

## STUDENT TYPOLOGIES IN MUSIC TEACHER EDUCATION

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**SUMMARY.** The monitoring of student perspectives and preconceptions of teacher candidates has become an area of growing interest in educational research. Through such investigations, teacher education can more effectively support the processes of professional socialization and actively shape the development of professional identity. In our research, we examined university students enrolled in music teacher education programs. By analyzing their career conceptions, we identified various attitudes and explored the underlying characteristics that define distinct student profiles. This study presents a segment of our broader research project, focusing on career factors that influence teacher candidates' orientation and the student typologies emerging from them. Based on our findings, we identified five student types, the recognition of which highlights the need for more supportive and personalized approaches in addition to the development of professional competences, in order to strengthen the effectiveness of music teacher education and foster long-term commitment to the teaching profession.

**Keywords:** music teacher education, career conception, student typologies

### Introduction

Our research was primarily inspired by observations made in the course of mentoring activities, during which we found that music teacher candidates demonstrated varying degrees of success in implementing their preliminary conceptions in actual music lessons. Even students whose subject-specific knowledge could be considered above average often faced difficulties in classroom management and in the experiential transmission of values associated with music education. The tension between the application of knowledge acquired in higher education and the realities of teaching

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practice, as well as the challenges related to the effective management of classroom situations, prompted us to investigate broader, global causes beyond professional competences and the structural framework of teacher education.

To increase the effectiveness of music teacher education, we deemed it essential to understand the diversity of students, as there has so far been little targeted research concerning this group. Typologies can contribute to revealing individual differences and may provide a basis for the differentiated development of teacher education.

Our investigations were also justified by the fact that the National Core Curriculum, introduced in 2020<sup>2</sup>, prescribes two weekly music lessons from the first through the fifth grade, and one weekly lesson from the sixth grade onwards. Compared with the previous decade, this constitutes a favorable change in the field of school music education. Consequently, it is of particular importance for music teacher education to prepare young professionals who possess both pedagogical and professional competences and who are committed to the teaching vocation in the long term. Music education, as a sensitive domain of public education, primarily influences the inner world of personality. Since its marketability cannot be measured in tangible terms, the personality and mediating ability of future music teachers are of key significance for the long-term perception of the subject and for fostering children's active engagement with music.

In this study, we aim to present the five student types identified in our research, described along career-related factors. Data collection was carried out in 2023 with the aid of our self-developed "Career Profile" questionnaire, administered both online and in person. The resulting database was named ÉZETAK (Ének-Zene Tanárok Kutatása (Research on Music Teachers)).

## **Theoretical background**

Research aimed at exploring student populations displays considerable diversity and has become widespread across many fields of higher education.<sup>3</sup> The results of studies examining the views, preconceptions, and characteristics

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<sup>2</sup> Nemzeti Alaptanterv 5/2020 (I.30) kormányrendelet (National Core Curriculum Government Decree 5/2020 (I.30))

<sup>3</sup> Ballantyne, Julie and Retell, James. "Teaching Careers: Exploring Links between Well-Being, Burnout, Self-Efficacy and Praxis Shock," *Frontiers in Psychology*, vol. 10, 18 Feb. 2020, <https://doi.org/10.3389/fpsyg.2019.02255> Ballantyne, Julie and Canham, Nicole. "Understanding Music Teachers' Perceptions of Themselves and Their Work: An Importance–Confidence Analysis," *International Journal of Music Education*, vol. 41, no. 3, 28 Oct. 2022, p. 025576142211249, <https://doi.org/10.1177/02557614221124966>;

of university students are relevant not only from the perspective of the labor market but also provide an important point of departure for the renewal of the content and structure of higher education programs. Uncovering the specificities of young people may contribute to strengthening career-choice motivations and to supporting long-term commitment to the chosen vocation.

From the perspective of the teaching profession, the selection of suitable teacher candidates and the quality of experience acquired during higher education are of crucial importance, as these largely determine commitment to the vocation. Numerous studies emphasize the necessity of renewing both the content and structure of teacher education, since the knowledge acquired during training does not necessarily contribute to successful professional performance, a shortcoming that may manifest in declining self-esteem, increased risk of attrition, and the quality of interactions with students. Due to the teacher shortage apparent at the international level, alternative models of teacher preparation have also emerged, questioning the necessity of higher education training in this field.<sup>4</sup> Reforms aimed at renewing teacher education have placed practice-oriented approaches at the center, requiring closer cooperation between universities and schools. The phenomenon of entry shock<sup>5</sup> arises from the contradictions between teacher training and classroom reality, particularly in the area of discipline management.<sup>6</sup> Coping with the difficulties of beginning teachers is greatly facilitated by the supportive attitudes of the teaching staff<sup>7</sup>, as well as by personal counseling and the examples set by colleagues.<sup>8</sup>

<sup>4</sup> Darling-Hammond, Linda. "Constructing 21st-Century Teacher Education." *Journal of Teacher Education*, vol. 57, no. 3, May 2006, pp. 300–314, <https://doi.org/10.1177/0022487105285962>.

<sup>5</sup> Veenman, Simon. "Perceived Problems of Beginning Teachers." *Review of Educational Research*, vol. 54, no. 2, June 1984, pp. 143–178, <https://doi.org/10.3102/00346543054002143>.

<sup>6</sup> Venter, György and Buer, Jürgen. „Tanárnak lenni: Szerepelvárások, terhelés, coping-stratégiák — empirikus neveléstudományi kutatások német nyelvterületen" (Becoming a Teacher: Role Expectations, Workload, and Coping Strategies — Empirical Educational Research in German-Speaking Countries) Stúdium Kiadó, 1996

<sup>7</sup> Sági, Mária and Szemerszki, Mária. "A pályakezdő pedagógusok szakmai fejlődési igényei és azok megvalósulása," in *Pedagóguskutatások. Merre tart a pedagógusszakma?* ("The Professional Development Needs of Beginning Teachers and Their Implementation," in *Educational Research: Where Is the Teaching Profession Headed?*), ed. Anna Fehérvári (Oktatóskutató és Fejlesztő Intézet, 2016), 53–93.

<sup>8</sup> Marion Jones, "Supporting the Supporters of Novice Teachers: An Analysis of Mentors' Needs from Twelve European Countries Presented from an English Perspective," *Research in Comparative and International Education*, vol. 4, no. 1, Jan. 2009, pp. 4–21, <https://doi.org/10.2304/rcie.2009.4.1.4>. Ben-Amram, Miri, and Nitza Davidovitch. "Novice Teachers and Mentor Teachers: From a Traditional Model to a Holistic Mentoring Model in the Postmodern Era." *Education Sciences*, vol. 14, no. 2, 1 Feb. 2024, p. 143, [www.mdpi.com/2227-7102/14/2/143](http://www.mdpi.com/2227-7102/14/2/143), <https://doi.org/10.3390/educsci14020143>.

Successful professional socialization may be reinforced by internal motivation, flexibility, conflict management, and the early provision of practical experience.<sup>9</sup> At the same time, contradictions between training and practice may lead to crises during the initial career phase.<sup>10</sup> In the case of music teachers, the challenges of career entry primarily arise from the discrepancies between expectations and experiences<sup>11</sup>. Although self-efficacy may increase over time, further development is still required in areas such as communication.<sup>12</sup> Overall, in addition to professional socialization and a supportive environment, workplace atmosphere<sup>13</sup>, career advancement, financial security, and flexibility are also critical factors influencing retention in the teaching profession.<sup>14</sup>

## Research and sample presentation

The aim of our empirical research was to gain a holistic understanding of students enrolled in music teacher education programs, for which we applied quantitative research methods. It is important to emphasize that our investigation focused exclusively on students enrolled in degree combinations qualifying them to teach music; students of instrumental performance, vocal performance, or other music pedagogy or performing arts majors were not included. Only those teacher candidates were involved in the study who, upon graduation, are entitled to teach music in primary and secondary schools.

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<sup>9</sup> Prather-Jones, Bianka. "Some People Aren't Cut out for It": The Role of Personality Factors in the Careers of Teachers of Students with EBD." *Remedial and Special Education*, vol. 32, no. 3, 1 Mar. 2010, pp. 179–191, <https://doi.org/10.1177/0741932510362195>. Schön, Donald A. *The Reflective Practitioner: How Professionals Think in Action*. London, Temple Smith, 1983. Schon, Donald A. *Educating the Reflective Practitioner*. Jossey-Bass, 10. Feb. 1987

<sup>10</sup> Tschannen-Moran, Megan, and Anita Woolfolk Hoy. "The Differential Antecedents of Self-Efficacy Beliefs of Novice and Experienced Teachers." *Teaching and Teacher Education*, vol. 23, no. 6, Aug. 2007, pp. 944–956, <https://doi.org/10.1016/j.tate.2006.05.003>. Draves, Tami J. "Teaching Ambition Realized: Paul's Beginning Music Teacher Identity." *Journal of Music Teacher Education*, vol. 29, no. 1, 29 Apr. 2019, pp. 41–55, <https://doi.org/10.1177/1057083719844211>.

<sup>11</sup> Ballantyne, Julie, and Zhukov, Katie. "A Good News Story: Early-Career Music Teachers' Accounts of Their 'Flourishing' Professional Identities." *Teaching and Teacher Education*, vol. 68, Nov. 2017, pp. 241–251, <https://doi.org/10.1016/j.tate.2017.08.009>.

<sup>12</sup> Ballantyne and Canham, "Understanding Music Teachers' Perceptions.

<sup>13</sup> Korthagen, Fred. "Inconvenient Truths about Teacher Learning: Towards Professional Development 3.0." *Teachers and Teaching*, vol. 23, no. 4, 31 July 2017, pp. 1–19, <https://doi.org/10.1080/13540602.2016.1211523>

<sup>14</sup> McKinsey, Philipp and Santiago Paulo, eds., *Teachers Matter: Attracting, Developing and Retaining Effective Teachers* (OECD Education Committee, 2005), OECD, <https://doi.org/10.1787/9789264018044-en>

Information on the number of active students in music teacher education was obtained from the Higher Education Information System (FIR). Instead of relying on admission figures, we requested the total enrollment numbers for all study years directly from the Educational Authority. In the spring of 2023, 232 students were enrolled in music teacher education programs in Hungary, of whom 145 (62.5%) completed our questionnaire voluntarily and anonymously. The sample ensured nationwide coverage: students from all higher education institutions offering music teacher education participated, proportionally representing the student body of their respective universities. Data collection was conducted both online and in person at the following universities: University of Debrecen, Faculty of Music (DE-ZK); Eszterházy Károly Catholic University (EKKE); Eötvös Loránd University (ELTE); Liszt Ferenc Academy of Music (LFZE); University of Nyíregyháza (NYE); University of Pécs (PTE); and University of Szeged (SZTE).

For our study, we used the self-developed “Career Profile” questionnaire, which was designed on the basis of focus group interviews. These interviews addressed the tensions and dilemmas between the experiences acquired during teacher education and the challenges encountered in classroom practice. Conducted in a semi-structured format, the discussions allowed for free exchange of ideas and lasted for approximately two hours, taking place in Budapest and Debrecen. The purpose of the focus group interviews was to ensure that our instrument was grounded in real and relevant topics, while also helping to refine our research hypotheses and to adjust the phrasing of the questionnaire items.

The “Career Profile” questionnaire (Pályakép-kérdőív) covered four main areas: (1) sociodemographic background, (2) study pathway, (3) professional motivations and career conceptions, and (4) attitudes and life skills dimensions. The main objective of our research was to establish a typology of students enrolled in music teacher education and to explore the specific characteristics of each student profile. In this paper, we present the student types distinguished along career-related factors and professional attitudes, while other dimensions are not discussed here due to limitations of scope.

In this study, we present five clusters of music teacher candidates. The data from our Career Profile questionnaire (N = 145) were analyzed using the SPSS software package.

## **Results and discussion**

### *Career Profile Factors*

In our study, we examined students’ career-related views on the basis of their self-reports. We grouped them into clusters according to their professional

attitudes and analyzed the specific characteristics of each cluster along the identified career profile factors.

Based on our focus group interviews, we developed a list of 34 statements related to career conceptions, which respondents evaluated on a five-point Likert scale. In order to reduce the number of dimensions, to uncover the underlying structures, and to examine potential content correlations among career conceptions, we applied principal component analysis with promax rotation.<sup>15</sup> The final factor structure, comprising six factors, accounted for 58.13% of the total variance, while the applicability of the variable groups was confirmed by the Kaiser–Meyer–Olkin (KMO) criterion with an index value of 0.75. For reasons of scope, in the present paper we summarize the attitudes and groups of characteristics associated with each factor, and we illustrate the deviations of teacher candidates from the mean values in Diagram 1.

1) „*Creative, child-centeredness*” (6 items). This factor includes statements that express the integrated realization of the professional and pedagogical functions of the teaching vocation, in accordance with the values of music education. Beyond subject-specific elements, the items reflect complex investment of energy, versatile thinking, creativity, and a drive for creation, all serving the development of students. The highest factor loadings were associated with values, tradition, creative activity, and the realization of conceptions. Although to a lesser extent, alongside statements expressing professional fulfillment, the motif of commitment to students is also present, which justifies the child-centered perspective reflected in the name of the factor.

2) „*Pedagogical competence*” (5 items). This dimension comprises statements that describe pedagogical qualities forming the prerequisites for the effective management and coordination of classroom situations. The items of this dimension outline a personality profile that consciously and confidently positions itself within the pedagogical role.

3) „*Prestige orientation*” (5 items). This variable group emphasizes a career trajectory and professional advancement built along the lines of the profession, with a particular focus on teaching musical specificities, effectiveness, and performance orientation. Prestige is further reinforced by the significance attributed to the type and status of the school. In contrast, the educational function of the vocation is absent from the statements belonging to this dimension.

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<sup>15</sup> Cureton, Edward E., and Stanley A. Mulaik. “The Weighted Varimax Rotation and the Promax Rotation.” *Psychometrika*, vol. 40, no. 2, June 1975, pp. 183–195, <https://doi.org/10.1007/bf02291565>. Hendrickson, Alan E., and Paul Owen White. “Promax: A Quick Method for Rotation to Oblique Simple Structure.” *British Journal of Statistical Psychology*, vol. 17, no. 1, May 1964, pp. 65–70, <https://doi.org/10.1111/j.2044-8317.1964.tb00244.x>.

4) „Professional uncertainty” (6 items). This factor encompasses feelings and attitudes such as fear, inhibition, and frustration, which also manifest in the difficulties of engaging with the classroom community. The items describe a more withdrawn disposition, a tendency toward gradual progress from the bottom up, and a need for slow unfolding.

5) „Search for inspiration” (2 items). The item with the strongest factor loading expresses an inner need and drive that encompasses open-mindedness, the intention to learn from the work of others, curiosity, and motivation.

6) „*Confident action*”. This factor captures confident performance and self-representation. It shows a strong content-related connection with the dimension of pedagogical aptitude, while also displaying elements characteristic of prestige orientation. It can be interpreted as a kind of synthesis between these two factors, since, for example, the role of choir conductor presupposes leadership attitudes, long-term planning of professional (musical) creative work, organizational and managerial skills, as well as outstanding interpersonal competences.

### *Student Clusters*

With the help of the six identified career profile factors, we obtained well-defined attitudes. One of the main motives in exploring the characteristics of music teacher education students was to focus on the strengths and shortcomings of teacher candidates. The factors are standardized variables, with a mean of 0 and a standard deviation of 1; thus, in the case of respondents, positive factor values indicate that a given attitude is more characteristic than average, while negative factor values signify that it is less characteristic than average.

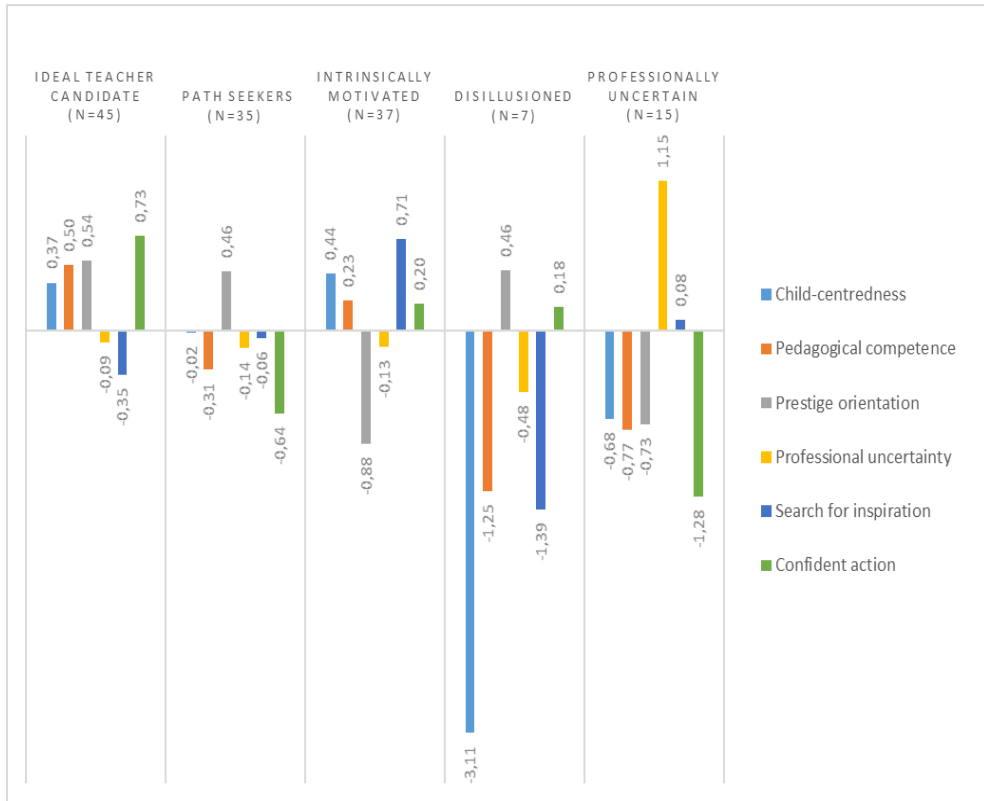
The identification of student profiles on the basis of the career profile factors was carried out through hierarchical cluster analysis using Ward's method.<sup>16</sup> As a result of the procedure, five clusters emerged, with each student assigned to exactly one cluster. The largest cluster included 45 students, while the smallest contained 7 students. It is important to highlight that during the analyses aimed at determining the number of clusters—while gradually reducing the number of clusters—this small cluster consistently remained distinct from the others. This indicates

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<sup>16</sup> Agárdi, Anita. “Klasszikus Klaszterező Algoritmusok Módosítása Körút Alapon.” *Multidiszciplináris Tudományok*, vol. 11, no. 4, 2021, pp. 81–86, <https://doi.org/10.35925/j.multi.2021.4.9>. Accessed 14 Sept. 2025.

that its specific pattern is sufficiently pronounced and stable to retain its characteristics even through successive mergers. The names of the student profiles and clusters were developed by considering the characteristics most strongly associated with the factors that define each group. The deviations of student types along the career profile factors are presented in Figure 1.

**Figure 1**



**Characteristics of career clusters. N=139**  
**Source: ÉZETAK Database (2023)**

The five student types, based on career profile factors, are characterized by the following attributes.



The group of 45 students labeled as *ideal teacher candidates* is primarily characterized by statements related to confident performance (6th career profile factor) and prestige orientation/professional advancement (3rd career profile factor). They display ambition, strong motivation, and a pronounced need for professional fulfillment, and they are goal-oriented. Their conception of the teaching career is shaped by the aspiration to achieve across the professional spectrum. Based on their self-image, they are likely to possess personality traits that enable them to successfully manage pedagogical situations (2nd career profile factor). Their attitudes toward students and their drive to make an impact (1st career profile factor) also exceeded the average in a positive direction. We consider them “ideal” because, on the basis of the items defining our career profile factors, these students are the most likely to realize their professional conceptions as teachers and to keep pace with the diverse and expanding functions of the teaching role.

The *path seekers* cluster (35 students) is characterized by a seemingly contradictory trait. Their defining feature is the importance attributed to prestige orientation and professional advancement (3rd career profile factor); however, they identified less strongly with the items related to confident performance. The first statement of this factor was connected to choral work, while the second presupposed self-confidence and assurance emphasizing the ability to succeed regardless of school type. Latently, this may reflect a more objective self-image and a realistic self-perception. At the same time, the items belonging to prestige orientation highlighted goal-directedness and concentration on the profession. Their motivation is presumably derived from external sources. Members of the *path seekers* cluster deviated little from the mean values; slight negative differences were observed in the factor of creative, child-centeredness (1), while slightly higher scores appeared in the variable group of search for inspiration (5). Professionally, they do not consider themselves uncertain, yet they do not identify as confident either. In essence, their career-related self-conception is more nuanced and less conspicuous, without marked or sharply defined characteristics. The balance of their personal convictions is not yet visible, which justifies the designation of this group as *path seekers*.

The *intrinsically motivated* cluster (37 students) is primarily characterized by a stronger presence of items related to the search for inspiration and to child-centeredness with creative energy. They possess a pronounced creative and generative inclination; beyond musical education, they are motivated by the teaching vocation itself and display openness toward other fields as well. They also identified more strongly with the items of pedagogical aptitude, though to a lesser degree than the *ideal teacher candidates*. In our view, their motivation

is primarily linked to teaching activities: they are individuals who take an active part in school life, and the quality of their future work is not dependent on external validation. They are not driven by more conspicuous forms of professional recognition, nor are they motivated by items highlighting professional advancement or explicitly profession-centered aspirations.

The profile of the fourth cluster is highly distinctive, as this small group (7 students) consistently remained separate throughout the cluster-merging process. Their negative deviations from the factor means are equally telling. Even prior to examining the interrelations, our impression is that at the time of the survey, they were characterized by a sense of disillusionment and apathy. They identified the least with the statements of the first factor (creative, generative child-centeredness) and the fifth variable group (search for inspiration). The negative deviation in relation to the first factor was particularly marked<sup>17</sup>, almost amounting to a rejection of the content elements of this dimension. Pedagogically, they do not consider themselves competent; however, in terms of professional knowledge, their self-image does not differ significantly from the average.<sup>18</sup> Surprisingly, this cluster displays the least doubt regarding their subject-specific and professional knowledge, exhibiting outstanding professional self-confidence. Their scores for confident performance (6th career profile factor) slightly exceeded the average, while they considered the items related to professional advancement and prestige orientation to be the most applicable to themselves. This is of particular interest, as other factors outlining the pathway necessary for professional advancement showed low levels of self-identification within the factor structure. In our view, this is a less motivated group.

The fifth cluster, the community of *professionally uncertain* students, consists of 15 university students. Their most dominant feature is their uncertainty, with the pronounced negative pole represented by the weakness of their confident performance. Among all student groups, they deviate the most from the average in these two factors. They seek inspiration only to a minimal extent, likely as a consequence of their professional insecurity. They tend to be withdrawn and are less capable of representing themselves within a community. They possess fewer of the attitudes associated with pedagogical aptitude, and they identified less strongly with the statements related to this dimension.

From the traits of the five student types, we highlight certain motifs that appear particularly noteworthy to us; however, our conclusions cannot be regarded as universally valid due to the diversity within the membership of the clusters:

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<sup>17</sup> deviation from the mean: -3,11

<sup>18</sup> deviation from the mean: -0,48

- The factors of confident performance and prestige orientation/professional advancement were more characteristic of the *ideal teacher candidates* than of the average.
- The attitudes of creative, generative child-centeredness and search for inspiration were most strongly embraced by the *intrinsically motivated* students.
- Doubts regarding professional and subject-specific knowledge were most characteristic of the *professionally uncertain* students.<sup>19</sup> An interesting aspect is that, in this regard, the *disillusioned* students proved to be the most confident<sup>20</sup>, while the *path seekers*<sup>21</sup> and the *intrinsically motivated* students moved around the average level<sup>22</sup>, followed by the *ideal teacher candidates*<sup>23</sup>.
- The *disillusioned* students and the *professionally uncertain* students are similar in that they deviate from the average in a negative direction in four of the six career profile dimensions. From this perspective, the indicators belonging to the *seekers* are closer to the average, although they identified primarily with the content of the prestige orientation variable group.
- When examining career conceptions and self-images, the motivations and commitments of the *ideal teacher candidates* and the *intrinsically motivated* students suggest a greater likelihood of spending a longer period in the teaching profession. It is encouraging that, in our study, these two profiles comprised a higher number of students.

## Discussion and conclusion

Our research, drawing on the career conceptions and attitudes of students enrolled in music teacher education, established a typology of teacher candidates currently in training. The study revealed that distinctly separate student profiles can be identified among teacher candidates. The five clusters, emerging along the six career profile factors, clearly demonstrate that students in music teacher education do not form a homogeneous group but differ in their motivational bases, self-conceptions, and potential for professional socialization. According to our findings, the *ideal teacher candidates* and the *intrinsically motivated* students exhibit the strongest commitment and professional

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<sup>19</sup> deviation from the mean: 1,15

<sup>20</sup> deviation from the mean: -0,48

<sup>21</sup> deviation from the mean: -0,14

<sup>22</sup> deviation from the mean: -0,13

<sup>23</sup> deviation from the mean: -0,09

potential for long-term persistence in the teaching profession, whereas the profiles of the *path seekers*, the *professionally uncertain*, and the *disillusioned* reflect more unstable relationships with the vocation and highlight the difficulties of professional socialization.

Our study supports the necessity of more differentiated and personalized developmental directions in teacher education, particularly for those student groups characterized by professional uncertainty or disillusionment. At the same time, it is important to emphasize that the higher proportion of types displaying positive attitudes offers favorable prospects for long-term commitment to the profession and the development of professional identity. The practical implications of the typology extend beyond the mere description of student attitudes: they may contribute to the development of targeted mentoring, support, and career guidance strategies within teacher education institutions, thereby enhancing the effectiveness of music teacher education and strengthening the social recognition of the teaching vocation in music.

## REFERENCES

- Agárdi, Anita. "Klasszikus Klaszterező Algoritmusok Módosítása Körút Alapon." *Multidiszciplináris Tudományok*, vol. 11, no. 4, 2021, pp. 81–86, <https://doi.org/10.35925/j.multi.2021.4.9>. Accessed 14 Sept. 2025.
- Ballantyne, Julie, and James Retell. "Teaching Careers: Exploring Links between Well-Being, Burnout, Self-Efficacy and Praxis Shock." *Frontiers in Psychology*, vol. 10, 18 Feb. 2020, <https://doi.org/10.3389/fpsyg.2019.02255>.
- Ballantyne, Julie, and Katie Zhukov. "A Good News Story: Early-Career Music Teachers' Accounts of Their "Flourishing" Professional Identities." *Teaching and Teacher Education*, vol. 68, Nov. 2017, pp. 241–251, <https://doi.org/10.1016/j.tate.2017.08.009>.
- Ballantyne, Julie, and Nicole Canham. "Understanding Music Teachers' Perceptions of Themselves and Their Work: An Importance–Confidence Analysis." *International Journal of Music Education*, vol. 41, no. 3, 28 Oct. 2022, p. 025576142211249, <https://doi.org/10.1177/02557614221124966>.
- Ben-Amram, Miri, and Nitza Davidovitch. "Novice Teachers and Mentor Teachers: From a Traditional Model to a Holistic Mentoring Model in the Postmodern Era." *Education Sciences*, vol. 14, no. 2, 1 Feb. 2024, p. 143, [www.mdpi.com/2227-7102/14/2/143](http://www.mdpi.com/2227-7102/14/2/143), <https://doi.org/10.3390/educsci14020143>.
- Cureton, Edward E., and Stanley A. Mulaik. "The Weighted Varimax Rotation and the Promax Rotation." *Psychometrika*, vol. 40, no. 2, June 1975, pp. 183–195, <https://doi.org/10.1007/bf02291565>.

- Darling-Hammond, Linda, and Peter Youngs. "Defining "Highly Qualified Teachers": What Does "Scientifically-Based Research" Actually Tell Us?" *Educational Researcher*, vol. 31, no. 9, Dec. 2002, pp. 13–25, <https://doi.org/10.3102/0013189x031009013>.
- Darling-Hammond, Linda. "Constructing 21st-Century Teacher Education." *Journal of Teacher Education*, vol. 57, no. 3, May 2006, pp. 300–314, <https://doi.org/10.1177/0022487105285962>.
- Draves, Tami J. "Teaching Ambition Realized: Paul's Beginning Music Teacher Identity." *Journal of Music Teacher Education*, vol. 29, no. 1, 29 Apr. 2019, pp. 41–55, <https://doi.org/10.1177/1057083719844211>.
- Hendrickson, Alan E., and Paul Owen White. "PROMAX: A QUICK METHOD for ROTATION to OBLIQUE SIMPLE STRUCTURE." *British Journal of Statistical Psychology*, vol. 17, no. 1, May 1964, pp. 65–70, <https://doi.org/10.1111/j.2044-8317.1964.tb00244.x>.
- Korthagen, Fred. "Inconvenient Truths about Teacher Learning: Towards Professional Development 3.0." *Teachers and Teaching*, vol. 23, no. 4, 31 July 2017, pp. 1–19, <https://doi.org/10.1080/13540602.2016.1211523>.
- Marion, Jones. "Supporting the Supporters of Novice Teachers: An Analysis of Mentors' Needs from Twelve European Countries Presented from an English Perspective." *Research in Comparative and International Education*, vol. 4, no. 1, Jan. 2009, pp. 4–21, <https://doi.org/10.2304/rcie.2009.4.1.4>.
- McKinsey, Phillip, and Paulo Santiago, editors. *Teachers Matter: Attracting, Developing and Retaining Effective Teachers*. OECD Education Committee, 2005. OECD, <https://doi.org/10.1787/9789264018044-en>
- Prather-Jones, Bianca. "Some People Aren't Cut out for It": The Role of Personality Factors in the Careers of Teachers of Students with EBD." *Remedial and Special Education*, vol. 32, no. 3, 1 Mar. 2010, pp. 179–191, <https://doi.org/10.1177/0741932510362195>.
- Sági, Mária and Szemerszki, Mária. "A Pályakezdő Pedagógusok Szakmai Fejlődési Igényei és Azok Megvalósulása," in *Pedagóguskutatások. Merre Tart a Pedagógusszakma?*, ed. Anna Fehérvári (Oktatókutatató és Fejlesztő Intézet, 2016), 53–93.
- Schon, Donald A. *Educating the Reflective Practitioner*. Jossey-Bass, 10 Feb. 1987
- Schön, Donald A. *The Reflective Practitioner: How Professionals Think in Action*. London, Temple Smith, 1983.
- Tschannen-Moran, Megan, and Anita Woolfolk Hoy. "The Differential Antecedents of Self-Efficacy Beliefs of Novice and Experienced Teachers." *Teaching and Teacher Education*, vol. 23, no. 6, Aug. 2007, pp. 944–956, <https://doi.org/10.1016/j.tate.2006.05.003>
- Veenman, Simon. "Perceived Problems of Beginning Teachers." *Review of Educational Research*, vol. 54, no. 2, June 1984, pp. 143–178, <https://doi.org/10.3102/00346543054002143>.

Venter, György and Buer, Jürgen, V. „*Tanárnak lenni: Szerepelvárások, terhelés, coping-stratégiák — empirikus neveléstudományi kutatások német nyelvterületen*” (Becoming a Teacher: Role Expectations, Workload, and Coping Strategies — Empirical Educational Research in German-Speaking Countries) Stúdium Kiadó, 1996