

Képzés és Gyakorlat

Training & Practice

20. évfolyam, 2022/1-2. szám

Képzés és Gyakorlat

A Magyar Agrár- és Élettudományi Egyetem Kaposvári Campus Neveléstudományi Intézetének
és a Soproni Egyetem Benedek Elek Pedagógiai Karának
neveléstudományi folyóirata

20. évfolyam 2022/1–2. szám

Szerkesztőbizottság

Kissné Zsámboki Réka főszerkesztő

Szerkesztők:

Pásztor Enikő, Molnár Csilla

Kloiber Alexandra, Frang Gizella, Patyi Gábor,

Kitzinger Arianna angol nyelvi lektor

Szerkesztőbizottsági tagok:

Podráczky Judit, Varga László, Belovári Anita,

Kövérné Nagyházi Bernadette, Szombathelyiné Nyitrai Ágnes, Sántha Kálmán

Nemzetközi Tanácsadó Testület

Ambrusné Kéri Katalin, Pécsi Tudományegyetem Bölcsészettudományi Kar, Pécs, HU

Andrea M. Noel, State University of New York at New Paltz, USA

Bábosik István, Kodolányi János Főiskola, Székesfehérvár, HU

Horák Rita, Újvidéki Egyetem, Magyar Tannyelvű Tanítóképző Kar, Szabadka (Szerbia),

Tünde Szécsi, Florida Gulf Coast University, College of Education, Fort Myers, Florida, USA

Jaroslaw Charchula, Jesuit University Ignatianum In Krakow, Faculty of Pedagogy Krakow, PO

Suzy Rosemond, KinderCare Learning Center, Stoneham, USA

Krzysztof Biel, Jesuit University Ignatianum in Krakow, Faculty of Education, Krakow, PO

Jolanta Karbowniczek, Jesuit University Ignatianum in Krakow, Faculty of Education, Krakow, PO

Maria Franciszka Szymańska, Jesuit University Ignatianum in Krakow, Faculty of Education, Krakow, PO

Abdülkadir Kabadayı, Necmettin Erbakan University, A.K. Faculty of Education, Konya, TR

Szerkesztőség

Kissné Zsámboki Réka főszerkesztő

Soproni Egyetem Benedek Elek Pedagógiai Kar

Képzés és Gyakorlat Szerkesztősége

E-mail: kissne.zsamboki.reka@uni-sopron.hu

9400, Sopron, Ferenczy János u. 5.

Telefon: +36-99-518-930

Web: <http://trainingandpractice.hu>

Web-mester: Horváth Csaba

Felelős kiadó: Varga László dékán

A közlési feltételeket

a <http://trainingandpractice.hu> honlapon olvashatják szerzőink

Képzés és Gyakorlat

Training and Practice

20. évfolyam, 2022/1-2. szám

Volume 20, 2022 Issue 1-2.

TARTALOM

Table of Contents

TANULMÁNYOK

DINNYÉS KATALIN JULIANNA – PUSZTAFALVI HENRIETTE: <i>Digitális oktatás (hiánya) az egészségnevelésben – összehasonlító elemzés</i>	5
EMRI ZSUZSA – ANTAL KÁROLY: <i>Az elektorenkefalográfia alkalmazása az oktatásban</i>	14
IZSÁK HAJNALKA: <i>Javítóintézeti nevelők metaforákban tükröződő intézményképe</i>	28
SZONTAGH PÁL: <i>Hivatás- és pályamotiváció a Kárpát-medencei óvodapedagógus- és tanítójelöltek körében</i>	41

KÉPZÉS ÉS GYAKORLAT

CSÁKINÉ DOBOS LAURA: <i>Környezettudatosságra nevelés a múzeumokban</i>	50
GERLANG VIVIEN: <i>Fogalmi térképekkel és gondolattérképekkel támogatott földrajztanulás</i>	59
GŐSI ZSUZSANNA – KASSAY LILI: <i>Az online oktatás nehézségei a sportszervező képzésen</i>	71
HORVÁTH KATALIN: <i>Teaching Creative Musical Skills: Different Ways of Development in Instrumental Music Education</i>	80

KISZL PÉTER:
Pénzügyi kultúra a könyvtár- és információtudományi képzésben..... 98

MILU ILDIKÓ – BALOGH BENCE – NAGY DÁVID – KOCSIS ZSÓFIA:
*A kreatív tanulás és tanítás szolgálatában Gamifikációs értékelés
a saját fejlesztésű MotivApp applikációval* 110

RECENZIO

VÓDLI ZSOLT ISTVÁN:
A II. világháborút bemutató múzeumok a békére nevelésért 122

HORVÁTH, KATALIN¹**Teaching Creative Musical Skills:
Different Ways of Development in Instrumental Music Education**

Empirical research provides an opportunity to examine the methods that flute teachers use in music lessons. A questionnaire survey is used to investigate these methods. Research questions are the following: how widespread the use of music creation exercises and games is and how much flute teachers use these exercises in their teaching practice. The research was conducted using the online questionnaire builder Survio and the multivariate scaling method by SPSS to evaluate the results. We expected a low score for creative music creation because of the lack of time and of methodological knowledge. According to the results, there is a need for a different approach to music education based on creative improvisation methods. Finally, some important suggestions that can be incorporated into the daily work of music teachers will be discussed.

1. Empirical research, questionnaire*1.1. Methodological ideas, hypotheses*

In the questionnaire part of the empirical research, I examined the flute teachers' opinions on the questions asked. A questionnaire was designed to obtain information. Data collection is the way to gain insights. I asked questions about issues that are problematic in flute teaching today, especially in the areas of music creation and improvisation. I wanted to find out how widespread the use of music creation tasks and games is, what kinds of tasks music teachers prefer, and how suitable existing flute schools are for the development of music creation tasks.

The questionnaire consists of statements and methodological procedures on which the flute teachers give their opinions, and measures how much they use the exercises in their teaching. The opinions are summarised to provide information on what they think can be incorporated into their daily work and how the methods can be put into practice.

Today's music education focuses on technical and musical skills. I took this as a basis and conducted a pilot survey in 2018. The survey was created with the online questionnaire builder Survio and uploaded to the internet via a distribution portal on 18 November 2018, and the questionnaire was completed on 6 December 2018. The questionnaire was mainly designed for flute teachers in Hungarian music schools. The headmasters of 736 schools (where there is also art education) received an e-mail requesting them to forward the questionnaire (including the

¹ PhD student at the University of Pécs Doctoral School of Education; email: fuvikati@gmail.com

link to the questionnaire and the file format) to their flute teachers. There was a lot of feedback from school principals that there was no music teaching or flute teacher in their art branch. The President of the Association of Hungarian Music Schools also published the questionnaire on an internet portal and asked colleagues to fill it in. A total of 125 replies were received. The sample of 125 respondents is sufficient to represent the opinion of flute teachers at the basic level, taking into account the characteristics and homogeneity of the population surveyed. Statistical analysis of the results was carried out using SPSS software.

Hypotheses:

Our main skill-building aspect, music creation, was based on a preliminary hypothesis: does the teacher use music creation tasks in the music classroom?

(1) hypothesis

In the questionnaire survey, a question on music creation will result in a low average score. We expect a low score for music creation because, due to lack of time and methodological knowledge, we believe that teachers do not undertake its use in instrumental lessons.

(2) hypothesis

In the questionnaire survey, musical creativity requires a creative teaching personality and a creative methodological toolkit.

A high score is expected, as the role and methodological tools of a creative and resourceful teacher are essential for the realisation of creative music creation tasks.

1.2. Questions of the questionnaire

According to the first question, 24 men (19.2%) and 101 (80.8%) women answered the questions asked, as shown in the first graph.

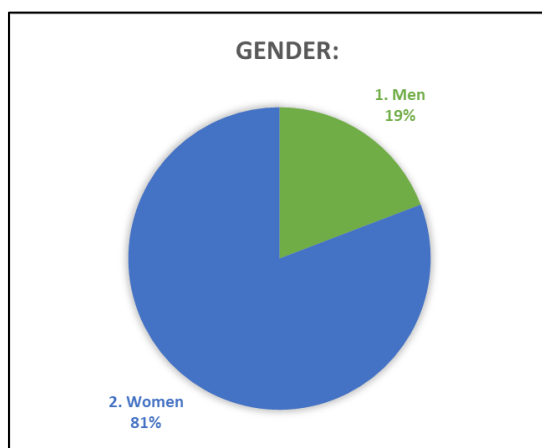


Diagram 1: Gender

The number of years in teaching is broken down as follows: more than 20 years – 60 candidates, 48%; between 11 and 20 years – 27 candidates, 21.6%; between 6 and 10 years – 15 candidates, 12%; and between 0 and 5 years – 23 candidates, 18.4% of those with teaching experience. This is shown in Diagram 2.

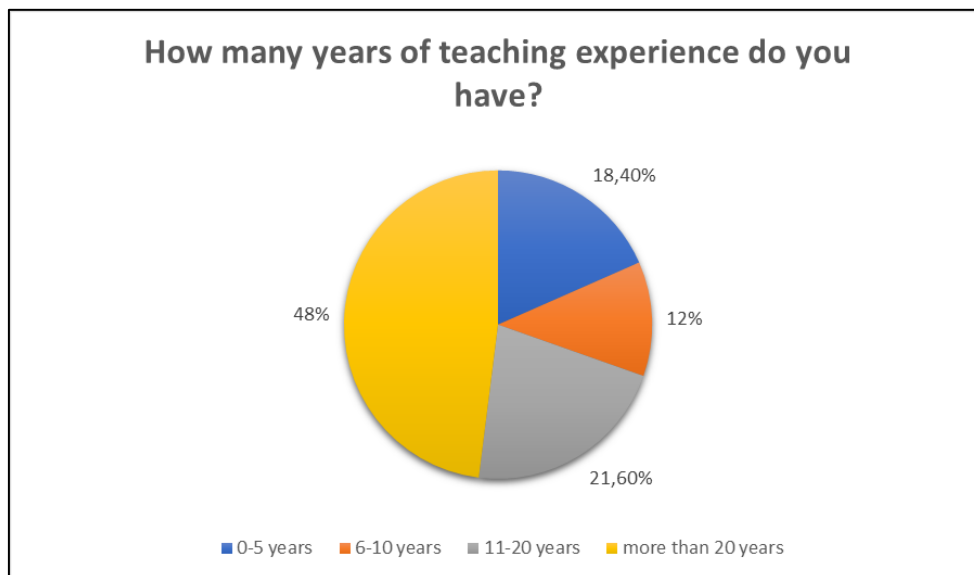


Diagram 2: How many years of teaching experience do you have?

To the third question, “Have you ever been to a training course on improvisation?”, 31 (24.8%) answered ‘yes’, 92 (73.6%) answered ‘no’. Eight teachers, 6.4%, have attended more than one training. A remarkable proportion is shown in Diagram 3.

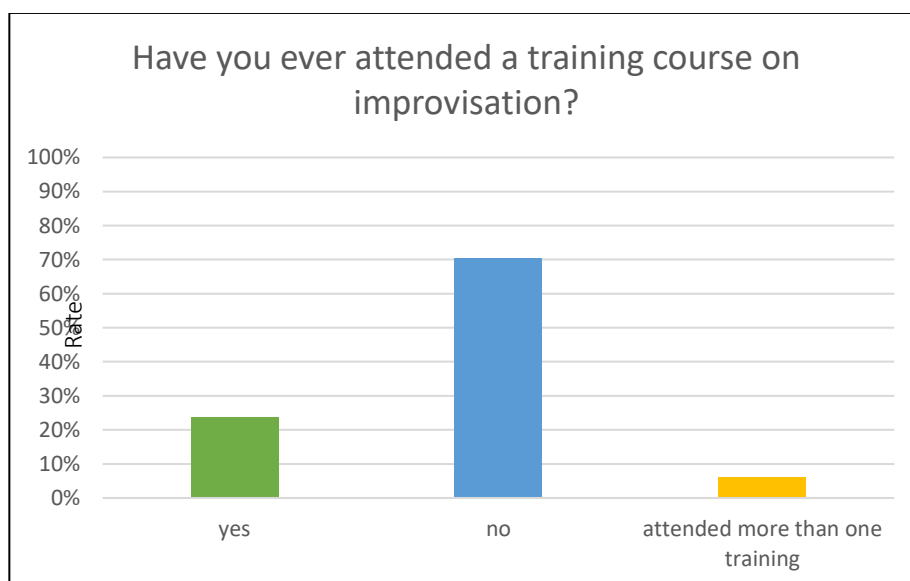


Diagram 3: Have you ever attended a training course on improvisation?

Question four is “*What do you mean by improvisation?*” As shown in Diagram 4, the answer of 111 teachers, 88.8%, was ‘impromptu’.

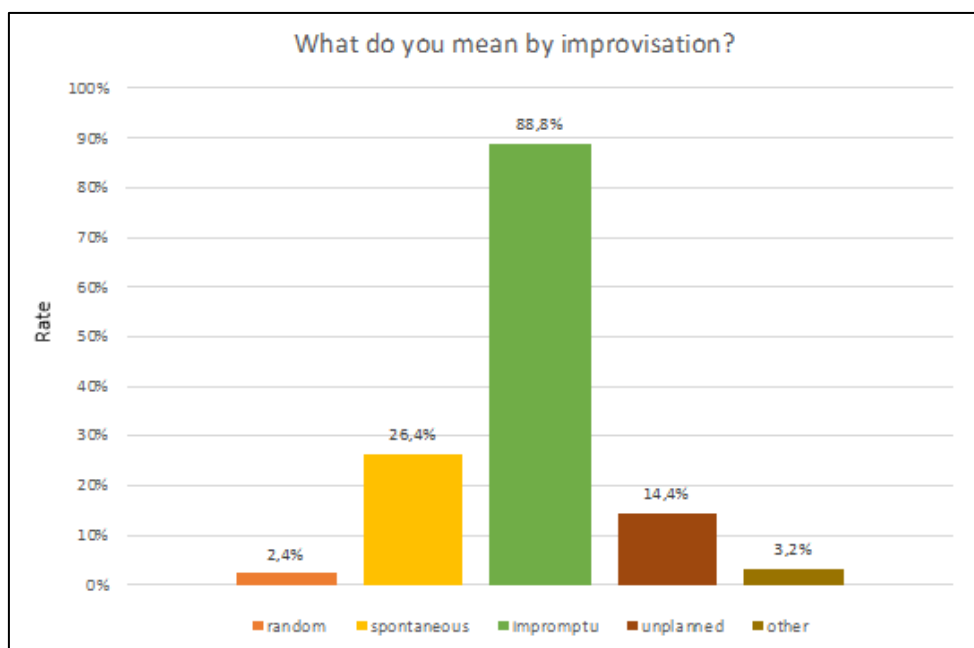


Diagram 4: What do you mean by improvisation?

When asked whether the music teacher uses music creation tasks in his or her teaching, or creates opportunities for the student to create music, the figures show higher than expected results. Out of the three possible answers (yes; sometimes; no), ‘no’ (12.8%) and ‘sometimes’ (42.4%) were the options chosen, while ‘yes’ was chosen by most teachers (44.8%). Those who do engage in music creation in their teaching could indicate several task types listed as most frequently used.

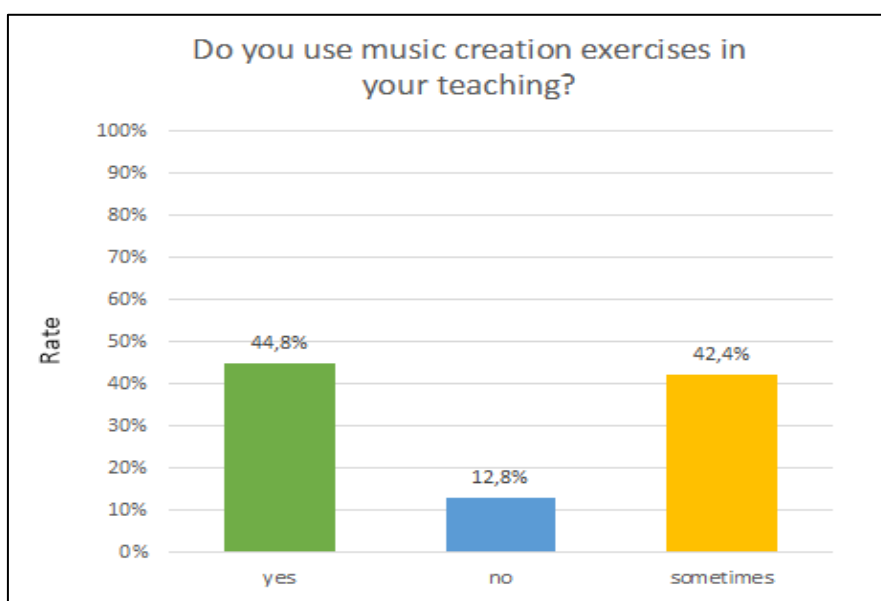


Diagram 5: Do you use music creation exercises in your teaching?

For the sixth question, those who use music creation tasks, the types of tasks given are: inventing a melody accompaniment, question-answer with melody, completing a rhythm, varying a rhythm, inventing a rhythm accompaniment, completing a melody, inventing a melody with a given set of sounds, question-answer playing with rhythm, compositional tasks, other. The top response option was ‘inventing a melody with a given set of notes’ with 51.2%, followed by ‘question-answer game with melody’ with 46.4%. The other seven tasks achieved significantly fewer and roughly equal vote shares (between 16% and 38%). An interesting feature is the other music creation task: playing the same motif in a different key, which means that transposition appears in the case of some pupils.

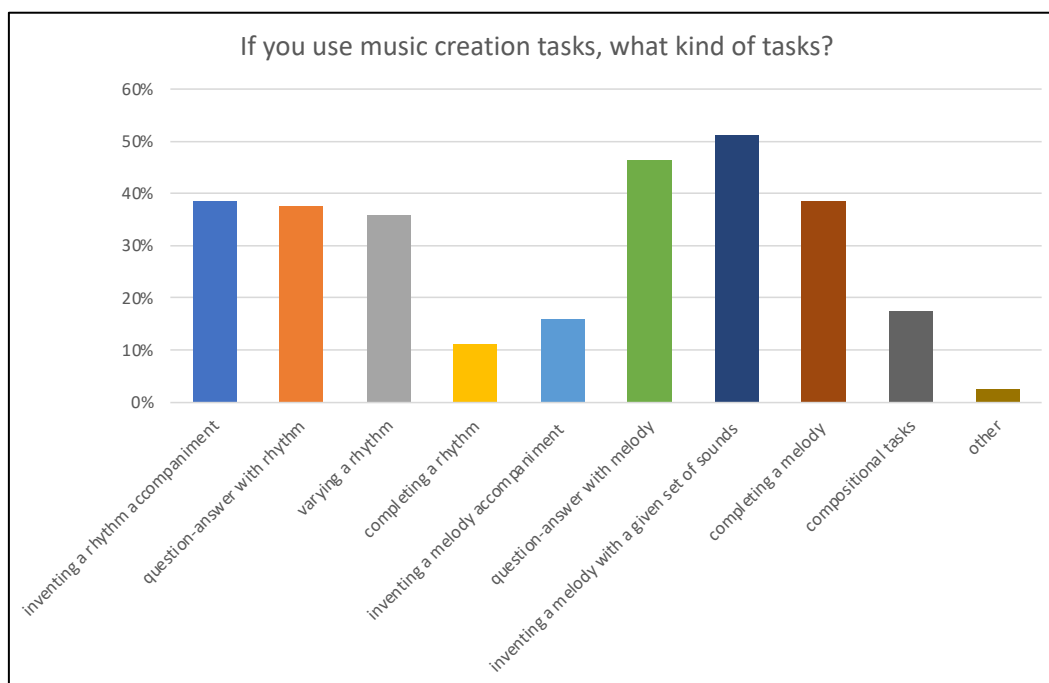


Diagram 6: If you use music creation tasks, what kind of tasks?

Another question I asked from teachers who use music creation tasks was how they see the importance of such tasks. Once again, the respondents were given the choice to pick more than one of the ten options: music creation tasks provide relaxation during the lesson, improve musical thinking, help the pupil understand the logic of the music, help the interpretation of the piece, help correct a technical problem; pupils can play freely, play together, practice the new knowledge with their peers under certain constraints, they can show their emotions in the task; or other.

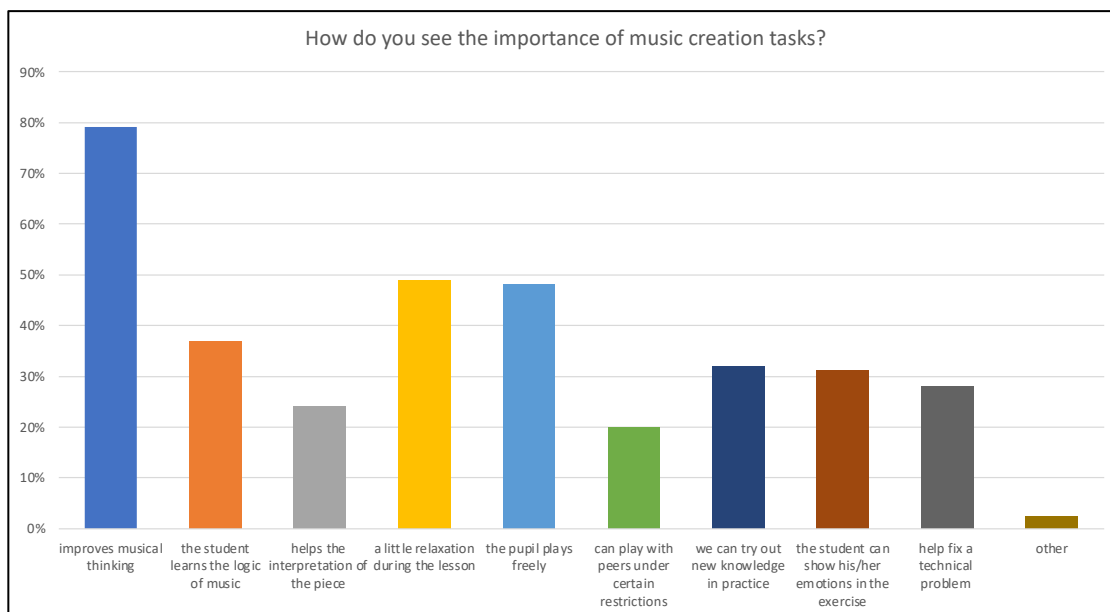


Diagram 7: How do you see the importance of music creation tasks?

The answer ‘improves musical thinking’ received the highest number of votes, with more than half of the teachers (79.2%) indicating it. In second place (48.8%) was the statement ‘a little relaxation during the lesson.’ Others included developing creativity, transfer effect in creativity, and releasing inhibitions.

When asked about the music pedagogical methods they know, Kodály, Kokas and Orff were the most frequently mentioned.

What forms of teaching do you know? 119 teachers preferred the individual form, 95.2 % of the respondents indicated this form, 67 teachers, 53.6 % indicated the pair form, and 65 teachers, 52% indicated the group form.

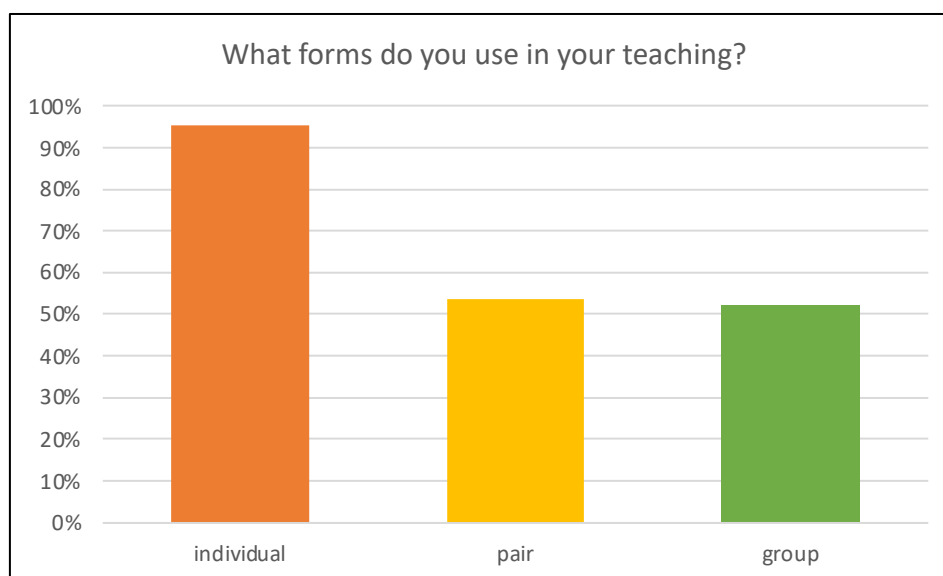


Diagram 8: What forms do you use in your teaching?

Teachers' examples of children's spontaneous music creation:

“We try improvisation with a very shy pupil. It turns out that he has a good sense for it. He can choose a note he likes and play with the notes around it. He chooses the note G and uses the notes very well in his improvisation. He then tackles the lesson material in a relaxed, easy, open way. His improvisation and playing is becoming more and more free.”

“Composition homework helps the child's auditory development, after half a year he automatically develops a sense of major tonality, of course in a very narrow range of tones. At the same time, his activity and musical motivation in solfege lessons soar, and his singing becomes clearer.”

“Between two pupils' lessons, the teacher leaves the room, one pupil finishes the lesson and clears away, the other arrives and prepares for the lesson. By the time the teacher returns, the two are playing together the song 'Hail up Sun'. The more experienced student helps the younger one and they play together. It was not a question of who could play the flute better or more perfectly, but the experience itself.”

The next question is “Do the existing flute schools develop the improvisation activities of the student?” Only 6.4% of the respondents, eight teachers, answered ‘yes,’ 45.6%, 57 teachers answered ‘no,’ and 48%, 60 teachers answered ‘partially.’ This suggests the need for new methodological publications with a focus on improvisation activities.

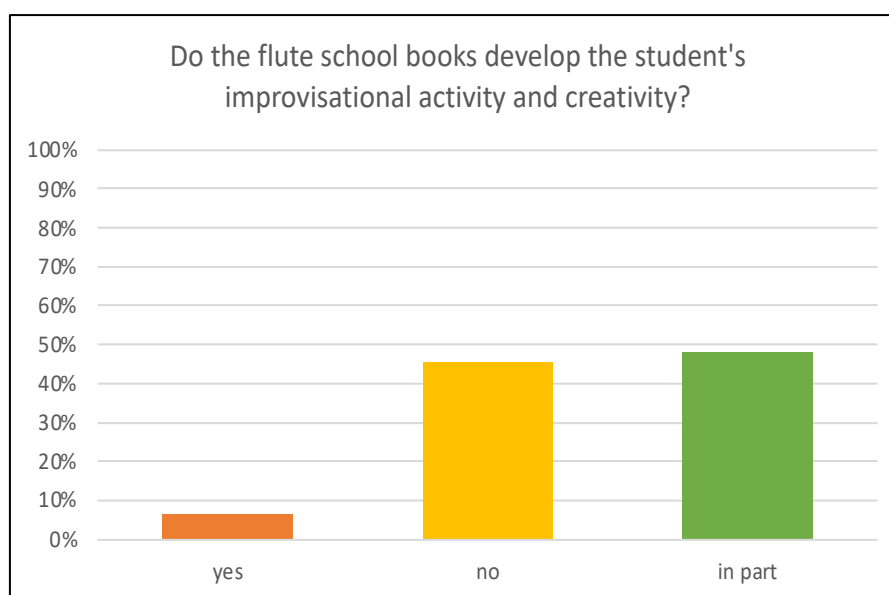


Diagram 9: Do the existing flute school books develop the student's improvisational activity and creativity?

(Bántai-Sipos: Flute ABC and Zoltán Jeney: Flute School I.)

What do you propose to improve the existing flute schools?

We definitely need creative, open-minded teachers. Improvisation exercises should be included after a specific part of the curriculum. In addition to using existing sheet music, improvisation should be made part of the lesson. By answering the questions in the questionnaire, we can gain insight into the teaching and learning work of music teachers, which is useful for all of us, as there is no comprehensive research on this. Improvisation and music creation have not yet gained a foothold in practical teaching, despite the importance attached to it by teachers and musicologists.

2. Association coefficients, multidimensional scaling

A surprisingly high number of respondents (10, 12) answered the explanatory questions, so we thought that something could be done statistically. The really exciting question is: which answers go together? We used the following method: first we read all the answers, then we wrote down a one-word description of them on a sheet of paper (11 for question 10, 13 for question 12), wrote the answers on numbered slips of paper, grouping them on the sheet of paper. The resulting numbers were used to perform a Yule association test in an Excel spreadsheet. Statistical analysis of the questionnaire results was carried out using SPSS. To understand the Yule association relationship, we need to clarify a few concepts. A detailed explanation of the Yule association coefficient can be found in Méhesné Szilvia Berek's PhD thesis (2016).

Association: used to examine the relationship between two qualitative criteria. It shows whether there is a relationship between the two variables. The closeness of the association is described by a measure of the relationship between the two variables. It can only be used for alternative criteria (2-variable). In this case the combination table is 2x2. Characteristics of Yule's association coefficient:

- is only suitable for measuring the closeness of the relationship between alternative criteria;
- is based on the idea of testing with coordination ratios;
- for alternative criteria, we denote one variant of the criterion by 1 and the other variant by 0;
- is between -1 and +1;
- $Y=0$ - independence;
- $Y=|1|$ - functional relationship

	B (1)	B (0)	Total
A (1)	f_{11}	f_{10}	$f_{.1}$
A (0)	f_{01}	f_{00}	$f_{.0}$
Total	$f_{.1}$	$f_{.0}$	n

Table 1: Yule's association coefficient combination table²

If there is no relationship between the two alternative criteria, then the corresponding coordination ratios are equal, i.e:

$$\frac{f_{10}}{f_{11}} = \frac{f_{00}}{f_{01}}$$

The equality can be transformed as follows, in the case of independence:

$$f_{10} \cdot f_{01} = f_{11} \cdot f_{00} \Rightarrow f_{11} \cdot f_{00} - f_{10} \cdot f_{01} = 0$$

If there is a relationship between the criteria:

$$Y = \frac{f_{11}f_{00} - f_{10}f_{01}}{f_{11}f_{00} + f_{10}f_{01}}$$

Interpretation of Yule's association coefficient:

- $|Y|=0$ independence
- $0<|Y|<0.3$ low-strength connection
- $0.3<|Y|<0.7$ medium strength of connection
- $0.7<|Y|<1$ close relationship
- $|Y|=1$ functional relationship
- $Y>0$ if criteria with the same index attract each other

“Multidimensional Scaling (MDS) can be seen as an alternative to factor analysis. Generally speaking, statistical analysis aims to identify meaningful dimensions that allow the researcher to explain similarities or differences (distances) between the objects under investigation.”
(Huszár 2009, 88)

² Source : www.gtk.unimiskolc.hu/files/4108/3_hét_asszociáció.ppt, downloaded on 28 Sep 2019.

The significance of multidimensional scaling is that it can be used to analyse any kind of similarity or distance matrix, and the similarities expressed in the matrix can be individual or group opinions about a wide variety of objects. A detailed explanation of multidimensional scaling; (MDS) can be found in Zsuzsanna Huszár's PhD thesis (2009).

2. 1. Processing the answers to question 10

108 respondents answered the question. 18 did not respond to the question in substance, 10 gave individual (unique) answers. These responses were excluded from further analysis and the remaining 80 responses were analysed statistically. The following elements were found in the responses, distributed as follows:

	all mentions	by itself	with another	more together
songwriting	26	17	6	3
music for pleasure	15	11	3	1
known song on an instrument	12	6	5	1
improvisation	11	7	2	2
sound set	10	0	6	4
other instrument	10	3	6	1
experimentation	8	3	5	0
another part	8	2	4	2
continued at	6	2	2	2
rhythm formula	4	0	1	3
game	4	3	0	1

Table 2: Results of the answers to question 10 of the questionnaire survey

The table shows that 53 teachers mentioned only one item. The association matrix calculated on the basis of co-occurrences is highly incomplete because not all pairings occurred. (The -1s in the association matrix indicate missing pairs.) The other Yule coefficients that can be evaluated allow the following findings.

	Yule's Y Coefficient of Colligation				
	sound set	rhythm formula	continued at	experimentation	songwriting
sound set	1.000	.731	.180	.092	.415
rhythm formula	.731	1.000	.667	-1.000	.292
continued at	.180	.667	1.000	-1.000	-.121
experimentation	.092	-1.000	-1.000	1.000	-1.000
songwriting	.415	.292	-.121	-1.000	1.000
improvisation	-.006	-1.000	-1.000	.063	-1.000
music for pleasure	-1.000	-1.000	-1.000	-1.000	-1.000
known song on an instrument	-1.000	-1.000	-1.000	.036	-.326
other instrument	-1.000	-1.000	-1.000	.324	-1.000
another part	.092	-1.000	.245	-1.000	-.209
game	-1.000	-1.000	.440	-1.000	-1.000

Table 3: Proximity Matrix (association matrix) results

	Yule's Y Coefficient of Colligation			
	improvisation	music for pleasure	a known song on an instrument	other instrument
sound set	-.006	-1.000	-1.000	-1.000
rhythm formula	-1.000	-1.000	-1.000	-1.000
continued at	-1.000	-1.000	-1.000	-1.000
experimentation	.063	-1.000	.036	.324
songwriting	-1.000	-1.000	-.326	-1.000
improvisation	1.000	-.130	-.061	-.006
music for pleasure	-.130	1.000	-1.000	.393
known song on an instrument	-.061	-1.000	1.000	-.032
other instrument	-.006	.393	-.032	1.000
another part	.063	-1.000	.422	-1.000
game	-1.000	-1.000	-1.000	-1.000

Table 4: Proximity Matrix (association matrix) result

	Yule's Y Coefficient of Colligation	
	another part	Game
sound set	.092	-1.000
rhythm formula	-1.000	-1.000
continued at	.245	.440
experimentation	-1.000	-1.000
songwriting	-.209	-1.000
improvisation	.063	-1.000
music for pleasure	-1.000	-1.000
known song on an instrument	.422	-1.000
other instrument	-1.000	-1.000
another part	1.000	.365
game	.365	1.000

Table 5: Proximity Matrix (association matrix) results

The definition of the soundset and the rhythm pattern are strongly linked. In experimentation, the other instrument is clearly the inspiration. It is interesting how the melodic composition is in contrast with the continuation and the other instrument.

There is a medium correlation between playing and continuation. It can be concluded that improvisation tasks should be given to children in a playful form, e.g., ending the suffix of the end of a period. Unfortunately, jamming was only associated with improvisation and other instruments based on the responses, but there is clearly strength in the involvement of partners and other instruments.

Multidimensional scale results:

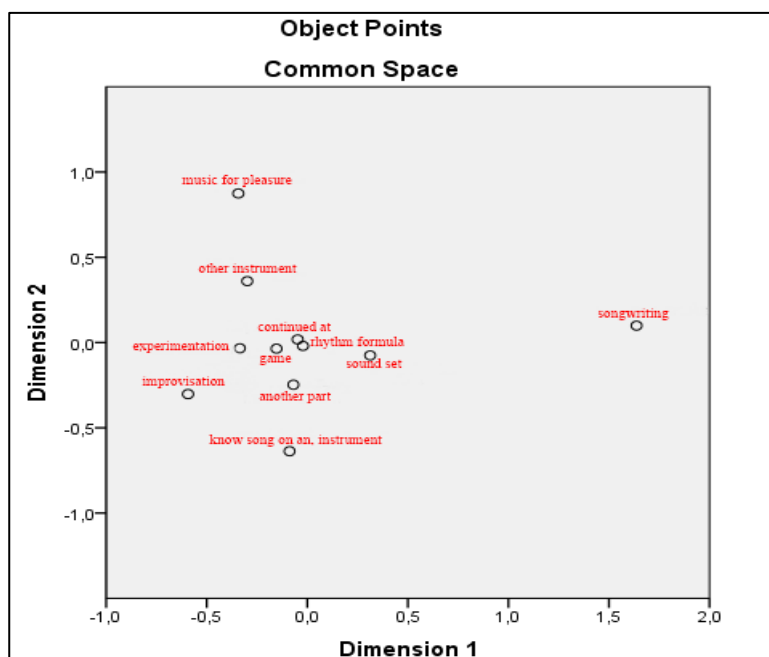


Figure 1: Multidimensional scale representation

Multidimensional scaling on a small amount of data yielded interesting results, confirming our previous findings. The methods mentioned are in a group — one could say they are technical elements. Two elements *stick out* from this pile: jamming and melody making. You could say that these are the two dimensions of the figure. (The ‘other instrument’ points in the direction of ‘jamming’, as already indicated.)

One might ask why improvisation is in the ‘technical’ group — almost in the opposite direction to melody making. From the detailed responses, we can see that several teachers mention improvisation as a teachable skill, giving specific examples.

2. 2. Processing the answers to question 12

102 respondents answered the question. 12 did not respond to the question in substance, 13 gave individual (unique) answers. These responses were excluded from further analysis and the remaining 77 responses were analysed statistically.

The following elements were found in the responses, distributed as follows:

	all mentions	by itself	with another	with more
finish	25	15	3	7
improvisation	14	7	5	2
creative exercise	14	9	5	0
addendum	11	4	6	1
creative teacher	11	8	3	0
melody writing	8	3	3	2
adaptation	7	1	3	3
sound set	5	0	1	4
question-answer	5	1	3	1
another part	5	0	1	4
game	4	2	1	1
rhythm formula	3	0	0	3
listening to music	2	0	2	0

Table 6: Results of the answers to question 12 of the questionnaire survey

The table shows that 50 teachers mentioned only one item. The association matrix calculated based on co-occurrences is highly incomplete because not all pairings occurred. (The -1s in the association matrix indicate missing pairs.) The other Yule coefficients that can be evaluated allow the following findings.

Association matrix results:

	Yule's Y Coefficient of Colligation					
	sound set	rhythm formula	improvisation	finish	addendum	creative teacher
sound set	1.000	.778	.370	.188	.192	-1.000
rhythm formula	.778	1.000	.584	.111	-1.000	-1.000
improvisation	.370	.584	1.000	-1.000	-1.000	.095
finish	.188	.111	-1.000	1.000	.041	-1.000
addendum	.192	-1.000	-1.000	.041	1.000	-1.000
creative teacher	-1.000	-1.000	.095	-1.000	-1.000	1.000
creative exercise	-1.000	-1.000	-1.000	-1.000	.095	-.127
question-answer	-1.000	-1.000	-1.000	-.068	.437	-1.000
game	-1.000	-1.000	-1.000	.007	-1.000	-1.000
listening to music	-1.000	-1.000	.442	-1.000	-1.000	-1.000
melody writing	.284	.439	-.029	.007	-1.000	-1.000
another part	.641	-1.000	-1.000	.584	-1.000	-1.000
adaptation	-1.000	.471	.249	.224	-1.000	-1.000

Table 7: Proximity Matrix (association matrix) results

	Yule's Y Coefficient of Colligation				
	creative exercise	question-answer	game	listening to music	melody writing
sound set	-1.000	-1.000	-1.000	-1.000	.284
rhythm formula	-1.000	-1.000	-1.000	-1.000	.439
improvisation	-1.000	-1.000	-1.000	.442	-.029
finish	-1.000	-.068	.007	-1.000	.007
addendum	.095	.437	-1.000	-1.000	-1.000
creative teacher	-.127	-1.000	-1.000	-1.000	-1.000
creative exercise	1.000	.119	-1.000	-1.000	-.029
question-answer	.119	1.000	.474	-1.000	-1.000
game	-1.000	.474	1.000	-1.000	-1.000
listening to music	-1.000	-1.000	-1.000	1.000	.569
melody writing	-.029	-1.000	-1.000	.569	1.000
another part	-1.000	-1.000	-1.000	-1.000	.284
adaptation	-1.000	-1.000	.387	-1.000	-1.000

Table 8: Proximity Matrix (association matrix) results

	Yule's Y Coefficient of Colligation	
	another part	adaptation
sound set	.641	-1.000
rhythm formula	-1.000	.471
improvisation	-1.000	.249
finish	.584	.224
addendum	-1.000	-1.000
creative teacher	-1.000	-1.000
creative exercise	-1.000	-1.000
question-answer	-1.000	-1.000
game	-1.000	.387
listening to music	-1.000	-1.000
melody writing	.284	-1.000
another part	1.000	.556
adaptation	.556	1.000

Table 9: Proximity Matrix (association matrix) results

The Yule coefficient of the rhythm pattern and the sound set is 0.778, which shows a close correlation. It can be said that any creative exercise or improvisation needs some fixed point, however restrictive, that will set the student in motion to solve the task. In this, sound or rhythm has the same function.

The rhythm formula given for improvisation is also sufficient without sounds, e.g., just clapping, without an instrument. Justify that the “rhythm must always walk in front.” The Yule coefficient of the other part and the sound set is 0.641, which allows the following statement: if, for example, another part is improvised for a melody, the other part must have the same sound set.

The medium Yule coefficient of question-answering suggests that question-answering develops the child's music creation skills and plays an important role in his instrumental work. For example, in an instrumental lesson, the teacher plays a two-beat pattern in advance, to which the pupil responds with a two-beat pattern. In other voices, the original melody can be reworked by multiplying, thinning, or replacing the melody and rhythm.

Results of multidimensional scaling:

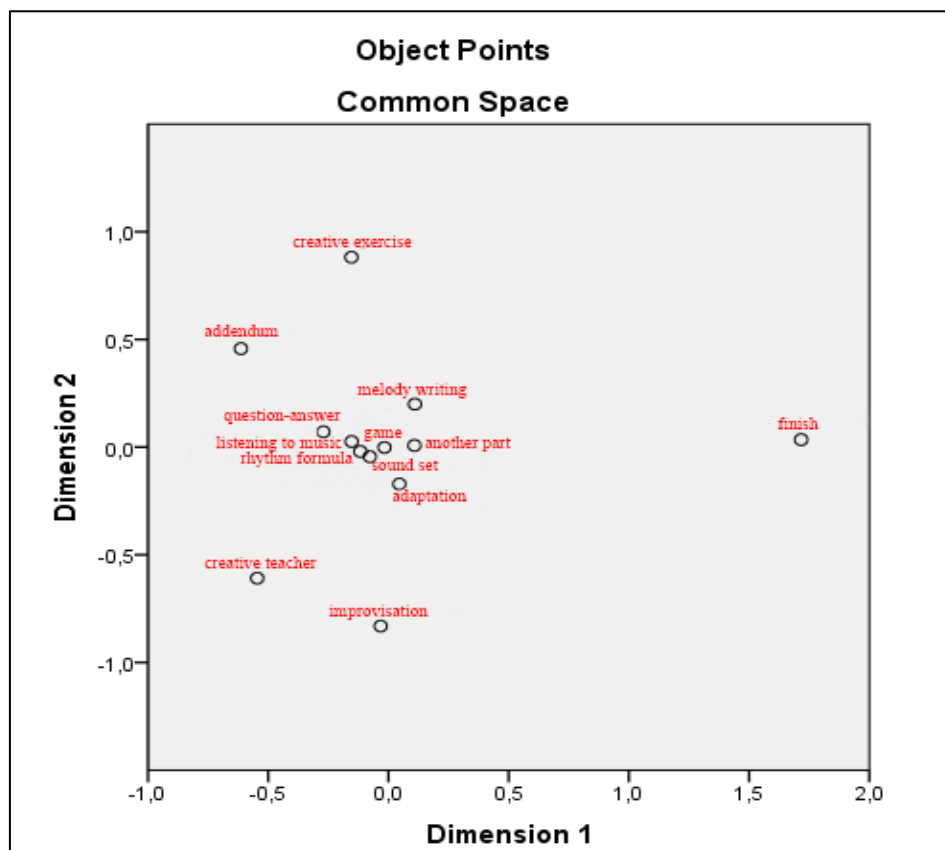


Figure 2: Multidimensional scale representation

Multidimensional scaling has produced interesting results. The technical elements are grouped together. Creative task, completion and improvisation stand out from the group. Melody writing and the completion point in the direction of the creative task. Creative teacher points towards improvisation, which suggests that the teachers consider improvisation as a task, a teachable skill in the classroom. Completion plays an important role, as the completion of an improvisation task once started is also a skill that can be developed. The majority of teachers supported this with concrete examples.

3. Results of the questionnaire survey

In the questionnaire survey, questions related to improvisation and music creation will result in a low average score. This hypothesis was not confirmed, because improvisation and music creation in the practice of music teachers accounted for 44.8%. This is a high result, since the flute curriculum includes the development of improvisation and creativity, the teacher chooses how to incorporate it into the curriculum. The measured data shows that many music teachers are using these exercises, which is welcome.

In the questionnaire survey, musical creativity requires a creative teaching personality and a creative methodological toolkit. This hypothesis is confirmed because in the last question we asked for suggestions to improve flute schools. The majority of respondents suggested creative teaching personalities and creative methodological tools. The result of the association matrix shows that the correlation between creative teacher and attention is 0.747, i.e., a strong relationship. Creative teachers use their methods to focus the child's attention on the material to be learned. The two-dimensional maps of the variables form a cluster: creative teacher, attention, experience, peer, personality development.

The association proved that the elements of the above group are related. A creative teacher uses creative methodological tools to provide students with an experience, either individually or in a group. The focus of attention is on the solutions to the music creation tasks, thus developing the personality.

4. Discussion

The questionnaires gave me a comprehensive picture of the teaching and learning work of music teachers. The survey revealed that several music teachers use improvisation exercises and tasks. The students themselves create the music.

In instrumental training, there is a great need to develop creative skills. Improvisation exercises should be part of the music school education, under the guidance of the teacher.

A further aim of the research was to explore the extent to which flute teachers use improvisation in their teaching and what methodological tools they use to develop creativity. The teacher's creativity is a major factor in the student's motivation, the continuous development of which is lifelong learning.

I evaluated quantitative data and results. I presented numerical data in tables and graphs, applied Yule's association coefficients, and multidimensional scaling.

There is a great need to develop creative abilities in instrumental education. Improvisation exercises should be part of music education, under the guidance of the teacher.

In primary flute teaching, changes are needed in the teaching tools and curricula. A further avenue of research could be to encourage flute teachers to develop a new methodological publication that presents creative and improvisational exercises.

BIBLIOGRAPHY

Huszár Zs. (2009) “Az idő, illetve az idői struktúrák megjelenése az iskolai fogalmazásokban.”

PhD dissertation, University of Pécs, Faculty of Humanities, Doctoral School of Linguistics, Applied Linguistics Programme. Available: https://nydi.btk.pte.hu/sites/nydi.btk.pte.hu/files/doktori_vedesek/Huszar_Zsuzsanna2008_disszertacio.pdf .

[Access: 15 February 2020]

Méhesné Berek Sz. (2016). “Logisztikai kontrolling, mint a vállalati logisztikai hatékonyságát

növelő eszköz.” PhD Dissertation, University of Debrecen, Faculty of Business Administration, Károly Ihrig Doctoral School of Business and Management. Available: https://dea.lib.unideb.hu/dea/bitstream/handle/2437/230837/Mehesne_Berek_S_zilvia_ertekezes_2016_titkositott.pdf?sequence=1&isAllowed=y . [Access: 28 September 2019]