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**INVESTIGATION OF FLOW EXPERIENCES
AMONG HIGHER EDUCATION STUDENTS**

Theses of the Habilitation Dissertation

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1. Topic of the Habilitation Dissertation

In my habilitation dissertation, I present the significance of my research conducted since obtaining my degree, particularly focusing on the use of flow-based teaching methods to enhance creativity and its potential integration into higher education. The investigation of flow is crucial because group synchronicity and its collective use in education play vital roles in enhancing experience and creativity. This understanding is essential for students to raise and maintain high performance levels as they enter the workforce. Working in groups means achieving goals collectively, which can only be accomplished through creativity. It is evident that if one person in a group is creative, it influences the others as well. However, a completely new flow-based creative teaching methodology is required, one that can be implemented even in the new digital technological era. Introducing or reintegrating creativity into education in this context is an exciting field.

Compared to other European countries, it is notable that Hungarians are considered highly creative people, although this creativity is not widespread among the general population. Education focuses on general knowledge and intellectual development, often stifling creativity. In classrooms, it is important for students not to ask questions, but to repeat the material provided by the teacher either verbatim or in content, without adding new information, supplementing, or thinking critically. They simply need to learn because the instructor says so. However, for knowledge transfer and

deep understanding, flow must be used as a focal point, and the ability to concentrate must be highly developed.

The usefulness of a creative mindset, the use of various problem-solving methods, and the creation and implementation of viable ideas are essential aspects of creativity. If we do not recognize our own autonomy and self-expression possibilities, our creativity is lost. If education can awake the "childlike curiosity," students can channel their inner drive, realize their ideas, and use their ability to think differently and creatively in a self-motivated, bold, and free manner. The most important thing is for students to dare to embark on new thinking paths, embrace their innovative ideas, draw inspiration from others, and inspire others. They should be able to adapt flexibly to uncertain situations and have the tools to understand complex problems, preparing them for the challenges of the 21st century.

Research has shown that current higher education students lack creative solutions, do not seek independent paths, and get stuck with problems. Therefore, one of the future challenges is to develop a creative teaching methodology that includes creative methods, problem-solving techniques, and good practices from both domestic and international sources. This methodology should foster students' own creative functioning modes.

1.1 Objective

The objective of the dissertation is to propose directions for educational development based on research experiences, highlighting the necessary elements for students to leave classes with enriching experiences and increased creativity.

2 Research Hypotheses

1. H1: Higher education institutions can provide engaging experiences for students through lesson plans based on the flow-based pedagogical model.
2. H2: The application of creativity in the classroom can create a constructive learning environment, defined as "a place where learners can work together and support each other in using a variety of tools and information resources to achieve learning goals and carry out problem-solving activities" (Wilson, 1995, p. 27).

3 Research Methods

In our applied research, we aimed to examine the experiential level of classes. A custom-designed questionnaire was deemed the most suitable tool for measuring the "experience level." The flow measurement, developed by Mihály Csíkszentmihályi, the late psychology professor at the University of Chicago, has only been used a few times in Hungary to measure experience levels (Oláh, 1999, issues 6-7). For describing the "optimal learning situation" (Józsa-Székely, 2004, pp. 339-362) and measuring the effectiveness of a

constructive method using adaptability as a central category, no more straightforward, adequate, and reliable measurement method could have been found than the one that measures learning flow. According to Csíkszentmihályi, building on "quasi" experiences that function well as strategies in life allows us to achieve understanding changes (Csíkszentmihályi, 2001). It is perhaps no coincidence that Csíkszentmihályi's basic idea best illuminates our research: the experiential flow state is the most adaptive way to create a higher level of life (Csíkszentmihályi, 2001).

Csíkszentmihályi states that the person experiencing the "flow" is so immersed in their activity that it becomes effortless and spontaneous, providing the joy of a "perfect experience" (Csíkszentmihályi, 2001). Hence, he calls this experience "flow." Based on his research, Csíkszentmihályi concludes that when the levels of skills and opportunities balance each other, thereby minimizing boredom and anxiety, the complexity of consciousness increases, leading to the most personality development. He created the "flow test" to measure this experience, also determining the levels of boredom and anxiety on a scale from 1.00 to 5.00. In this dissertation, we further developed this by creating a validated test to measure class experience levels and used it in our research.

3.1 Applied Research Methods

The following applied research methods were systematically identified in the process described above:

3.1.1 Questionnaire Data Collection

Data were collected from students participating in the research through questionnaires included in the appendix.

3.1.2 Quantitative Data Processing

The quantitative data from the completed questionnaires were processed using appropriate statistical methods, including manual and computer-assisted cluster analysis.

3.1.3 Keyword Evaluations for Two Subjects

The questionnaire allowed participants to evaluate the class using associations and keywords.

3.1.4 Qualitative Data Processing

The qualitative data provided by the keywords were analysed through content analysis.

3.1.5 Literature Review

We reviewed national literature on education, flow, creativity, positive psychology, and multiple intelligences using specialized books available in our institutional libraries and studies accessed through Google Scholar. We also used the MATARKA database services for keywords such as "education," "flow," "creativity," "positive psychology," and "experiential pedagogy." The review of foreign literature on experience-based learning was

conducted through Google Scholar and full-text JSTOR and Science Direct databases with similar keyword searches ("education," "flow, experience," "creativity"). The primary source for reviewing the "flow" literature was the study of Mihály Csíkszentmihályi's work. Additionally, we examined the publication activities of the Positive Psychology Laboratory at ELTE PPK, the dedicated domestic research site for "flow" and positive psychology broadly defined by Csíkszentmihályi and Martin E. P. Seligman (Oláh, 1999, 2004, 2010, 2012; Magyaródi 2016). We also cited the latest edited volume by the European Flow Researchers Network (EFRN), the largest common platform for empirical flow research (Harmat, Ørsted, Ullén, Wright, Sadlo, 2016).

3.2 Research Group

The study involved university students from various disciplines and with different backgrounds.

4 Results of the Habilitation Dissertation

The dissertation's scientific aim originated from the daily realities of higher education: how to measure and enhance the student experiences generated during routine university classes. To achieve this, the author first reviewed the theoretical foundations of international and domestic literature, introducing them to the reader, followed by the presentation of previous surveys and analyses.

To substantiate the research hypotheses aligned with the dissertation's objectives, an interdisciplinary relationship explored by other authors was investigated: the hypothesis suggests that

incorporating and utilizing the flow phenomenon, a key element in Mihály Csíkszentmihályi's positive psychology research, into teaching styles and classroom frameworks could be the key to enhancing and deepening classroom experiences. Accordingly, the author developed the flow-based pedagogical model (Dominek, 2022) and the associated measuring tool, the Dominek Learning Flow Questionnaire (Dominek, 2023). This dissertation represents the first steps of a truly innovative research programme: the theoretical and practical development and empirical investigation of a completely new methodological toolkit that did not previously exist in the country.

A total of 348 research subjects participated in the study, attending university classes with or without the flow pedagogical model in various groups and times in 2023 and 2024. The model included 245 participants, while 103 students participated without the model.

The habilitation dissertation analysed these classes using the methodological tools detailed in the second chapter: the research involved questionnaires and keyword submissions after the classes, followed by qualitative and quantitative analysis of the data. Based on the data revealed during the dissertation, the following can be stated about our hypotheses:

1. H1: Higher education institutions can provide flow learning experiences to students through lesson plans based on the flow pedagogical model. This hypothesis was unequivocally confirmed, as the results showed significant differences. Therefore, the use of the flow-based pedagogical model and the lessons developed accordingly can achieve a higher flow experience in the classroom. Without the model, flow experiences could not be demonstrated.
2. H2: The application of creativity in the classroom can create a constructive learning environment, described as "a place where learners can work together and support each other in using a variety of tools and information resources to achieve learning goals and carry out problem-solving activities" (Wilson, 1995, p. 27). This hypothesis was also confirmed, as the results showed significant differences. The words provided by the students indicated the creativity and uniqueness of the classes, while also developing their knowledge and skills.

It is important to note that all participants in the student groups completed the pre-compiled, validated, innovative, and unique questionnaire presented in the appendix of the dissertation. However, the provision of keywords was requested only from students attending selected classes on a non-mandatory basis. Therefore, not the entire student group, but only the participants of the selected classes contributed in this manner.

The detailed presentation of the research results is presented in the habilitation dissertation Chapters Five and Six, highlighting the significant finding that the use of the flow-based pedagogical model is capable of eliciting student engagement.

In addition to developing a new model tailored to the university environment and aligned with modern psychological research methodologies, the dissertation has successfully taken steps to identify the factors influencing classroom experience. Furthermore, it has introduced a new, innovative, and unique validated measurement tool associated with the methodology. The presented research results clearly indicate that the flow-based pedagogical model has a place in university classroom instruction.

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