

Evaluation on the Relationship between Self-efficacy and Creative Teaching Behavior of Music Teachers

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Abstract: Music teachers' self-efficacy refers to teachers' beliefs about their ability to influence students to complete academic tasks, that is, teachers' beliefs about how they affect students' learning. This self-efficacy has two main components: one is general teaching efficacy, and the other is personal teaching efficacy. This article takes 1689 primary school students in grades 3 and 8 from one primary school and two junior high schools as the subjects and conducts a questionnaire survey to examine the relationship between teachers' innovative teaching behavior and students' innovative self-efficacy, the mediating role of innovative classroom atmosphere, and the moderating role of innovative situations in it. This article explores and finds that: first, the most important teaching style is the radical style; second, teaching style, general self-efficacy and creative teaching behavior are related; third, the older the teaching experience, the higher the level of creative teaching behavior ability of teachers (the creativity level index of teachers with teaching experience over 20 years is 4.29 ± 0.37).

Keywords: Music Teacher, Self-Efficacy, Creative Teaching, Research on Behavioral Relationships

1. Introduction

The quality of music teachers includes two aspects: one is basic professional literacy, and the other is personal psychological quality. In the teaching process, due to personal qualities, music teachers often exhibit greater self-confidence, resulting in greater self-efficacy. When the psychological quality of teachers is poor, such as impatience, emotional fluctuations, and inability to cope with various emergencies, it would have a significant impact on their teaching effectiveness.

For teachers' self-efficacy, a large number of scholars have made relevant research. Cumming M M conducted a nationwide survey of 171 special education personnel who provided assistance to students with emotional/behavioral disorders (EBD) in independent contexts. The results of the structural formula model prove that those special educators who have experienced more supportive working conditions (that is, stronger logistical resources and lower requirements) would have more controllable workload, feel less mental fatigue and pressure, have a higher sense of self-efficacy in teaching, and would more frequently use evidence-based teaching methods for their students [1]. Johnson T M proposed an evaluation standard that has many factors that affect the effectiveness of teaching, that is, individual fit is an important factor affecting teachers' teaching activities. The co-teachers of 127 students with learning difficulties and other high incidence rate diseases participated in the survey. The actor partner dependency model (APIM) found that teacher self-efficacy can predict the active participation of general educators without affecting the active participation of special educators. The results of moderate APIM research indicate that individual compatibility is not an important factor affecting teachers' self-efficacy and active participation in teaching, whether in general education or special education [2]. Sawyer B E investigated the differences in TSE (Teachers' self-efficacy) levels displayed by teachers during the teaching process, and specifically investigated the following issues: (a) child characteristics related to TSE exist, especially their disability and learning behavior; (b) the relationship between children's characteristics and TSE is consistent throughout the year. 37 teachers conducted a survey on the TSE and learning behavior of 114 students. Research has found that there is a certain interactive relationship between teachers and students in classroom teaching. The correlation between TSE and children's characteristics, especially their attention/endurance, is greater at the beginning of each academic year than at the end of the semester. Differences in the level of TSE presented by the teachers during the teaching process were investigated [3]. Although the above studies

have made teachers' self-efficacy, the theoretical knowledge is not practical and universal.

Teachers' self-efficacy (TSE) is a structure that is often studied because it has a positive relationship with students' achievements. However, in the inclusive early childhood special education (ECSE) classroom, teachers' self-efficacy is rarely studied. To fill this gap, this paper studied (a) teachers showing varying degrees of TSE towards students; (b) the characteristics of children, especially their disability status and learning behavior, are related to TSE; (c) the relationship between children's characteristics and TSE remains consistent throughout the academic year. 37 inclusive ECSE classroom teachers completed a survey to determine their specific TSE and learning behavior towards 114 children. The results indicate that teachers have varying degrees of TSE towards the students in their classrooms. The characteristics of children, especially their attention/persistence, are related to TSE, and there is a greater relationship between TSE and child characteristics at the beginning of the school year than at the end of the school year. Implications for faculty professional development are discussed.

Music, as a unique art form, not only cultivates students' emotions, willpower, and creativity, but also plays an important role in their emotions, willpower, and creativity. Music teachers should adapt to the development of modern education, while striving to shape their own teaching personality, and they should also strengthen their own ideological construction, establish a correct understanding of the teaching attitude, emotions, and values of music courses, influence and guide students with correct teaching concepts, and set a good example for them. For improving music teachers' self-efficacy and bringing students good learning experience, the discussion of the relationship between music teachers' self-efficacy and creative teaching behavior in this paper is of research significance.

2. Self-efficacy and Creative Teaching Behavior

2.1 Self-efficacy Theory

Self-efficacy is an individual's confidence and evaluation of what they do. It refers to an individual's level of confidence in themselves when completing a certain task [4-5]. The relationship between "cause" and "effect" is explained based on the theory of human, cause, and effect determination based on the interaction of "human environment behavior" [6-7]. It has been valued, adopted and studied by psychology, sociology, organizational behavior and many other disciplines. Self-efficacy theory is a theory closely related to the personality and goals of contemporary people, which emphasizes the establishment of individual emotions and confidence, and emphasizes the development of individual abilities [8-9].

With the continuous development of psychology and the continuous improvement of theories, many scholars have proposed some new theories related to the development of children's self-esteem, and believe that this theory plays a crucial role in children's learning and development [10-11]. Self-esteem is an individual's subjective evaluation of what they do [12-13]. An action does not lead to the reinforcement of subsequent actions, but when people realize the connection between action and reinforcement, they have expectations that their future abilities would be improved. These expectations include performance expectations and outcome expectations [14]. When people feel that they can purposefully do something, they would constantly give themselves confidence, which would accelerate progress [15]. This theory has played a significant role in promoting students' learning process. In music teaching, building confidence plays an important role in cultivating teachers' sense of responsibility, enhancing their sense of satisfaction, and improving their teaching ability.

2.2 Influencing Factors of Personal Teaching Efficacy of Music Teachers and Their Impact on Creative Teaching Behavior

(1) Teaching ability

Fundamentally speaking, the teaching ability of music teachers can be divided into two categories. Educational ability refers to the organizational ability of music teachers in classroom teaching, the selection and individualized teaching of textbooks, and the ability to organize and express language, such as "Love China". What kind of organizational method should teachers use to enable students to quickly grasp the characteristics of songs and combine their emotions during the learning process, thus achieving the goal of singing? The creative ability is reflected in the ability of music teachers to grasp students' learning status and psychology in the classroom, and to flexibly use different teaching methods to stimulate their musical thinking, thereby improving their ability to feel, understand, and

express music [16-17].

(2) Personality characteristics of music teachers

Among the personality traits of teachers, there are two important characteristics that can have a significant impact on teaching effectiveness: One is the enthusiasm and compassion of the teachers. In the new music curriculum standard, it is pointed out that music courses are centered on aesthetics and driven by interests and hobbies. The level of enthusiasm of music teachers has a significant impact on students' enthusiasm. Every student's ability to comprehend music is different. Therefore, in the teaching of music teachers, only by holding a mentality of equality, being compassionate, and teaching according to their aptitude can they truly win the students' love [18]. Secondly, teachers with a tendency towards provocation and imagination, as well as high individual self-efficacy, have a more outgoing personality and are able to better handle students' situations. They are also able to better combine the characteristics of music majors and choose appropriate teaching methods to stimulate students' imagination and creativity [19].

(3) Monitoring capability

The teaching monitoring ability of teachers is a concept closely related to the sense of teaching effectiveness. It refers to the fact that teachers, in order to ensure the smooth progress of teaching and achieve predetermined teaching objectives, treat teaching activities themselves as objects of consciousness throughout the entire teaching process, constantly awaken them, and actively plan, inspect, evaluate, and regulate teaching. Research has shown that there is a very close connection between teacher efficacy and their teaching supervision ability. Whether it is a novice teacher or an expert teacher, there is a very clear correlation between personal teaching efficacy and teaching behavior, as well as their various dimensions. Among beginners and expert teachers, the relationship between individual teaching efficacy and teaching behavior is the best. Due to the fact that the new music course is primarily practical, it has stronger activity compared to other courses. Therefore, it requires music teachers to have stronger monitoring abilities. While ensuring the achievement of teaching objectives, it is also necessary to fully leverage students' enthusiasm and classroom initiative [20].

3. Experiment on the Relationship between Self-efficacy and Creative Teaching Behavior

(1) Subject

The study focused on 8 primary schools in 5 regions and 3 counties of Shandong Province, and conducted a random sampling study on them. During the research process, the researchers distributed 350 questionnaires to the subjects, collected 288 questionnaires, and collected 251 valid questionnaires. The average age of the study subjects was 35.6 years old, with a standard deviation of 8.1.

(2) Research tools

a) The Creative Behavior Scale for Primary School Teachers consists of 45 items and measures teachers' creative behavior from 9 dimensions: independence, inclusiveness, motivation, appreciation, flexibility, evaluation, problems, opportunities, and setbacks. It is a formal questionnaire. The revised scale consists of 28 items, divided into four dimensions: teaching style, motivation, appreciation opportunities, and enhanced adaptability, and is rated on a 5-point scale (from completely inappropriate to completely appropriate).

b) Teaching style evaluation scale

Table items are divided into seven types of teaching styles: legislative, executive, evaluative, holistic, local, radical, and conservative.

c) Chinese version of the general self-efficacy scale

(3) Related formulas for data processing

The calculation formula for the correlation coefficient R between variables is as follows:

$$R(X, Y) = \frac{Cov(X, Y)}{\sqrt{VarXVarY}} \quad (1)$$

Among them, Cov(X, Y) is the covariance between X and Y; VarX is the variance of X; VarY is the

variance of Y.

The formula for standard deviation SD is as follows:

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(4) Experimental results

The total score of creative teaching behavior among primary school teachers is 16.62, with a standard deviation of 1.81. The scores on various dimensions of creative teaching behavior are shown in Figure 1.

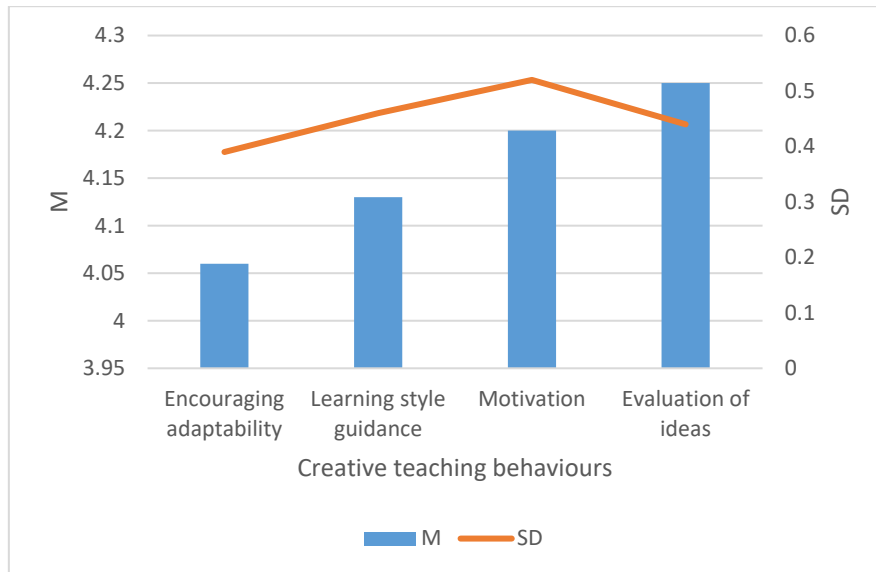


Figure 1: Overall situation of teachers' creative teaching behavior

From Figure 1, it can be seen that the four major dimensions of teacher innovation behavior are encouraging flexibility, guiding learning style, motivation, and evaluation perspective. There are significant differences in "motivation elasticity" in terms of directed learning style, motivation, and evaluation perspectives. The score of guided learning style is significantly higher than that of motivational and evaluative learning style, while the score of individual learning style is the lowest.

Based on survey data, Figure 2 shows the scores of seven learning styles evaluated by primary school teachers, arranged in the following order: legislative, radical, evaluative, holistic, partial, conservative, and executive.

As shown in Figure 2, the main teaching style of primary school teachers is the radical style, and the proportion of judgmental teaching style is the smallest among primary school teachers (the maximum SD means the maximum standard deviation, so the proportion is smaller). Studying the teaching style of primary school teachers can provide people with a clear understanding of their teaching style in the classroom, which can also reflect their thinking style from one side and predict their innovative teaching behavior. This is very helpful for primary school teachers to better cultivate innovative primary school students.

From Table 1, it can be concluded that:

The correlation coefficient is relatively small, and the ones that are not significantly correlated include: executive and encouraging flexibility, executive and learning style guidance, executive and viewpoint evaluation, executive and creative teaching behavior overall, legislative and executive behavior, conservative and encouraging flexibility, executive and motivational stimulation, conservative and learning style guidance, conservative and viewpoint evaluation, conservative and creative teaching behavior in general, legislative and conservative behavior, executive and radical behavior, executive and general self-efficacy, conservative and motivation motivation, overall and general self-efficacy, judgment and opinion evaluation, partial and general self-efficacy, general self-efficacy and learning style guidance, general self-efficacy and opinion evaluation, local and

encouraging flexibility, general self-efficacy and motivation stimulation, local and learning style guidance, radical versus conservative, conservative versus general self-efficacy, general self-efficacy versus encouraging flexibility, executive versus holistic, critical versus general self-efficacy, local versus opinion evaluation, general self-efficacy versus creative teaching behavior in general, legislative versus general self-efficacy, radical versus general self-efficacy, critical behavior versus motivational behavior, local versus creative teaching behavior in general, and judgmental and encouraging flexibility.

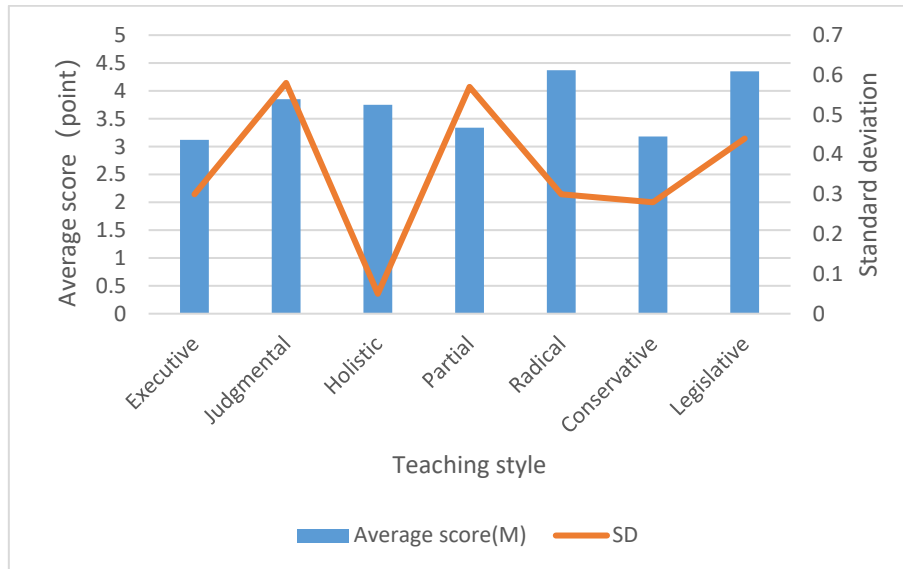


Figure 2: Overall situation of teacher teaching style

The correlation coefficient is moderate and belongs to the following categories: executive and evaluative, evaluative and creative teaching behavior overall, local and motivational behavior, legislative and local behavior, holistic and learning style guidance, evaluative and learning style guidance, holistic and encouraging flexibility, proactive and motivational stimulation, radical and viewpoint evaluation, holistic and conservative behavior, holistic and viewpoint evaluation, legislative and motivational stimulation, local and radical behavior, holistic and motivational stimulation, holistic and creative teaching behavior overall, radical and learning style guidance, legislative and critical behavior, radical and encouraging flexibility, radical and creative teaching behavior overall, critical and conservative, critical and holistic behavior, holistic and radical behavior, legislative and learning style guidance, legislative and viewpoint evaluation, legislative and holistic behavior, overall and local behavior, legislative and creative teaching behavior overall, critical and radical behavior, executive and local behavior, legislative and encouraging flexibility, local and conservative behavior, and critical and local behavior.

Table 1: Correlation coefficient matrix of teaching style, general self-efficacy and creative teaching behavior of primary school teachers

	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1												
2	0.09	1											
3	0.53	0.4	1										
4	0.59	0.33	0.57	1									
5	0.44	0.62	0.65	0.59	1								
6	0.71	0.18	0.61	0.57	0.51	1							
7	0.17	0.71	0.54	0.48	0.64	0.32	1						
8	0.36	0.19	0.34	0.29	0.3	0.36	0.32	1					
9	0.58	-0.03	0.45	0.44	0.32	0.52	0.13	0.3	1				
10	0.49	0.13	0.38	0.52	0.41	0.45	0.26	0.31	0.7	1			
11	0.58	0.01	0.3	0.48	0.34	0.45	0.15	0.3	0.79	0.79	1		
12	0.63	-0.06	0.39	0.45	0.31	0.53	0.12	0.32	0.87	0.75	0.86	1	
13	0.61	0.02	0.4	0.52	0.38	0.53	0.16	0.35	0.92	0.88	0.94	0.96	1

Note: Different variables in the table above are represented by Arabic numerals, and 1-13 respectively represent the overall teaching behavior of legislation, implementation, evaluation, integrity, partial, radical, conservative, general self-efficacy, learning style guidance, motivation stimulation, opinion evaluation, encouraging flexibility, and creativity.

The correlation coefficient is high, and there is a significant correlation between learning style

guidance and motivational stimulation, legislative and radical types, executive and conservative types, motivational stimulation and encouraging flexibility, learning style guidance and viewpoint evaluation, motivational stimulation and viewpoint evaluation, viewpoint evaluation and encouraging flexibility, guiding and encouraging flexibility in learning methods, motivational stimulation and creative teaching behavior overall, guiding and creative teaching behavior overall, viewpoint evaluation and creative teaching behavior overall, encouraging flexibility and creative teaching behavior overall.

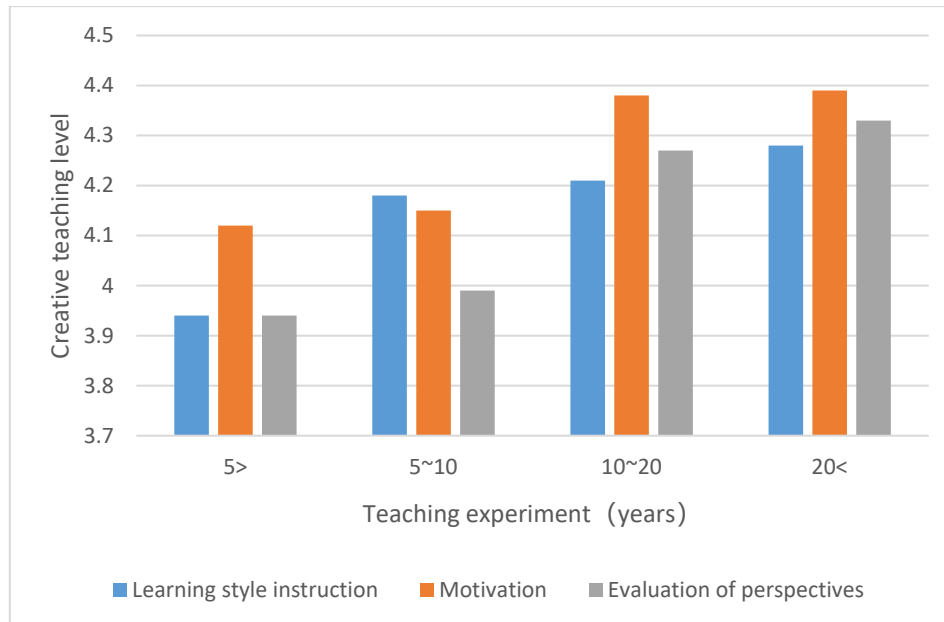


Figure 3: Comparison of creative teaching behavior levels among teachers of different teaching years

Figure 3 shows that teachers' scores in the dimension of creative teaching behavior often gradually increase with the increase of working years. The difference between dimensions over 5 years and over 10 years is slightly smaller, and the difference between dimensions under 5 years and over 5 years is the largest.

4. Conclusions

The overall confidence of music teachers is influenced by many factors, not only related to work, but also to other aspects of life. Therefore, teachers must continuously develop their teaching skills, follow new concepts and teaching methods, and rationally evaluate their successes and failures in the teaching process to improve teaching effectiveness. In interview, teachers gave students more autonomy in teaching and listened to their questions. This autonomous and open teaching approach has led to the development of teacher-student relationships, allowing students to discover and solve problems on their own under the guidance of teachers, which has improved their job satisfaction. This paper discusses the relationship between self-efficacy and creative teaching behavior of music teachers, and proves their correlation through experiments, which is of great benefit to improving the teaching effect of music teachers.

References

- [1] Cumming M M, O'Brien K M, Brunsting N C. *Special Educators' Working Conditions, Self-Efficacy, and Practices Use With Students With Emotional/Behavioral Disorders: Remedial and Special Education*, 2021, 42(4):220-234.
- [2] Johnson T M, King-Sears M E, Miller A D. *High School Co-Teaching Partners' Self-Efficacy, Personal Compatibility, and Active Involvement in Instruction: Learning Disability Quarterly*, 2022, 45(2):96-107.
- [3] Sawyer B E, O'Connell A, Bhaktha N, et al. *Does Teachers' Self-Efficacy Vary for Different Children? A Study of Early Childhood Special Educators: Topics in Early Childhood Special Education*, 2022, 42(1):50-63.
- [4] Harris J, Leeming P. *The impact of teaching approach on growth in L2 proficiency and self-efficacy: A longitudinal classroom-based study of TBLT and PPP. Journal of Second Language*

Studies, 2022, 5(1):114-143.

[5] Muneer K H, Aboobaker N. Effectiveness of web-based learning environment: role of intrinsic learning motivation, computer self-efficacy, and learner engagement. *Development and Learning in Organizations: An International Journal*, 2022, 36(4):13-16.

[6] Papavassiliou-Alexiou I, Moutiaga S, Papaioannou A. Career resilience and self-efficacy of Greek primary school leaders in times of socioeconomic crisis. *International Journal of Educational Management*, 2022, 36(2):164-178.

[7] Narayanan M, Ordynans J. Self-efficacy is a story: teachers' possible selves in a pandemic world. *Journal for Multicultural Education*, 2022, 16(1):64-76.

[8] Luo T, Su W, Li W C. The Development and Validation of a Survey for Evaluating Primary Students' Self-efficacy in STEM Activities. *Journal of Science Education and Technology*, 2021, 30(4):1-12.

[9] Zben A, Klcoglu E. The Development Process of Classroom Teacher Candidates for Teaching Mathematics: Self-Efficacy, Anxiety and Professional Belief. *Participatory Educational Research*, 2021, 8(2):129-146.

[10] Al N. Teacher Trainees' Computer Self-Efficacy: Its Relationships towards Implementation of Blended Learning. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 2021, 12(3):398-405.

[11] Nielsen T. Pre-Academic Learning Self-Efficacy Revisited: Validation in the Danish Academy Profession Degree Context and Differences Across Degree Programs. *Scandinavian Journal of Educational Research*, 2021(2):1-14.

[12] Aladini A, Jalambo M. Dramatizing the CLIL to Promote Learners' Speaking Skills and Their Self-efficacy. *Universal Journal of Educational Research*, 2021, 9(1):37-52.

[13] Arslan S, Kl M, Toan M. Effect of Education and Monitoring on Level of Diabetic Patients' Self-efficacy and Health Beliefs. *Kocaeli Medical Journal*, 2021, 10(1):171-182.

[14] Jenen L, Gierlinger F, Eilerts K. Pre-service teachers' enjoyment and ICT teaching self-efficacy in mathematics – an application of control-value theory. *Journal of Digital Learning in Teacher Education*, 2021, 37(3):1-13.

[15] Ramanathan P, Divya K Y. creative teaching strategies. *Journal of Nursing Education*, 2020, 6(2):34-39.

[16] Makris S, Welch G F, Himonides E. Music Teachers' Perceptions of, and approaches to, Creativity in the Greek-Cypriot Primary Education. *The Journal of Creative Behavior*, 2022, 56(1):92-107.

[17] Regier B J. Preservice music teachers' self-efficacy and concerns before and during student teaching: *International Journal of Music Education*, 2021, 39(3):340-352.

[18] Edelman P B. Cooperating Music Teachers' Opinions Regarding the Importance of Selected Traits, Behaviors, and Skills as Predictors of Successful Student Teaching Experiences: *Journal of Research in Music Education*, 2021, 68(4):451-468.

[19] Kibici V B, Sarkaya M. Readiness Levels of Music Teachers for Online Learning during the COVID 19 Pandemic. *International Journal of Technology in Education*, 2021, 4(3):501-515.

[20] Jordhus-Lier A. Negotiating versatility and specialisation: On music teachers' identification with subject positions in Norwegian municipal schools of music and performing arts: *International Journal of Music Education*, 2021, 39(4):450-463.