



# Development of flexible competencies in the process of physical education classes in the educational space of higher education

UDC 796.01

PhD, Associate Professor **A.A. Novikova**<sup>1</sup>Dr. Hab., Professor **L.L. Mekhrishvili**<sup>1</sup><sup>1</sup>Federal State Budget Educational Institution of Higher Education

«Industrial University of Tyumen», Tyumen

Corresponding author: novikovaaa@tyuiu.ru

Received by the editorial office on 30.10.2024

## Abstract

**Objective of the study** was to determine the relationship between the approaches to physical education employed in the classroom at a higher technical institution and the development of students' adaptable skills.

**Methods and structure of the study.** Within the context of the project «Enhancing the adaptive abilities of students» at the Tobolsk Industrial Institute, a research was conducted to assess the level of development of the elements of «soft» skills through physical education. The study involved 110 students from the second and third years of study.

**Results and conclusions.** The investigation showed that the educational approaches and techniques employed in physical education classes contribute to the enhancement of students' abilities to collaborate effectively, fostering a sense of responsibility for their actions. Additionally, these approaches promote the development of cognitive and creative skills in tackling both specific and general tasks through exercises and participation in sports activities, such as chess tournaments and mini football matches. Furthermore, they cultivate the ability to make informed decisions and achieve desired outcomes.

**Keywords:** *flexible competencies, physical education methods, higher education.*

**Introduction.** The basic model of soft skills is presented by the well-known «4K» scheme, which includes «critical thinking» as a way to think critically and analyze facts, events, phenomena, and also to see cause-and-effect relationships; «creativity» as an expression of creative skills and a way to think outside the box; «communication competencies» – an important skill for building business and personally-oriented communication in different interaction situations; «coordination» – as an aspect of managing the effectiveness of teamwork, developing leadership qualities, etc. [3, 10, 11, 12].

The relevance of developing and the importance of soft skills in the VUCA world is unconditional. As T.N. Anufrieva notes, soft skills give hard (professional) skills the necessary plasticity and adaptability, regardless of professional qualifications [1, pp. 120-132].

Yu.V. Pushkarev, E.A. Pushkareva reveals the factor of sufficient influence of soft skills on academic performance and success of students. The authors consider the factors and interrelation of cognitive

and emotional, motivational, linguistic, creative components of development, and also substantiate the need to create an adequate educational environment that takes into account the psychophysiological characteristics of age, contributing to an increase in the level of motivation and cognitive activity [8, p. 111]. Interest in the study of meta-skills, analysis of the components and structure of the construct in modern scientific discourse is growing. According to K. Kenton and V. Blumer, soft skills include attributes and personality traits that help employees interact with other people and achieve success in the workplace [13, p. 77].

**Objective of the study** was to determine the relationship between the approaches to physical education employed in the classroom at a higher technical institution and the development of students' adaptable skills.

**Methods and structure of the study.** Mastering students' universal skills in physical education classes creates the opportunity for practical implementation



of skills and abilities in all spheres of life, including successful mastering and inclusion in the educational process [3, 5, 6]. At the Tobolsk Industrial Institute, as part of the development of the topic «Development of flexible competencies of students», a study was conducted to identify the degree of development of the components of «soft» skills through physical education, in which 110 students of the 2nd and 3rd years took part.

**Results of the study and discussion.** In the sections of the work program for the disciplines: «Physical Education and Sports», «General Physical Fitness», «Applied Physical Education», the didactic units are: athletics, volleyball, basketball, general physical training, mini football, table tennis, etc., the implementation of which is due to the variable interval, control, competitive, individual, group, frontal, circular and other methods used in the course of classes.

In the course of the study, it was revealed that educational technologies and methods used in physical education classes influence the development of communicative competencies in the context of teamwork, while at the same time, students develop responsibility for their actions; development of cognitive and creative competencies in solving narrowly focused and general problems when performing exercises and participating in sports games, chess tournaments, mini football matches; formation of decision-making skills and the skill of achieving results. Based on the entrance testing of first-year students and the control testing of students at the end of the first to third years, using the questionnaire «Flexible skills 4K» on the platform of the State Budgetary Institution of Additional Education for Children and Youth Creativity «Na Lenskoy», the following indicators of the development of flexible skills were identified (Table 1). Table 2 shows the coefficient of growth of competencies.

**Conclusions.** The obtained results allow us to conclude that there is a direct correlation between the methods used in physical education classes and the indicators of the development of students' soft competencies. Students of the second and third years attending physical education classes at a higher technical school demonstrate a high level of development of soft «super-subject» skills.

In modern Russian society, the role of physical education is increasing, which is declared from high tribunes of various levels, emphasizing the influence of physical education classes on the personal development of young people not only in terms of physical health and development, but also the development of flexible competencies.

The role of physical education in the spectrum of development of soft «super-subject» skills of students in the educational space of a higher technical school is underestimated, which is proven by the results of the study. Analysis of the data obtained as a result of the study allows us to identify a correlation between the methods used in physical education classes: group, individual, competitive, frontal, interval and the level of development of critical thinking, communication, teamwork, creativity.

It seems appropriate, when organizing the educational process at a university, within the framework of the implementation of the competency model, to develop criteria for the levels of formation of «supra-subject» skills of students through disciplines not only in the technical, natural sciences and social and humanitarian fields, but also in physical education.

## References

1. Anufrieva T.N. Kontent-analiz ponyatiya «gibkiye navyki» (soft skills). Vestnik Tomskogo gosu-

Table 1. Level of development of students' flexible competencies ( $\approx$  average value)

Competencies	Entry score	Control Score. Level of development	Methods of formation
Critical thinking	58	81,2 (high)	project; individual, competitive, group
Communication skills	73	93,8 (high)	group; competitive; frontal; project
Teamwork	66	89 (high)	competitive, group
Creativity	63	78 (above average)	project; individual, competitive; group

Table 2. Competency growth rate

Critical thinking	Creativity	Communication skills	Teamwork
$\approx 40\%$	$\approx 25\%$	$\approx 20\%$	$\approx 35\%$



- darstvennogo pedagogicheskogo universiteta. 2023. Issue. 2 (226). pp. 120-132.
2. Golub M.D., Kudryavtsev M.D., Galimov G.Ya. et al. Rol i znachenije fizicheskoy kultury v sovremennom obshchestve. Fizicheskaya kultura, sport, nauka i obrazovaniye [Physical culture, sport, science and education]. Proceedings of the II All-Russian scientific conference. Yakutsk: FGBOU VO «Churapchinskiy gosudarstvennyy institut fizicheskoy kultury i sporta», 2018. pp. 119-122.
  3. Ermakov D.S. Model myagkikh navykov. Sovremennoye obrazovaniye i Soft Skills. Obrazovatel'naya politika. 2021. No. 4(88). pp. 42-51.
  4. Lubysheva L.I. Sotsiologiya fizicheskoy kultury i sporta. Study guide for students of higher educational institutions studying in the specialty «Physical Education». Moscow: «Akademiya» publ., 2010. 270 p.
  5. Mikhaylova T.A. Problemy sporta i fizicheskoy kultury v rossiyskikh sotsiologicheskikh issledovaniyakh: istoriya i perspektivy razvitiya. Chelovek. Soobshchestvo. Upravleniye. 2017. Vol. 18. No. 4. pp. 121-136.
  6. Novikova A.A. Issledovaniye vliyaniya sovremennykh obrazovatelnykh tekhnologiy na formirovaniye kognitivnoy kompetentnosti obuchayushchikhsya. Science for Education Today. 2023. Vol. 13. No. 2. pp. 57-77.
  7. Pushkarev Yu.V., Pushkareva E.A. Faktory, opredelyayushchiye razvitiye kognitivnykh sposobnostey v usloviyakh tsifrovizatsii protsessov obrazovaniya: obzor tekushchikh issledovaniy. Science for Education Today. 2022. Vol. 12. No. 6. pp. 111-136.
  8. Sirotkina O.V. Sotsialno-pedagogicheskoye obespecheniye formirovaniya tsennostnogo ot-nosheniya k zdorovyu sovremennykh studentov. PhD diss. abstract. 2022. 24 p.
  9. 9. Fedorova T.A., Rybnikova O.L. Formirovaniye «gibkikh» navykov v professionalnom obrazovanii pedagoga po fizicheskoy kulture. Gumanitarnyye i sotsialnyye nauki. 2020. No. 2. pp. 331-339.
  10. Chedova T.I. Formirovaniye universalnykh kompetentsiy u studentov vuzov na teoreticheskikh zanyatiyakh po fizicheskoy kulture. Mezhdunarodnyy zhurnal eksperimental'nogo obrazovaniya. 2023. No. 4. pp. 32-36.
  11. Yarkova T.A. Formirovaniye gibkikh navykov u studentov v usloviyakh realizatsii professionalnogo standarta pedagoga. Vestnik Tyumenskogo gosudarstvennogo universiteta. Gumanitarnyye issledovaniya. Humanitates. 2016. Vol. 2. No. 4. pp. 222-234.
  12. Kenton K.J., Blumer B. 8 - Metacognitive skills and online search behavior. Improving Student Information Search. A Metacognitive Approach. pp. 75-88.