacher's personality and to scientifically substantiate which specific factors play a key role in ensuring the effectiveness of his or her professional activity.

Each identified factor was named on the basis of a set of interrelated attributes reflecting the teacher's activity styles, the specific features of his or her managerial behavior and behavioral strategies in pedagogical situations, as well as his or her socio-psychological characteristics. These factors serve as indicators characterizing the individual profile of the teacher, his or her behavior in pedagogical situations, and the style of communication in the educational process.

MATERIALS AND METHODS

The object of this study was the process of identifying the socio-psychological features of teacher activity within the teacher-student collaboration system. The study involved teachers from general education schools in Tashkent, Bukhara, Syrdarya, Samarkand, and Khorezm, as well as part-time students of the "Primary Education" program at Tashkent International Kimyo University. The empirical study included 483 teachers and 654 students; the total number of respondents was 1,137.

The subject of the research is the identification of socio-psychological factors that ensure effective interaction within the teacher-student collaboration process.

In the course of the study, a number of psychodiagnostic and statistical methods were used on the basis of an integrated approach. In particular, the following were applied: the socio-psychological questionnaire (SPQ) developed by V.M. Karimova and D.R. Turayeva; the content analysis method; N. Elterman's "School Situations" technique; the cluster pedagogical strategy; Ch. Osgood's semantic differential; K. Markova and A.Ya. Nikonova's "Study of the Teacher's Activity Style" methodology; the "Determination of Self-Management Style" methodology; observation of pedagogical communication style based on the Flanders system (as modified by O.A. Mittrakhovich); as well as R. Cattell's 16-factor personality questionnaire (Form C) and the method for studying motives of learning activity by A.A. Rean and V.A. Yakunin (as modified by N.S. Badmaeva).

The reliability and statistical significance of the obtained empirical results were verified using methods of mathematical statistics. In particular, the analysis was carried out using the Kruskal-Wallis test (H), the Kolmogorov-Smirnov test, the Mann-Whitney U test, Cronbach's alpha reliability coefficient (α), and Spearman's rank correlation coefficient (r), which made it possible to confirm the validity of the obtained results.

RESULTS AND DISCUSSION

In the course of the study, empirical data obtained using various psychodiagnostic methods were subjected to comprehensive analysis. Factor analysis was conducted in order to identify their generalized structure. According to the obtained results, the first factor was designated as the "effective style of positive collaboration." This factor is characterized by a high level of orientation of pedagogical strategies toward direct interaction and collaboration with students.

Table 1

Indicators Included in the Factor “Effective Style of Positive Collaboration”

Indicators	Positive collaboration
Engaging (teacher-student interaction style)	0,742
Flexible (teacher-student interaction style)	0,813
Guiding (teacher-student interaction style)	0,694
Explanatory (teacher-student interaction style)	0,688
Responsible, distanced (teacher-student interaction style)	-0,284
Waiting/observational (teacher-student interaction style)	-0,302
Emotional-planning style (activity style)	0,418
Cognitive-planning style (activity style)	0,329
Democratic style (management style)	0,589
A (Reservedness - sociability) (personality characteristic)	0,603
F (Reasonableness - expressiveness) (personality characteristic)	0,458
Y (Social boldness - shyness) (personality characteristic)	0,604
I (Tough-mindedness - tender-mindedness) (personality characteristic)	0,302
N (Forthrightness - diplomacy) (personality characteristic)	-0,833
Q2 (Conformity - independence) (personality characteristic)	-0,520
Q3 (Self-control) (personality characteristic)	0,538

$$p \leq 0.05, p \leq 0.01$$

High factor loadings for this factor are primarily associated with pedagogical activity styles oriented toward direct interaction and collaboration with students. In particular, the leading role in the structure of this factor is played by the “engaging” ($r=0.742$), “flexible” ($r=0.813$), “guiding” ($r=0.694$), and “explanatory” ($r=0.688$) styles.

In addition, among personality-psychological characteristics, significant positive relationships were identified with scale A (communicativeness, $r=0.603$), scale H (social boldness, $r=0.604$), scale F (expressiveness, $r=0.458$), and scale Q3 (self-control, $r=0.538$). These results indicate that teachers of this type are characterized by the capacity for effective interaction with students, high social activity, and a pronounced orientation toward collaboration.

Such teachers are capable of involving students in active learning activities, fostering interest in learning, and creating a positive educational environment. A high level of social boldness reflects their initiative, leadership qualities, and readiness to assume responsibility in the pedagogical process. At the same time, expressiveness and emotional openness ensure sincerity and expressivity in the communication process.

However, the results of factor analysis also revealed certain negative relationships within this style. In particular, a negative correlation was established with scale N (forthrightness - diplomacy, $r=-0.833$) and scale Q2 (conformity - independence, $r=-0.520$). This indicates that, when teachers of this type display a pronounced orientation toward independence, they may show insufficient diplomatic tact in communication and certain difficulties in achieving social coordination. In other words, their openness and social boldness may in some cases be combined with an excessively independent position, which reduces attention to others’ opinions and readiness for compromise.

The factor of “effective positive collaboration” functions as a leading style of pedagogical activity that ensures high effectiveness of the educational process. It plays a key role in activating the student’s personality, expanding social interaction, and forming a favorable educational environment.



At the same time, the identified limitations-excessive independence and insufficient diplomatic tact-point to the need to ensure balance in pedagogical activity.

Thus, this factor reflects the teacher's orientation toward positive interaction and collaboration; however, achieving maximum effectiveness in the educational process also requires the development of diplomatic tact and elements of collective coordination in the teacher's professional behavior.

CONCLUSION

The results of the present study once again confirmed that the socio-psychological aspects of teacher-student collaboration in the system of general secondary education are among the key factors determining the effectiveness of the pedagogical process. On the basis of empirical analysis using the factor method, the internal structure of teachers' pedagogical strategies was identified and their generalized model was developed.

The study established that the first identified factor, the "effective style of positive collaboration," plays an important role in establishing effective communication with students, actively involving them in the educational process, and forming a favorable socio-psychological environment. This style is characterized by engaging, flexible, guiding, and explanatory pedagogical strategies and is closely associated with such personality-psychological characteristics as communicativeness, social boldness, expressiveness, and self-control.

At the same time, the negative correlations revealed through factor analysis indicate the need to maintain balance in pedagogical activity. In particular, excessive independence and insufficiently developed diplomatic tact in communication may, in certain cases, limit the effectiveness of collaboration. This suggests that pedagogical practice should develop not only activity and independence, but also communicative flexibility and skills of collective interaction.

The scientific and practical significance of the study lies in the possibility of developing, on the basis of the obtained results, scientifically grounded recommendations aimed at enhancing teachers' communicative competence, optimizing pedagogical communication, and forming a positive socio-psychological environment in the educational process.

In the future, it appears important to expand research in this direction, particularly through a deeper study of pedagogical strategies by age, professional experience, and regional factors, as well as through a comprehensive analysis of their influence on educational outcomes.

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