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Theses of the doctoral dissertation:

**The content and methodology of dance education  
in the context of daily physical education**

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## **1. Introduction**

The introduction of daily physical education (PE) prompted professionals in the field of PE pedagogy to rethink the organisation of annual PE. One potential avenue for exploration is the teaching of dance movement forms. Consequently, this thesis concentrates on the role of dance in the content of PE, with a particular focus on methodological possibilities.

This study reviews the history of dance education in PE, from the introduction of the 1868 Law on Popular Schools to the present day. It draws on a range of sources (*Curriculum Regulations; Herkules 1884–1914, Néptanítók lapja / People's Teachers' Journal 1868–1914; A testnevelés tanítása / Teaching PE 1965–1989*) and the guidelines for dance in the National Core Curricula (*Nemzeti Alaptanterv*, hereinafter referred to as NAT, 1995, 2003, 2008, 2012, 2020).

A significant number of PE teachers and educational establishments fail to allocate sufficient time to the teaching of dance. The primary reason for this is that a considerable number of teachers lack the requisite preparation to teach this specific movement material. This is corroborated by national and international research into the perceptions of PE teachers and the methods of transfer of methodological knowledge in university courses (Hamar, Karsai, Prihoda & Soós, 2018; Láng & Bognár, 2021, Molnár & Prisztóka, 2023; Lykesas, Koutsouba & Tyrovola, 2009; Nordaker, 2009; Rustad, 2012; Mattsson & Lundvall, 2015; Gibbs, Quennerstedt, & Larsson, 2017; Ørbæk & Engelsrud, 2021).

In terms of attitudes towards dance education, it is crucial to consider the training that PE students receive in dance courses, their preparedness to teach dance movements, and the emphases placed on these skills in their academic requirements. To what extent do universities adhere to the changes in the NAT

in their training programmes? Which dances do they prioritise teaching and to what extent can they devote time to teaching them?

A variety of Hungarian dance methodological approaches were collated (Pignitzkyné & Lévai, 2014; Kovács, 2020; Balatoni & Kovács, 2014; Mizerák, 2016, Balatoni, 2016; Láng 2022; Mikó & Kovács 2023), from which one was selected and used in our own methodological studies. The objective of the research on the use of the methodological tool LippoZoo (Kovács, 2020) has been to promote the experiential teaching of dance and movements set to music. This approach also offers an opportunity for PE teachers with no previous dance training to convey dance movements to students (Láng & Szöllősi, 2023). Furthermore, the utilisation of this instrument may facilitate the acquisition of fundamental principles associated with a diverse array of athletic movements, extending beyond the domain of traditional folk dance. The investigation illuminates the pivotal function of dance in the context of PE, delineating strategies for the more efficacious integration of dance within the PE curriculum.

### **1.1 Definition of objectives**

Although PE teachers recognise the developmental impact of dance and movement set to music and their crucial role in PE, the majority lack the requisite preparation to teach these types of lessons (Hamar, Karsai, Prihoda & Soós, 2018; Láng & Bognár, 2021, Molnár & Prisztóka, 2023).

The objective of this research is to present, through empirical investigation into both practice and PE teacher training, an analysis of the factors that shape attitudes towards the teaching of dance and forms of movement set to music. Furthermore, the study seeks to delineate the various methodological approaches to teaching dance and its incorporation into PE.

## **1.2 Research questions**

Q1: To what extent has dance been included in PE curricula from the 1868 Vocational Schools Act to the present day, and how have the legal frameworks and guidelines for teaching dance in PE classes changed over time?

Q2: How might dance courses at the university level align with the evolving requirements of the NAT?

Q3: Do teacher training colleges adequately prepare prospective PE teachers for their use in the PE classroom with dances and forms of movement set to music as defined in the current legislation?

Q4: What are the primary foci of university dance courses, in terms of requirements (e.g., presentation, methodology, etc.)?

Q5: How do practising PE teachers perceive the role of dance in PE?

Q6: Can the motivation and attitude towards dance education and PE be enhanced by introducing the LippoZoo methodological tool to the students, teachers, and pupils involved in the studies?

## **1.3 Research hypotheses**

H1: The curricular content of PE and the role of dance are subject to constant change as a result of historical and legal guidelines.

H2: The dance themes taught at universities are broadly aligned with the NAT, but there is considerable variation in the specific dance styles that are taught across different institutions.

H3: The content of dance courses at the university level is primarily focused on the presentation of specific dance styles, rather than on providing a comprehensive methodological toolkit that could assist students in learning dances that can be effectively applied in PE classes.

H4: LippoZoo represents an effective educational methodological tool that can be utilised in PE classes for dance experience and movement development,

thereby enhancing the motivation of PE teachers and students for lessons employing movement set to music.

H5: PE teachers perceive the teaching of dance in PE classes as valuable, yet women demonstrate greater motivation to employ it.

## **2. Methods**

Triangulation typologies were used as the research method, as they are effective for addressing research problems with a scientific approach, thereby providing a comprehensive and detailed account of the potential applications of dance in school PE, the processes involved, and the structural elements of the studies (Sántha, 2017). In accordance with the aforementioned, the research is divided into four sections.

*Dance education in schools:* history, regulation, application in schools

*University dance courses:* course descriptions and syllabi, course supervisors, dance course instructors, and student interviews

*Dance methodologies and yoga exercises*

*Methodological research:* the LippoZoo methodology among university students and in public education.

The studies commenced following the acquisition of ethical approval for the research (RK/822/2024) and the requisite parental consent.

### **2.1 Introduction to sample selection**

With regard to the subject of dance education in schools, the study sample comprises individuals (N=155) and documents that are involved in or define the practice of PE. A review of teacher training and dance courses at Hungarian universities revealed those institutions (N=8) where dance is included in the training of PE teachers. The research involved the analysis of subject networks, course descriptions, interviews and questionnaires. The higher education stakeholders included course supervisors (N=7), dance course lecturers (N=6), and students (N=248). Methodological research was conducted with professionals to gain insight into dance methods and best practices (N=4 participants) and with students to examine the practical application of the LippoZoo teaching methodology tool (N=87 participants). Additionally, the

method was studied in public education through attitude tests and interventions (N=104 students, N=6 teachers). The total number of elements in the sample amounted to N=619 students.

## **2.2 Data collection**

### ***2.2.1 Document analysis***

The research aimed to identify primary and secondary sources that would facilitate a comprehensive understanding of the dance content included in PE programmes. For example, the following sources were consulted: pedagogical articles, curriculum guidelines, the NAT, framework curricula, dance courses and subject descriptions.

### ***2.2.2 Interviews***

During the course of the research, a total of one to two teachers of dance or forms of movement set to music were contacted from each university, as well as PE course supervisors, for 30–40-minute interviews with each. Interviews were conducted with dance professionals and the creator of the LippoZoo method, and permission was sought from the relevant individuals to record the interviews. Structured interviews were conducted via online video conferencing software (namely, Zoom or Teams).

### ***2.2.3 Questionnaires***

The opinions of undergraduate PE students as well as teachers were gathered through online questionnaires designed by the researchers. The questionnaires investigated the respondents' attitudes towards dance, their teaching competence and their attitudes towards the inclusion of dance in the school curriculum. The questionnaire comprised predominantly closed-ended questions and Likert scale measurements. The open-ended questions in both

questionnaires provided respondents with the opportunity to elaborate on their perceptions of dance movements in PE.

#### ***2.2.4 LippoZoo Methodological Studies***

In addition to attitude tests, the efficacy of the LippoZoo method was evaluated through the implementation of interventions. The initial six-week intervention was conducted by an active PE student with experience in folk dances, who assessed changes in cognitive and motor skills in his students through the medium of dance. During this period, the control group engaged in conventional PE, thereby enabling the contrast between the two groups to be evaluated.

Subsequently, the practical implementation of the LippoZoo method was conducted with five students lacking prior dance training. These students instructed one class per week for a duration of two to three weeks, utilising the aforementioned method in their own classroom. A Likert scale questionnaire was employed to assess the students' perceptions of the dance PE, with the results being compared with those obtained from online recorded (Zoom) interviews with PE teachers.

### **2.3 Data analysis**

The data were analysed using computer-aided data analysis software. The qualitative data, comprising documents and interviews, was analysed using the text analysis software MaxQDA 24, following transcription with the Alrite application. The data were analysed both in vivo and by training a priori codes. A reliability index formula was employed to verify the validity of the findings. The quantitative results were analysed using IBM SPSS 23 software, with descriptive statistics, ANOVA, Pearson's correlation and independent samples t-test being used as methods. Following the completion of homogeneity and



normality tests, the most appropriate tests were selected, with the non-parametric test being the Mann-Whitney U-test.

### **3. Results**

#### **3.1 Dance at school**

##### ***3.1.1 History and legislation – from the Compulsory Education Act of 1868 to the NATs***

The historical overview revealed that dance has consistently held a position of interest among those engaged in PE pedagogy. At various points in time, there were periods when dance was regarded as a crucial and indispensable component of the curriculum, and at other junctures, it was confined to the domain of experimental and alternative educational institutions. In the mid-1990s, the NAT reintroduced dance into the public education system. In light of the introduction of daily PE, the 2012 NAT proposed the incorporation of folk dance into the curriculum of lower secondary schools and ballroom dance into that of upper secondary schools. The dances and the LippoZoo methodology can be most accurately situated within the domain of gymnastics, encompassing gymnastic exercises and folk games.

##### ***3.1.2 Dance in daily PE: experiences and opinions of PE teachers***

The survey among PE teachers revealed that 28.4% had not received any training in dance at the university level, while the majority (69.7%) had studied dance for one semester. In 58.1% of schools, there is no structured dance education programme in place. Where dance is implemented, only 27.7% of PE teachers provide it, while 92.3% of respondents utilise music in their work. There is a significant correlation between the teaching of dance and the gender of the teacher ( $t=33.898$ ,  $p<0.001$ ), whereas no differences were found between age groups on the questions examined. The opinions of the PE teachers were measured on a five-point Likert scale. The majority of respondents (78.1%) expressed support for the teaching of dance, viewing it as a valuable component of education. Additionally, 87.1% of the respondents

indicated that music should be present in the classroom. *In vivo* coding revealed that the majority of PE teachers express support for integrating music and dance into the curriculum. However, many teachers reported feeling unprepared to teach these subjects. The most frequently cited challenges were a lack of training, lack of space, and lack of time. The respondents proposed that greater attention should be devoted to dance teaching methodology and rhythm exercises in the training of teachers.

### **3.2 Dance in university education: analysis of course descriptions and peer reviews**

#### ***3.2.1 Music and dance courses in network diagrams***

The institutions offer a variety of dance courses, with varying durations (1–3 semesters). As indicated in the course descriptions, aerobics is a course offered at all universities, ballroom dancing is taught at seven institutions, and folk dance is only offered at four institutions for a full semester. The time allotted for learning dance styles is notably limited, with some courses having multiple instructors teaching the same style in a single course, resulting in only three to six sessions available for one style. The requirements are primarily focused on the final examination and practical demonstration, and the course descriptions indicate that only one university has a methodological approach that prepares students for dance teaching in schools.

#### ***3.2.2 The position of PE course supervisors on dance courses***

The *in vivo* and *a priori* coding of interviews with supervisors revealed that dance courses are considered equal to other physical exercise subjects and that they are considered important to be taught in schools. Dance is an activity that engages students who do not necessarily seek competitive engagement, is accessible to all, and the use of music as a motivational tool is a valuable

addition to the learning process. Dance courses attempt to adapt to the changes in the NAT; however, the styles of dance taught remain contingent on the dance orientation of the instructors. The time available for teaching dance is often limited, as observed by course supervisors. The criteria for selecting instructors vary across universities. Some prioritize higher dance education qualifications, while others give preference to those with PE qualifications.

### ***3.2.3 Views on the courses by instructors of dance or movement set to music***

Following the application of *in vivo* and *a priori* coding, the interviews can be summarised as follows (with a reliability index of 0.95). Among those responsible for teaching dance at the university level, there are individuals who have obtained a master's degree in dance education. They adhere to the conviction that only a dance instructor, possessing the requisite qualifications, can effectively teach dance in PE classes within the academic setting. Instructors who have obtained a degree in PE attempt to teach exercises and simpler dances that a PE teacher can teach to their students. Four of the university's dance teachers are also doctoral students, with their research focusing on dance in PE. Further research and results are anticipated in the near future.

The duration of the dance courses varies, with some lasting 45 minutes and others as many as 90 minutes per week. The typical semester comprises 13 weeks, although some dance courses are of a shorter duration, typically 10 weeks. In addition, some instructors are absent for part of the semester, with each style being taught for between three and six weeks. There is no uniform curriculum, and the styles taught include folk dance, ballroom dance, Cuban salsa, hip-hop-based movement forms, rock and roll, modern dance, and cheer dance. All instructors concur that the time allotted is inadequate for attaining the desired level of proficiency in any dance. All instructors prioritize the

acquisition of practical skills despite the limited time available. As a potential solution, it is generally agreed that if dance were introduced in schools from an early age, students with a fundamental understanding of dance would be admitted to university, allowing for a more seamless transition to higher education.

#### ***3.2.4 Undergraduate PE student perceptions of dance courses and their attitudes towards dance in PE***

The results of the student questionnaire indicate that aerobics was the most commonly taught form of movement set to music (78%), followed by ballroom dancing (54%). However, the time available for performing these courses is insufficient, and students are less familiar with the use of playful methodologies. The attitudes towards dance and music, as measured on the Likert scale, are found to be significantly dependent on prior dance experience. The results indicate that women generally tend to hold more positive attitudes towards dance movements than men ( $P > 0.05$ ). A total of 46.9% of respondents indicated that they believe more semesters of dance courses are needed, with an average rating of 3.8 on a 5-point Likert scale (standard deviation=1.129;  $p < 0.05$ ;  $t = -5.616$ ). Additionally, 69.4% of respondents expressed that there is a justification for dance in PE, with an average rating of 3.84 on a 5-point Likert scale (standard deviation=0.994;  $p < 0.05$ ;  $t = -1.996$ ). The majority of respondents (63.6%) believe that the courses adequately prepare them to teach dance ( $m = 3.9$ ;  $\sigma = 1.006$ ;  $p < 0.05$ ;  $t = -3.748$ ). Furthermore, 64.6% of respondents intend to teach dance ( $m = 3.42$ ;  $\sigma = 1.258$ ;  $p < 0.05$ ;  $t = -2.500$ ). It is acknowledged that music adds variety to lessons (93.8%), better engages non-competitive types of students (71.7%), and helps to establish other sports activities (72.7%).

### ***3.3 Dance methodologies and good practices in PE teacher training and daily PE***

This chapter presents effective and good practices that provide guidance for “dance and aerobic” task solutions. A content analysis of the interviews revealed that creative dance and movement teaching offers promising opportunities for PE, particularly when combined with gymnastics. This approach is still in its experimental phase, but initial results are encouraging. This method allows teachers and students to create dance choreographies while developing their creativity.

The incorporation of creative dance in PE classes can prove advantageous due to its capacity to enhance body awareness and instil a sense of movement. Interviews indicated that creative dance may also facilitate stress reduction and enhance concentration. Should there be sufficient interest, MTE could facilitate the delivery of bespoke training programmes for PE teachers.

In an international school, dance is taught in the PE class over a six-week period, divided into three distinct categories: folk dances, the Hungarian section, and modern and fashion dances. Dance teachers are invited to conduct a workshop, during which they learn a few dances which they subsequently teach to the students.

### **3.4 Tests conducted with the LippoZoo methodological tool**

#### ***3.4.1 Examining student attitudes***

Following the introduction of the LippoZoo method, 80.5% of undergraduate students indicated a desire to utilise LippoZoo in their future work, with 57.4% perceiving its regular incorporation into PE classes as beneficial. The responses to the open-ended questions on the questionnaire were subjected to theory-driven intra-coding for analysis. The responses were coded according to the same substantive nodes. A total of 25 codes were generated from the

responses to the open-ended questions, and the 214 classified responses indicated that this tool is particularly effective for developing rhythm sense and movement coordination. The LippoZoo can be used not only in dance education, but also in various sports such as athletics and ball team sports, where it can assist in establishing sport-specific movements in addition to general movement development (19 codes could be generated out of 74 suggestions). It is also an excellent experiential pedagogical method, as students highlighted the positive affect and sense of accomplishment that can be achieved when using the tool. In the analysis, the reliability score was above 0.8 for all questions.

### ***3.4.2 Interventions in public education***

#### ***Intervention involving a student with a dance degree***

The efficacy of the LippoZoo method was evaluated through an intervention involving a PE student, who at the same time was working as a folk dance instructor, leading the sessions for a six-week period in a school where he teaches. The cognitive assessment was conducted in order to measure cognition, information processing and learning skills, with the use of task sheets. A comparison of the cognitive abilities of the experimental and control groups revealed that the experimental group exhibited notable improvements in shape drawing, number concept and spelling ( $p < 0.05$ ) when assessed using the Mann-Whitney U test. Motor tests were employed to evaluate balance, spatial orientation, hand-leg coordination, and rhythm perception. The most notable improvement in coordination abilities was observed in the domain of balance.

The expert interview revealed that the LippoZoo method served as a motivating force for both the students and the instructor. It enabled weaker students to learn the dance choreographies at a faster pace. Following the

conclusion of the instructional period, the students exhibited a noticeable increase in composure, a change that was observed in other classes and noted by other instructors. The findings indicated that the LippoZoo method was associated with enhancements in the students' cognitive, motor, and affective functioning, which in turn facilitated learning and motivation for both the students and the instructors.

### ***Involving PE teachers without prior dance training in LippoZoo***

The following findings were obtained when the LippoZoo method was applied by PE teachers without previous dance training: 70.7% of students indicated that they rarely have PE lessons set to music, while 48.7% expressed a desire for more frequent sessions. The LippoZoo method was rated positively by 60% of the students, with 58.9% indicating a preference for its continued use. Among female students, the method was associated with enhanced physical motivation ( $p < 0.05$ ;  $t = -4.229$ ), whereas a higher prevalence of shyness and inhibited attitudes was observed among male students. The five structured interviews yielded confirmation that the LippoZoo method was predominantly successful in the lower grades, where children expressed enjoyment and a sense of achievement. In the upper grades, however, the uptake of the method was mixed, and it was not as popular with secondary school pupils. Adapting the method to align with the musical preferences of the pupils could potentially enhance its appeal. The coding method facilitated the identification of diverse background information, teaching conditions, the derivation of the method employed, and self-reflections. It was established that the LippoZoo method provides avenues for physical educators lacking prior dance training to facilitate the dance movement experience.



## **4. Discussion**

A review of the content and methodological framework of dance education and its role in PE reveals that dance has consistently been a topic of discussion within professional discourse, despite not being explicitly referenced in regulatory documents across all periods under study. The introduction of daily PE education has afforded dance a more prominent role than was previously the case. Universities and course instructors are striving to maintain pace with the evolving landscape of dance education. In addition to traditional forms such as folk dance, aerobics, and rhythm gymnastics, contemporary styles such as ballroom dancing, modern dance, and fashion dance are also being incorporated alongside other dance genres. The duration of the courses is typically between one and three semesters, with responsibility for their delivery often shared between multiple instructors. The results of the student and PE teacher questionnaires indicate that women are more inclined to pursue a career in dance education if given the opportunity, and also express a desire to undertake further training. If universities allocated more time to rhythm development, games and the teaching methodology of simpler dances, they would be more inclined to utilise music in their classes. A review of the literature both abroad and in Hungary yielded comparable results. In international contexts, there has been a notable shift in focus from the teaching of specific dances to the promotion of creativity and self-expression. A review of the literature revealed the absence of any published work on creative dance in Hungarian. Furthermore, the research indicated that PE teachers in Hungary are not familiar with this area. Research in dance methodology (Láng & Szöllősi, 2023) has identified the inclusion of creativity based on gymnastics (Mikó & Kovács, 2023) and the LippoZoo methodological tool as potential avenues for enhancing the quality of school PE and university dance courses.

H1 has been validated as the position and perception of dance in the curriculum have undergone a transformation over time. With the introduction of daily PE, the profession's attention to dance has been rekindled, and dance has been positioned at the centre of scrutiny.

H2 is, to some extent, validated. Universities are responding to the changes, but the impact is not yet fully reflected in their curricula. Interviews and course descriptions indicate that each university has a distinct focus, with varying approaches to teaching different dance styles. Consequently, there is no uniform curriculum either.

H3 can also be regarded to be partially validated. Dance teachers consider the role of dance in PE to be of significant importance, yet there is no consensus regarding the implementation of dance instruction. Instructors with a dance degree tend to favour the involvement of dance professionals, whereas those with a PE degree are more inclined to emphasise the delivery of methodologies that a physical educator can utilise to provide a dance experience for their students.

H4 is partially validated. The LippoZoo teaching methodology has been observed to motivate students in dance PE. It is within the remit of PE teachers to facilitate the provision of a dance experience for their students, particularly in the lower grades. The results for secondary and upper secondary school students have not been uniform, with the teaching style and personality of the PE teachers being identified as key factors influencing the success of the method.

H5 is also validated as PE teachers consider dance education important, but are constrained by a lack of preparation, infrastructure issues and time limitations. Female respondents displayed a more favourable disposition towards the utilisation of music and evinced greater interest in dance training.

A total of 619 individuals were included in the study, which revealed that pedagogical approaches that capitalise on playfulness, creativity, and self-expression can facilitate the realisation of the benefits of dance. Currently, dance instructors are the most qualified to impart specific dance instruction; however, this situation can be enhanced through training, methodological advancement and research for PE teachers, a process that will require attention in the forthcoming years.

Further research is planned, including:

- the organization of an extended intervention with the LippoZoo methodology;
- methodological research on the comprehension and utilisation of creative dance methodology;
- the monitoring of the practical implementation of the techniques taught in dance courses among teachers with a PE degree.

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