

CORRELATIONS BETWEEN THE PHYSICAL EDUCATION TEACHER'S TEACHING STYLE AND THE PERCEPTIBLE MOTIVATIONAL LEVEL OF THE LEARNING ENVIRONMENT

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Abstract

The goals of physical education teaching today go beyond achieving psychomotor activity in the classroom. The most crucial objective of the subject is to develop the child's need for physical activity both in the classroom and outside the school environment. To achieve this, physical activity motivation must become intrinsic, which physical education teachers can help achieve by using teaching styles and methods that promote autonomy and ensure that each pupil has the opportunity to develop.

In our research, based on the answers to the questionnaire validated by the Hungarian Student Sports Federation, we selected physical education teachers with a predominantly student-centered or predominantly teacher-centered teaching style. We asked a sample of physical education teachers about their attitudes and sporting habits toward physical education lessons using a PMCSQ-2 questionnaire. The results confirmed the motivational effects of student-centered teaching styles.

Keywords: teacher-centered education, learner-centered education, PMCSQ-2, teaching style

INTRODUCTION

The place and role of school physical education in education can be defined in several ways. Some see it as physical education using outdated teaching methods and, nowadays, unrealistic tasks; others define it as a skill subject, i.e., its importance depends on physical abilities. Still, others see it as a classroom where, in addition to imparting the specific content of the subject, the body and mind can be refreshed among other subjects (RÉVÉSZ – CSÁNYI, 2015). The role of physical education in the school world is profound and complex. On the one hand, a well-organized, logically structured PE lesson can contribute significantly to meeting daily physical activity needs, and on the other hand, its role in personal development through appropriately chosen tasks of varying difficulty can be crucial (CORBIN - PANGARZI, 2003; RÉVÉSZ – CSÁNYI, 2015). However, for this to happen, it is essential that the child feels the urge to take up the subject.

As in all areas of education, the issue of student motivation is inescapable. The teacher can achieve the educational objectives by using some form of motivation.



Motivation is the complex psychological system that determines the efforts of learners to achieve their goals (JÓZSA, 2002; CSÁNYI, 2010). Besides imparting knowledge, the teacher's main task is developing the right motivation to absorb the knowledge.

Whatever the subject, student motivation is fundamentally influenced by the teacher's attitude, the repertoire of methods, and the learning environment. By this, we mean the classroom conditions that the teacher and the student create together, typically under the teacher's guidance, to work effectively (RÉVÉSZ – CSÁNYI, 2015; LAPPINTS – H. EKLER, 2023). Concerning the learning environment, we can distinguish two components. The managerial component, i.e., the organizational framework of the classroom, covers the structure of the school, the habits and routines, and the instructional component, which covers the methods of processing the learning material (RÉVÉSZ – CSÁNYI, 2021).

Depending on the role of the teacher or the student in the decision-making of certain classroom events, we can talk about direct and indirect teaching methods, within which we can distinguish several types of teaching strategies (MOSSTON & ASHWORTH, 2008; RINK, 2010). Teaching style refers to the planned teaching/learning processes that achieve educational goals by combining strategies (EKLER, 2015, LAPPINTS – H. EKLER, 2023).

The nature of the learning environment is highly influenced by the teacher's reactions and feedback to the students' various experiences of success and failure. In the case of success, mentioning the efforts made and the changeable reasons for failure can positively affect motivation levels rather than negatively (SZABÓ, 2004). The teacher influences the atmosphere in the classroom during and outside the classroom. It has an impact on the strength of peer support and cooperation. Therefore, It is essential to control what happens in the school. At the same time as assessing, the teacher often sets expectations of the pupils, sometimes unconsciously. Such implicit expectations then significantly impact the pupils' motivational base, whether positive or negative. In essence, these persistent expectations are embedded in learners' self-image and help or hinder them in achieving their goals. Challenging yet realistic expectations can stimulate students' motivation, while impersonal, generalized, and therefore unrealistic expectations can be highly demotivating for many (RÉVÉSZ - CSÁNYI, 2021). Depending on what the teacher values and rewards in their feedback and what they identify as unfavorable, a value system is formed, and often, children adapt their behavior to it, which also leaves its mark on their personality. Nicholls' (1984) 'Achievement Goal' Theory distinguishes between two types of personality, task-oriented and ego-oriented (task involvement and ego involvement). The difference between the two is reflected in the relationship between task interpretation, failure management, and self-concept-environment.

While for the ego-oriented person, success, victory, and rising above peers are seen as positive, and possible mistakes, failures, and defeats as unfavorable, for the task-oriented learner, the effort put in the pursuit of the goal, the learning process itself, is valuable, not just the result. In addition, they do not necessarily see the possible experiences of sport as a negative but as a necessary corollary of the learning-development process (SZABÓ, 2004; TÓTH, 2015). The latter are generally more open to persistent effort and sustained physical activity that supports sporting performance. They feel successful when they can set themselves challenges and know they will develop their skills (BIDDLE et al., 1999).



One of the main aims of modern physical education is to develop this kind of aspiration in students, thereby creating the need and desire for lifelong physical activity.

Creating a positive learning environment is essential for developing the right level of motivation in physical education lessons, but also, according to recent research, for the effectiveness of learning to move. Therefore, it is of crucial importance whether the physical education teacher reinforces the task-oriented or the ego-oriented orientation by communicating the tasks and setting the goals (HEIN et al., 2012; VASS, 2020; CSÁNYI, 2020; LAPPINTS – H. EKLER, 2023).

MATERIAL AND METHODS

We surveyed physical education teachers in Vas County with a questionnaire validated by the Hungarian Student Sports Association, which, among other topics, examined the teaching style of physical education teachers based on their views and teaching practices. Based on their answers on a Likert scale from 1 to 5, we selected 6 to 6 PE teachers with predominantly teacher-centered and student-centered teaching styles. Subsequently, a class of their choice was surveyed using the PMCSQ-2 questionnaire. The Perceived Motivational Climate in Sport Questionnaire (PMCSQ and PMCSQ-2) measures the perceived motivational climate in sports based on Deci and Ryan's (1985) self-determination theory. Its Hungarian validation was carried out by Révész and colleagues (2009). The PMCSQ-2 is a widely used measurement instrument to assess the behavioral mechanisms of coaches/coaches and the nature of the sporting environment (BALOGH, 2016). The questionnaire questions can be divided into two groups: ego-orientation and task-orientation. The questionnaire contains 33 questions that relate to the athlete's subjectively perceived environment. Each scale can be further subdivided into 3-3 subscales. For task orientation, these are "cooperative learning," "role within the team," and "striving for improvement." And for ego-orientation, "fear of blame or punishment," "unequal treatment (recognition)," and "intra-team rivalry." The questions can be answered on a 5-point Likert scale, where one means "Strongly disagree" and five means "Strongly agree."

A total of 169 students completed the questionnaire. The results of the students of physical education teachers with a predominantly teacher-centered teaching style (n=82) and with a predominantly learner-centered teaching style (n=87) were compared using a two-sample t-test with the prerequisites, with differences considered significant at $p < .05$. Microsoft Excel and the statistical software Cogstat 2.3 were used for data analysis.

The statistical tests compared the two groups' task-orientation scores and the scores of the task- and ego-orientation sub-factors.

RESULTS

The following compares the two groups' task- and ego-oriented scores and subscales. Eight comparisons were made in terms of the two teaching styles. Significant differences were found in three cases: the scores of questions on task orientation, striving for improvement, and fear of making mistakes.



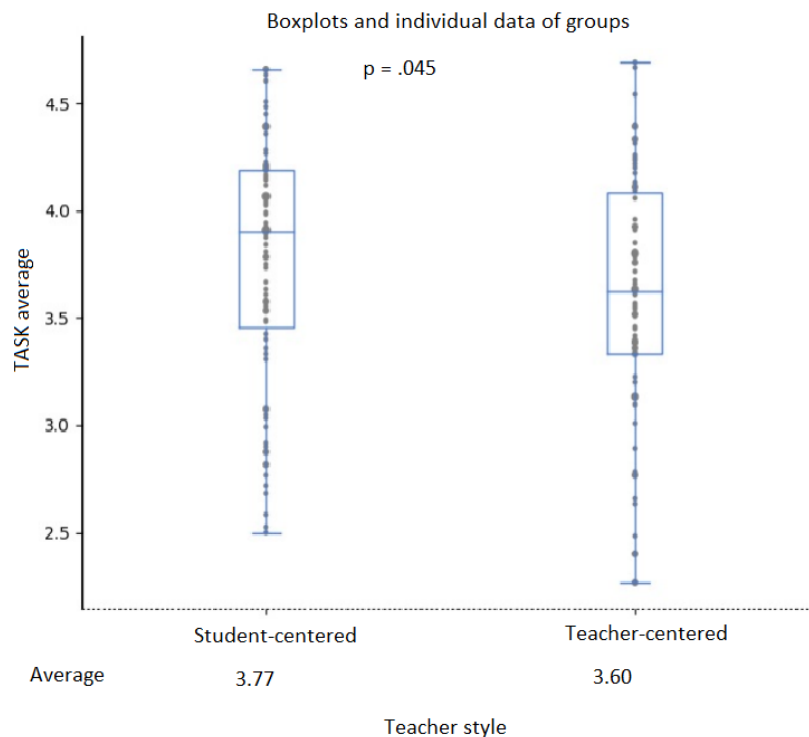


Figure 1: Results of TASK questions

Comparing the responses to a total of seventeen questions on task orientation (TASK) between the two groups of students, students working in a predominantly learner-centered environment scored significantly higher than their peers (Independent samples Mann-Whitney rank test: $U = 4204.00$, $p = .045$, Levene's test: $W = 0.00$, $p = .947$), with a low effect size (Cohen's d 0.296). The mean of the responses of the student-centred group was 3.77, while the mean of the responses of the teacher-centred group was 3.60.

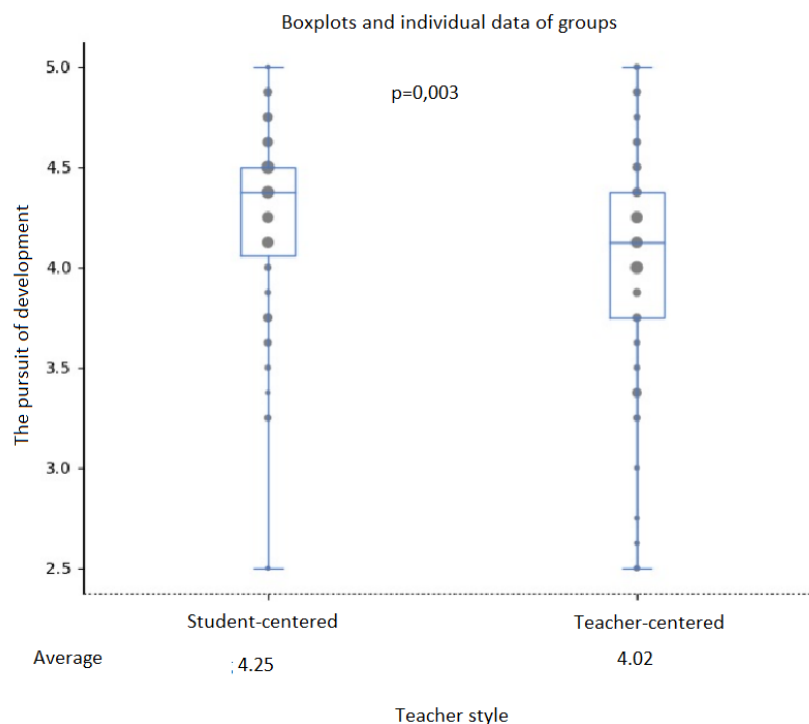


Figure 2: Answers to questions related to the pursuit of development

Based on the responses to a total of eight questions on striving for improvement, students in the learner-centered group also scored significantly higher (Independent-sample Mann-Whitney rank test: $U = 4521.00$, $p = .003$, Levene's test: $W = 1.49$, $p = .223$), with a medium effect size (Cohen's d 0.443). The mean of the learner-centered group's responses was 4.25, while that of the teacher-centered group was 4.02.

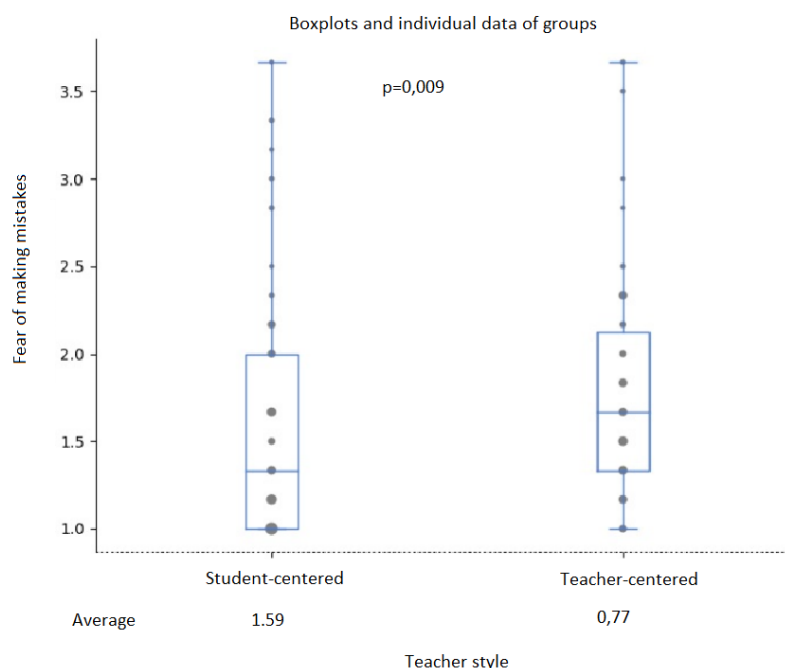


Figure 3: Answers to questions related to the fear of making mistakes

For questions that reflect achievement orientation (EGO), the lower the score, the higher the motivation. Within the EGO scale, in the fear of failure subscale, the responses of the teacher-centered group resulted in higher scores (Independent-samples Mann-Whitney rank test: $U = 2745.50$, $p = .009$, Levene's test: $W = 0.21$, $p = .645$), with a low effect size (Cohen's $d -0.277$). The mean of the responses of the student-centered group was 1.59, while the mean of the teacher-centered group was 1.77.

There was no significant difference between the two groups' scores on the cooperative learning subscales of the TASK subscale and the unequal recognition and intra-team rivalry subscales of the EGO subscale.

DISCUSSION, CONCLUSIONS

The biggest challenge in physical education teaching is not to achieve a high level of psychomotor activity in a given lesson but to ensure that this is not merely a matter of teacher instruction but increasingly comes from the students' intrinsic motivation. This is important because a higher level of motivation resulting from a higher sense of autonomy can also lead to a sustained increase in physical activity outside the classroom, which is a long-term goal of physical education teaching (JAAKKOLA et al., 2008; LIM – WANG, 2009; RYAN - DECI, 2017; LAPPINTS – H. EKLER, 2023).

Our measurements with the PMCSQ-2 questionnaire found significant correlations in three areas. For the Task Orientation Climate (TASK) questions as a whole, for the TASK "Aspiration to Improve" subscale, and the EGO master scale, the "Fear of Failure" subscale. In the former two, students of teachers who reported using predominantly democratic,



learner-centered methods scored higher. At the same time, in the latter, responses of children taught using predominantly authoritarian means scored higher. According to the results of the Mann-Whitney rank test, the answers of students who mainly study and those who benefit from teacher-centered lesson management differ significantly in three areas.

These results suggest that the learning process and individual development are valued over the absolute imperative of performance in physical education lessons, which are typically student-centered. It is also typical for pupils not to be afraid of mistakes when executing tasks. PE lessons demonstrate that this is entirely accepted and part of the learning process; therefore, they do not receive negative feedback.

This becomes important in the context of the long-term goals of physical education. Building up and coordinating one's sporting habits is essential for developing lifelong physical activity and an active, positive relationship with sport. To reach this level, a child needs a safe learning environment that supports and values individual efforts and ideas (RÉVÉSZ, 2021).



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