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EXPLORATION OF THE FLOW EXPERIENCE AMONG STUDENTS PREPARING FOR A CAREER IN CLASSICAL MUSIC, SUCCESSFUL CAREER-ESTABLISHED MUSIC EDUCATORS, AND MUSICIANS IN THE FIELD OF CLASSICAL MUSIC

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I. Introduction

Multiple studies (Sawyer, 2007; Limb, 2008; de Manzano, 2010, etc.) confirm the relevance of flow and music. In my research, I aim to address an unexplored question: whether students preparing for a career in classical music, music educators, and musicians in the field of classical music experience flow. Furthermore, I intend to uncover how specific flow factors manifest in this domain and in what manner.

Currently, the scientific literature recognizes twenty-two triggers for inducing flow. However, a comprehensive examination of flow across all triggers requires diverse methodologies, which the present study, due to its limitations, cannot undertake. Hence, this study focuses on investigating the realization and modes of realization of flow factors as formulated by Csíkszentmihályi (1997), as illustrated in Table 1.

To the best of my knowledge, there has been no prior research in Hungary that specifically focuses on examining flow factors within the field of music education. This study aims to address this gap and provide insights into this unexplored area.

1. Table: Flow factors defined by Mihaly Csikszentmihalyi

Flow Conditions	**Phenomena of flow**
Challenge skill balance	Action Awareness Merging
Clear golas and feedback	Concentration of Task
	Paradox of controll
	Loss of Self-Consciousness
	Transformation of time
	Autotelic experience

Own editing

II. Theoretical Framework

As Csikszentmihalyi (1997) elucidates, in a state of flow, an individual becomes deeply committed to an activity that becomes intrinsically rewarding, or autotelic. Flow is universal, enhancing performance and well-being (Csikszentmihalyi, 1997; Kotler, 2021). In terms of neuroanatomy, flow corresponds to the temporary hypofrontality of the cerebral cortex (Dietrich, 2004), which leads to heightened creativity, increased self-efficacy, and the potential to generate well-being. This is why flow can be seen as an effective tool in nurturing talent (Seligman, 2012; Csikszentmihalyi, 2011, 2018).

With respect to the element of time, following Csikszentmihalyi's framework, macro-flow and micro-flow can be distinguished. Micro-flow is a short-duration, low-intensity experience that occurs multiple times within a work process, while macro-flow is a high-intensity, prolonged state that exerts a shaping influence, rewiring the brain. This accounts for the skill-enhancing effects of flow (Kotler, 2014, 2021). Subsequent research (Kotler, 2021) has determined that during the state of flow, six performance-enhancing/pain-alleviating neurotransmitters are produced, which allows individuals to maximize their performance.

Music is not merely a collection of sounds, and music education goes beyond teaching musical notation and instrumental skills. The process of learning music engages multiple regions of the brain, promoting better communication between the left and right hemispheres. This assists in avoiding psychosomatic conditions. Through years of music learning, a child develops the capacity for integration, enabling them to express emotions more easily and comprehend relationships better (Siegel, 2008). Based on these findings, it can be concluded that music and music education contribute to shaping the entire personality.

Summing up all these points, I presume that by integrating flow into music education, the teaching process can become more effective and enjoyable for both educators and students alike.

Summing up all of these, I assume that by applying flow in music education, the process can be made more effective and enjoyable for both educators and students alike.

III. Participants

It is likely that aspiring classical music students, successful music educators, and established classical musicians experience a high level of flow, as all three groups inherently require the presence of necessary skills for challenges and the fulfillment of clear goals with continuous feedback factors. In my research, I examine these three groups, which I justify as follows:

Choosing a career in music is an option only for students possessing the required abilities. Furthermore, entrance into music conservatories is limited to those students who successfully meet the admission criteria set by these institutions.

However, meeting these requirements is a result of collaborative efforts between students and music educators. For students, diligence and persistent work are essential, while for educators, continuous development of students' skills and possessing a high level of subject knowledge are crucial. A pivotal aspect of a career in music is not only the ongoing enhancement of abilities but also the presence of clear goals.

I assume that all three groups experience music learning, music education, and playing music as autotelic experiences, mainly because, in most cases, choosing a career in music is voluntary and not obligatory.

If my assumption proves to be correct, it could become possible to develop a music pedagogy flow methodology tailored for every student learning music. Through its practical application, this methodology could enhance the students' experiences of success. While the primary goal might not be pursuing a musical career for students who are not aiming for one, the undeniable fact is that years of music learning have a positive impact on personality development.

Hence, the ultimate aim of my research is to develop a music pedagogy flow methodology. This current study serves as the first step towards achieving this goal by scientifically exploring the connection between music education and flow within the context of music education in Hungary.

As mentioned earlier (see: introduction), to the best of my knowledge, there hasn't been any research conducted in Hungary that specifically focuses on investigating flow factors in the field of music education. This research aims to fill this gap.

Therefore, my goal is to examine the presence of flow factors and their correlation with autotelic music performance among aspiring classical music students, successful music educators, and established classical musicians.

Furthermore, my aim is to uncover the roles of family, peers, and teachers in the realm of successful music education.

Another objective is to delve into previously unexplored aspects of flow experienced by musicians, such as the challenges preceding the entry into flow and the difficulties encountered after exiting the flow state.

The long-term aim of this research is to develop a music pedagogy methodology based on the current research findings related to flow in music education.

III. Presentation of the Circumstances of the Research

For the purpose of investigating music educators and students, questionnaires were created and developed using Google Forms between the period of 2019 and 2020. As part of the process, the pilot version of the questionnaire was filled out by 10 music educators from Gyulai Erkel Ferenc Elementary Art School and 8 students preparing for a classical music career at the institution, in addition to my personal presence[1].

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The duration of the completion was measured using a stopwatch, and after the completion, we interpreted the introductory questions and items together. Based on their feedback – for instance, if they didn't understand a question, interpreted it differently, etc. – certain items were rephrased.

The actual data collection took place between 2020 and 2022. The data collection was conducted online due to the following reason: due to the COVID-19 pandemic measures[2][3][4], there was no opportunity for personal visits to institutions. Consequently, I employed the convenience-based methodology (Szokolszky, 2004). Both the fact of pursuing a musical career and the identification and number of respondents were left to the discretion of the institution's leaders. As a result, I couldn't avoid the potential for subjective bias (Szokolszky, 2004). Out of the 150 institutions contacted, several declined to cooperate due to the additional administrative burden caused by the pandemic, and multiple institutions did not have students preparing for a classical music career.

In the first step, I contacted the institution leaders via email. In cases where I didn't receive a response within two weeks, I reached out to them using the phone number available

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[1] The participants were music educators/students of Gyulai Erkel Ferenc Elementary Art School.

[2] https://magyarkozlony.hu/dokumentumok/af0a665e93020a1bb69193ed9a8379f516854bf7/megtekintes#;=Covid%20karant%C3%A9n (Last downland: 2023. 01. 14.)

[3] https://magyarkozlony.hu/dokumentumok/58bba6799a05f92a423b00f406661148e2e6d077/megtekintes#;=Covid (Last downland: 2023. 01. 14.).

[4] https://magyarkozlony.hu/dokumentumok/5e023e2126a4484337780117c932037937892a0f/megtekintes#;=Covid (Last downland: 2023. 01. 14.)

on the institution's website. I requested the following from them: to share the online link to the questionnaire with those music educators who are enthusiastic[5] and have achieved successes in their careers so far. Additionally, I asked them to forward the consent forms, provided as email attachments, to the parents/legal guardians of the students preparing for a musical career, and to have the signed copies returned to me either scanned or through postal mail. In the latter case, if requested, I sent printed consent forms with stamped return envelopes to the institutions.

For the students, in the consent form, I requested the parents' email addresses, and I sent the online questionnaire link to the provided email addresses. I assured the parents/legal guardians that I wouldn't disclose their email addresses to third parties, and I didn't ask for email addresses or the child's name in the questionnaire to avoid identification. I asked them to have their child fill out the questionnaire independently. I couldn't verify this, but due to the rules established in my doctoral program and the unpredictability of the pandemic, I couldn't implement an alternative procedure.

For the educators, I didn't consider it necessary to obtain a preliminary consent form signature. In the header of the questionnaire, I provided all necessary information regarding participation in the research.

The investigation of the musicians was carried out through semi-structured interviews. I conducted interviews with ten musicians who are considered esteemed artists in Hungary (criteria for selection can be found in the qualitative method). The interviews were conducted between 2020 and 2022, and their duration ranged from 40 to 90 minutes. Due to the COVID-19 pandemic measures[6][7][8], I also offered the possibility of conducting interviews via Skype to the interviewees.

[5] As a result, a few currently active music educators were also included in the sample. Since their flow values were high, their responses were not excluded.

[6] https://btk.pte.hu/hu/nevtudphd/szabalyzatok (Last downland 2023. 02. 28.)

[7] https://magyarkozlony.hu/dokumentumok/af0a665e93020a1bb69193ed9a8379f516854bf7/megtekintes#;=Covid%20karant%C3%A9n (Last downland: 2023. 01. 14.)

[8] https://magyarkozlony.hu/dokumentumok/58bba6799a05f92a423b00f406661148e2e6d077/megtekintes#;=Covid (Last downland: 2023. 01. 14.).

III. Presentation of the Research Context

For the purpose of examining music educators and students, the questionnaires were developed and created using Google Forms between the period of 2019 to 2020. As part of this process, the pilot version of the questionnaire was completed by 10 music educators from the Gyulai Erkel Ferenc Elementary School of Arts and 8 aspiring classical music students studying at the institution, with my personal presence during the data collection.
The duration of the completion was measured using a stopwatch, and after the completion, we interpreted the introductory questions and items together. Based on their feedback – such as not understanding a question, interpreting it differently, etc. – some items were rephrased. The actual data collection took place between 2020 and 2022. Data collection was conducted online due to the COVID-19 pandemic restrictions, preventing in-person visits to institutions. Consequently, I applied a convenience-based methodology (Szokolszky, 2004) due to its accessibility. Both the fact of pursuing a music career and the identification of participants, as well as their numbers, were entrusted to the institution's administrators. Therefore, it was inevitable that subjective bias (Szokolszky, 2004) could arise. Out of the 150 institutions contacted, several declined cooperation due to the additional administrative burden caused by the pandemic. Additionally, some institutions did not have aspiring classical music students.

In the initial step, I contacted the institution administrators via email. If I didn't receive a response email within two weeks, I reached out to them using the phone numbers available on the institution's website. I requested the following from them: to share the online link of the questionnaire with those music educators who were enthusiastic and had achieved successes in their careers. I also asked them to forward the consent forms, sent as attachments in the email, to the parents/legal guardians of the aspiring classical music students and to return the signed copies to me either by scanning or by postal mail. In the latter case, if requested, I provided printed consent forms with stamped reply envelopes to the institutions. For the students, I requested parental email addresses in the consent form and sent the online questionnaire link to the provided email addresses. I assured the parents/legal guardians that I wouldn't disclose their email addresses to any third parties, and I didn't ask for email addresses or the child's name in the questionnaire to maintain anonymity. I asked them to have their child complete the questionnaire independently. I couldn't verify this, but due to

the regulations set by the doctoral program and the unpredictability of the pandemic, I couldn't implement a different approach.

I didn't consider it necessary to have the educators sign a prior consent form. In the questionnaire header, I provided all the necessary information regarding their participation in the research.

The investigation of the musicians was carried out through semi-structured interviews. I conducted interviews with ten musicians who are considered esteemed artists in Hungary (criteria for selection can be found in the qualitative method). The interviews were conducted between 2020 and 2022, and their duration ranged from 40 to 90 minutes. Due to the COVID-19 pandemic measures[9], I also offered the possibility of conducting interviews via Skype to the interviewees. I conducted in-person interviews with four of the participants and used Skype for the remaining six interviewees. The interviews were recorded with the interviewees' consent, either through smartphones or by recording Skype conversations, while maintaining their anonymity. I assured them that the recordings would not be shared with any third party. To avoid influencing their responses, I did not provide the interviewees with prior information about the research's exact title and purpose. Before the interviews, I informed them that I would be examining the progression of their musical careers, their reasons for choosing their instruments, and the factors and individuals – such as family, educators, and environment – that influenced their musical career choices. In essence, I aimed to understand why they became musicians. The explanation of flow occurred after the interview. At the beginning of the interview, I assured them that I would reveal the precise purpose and title of my research at the end of the interview. Furthermore, I informed them that if, with this knowledge, they decided not to permit the use of the information shared for research purposes, they could retract their consent for participation even after the interview. In such cases, the recorded interview would be deleted. However, this step wasn't necessary, as all interviewees agreed to the retention, transcription, and utilization of the recordings for research purposes.

[9] https://magyarkozlony.hu/dokumentumok/5e023e2126a4484337780117c932037937892a0f/megtekintes#;=Covid (Last Downland 2023. 01. 14.)

III. Methods, Hypotheses, Research Questions

III/1. Quantitative Method

The selection of units for analysis in the quantitative research followed the expert selection method (Kontra, 2011). Only students preparing for a classical music career and successful music educators participated in completing the questionnaires.

For students, the criterion was their preparation for a classical music career, while for educators, "successful" music educators were included in the study sample. As a result, the following criteria were formulated: music educators who have been in the field for several years and/or have (student) competition results, and/or have former students who are currently pursuing musical careers. Regarding the students, the research included 53 institutions, 243 participants aged 11 to 30+ (35% N=85 male, 65% N=158 female). Among educators, 93 institutions were represented, with 331 participants (6% N=20 male, 94% N=311 female).

After extensive and thorough research, I couldn't find a Hungarian standard[10], so for the development of the questionnaires, I based them on the Flow State Questionnaire by Jackson & Marsh (1996). In the Flow questionnaire, which is based on a 4-point Likert scale, the score of 4 is considered the highest level of flow.

For the students, the measurement of flow values was conducted with 28 items, while for the educators, it was done with 25 self-formulated items. Low scores cannot be regarded as anti-flow. The focus of the study is on the levels of flow factors' values rather than investigating the flow-anti-flow hypothesis. In the case of the students, the introductory section of the questionnaire includes inquiries about the respondent's gender, age, years spent in music education, the institution's type and level - elementary, middle, high school -, the instrument studied, the amount of daily practice, competition results, and performance experiences (whether they regularly participate in concerts or not). Both for the students and the educators, the second part of the questionnaire contains items that focus on flow factors. The quantitative data from the questionnaires were processed using the SPSS 26 software program.

[10] Indeed, these explanations provide further insight into why factors related to flow haven't been extensively investigated in music education in Hungary.

Results

The theoretical minimum of the flow scale for the students is 1, and the theoretical maximum is 4. Within the sample of 243 participants, the observed minimum on the flow scale was 1.68, the maximum was 3.89, and the range was 2.21. The average score on the scale was 3.19, with a standard deviation of 0.38 and a median value of 3.25. Based on this, it can be concluded that the respondents have relatively high levels of flow values.

The sub-scales of flow were also examined. Within the sample of 243 participants, the minimum score for the flow sub-scales was 1.00, and the maximum was 4.00. The latter was achieved for all factors. The highest average score for a Flow factor was 3.61 on the Goal sub-scale, while the lowest was 2.65 on the Concentration and Control sub-scale. Respondents, especially in the case of the Balance, Goal, Self-esteem, Time perception, and Autotelic factors, exhibit high flow values (see Table 2).

2. Table: Levels of flow subscales for students

Flow Factors	Balance Scale	Goal Scale	Immersion Scale	Concentration Scale	Control Scale	Sense of Self Scale	Time Scale	Autotelic Scale
Average	3,62	3,61	2,88	2,65	2,65	3,11	3,20	3,23
Median	4,00	3,71	3,00	3,00	2,75	3,33	3,25	3,33
Standard Deviation	0,61	0,43	0,57	0,96	0,61	0,64	0,55	0,53
Range	3,00	2,43	3,00	3,00	2,50	2,67	2,25	3,00
Minimum	1,00	1,57	1,00	1,00	1,50	1,33	1,75	1,00
Maximum	4,00	4,00	4,00	4,00	4,00	4,00	4,00	4,00
Number of Items	243	243	243	243	243	243	243	243

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Hypotheses regarding students.

Hypothesis 1: *Based on the theory of the flow cycle, we hypothesize that students who practice three or more hours daily experience higher levels of flow compared to students who practice less than three hours daily.*

Comparison of the average flow scale scores in the two categories was conducted using an independent samples t-test. The duration of practice was a four-category variable with the following values: 1 hour per day, 2 hours per day, 3 hours per day, and more than 3 hours per day.

For testing the 1st hypothesis, the variable values were merged into 2 categories based on whether students practice three or more hours daily versus less than three hours daily. 36% of the students practice three or more hours daily, while 64% practice 1-2 hours daily.

The Levene's test for equality of variances resulted in an F-value of 16.954 and a significance of $p < 0.001$, indicating that the variance of flow scores between students practicing 1-2 hours daily and those practicing 3 or more hours daily is not equal. Thus, due to violated homogeneity of variance assumption, the Welch's unequal variances t-test was deemed appropriate instead of the regular t-test.

The p-value obtained from the Welch's test was 0.003, indicating that the mean flow scores of students practicing 1-2 hours daily and those practicing 3 or more hours daily differ significantly. The average flow score for the students practicing less was 3.14, while for those practicing more, it was 3.28.

This result indicates that the hypothesis stating that students who practice three or more hours daily experience higher levels of flow compared to students who practice less than three hours daily has been supported.

Hypothesis 2: Based *on the theory establishing the relationship between age and flow, we hypothesize that students who study at a music conservatory experience learning music as an autotelic experience.*

The hypothesis was examined using one-way analysis of variance (ANOVA) for the purpose of comparing group means. The average flow scale values, according to the results of the one-way ANOVA, do not differ significantly across age groups ($p = 0.432$). In the age group of 11-14 years, the average is 3.20, in the 15-19 age group, it's 3.15, and in the age group above 20 years, it's 3.23.

In the examination of factors using one-way ANOVA – with the exception of the balance factor – no significant differences were found among the age groups.

The subscale measuring autotelic experience was formed by combining 6 items (4, 6, 11, 22, 23, 25) from the flow scale. The examination of the subscale's internal consistency was

conducted using Cronbach's alpha calculation, resulting in a value of 0.742, indicating satisfactory internal reliability.

Among the respondents, 44% study music in music schools, 30% in specialized music high schools, and 26% at music conservatories. Responses to the question "Where do you study music?" were categorized into two groups: one group comprising students studying at music conservatories, and the other group including students studying at primary and secondary level institutions. The average score for the autotelic factor among students studying in music schools and secondary level institutions was 3.20, while the average score for students studying at music conservatories was 3.34.

The p-value was 0.038, indicating that the average score of the autotelic subscale for students studying music in primary and secondary level institutions differs significantly.

The average scores of the autotelic factor in the two groups were compared using a Student's t-test. The Levene's test for equality of variances resulted in an F-value of 6.387 and a significance of $p = 0.012$, showing that the variance of autotelic subscale scores between students studying at music conservatories and those studying in primary and secondary level institutions is not equal. Hence, due to this violation of the homogeneity of variance assumption, the use of the Welch's unequal variances t-test was appropriate instead of the regular t-test.

Based on the frequency distribution of the autotelic subscale scores among students studying at music conservatories, it is observed that only 14% of the respondents have an average autotelic factor score lower than 3. This indicates that the vast majority of students studying at music conservatories experience learning music as an autotelic experience.
According to this, it can be said that the hypothesis stating that those students experience learning music as an autotelic activity who study at a music university has been confirmed. However, the results also demonstrate that students in other institutions, both at the elementary and secondary levels of education (Flow autotelic factor score 3.20), also experience learning music as an autotelic activity, considering that their average score is also above 3.

Hypotheses Regarding Educators

Hypothesis 3: *Based on the theory of flow and personality traits, we hypothesize that music educators with 18 years or more of experience on the field experience the same level of flow as music educators with fewer than 18 years of experience.*

35% of music educators (N=116, Flow value: 3.42) have less than 18 years of experience, while 65% (N=215, Flow value: 3.48) have 18 years or more of experience. The investigation of the hypothesis was conducted using an independent samples t-test to compare the means of the groups. The Levene's test for equality of variances yielded an F-value of 0.349, with a significance of p=0.555, indicating that the variances of the groups are similar, thus making the t-test applicable. The music educators with 18 or more years of experience and those with fewer than 18 years of experience were compared using the t-test.

The independent samples t-test results indicated that there was no significant difference in the average flow values between music educators with 18 or more years of experience and those with fewer than 18 years of experience (p=0.091). Based on these results, the hypothesis was confirmed: the flow values of educators are not dependent on the duration of their experience in the field. Furthermore, the autotelic scale values for music educators with fewer than 18 years of experience were found to be 3.21, while for those with 18 or more years of experience, the value was 3.28. This indicates that the average scores on the autotelic scale also do not differ significantly (p=0.173).

Hypothesis 4: *Due to the potential performance-enhancing and pain-alleviating effects of flow, we hypothesize that the flow values of educators teaching 22 or more hours per week are equivalent to the flow values of educators teaching fewer than 22 hours per week.*

42% of educators (N=139, Flow value: 3.45) teach fewer than 22 hours per week, while 58% (N=192, Flow value: 3.46) spend 22 or more hours per week on teaching.

The investigation of the hypothesis was carried out using an independent samples t-test for the purpose of comparing the means of the groups. The Levene's test for equality of variances yielded an F-value of 2.751, with a significance of p=0.098, indicating that the variances of the groups do not significantly differ, making the t-test applicable. According to the result of the independent samples t-test, the flow values of educators teaching 22 or more hours per week do not significantly differ (p=0.917) from the flow values of educators

teaching fewer than 22 hours per week. Consequently, the hypothesis was confirmed, indicating that the flow value is not dependent on the weekly hours of teaching.

Hypothesis 5*: Based on the interest – enthusiasm – purpose theory supported by the flow concept, we hypothesize that music educators who are less satisfied with the societal recognition of their educational work experience the same level of flow as music educators who are more satisfied with societal recognition.*

Only 5% of educators (N=17, Flow value: 3.56) stated that they are "very satisfied" with the societal recognition of their work. 51% (N=167, Flow value: 3.45) expressed that they are "less satisfied," while 44% (N=147, Flow value: 3.44) indicated that they are "not satisfied at all" with the societal recognition of their work.

The investigation of the hypothesis, i.e., the comparison of the means of the groups, was conducted using one-way analysis of variance (ANOVA). Based on the results of the one-way ANOVA, it can be concluded that the flow values of educators are not significantly dependent ($F(df1=2, df2=328)=1.209$, $p=0,300$) on the perceived level of societal recognition. Therefore, it can be concluded that the hypothesis has been confirmed.

Hypotheses related to both students and educators

Hypothesis 6: *Based on the theory of group flow, we hypothesize that a music teacher who experiences flow more frequently is more likely to facilitate their students' experience of flow as well.*

This hypothesis was examined based on the responses received from students and educators in different institutions. Due to the anonymity of the questionnaires, there isn't sufficient information about the relationships between the completing educators and students. The responses from students came from a total of 53 institutions, while the responses from educators came from a total of 93 institutions.

During the verification of the hypothesis, the scope of examined institutions was narrowed down. Only those institutions were included in the sample where there were at least 3 responses from educators and at least 3 responses from students. As a result, this hypothesis could be examined for a total of 16 institutions.

In the aforementioned institutions, the average flow values and flow scale scores were calculated for educators (N=107) and students (N=114). Following this, the Pearson correlation coefficient was computed to determine whether there is a correlation between the institutional averages of educator and student flow values.

The Pearson correlation coefficient has a value of 0.504 with a significance of 0.046, indicating a moderately strong and statistically significant correlation between the institutional average of educator flow values and student flow values. The results suggest that in institutions where educators experience high levels of flow, students also tend to experience high levels of flow. Given that the significance value is 0.049, the hypothesis is supported.

III/2. Qualitative Study

Ten music artists participated in the research. According to their age distribution, 7 male and 3 female individuals took part in the study. Their ages ranged between 28 and 50 years. Among the participants, 4 individuals play the trombone, 3 individuals play the piano, 2 individuals play the classical guitar, and 1 individual plays the flute. Out of the trombonists, 2 individuals are members of the MAV Symphony Orchestra, 1 individual plays in the Opera House Symphony Orchestra, and 1 individual is the founder and soloist of several renowned trombone ensembles. The rest of the interviewed subjects primarily perform as soloists, giving concerts both in Hungary and abroad.

Methodology

The research conducted among music artists is exploratory in nature, aiming to uncover new insights. To the best of my knowledge, there hasn't been any research focusing on flow experiences among music artists in Hungary.

Similar to the quantitative approach, the selection of units of analysis (basic units of investigation) in the research was guided by expert selection methods (Kontra, 2011). Only nationally and/or internationally recognized music artists were eligible to be included in the study sample (Sántha, 2006). Prior to finalizing the sample, I reviewed the online biographies of 40 music artists.

The criteria are as follows: A degree from the Liszt Ferenc Academy of Music or studies at a prestigious foreign music university, achieving 1st, 2nd, or 3rd place in international competitions, and in the case of symphony orchestra members, holding a significant role in a distinguished Hungarian or foreign symphony orchestra (e.g., first trombone, first violin, etc.). For soloists, the criteria include performing in renowned concert halls in Hungary and/or abroad, and giving concerts with internationally recognized music artists.

Only 10 music artists were included in the sample. The reasons for this are as follows: few biographies contained information about international competition placements, in several cases, the significant role held in the symphony orchestra was not specified[11], only the instrument they played. After conducting the ten interviews, I didn't approach additional music artists as I considered the scope of the interviews sufficient and suitable for analysis.
The structure of the interviews was based on the appearance and forms of flow factors, the roles of family members and teachers throughout the music career, and additionally, the subjects extensively discussed the role of their peers in shaping their musical paths. While the latter aspect wasn't initially part of the interview structure, it emerged as an important factor influencing musical careers. Therefore, following the analysis that provided explanations for flow factors and the forms of their appearance within the flow cycle, it was reasonable to formulate a research question that delved into the roles of family, teachers, and peers. This inductive approach[12] aimed to provide a more comprehensive understanding. The document containing the interview structure was only shared with the subjects if they specifically requested it in advance. This was done in the case of a single interviewee, "Nz3." In other cases, the structure served as a guiding tool for me, the researcher, while conducting the interviews.
After the narrative portion of the interviews, I conducted a check to ensure that all factors outlined in the interview structure had been mentioned. In cases where any factors were missing, I employed the technique of follow-up questioning (Solt, 1998). I asked questions related to flow factors, in a subtle manner, only when the interviewees hadn't mentioned them on their own. This approach was only applied when it was necessary, such as in the case of time perception. If I had directly asked about all the factors and guided the interview along those lines, it would have not only deviated from the narrative deep interview

[11] Exactly, the specificity of roles within musical ensembles, such as being a first, second, or third part
[12] Formulated during the course of the research, in accordance with inductive logic as outlined by Sántha (2006),

methodology but also overly influenced the interviewees. This way, by delicately introducing flow-related questions where necessary and allowing interviewees to naturally discuss their experiences, I aimed to maintain the integrity of the narrative research approach while ensuring a comprehensive understanding of flow factors in their musical careers.

During the interviews, I followed the guidelines provided by Fritz Schütze (1983). I initiated each interview with an introductory question (stimulus): "Please, tell me about the development of your musical career from the beginning to the present day." I refrained from interrupting with follow-up questions to allow for spontaneous narration. To ensure an uninterrupted flow during the interview, I entrusted the interviewees with selecting the location, with the condition of choosing a quiet environment. Using nonverbal cues such as attire, body language, and facial expressions, I offered support to the interviewees. I reassured them that whatever they shared would remain confidential, their identities would be protected, and their disclosures wouldn't lead to adverse consequences. It wasn't uncommon for several interviewees to pause for a few moments while sharing their stories. In such cases, I refrained from pushing them or interjecting; instead, I allowed them the time and space to reflect on their thoughts silently. This approach aimed to establish a comfortable and open atmosphere, facilitating genuine and reflective sharing of their musical journeys. It prioritized the interviewees' experiences and perspectives, aligning with the principles of qualitative research and maintaining their emotional well-being and privacy.

After the recordings, I transcribed the spoken content. Transcribing the interviews was done based on auditory input, and each transcription took approximately 1 to 1.5 hours for completion. Given that many interviews contained sensitive and private information, I considered it ethically inappropriate to use the interviewees' original first names. Therefore, I opted not to use their full first names. In the dissertation, I employ a coding system in place of the participants' actual names. These codes carry the following meanings: F = Male, N = Female. I used the initials of the instruments followed by F/N to denote the instruments. Since among the interviewees, four played the trombone, three played the piano, and two played the classical guitar, I appended numbers to the initials, such as Fh1, Nh2, and Fg1. As there was only one interviewee who played the flute, I didn't find it necessary to use numbers in that case – Nf.

During the analysis, I employed the method of qualitative thematic content analysis, which was tailored to align with the relevant literature. Following my own interpretive framework, I established main and subcategories (as seen in Table 3). For the flow factors, I utilized a deductive logic approach (Sántha, 2020) to define the main and subcategories

before the analysis, adhering to the principles of flow theory. The goal was to assess whether the interview responses could be categorized and which main and subcategories they could be assigned to. The rationale for this approach is as follows: If I had solely constructed the main and subcategories based on the content of the interviews, it would have been difficult to ascertain which specific flow factor was being realized and how it was being realized. By establishing the categories beforehand, I was able to more accurately identify and analyze the presence and manifestations of different flow factors within the interview narratives.

The roles of family, teachers, peers, and competitions were formulated into main and subcategories following the inductive logic approach (Sántha, 2020). This approach was chosen because, prior to the analysis, it was uncertain whether sufficient data would be available to categorize quotes into main and subcategories. However, as the majority of interviewees extensively discussed the roles mentioned above, the creation of main and subcategories became justified. The subcategories were established based on the roles played by these groups in shaping the musical careers of the participants.

In the interviews, statements related to flow were preserved in the form of verbatim quotations. The analysis focused solely on the meaning of these quotations and their relation to the main and subcategories. Only those quotations necessary to address the research questions were interpreted and elaborated upon in more detail. For other verbatim quotations with less significance, only the relevant expressions were mentioned.

To achieve a more precise measurement of flow, the quotations within the main and subcategories were quantified (see Figure 1), and the distribution of flow factors according to the participants was determined for flow factors (see Figure 2). The basis for calculation was the number of quotations within the columns of the main and subcategories. This approach allowed me to compute some basic statistics regarding the content of flow factors, the flow cycle, different social groups (such as family, peers, teachers), and competitions based on the main and subcategory content.

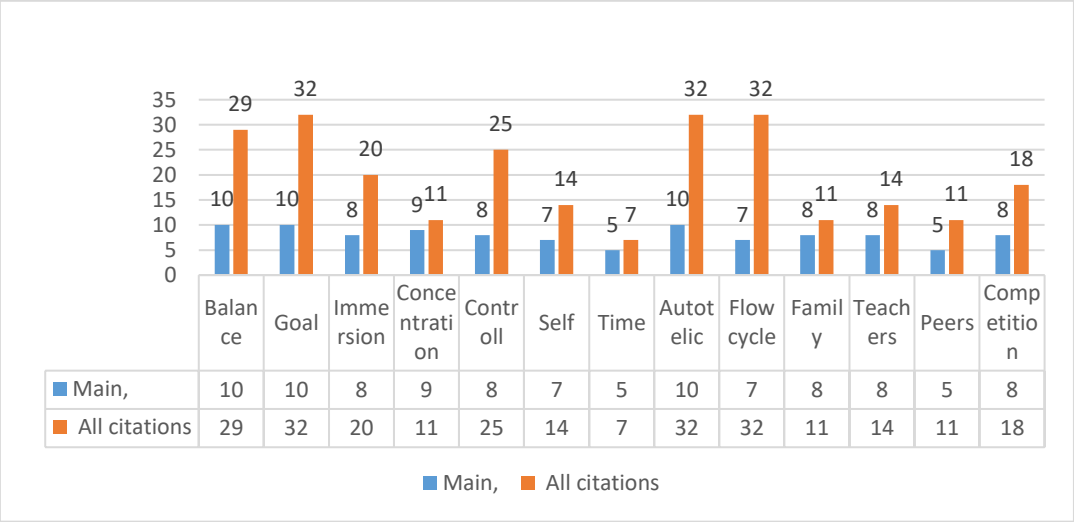
1. Table: Main and Subcategories

I. Challenge-Skill Balance		
Hard work (practicing several hours a day)	Talent	Self-education
II. Clear Goals+feedback		

Instrument selection, development as a goal Feedback - personal/competitions	Career in music choice	Feedback - personal/competitions	
III. Action-Awareness Merging			
Spontaneous action,	Moment - "here and now"	Becoming one with the piece	
IV. Concentration on Task			
Attention	Productivity	Ecstasy	
V. Paradox of Control			
Elimination of distractions	Personal decision	Elimination of fear of negative consequences	
VI. Loss of Self-Consciousness			
Forgetting about the outside world	Forgetting about ourselves	Merging into a greater unity (into music, into a different state)	
VII. Transformation of Time			
Not paying attention to time	Hours in "minutes"	Underestimation of time	
VIII. Autotelic Experience			
Internal motivation	Self-rewarding	Feeling of lack	
Flow cycle			
Struggle	Relaxation	Flow	Rejuvenation
Family			
Has musician ancestor	No musician ancestor	Support	
Contemporary			
Rivalry	Collaboration		
Teacher			
Helper	Mentor		
Competition			
Progress	Feedback		

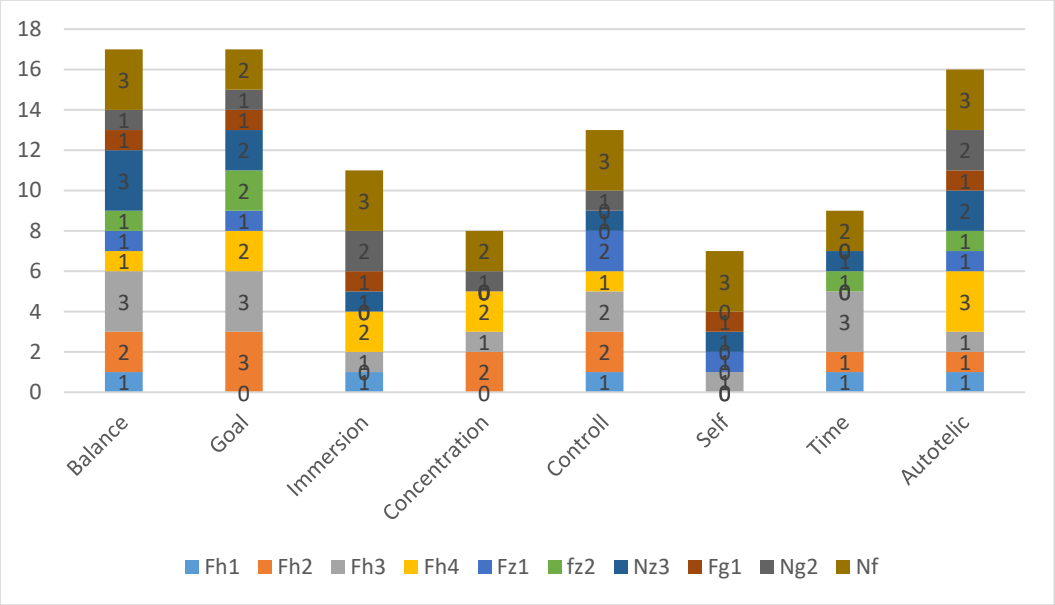
Own Editing

1. figure: Quotes and number of interviewees by main categories"



	Balance	Goal	Immersion	Concentration	Controll	Self	Time	Autotelic	Flow cycle	Family	Teachers	Peers	Competition
Main,	10	10	8	9	8	7	5	10	7	8	8	5	8
All citations	29	32	20	11	25	14	7	32	32	11	14	11	18

2. figure Distribution of interview subjects according to Flow factors



Research Questions, Results

1. *What factors contribute to making music playing autotelic?*

Autotelic experiences, or intrinsic rewards, are most commonly experienced by the studied musicians during practice, especially when the musicians themselves can choose the musical pieces to practice. However, these musicians predominantly experience these rewarding

moments during performances and concerts. The latter plays such a significant role in their lives that they would even be willing to perform without receiving any compensation. Just one to two weeks after a break, they already start to miss engaging with their instruments. Even during their vacations, they continue to play music, and a substantial portion of their leisure time is dedicated to playing music for their own enjoyment.

2. *What impact do family, peers, and teachers have on the trajectory of musicians' careers?*

For most interviewees, their childhood was shaped by music. According to their accounts, their parents were music enthusiasts who frequently attended concerts and played high-quality music at home. Several interviewees also have musician ancestors. The family not only provided support, but also provided significant guidance. One interviewee's mother aspired to be a pianist herself, a dream she couldn't fulfill. However, she consistently supported and steered her daughter towards a musical path. None of the interviewed individuals reported encountering opposition from their families regarding their choice to pursue a musical career.

The role of peers mainly manifested in mutual motivation, but the feedback loop of flow factors also emerged, as they served as important mirrors for each other. The phrase 'we pushed each other' was used by several interviewees, indicating a mutually supportive and constructive form of competition distinct from rivalry. The greatest motivation was identified in terms of practice.

Every interviewee discussing the role of teachers spoke with sincere reverence about their former mentors. The teachers didn't just fulfill an 'instructor' role but also set an example in terms of worldview, professional humility, and treating others with respect.

3. *How do flow boundary conditions manifest among musicians?*

- 3.a: *What challenges do musicians face before entering the state of flow?*

Before entering the state of flow, it is necessary to overload the mind with information, without this, flow cannot be achieved (Benson, 2004). The interviewees work on composing and practicing a piece until they perceive it as 100% complete. They practice beyond their endurance, often surpassing their pain threshold. The performance of a musical piece

demands a high level of precision, and according to their accounts, they always strive for it, but this is often a challenging endeavor.

- 3.b: In what ways do musicians recharge after exiting the state of flow?

Most interviewees mentioned deliberate rest. For them, this means refraining from playing music for a few days. They do this particularly after more exhausting and demanding periods. According to their accounts, this serves the purpose of 'creating a hunger' for playing music again. Most of the individuals prioritize active rest, such as taking walks, engaging in cooking and baking, Nordic walking, driving, spending time with family, and traveling.

Citing the in-depth analysis of the interviews, the conditions for flow as defined by Csíkszentmihályi Mihály (Nakamura & Csíkszentmihályi, 2002), namely 'Balance between Challenge and Skill' and 'Clear Goals and Immediate Feedback,' were present in the cases of all ten interviewees.

Among the accompanying factors of flow, the elements 'Immersion in the Action' and 'Focused Concentration on the Task' were identified in 9 cases, while the 'Paradox of Control' and 'Loss of Self-Consciousness' were recognized in 7 cases. The 'Time Perception' factor appeared in 5 cases, and the 'Autotelic' factor was identified in 10 individuals.

Most factors were realized in the case of Nf. From the above, we can conclude that the studied musicians experience flow throughout their musical careers, and engaging with music itself provides them with intrinsically rewarding, i.e., autotelic experiences.

IV. Summary, Further Research Directions

In my research, I aimed to explore the extent of flow experienced by classical music students preparing for their careers, successful established music educators, and classical musicians currently on their musical journeys.

In addition to uncovering flow factors, the study also examined the roles of family, peers, and teachers in music learning and the development of a musical career.

In relation to the students, the study examined the daily practice duration and age, while for educators, it delved into their relationship with social contentment, experience, weekly teaching hours, as well as the collaborative efforts between teachers and students and their impact on flow. The findings revealed that all three examined groups experience flow. The results among students correlate with Sabahat Burak's (2014) research, indicating a direct correlation between practice duration and experienced flow. According to my study, higher flow values were achieved by students who practiced less, with those practicing 3 or more hours per day achieving higher flow levels. In relation to age, I found that students at the elementary, middle, and high levels of education all experience learning music as a flow experience. The autotelic factor also exhibited high flow values, which I presume is due to the self-rewarding nature of autotelic experiences and the commitment to musical activities.

In the case of educators, the flow value is not dependent on the years spent in the field, the number of weekly teaching hours, or the level of societal recognition. The relatively high average autotelic flow value of 3.26 can be attributed to these factors.

Musicians experience higher levels of flow during home practice than during symphonic orchestra rehearsals. This correlates with Walle's (2016) research findings, indicating that professional musicians experience higher flow levels during practice at home. Musicians perceive playing music as an autotelic experience; even during their vacations and leisure time, they find ways to engage with their instruments. They would continue to play music even without financial incentives, as music fills their lives.

My research delved into flow and its factors as a state, exploring whether the examined groups experience and how they experience the flow factors formulated by Csíkszentmihályi Mihály (1997) during music education, music learning, and music playing. My research findings support that commitment to music learning, music education, and playing music yields high levels of flow. The question arises: can flow be created within

flow by applying a methodology based on factors, it could be used to address students with low flow values as well. In order to obtain a concrete answer to this, it is justified to assess the level of flow experienced by individuals learning music at a hobby level. In this study, I will address various aspects, such as whether they learn music due to personal or parental influence, how they manage their music lessons alongside their studies and other extracurricular activities, whether they practice out of intrinsic motivation or external influence, whether they enjoy performing in concerts, how they handle stage fright, and more.

After the results are compiled, the deficient areas will be identified and, based on the findings of both studies, a flow methodology will be developed to address and alleviate these shortcomings.

Last but not least, I aim to provide an answer to the question of what positive impact the application of the flow methodology has on music education. Several music educators have adopted the flow methodology developed by Andreas Burzik (2003) and Eve Newsome (2016).

Andreas Burzik (2003) method was reported as follows: “My students have made a quantum leap since we started working with flow. And the results are not only perceived in the lessons, they also work on stage”[13] (Bela Szedlak, university professor, double bassist). „When I am teaching the flow practising to my students, it seems to help them improve their musicality in their performance”[14] „The results with my students in Bremen have been spectacular. Their sound, their self-knowledge have been transformed.”[15] (Alexander Baillie, cellist, university professor). „Mastering and applying the flow in practice brings a sense of success and I find joy in performances."[16] (Rachael Beesley, violinist)

The effectiveness of both methodologies, I believe, is indisputable. Therefore, developing a methodology for current and future music students is justified.

Keywords: Flow, positive psychology, music education. Likert scale, interview

[13] https://www.flowskills.com/en-feedback.htm (Last downland 2023. 08. 31.)
[14] https://www.flowskills.com/en-feedback.htm (Last downland 2023. 08. 31.)
[15] https://www.flowskills.com/en-feedback.html (Last downland: 2023. 08. 31.) Note: The literal translation of the quote is 'self-knowledge,' but in this context, it refers to musical self-awareness, which we apply to musical self-expression.
[16] https://www.flowskills.com/en-feedback.htm (Last downland 2023. 08. 31.)

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