

# The Craftsmanship that Disappeared? Investigating the Role of the Principal Instrument in Music Teacher Education Programs

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**Abstract:** This chapter investigates the role of the principal instrument in music teacher education programs that qualify people to teach music in Norwegian compulsory schools. The data material for the study is the mapping of 12 music teacher education institutions and the reflection notes from six music teacher educators. The theoretical premises for the paper are Aristotle's concept of *techné* and Fullan's description of deep learning. *Techné* concerns both technical skills and artistic sensitivity, and this combination provides a framework in which to discuss the educators' reflections about the principal instrument in music teacher education in relation to deep learning, which entails commitment, perseverance, and the learner as a whole human being. This chapter leans on previous studies on music teacher education and the new curriculum for Norwegian compulsory schools, and the concluding remarks point to new perspectives that are needed to evolve music teacher education, concerning both the subject of music and what skills and types of knowledge music teachers should ideally have.

**Keywords:** principal instrument, music teacher education, *techné*, deep learning

In March 2018, a group of generalist music teacher students from the Norwegian University of Science and Technology (NTNU) and a group of specialist music students from the Conservatory in Amsterdam discussed the need for specialist music knowledge, principal instrument skills, handicraft, and musical skills in their future profession as music teachers. As part of this discussion, the students were asked by the facilitator to place themselves on an axis from left to right, where the left side reflected the standpoint that specialist music knowledge was crucial for teaching music in school and the right side that specialist knowledge was less important. The Norwegian generalist students generally positioned themselves further to the right and the specialist students further to the left. This reflected a great difference in their views on the knowledge and skills that are necessary for music teachers. This exercise led to a follow-up discussion among the students about how their music teacher education programs emphasize specialist music knowledge differently.

Ongoing discussions in the international field of music education research concern the content, forms, and aims that should constitute music teacher education programs (e.g., Bowman, 2007; Johansen, 2007; Kaschub et al., 2014; Sætre, 2014, 2018). A central topic in these discussions is the relative importance of generalist knowledge and specialized knowledge for the effective teaching of music in schools (e.g., De Vries, 2015; Dobrowen, 2020; Holden & Button, 2006). In this chapter, we approach this topic by examining how skills with a principal instrument is emphasized in music teacher education programs that qualify people to teach in Norwegian primary and secondary schools. Historically, music education builds on a master-apprentice tradition, wherein a master (for example, of the violin or piano) teaches learners at various levels (Gies, 2019). This tradition is also found in music teacher education programs in Norway (Sætre, 2014). Today, this tradition is challenged or supplemented by music technology, and there is reason to believe that the same challenges concerning authentic and inauthentic learning and learning spaces as presented by Eiksund and Reistadbakk (2020), is also valid in the education of music teachers. For teaching classroom music in primary and secondary schools, the debates center on who are best suited

as teachers, those with expertise on an instrument or those with expertise in classrooms and teaching young pupils (Daniel & Parkes, 2017; De Vries, 2015; Hennessy, 2000; Holden & Button, 2006; Russell-Bowie, 2009; Seddon & Biasutti, 2008; Wiggins & Wiggins, 2008). These debates reveal a lack of confidence among generalist school teachers towards teaching music, which does not necessarily correspond to a lack of skills or formal music education. The debates also point to a frequent notion about music as a “special” subject in school that requires and nurtures given talent (Hennessy, 2000; Ruddock & Leong, 2005; Russell & Bowie, 2013). We aim to contribute to these discussions by examining the research question: *How is a principal instrument emphasized in music teacher education in Norway?* We were curious to find out how much time is dedicated to the student’s principal instrument in diverse music teacher education programs and how music teacher educators reflect upon the time spent on principal instruments. Our data material for this study is derived from (1) a survey of institutions that offer music teacher education programs qualifying people to teach music in Norwegian primary and lower secondary schools and (2) reflection texts from six music teacher educators working in these institutions. By using the theoretical and philosophical premises from Aristotle’s concept of *techné* and the concept of deep learning in educational theory and curricula (Fullan & Langworthy, 2013; Fullan et al., 2018; NOU, 2015: 8), the discussions about the role of the principal instrument in music teacher education can be deepened and the division between generalist/specialist musical skills challenged.

Our motivation for this study partly relates to the new curriculum for primary and lower secondary schools introduced in Norway (2020)<sup>1</sup> and to its increased focus on music as a practical and creative subject, as well as the introduction of the concept of deep learning in the curriculum. For example, music is presented as a subject with creative power that fuels the pupil’s urge to explore, create, and experiment. Deep learning concerns the pupil’s gradual development in understanding the concepts, systems,

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<sup>1</sup> Fagfornyelsen [the Renewal of subjects]/ LK20 is an education reform gradually introduced in Norwegian primary, lower secondary, and upper secondary education and training during 2020. See <https://www.udir.no/laring-og-trivsel/lareplanverket/fagfornyelsen/hva-er-nytt-fagene-les-vare-korte-oppsummeringer#147424>

methods, and contexts within a particular subject area, as well as topics and issues that intersect several areas. Central to the idea of deep learning is that students engage in analyzing and problem-solving and that they reflect upon their own learning to construct a lasting understanding (NOU, 2015: 8). These aspects of deep learning make it relevant for examining the place of the principal instrument in music teacher education. Our motivation also builds on previous research on the subject of music in compulsory schools in Norway (e.g., Bandlien, 2019; Dobroven, 2020; Fredriksen, 2018) and other Scandinavian countries (e.g., Georgii-Hemming & Westwall, 2010; Holgersen & Holst, 2020; Lindgren & Ericsson, 2011) and international research on music teacher education (e.g., Bowman, 2007; Kaschub et al., 2014). A main topic in this research is how music education in schools can be understood as an individual pursuit, with little support provided by the school as an organization and the professional community (Benedict & Schmidt, 2014; Dobrowen, 2020; Fredriksen, 2018; Georgii-Hemming & Westwall, 2010). Another major topic is the underlying tension between the positioning of the subject of music as an arena for the pupil's general growth and well-being, or as an arena in which to gain specific musical knowledge and skills (Bowman, 2007; Lindgren & Ericsson, 2011). A third main topic relates to the music teacher's competence, background, and tasks, and to the critical questioning of who is best suited to teach music in the compulsory school; the specialized music teacher or the generalist teacher who teaches music as one of several school subjects (Dobrowen, 2020; De Vries, 2015, 2013; Hennessy, 2000; Holden & Button, 2006; Wiggins & Wiggins, 2008). Previous research elaborates on how teachers with different educational backgrounds, as specialists or generalists, tend to choose different content and activities in their music teaching. For example, Sætre et al. (2016) found that teachers in the lower grades (1–4) often are female, seldom use instruments in their classes, and have low participation in non-formal musical activities outside of school (choirs, wind bands, etc.), while music teachers in the higher grades often are male, use instruments, and are more oriented towards individual musical activities, such as composing, listening, and playing. Interestingly, a study about music and other arts subjects in generalist teacher education in Sweden (Lindgren

& Ericsson, 2011) revealed that a *lack* of specialized competence is seen as a sign of pedagogical quality, as this equalizes the position between the teachers and the students and makes the subjects (e.g., music) seem less threatening.

In this chapter, we follow up on the discussion between the Norwegian and Dutch music teacher students (from the start of the chapter), by examining how a principal instrument is emphasized in music teacher education programs. The chapter has four parts. The first part elaborates on the concepts of *techné* and deep learning, which serve as the theoretical premises for our discussion. The second part explains our research design: (i) how we mapped the diverse music teacher educational programs that exist in Norway, and the hours spent on a principal instrument in these programs, and (ii) how we conducted the work of gaining reflection notes from six educators in these programs. After analyzing and discussing these in the chapter's third part, we end the chapter with some concluding remarks on the (perhaps artificial) division between specialist and generalist music teachers, and about a possible reconsideration of principal instruments in transgressive and transformative music teacher education.

## Theoretical Perspectives

To theoretically dive into the new curriculum's emphasis on practical and creative work in music and deep learning, Aristotle's concept of *techné* serves as our entrance. Our use of the term *techné* is philosophically geared through Heidegger's philosophy on art, and music-pedagogically geared through Varkøy et al.'s thoughts about music and craftsmanship (Aristotle, 2011; Heidegger, 2006; Varkøy et al., 2020). The Greek concept of *techné* (English: *art*) concerns the necessary knowledge of bringing something new into the world and implies both technical skills and artistic sensitivity. Technical skills are undoubtedly needed to play an instrument, and performing musicians need technical knowledge. This knowledge may also be necessary for music teachers in teaching pupils to play and sing alone and together with others. However, the Aristotelian term *techné* does not refer to mere technical skill, but rather to

the knowledge that allows one to perceive the sense of “being” and be able to put this into one’s work, in artworks (Heidegger, 2006). Related to music and art, this interpretation of *techné* coincides with the term “handicraft” and with the aesthetic aspects of artistic expression and craftsmanship. In this sense, handicraft does not relate to mere technical skill but to a way of knowing that is crucial for bringing something new and authentic into the world. In this view, *techné* (both skills and sensitivity) is needed to “do” (make/create/explore) music, as required in the curriculum (The Norwegian Directorate for Education and Training, 2019). Importantly, *techné* is not about the superficial skills needed to reproduce (as machines) but is deeply rooted in the essence of human beings. Music, understood as an object, is also suggested to imply depth, with different layers of meaning that correspond to different layers of human consciousness (Nielsen, 1998, pp. 137–139). From this perspective, refinement in playing a principal instrument can be seen as revealing forms of knowledge that contain depth in relation to the craft, the music played, and the human being.

The concept of deep learning has flourished in international educational literature and research from mid-2000 and is heavily emphasized in the 2020 curriculum for compulsory schools in Norway (Ministry of Education and Research, 2017; NOU, 2015: 8). This idea can be traced back to the mid-1970s (Marton & Säljö, 1976) and refers to the distinction between surface learning (simple memorization of new ideas) and deeper learning (actively integrating new ideas with previous knowledge and creating new connections between concepts) (Ahrony, 2006; Biggs, 1999). The concept of deep learning has been employed in general research on education, teaching, and learning (e.g., Biggs, 2004; Filius et al., 2018; Hay, 2007), in research on different subjects and in diverse contexts (e.g., Rillero, 2016; Hall et al., 2004), and in music education research (e.g., Ferm & Johansen, 2008). So far, however, we have not found studies that employ this term specifically with regard to teaching and training in a principal instrument. Garrison et al. (2001) emphasized that the whole person needs to be engaged to promote deep learning cognitively, socially, and affectively. Deep learning is thus meaningful learning that goes beyond the acquisition of new skills and information.

Michael Fullan and his colleagues explain deep learning as a means to develop learners to become creative, connected, collaborative, engaged, and healthy individuals with skills to pursue their own visions in an ever-emerging world (Fullan et al., 2018, 2013). Fullan describes deep learning skills as concerning *character* (e.g., honesty, self-regulation, perseverance, responsibility, and self-confidence), *citizenship* (e.g., sensitivity and respect for others), *communication*, *critical thinking*, *problem solving*, *collaboration*, *creativity*, and *imagination*. The Ludvigsen Committee<sup>2</sup> (NOU, 2015: 8), which has thoroughly prepared and influenced the new curriculum in Norway, defines deep learning as the understanding of concepts and interrelationships within one discipline or across disciplines, which is developed and nurtured gradually and over time. They explain deep learning as characterized by processes in which the pupils become absorbed by the learning material over time, are given suitable challenges, and receive useful feedback. The students' own reflections on their learning are emphasized as necessary to improve their understandings of the connections between disciplines (NOU, 2015: 8, p. 14). However, a critique of the curriculum's explanation of deep learning is that it is one-sided, targeted towards the cognitive perspective of learning, but lacks the perspectives of childhood and adolescence, as well as humanity and society as a whole, which are needed to fully grasp the complexity of learning in primary and secondary schools (Østern et al., 2019). In our study, the tensions and topics around the concept of deep learning, as related to the above discussions of the concept of *techné*, serve as a framework in which to discuss the mapping and the reflections on the importance of principal instruments in music teacher education.

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2 The Ludvigsen Committee's mandate was to assess and report on what pupils need to learn in school in a perspective of 20 to 30 years (NOU, 2015: 8, p. 3).

## Research Design

In Norway, several paths can be chosen to gain formalized qualifications to teach music in primary (grades 1–7) and secondary (grades 8–10) schools. Some of these paths are clearly targeted towards music and musicians, with pedagogical courses as an add-on education. Others are clearly targeted towards classroom teaching and the teacher profession.<sup>3</sup> To gain an overview of this varied landscape, our first step was to map what education programs confer the formal qualification of music teacher in compulsory schools in Norway, and the amount of lesson hours on a principal instrument these programs offer. Our second step was to approach six music teacher educators from the two types of music teacher education programs that are most targeted towards the teacher profession (types 1 and 2, which will be explained in the results section) and ask them to reflect openly on four questions about the role of the principal instrument in their education.

In 2018–2020 we conducted the mapping part first through finding the diverse institutions that offer music teacher education in Norway. This information was found in the Ministry of Education and Research's list of state-owned universities and university colleges<sup>4</sup> and through web searches of private institutions, such as the Barratt Due Academy. In total, 12 institutions were located. Secondly, we found the relevant contacts and e-mail addresses via the different institutions' web pages and forwarded our questions to the music education program leaders. These questions concerned (1) the amount of principal instrument lessons given to each student during their music teacher education, and (2) the duration of these lessons (appendix 1). These steps provided us with the information to map the landscape and identify huge differences in the amount of lesson time given to principal instruments and the duration of these lessons (appendix 3). To further explore how the principal instrument was viewed in these education programs, we needed qualitative data. To generate these, we designed a short reflection note, with four questions, and emailed them to six music teacher

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3 In reality, almost 60% of those who teach music in the compulsory schools have no credit points in music, but this study does not focus on that aspect (Statistisk Sentralbyrå, 2019).

4 <https://www.regjeringen.no/en/dep/kd/organisation/kunnskapsdepartementets-etater-og-virk-somheter/Subordinate-agencies-2/state-run-universities-and-university-co/id434505/>

educators (later referred to as E1–E6), including a question on their willingness to participate. E1–E3 are from the specialist music teacher education (SMTE) and E4–E5 are from generalist teacher education (GTE). E6 is from both SMTE and GTE. These six reflection notes are seen as examples, not as representative of music teacher educators' views on the place of the principal instrument in music teacher education. The questions were designed to encourage freely written reflections on the educators' meanings about the role of the principal instrument in their education (appendix 2). The written form was chosen to provide the teachers with the freedom to write and revise whenever they had time.

The analysis of the reflection texts was done through a qualitative, inductive approach, identifying the reoccurring themes across the texts (Braun & Clarke, 2006; Creswell & Creswell, 2018). The six reflection texts (altogether 20 pages) were arranged in groups relating to what kind of music teacher education program the educators were engaged in: (i) specialist music teacher education or (ii) generalist music teacher education. Secondly, we read the texts with the aim of grasping a general description of these programs, along with the overall meanings ascribed to the role of the principal instrument in these programs. To facilitate this process, we wrote notes in the margins of the texts, collected these notes in a new document, and used these to write a small description of the two programs, which is presented in the results section of this chapter. As a third step, we aimed to identify the reoccurring aspects that the six educators expressed across the programs and then form these into themes for deepening the discussion. This step was implemented through a process of further synthesizing the reflection texts, bracketing segments and highlighting words and expressions that reoccurred in the six texts. From this investigation, we identified three themes: subject-specific, human-specific, and learning-specific. These themes were then advanced and discussed by mirroring them against the concepts of *techné* and deep learning (Aristotle, 2011; Heidegger, 2006; Varkøy et al., 2020). Our backgrounds and experiences as music teachers and music teacher educators were both fruitful and challenging in this analytical work; fruitful because we could relate to the contexts and practices described and challenging because we aimed for the analysis to

grow from the data and not from our background and preunderstandings. To meet this challenge, we constantly returned to the raw texts throughout the whole process and adjusted the in-progress analysis of the descriptions and the wording of the themes with regard to what the six educators actually wrote. In the following section, quotes and critical questions are provided to improve the transparency of the research process. This study has been conducted in line with the Norwegian Guidelines for Research Ethics in the Social Sciences, Humanities, Law and Theology (NESH, 2016) and the guidelines and requirements from the Norwegian Data Protection Services (NSD). All six educators who provided reflection notes are anonymized, and direct consultation with the NSD has ensured that the whole research process is conducted in line with the GDPR rules for privacy protection.

## Results and Discussion

### The Mapped Landscape

Several paths can be followed to gain formal qualifications as a compulsory school music teacher in Norway. This study's first step provided us with an overview of the diverse music teacher education programs that qualify people to teach music in the compulsory schools in Norway. Five formalized educational paths were found, two of them clearly targeting the teacher profession (1, 2) and three targeting the professions of musicians or musicologists, including a practical-pedagogical study programme, 60 ECTS (PPU) (3, 4, 5).

1. Specialist Music Teacher Education, [no: faglærerutdanning] (BA – 3–4 years, 180/240 ECTS)
2. Generalist Teacher Education, [no: grunnskolelærerutdanning] (MA – 5 years, 300 ECTS in total, music: 30/60/135 ECTS)
3. Music Performance Education, [no: utøvende musikkutdanning] (BA – 3/4 years 180/240 ECTS) + PPU
4. Bachelor in Musicology, [no: BA i musikkvitenskap] (3 years, 180 ECTS) + PPU
5. 1-year Music course, [no: årsstudium i musikk], (60 ECTS) + PPU

The mapping work also showed that the hours spent on principal instrument teaching in these programs were quite diverse (see appendix 3 for details). This might be obvious because the programs are differently targeted, but we were surprised to find huge differences also within the same educational programs in different institutions. To give an example: if a student chooses the second path, (2) GTE and the subject Music 1 (30 ECTS), only two out of eight institutions offer principal instrument lessons. If the student adds Music 2 (30 ECTS) for further specialization, three out of eight institutions offer lessons in principal instrument. However, this is not required to teach in primary and lower secondary schools in Norway. Some institutions also offer music as the master specialization subject (MA) in the GTE program. The table below shows the different music subjects or paths in the Generalist Teacher Education program in the different institutions and the total duration of principal instrument lessons that these programs offer.

**Table 1** Principal instrument lessons in GTE

<b>Institution</b>	<b>OsloMet</b>	<b>NTNU</b>	<b>UiA</b>	<b>INN</b>	<b>USN</b>	<b>UIS</b>	<b>UiT</b>	<b>HVL</b>
<b>Subject</b>								
Music 1	105 min	0 min	180 min	0 min	0 min	0 min	0 min	0 min
Music 2	105 min	150 min	0 min	0 min	0 min	0 min	0 min	360 min
MA	0 min	450 min	Not offered	0 min				

If we focus solely on the subject Music 1, Norwegian University of Science and Technology (NTNU), Inland Norway University of Applied Sciences (INN), University of South-Eastern Norway (ISN), University of Stavanger (UiS), and Western Norway University of Applied Sciences (HVL) offer zero principal instrument lessons. However, if the student is enrolled at the University of Agder (UiA), he/she will get a total of 180 minutes of lessons spread out over two semesters. Oslo Metropolitan University (OsloMet) also offers a total of 105 minutes of principal instrument lessons within the subject Music 1.

The differences between the education programs are also remarkable in the first path, (1) Specialist Music Teacher Education. This program

qualifies people for teaching music in Norwegian primary, lower, and upper secondary schools, and are located at different institutions; both earlier conservatories/music academies (UiA, NMH, UiT) and teacher educations (INN, Nord, HiVolda, HVL). The Norwegian Academy of Music (NMH) offer the most with a total of 65.25 hours of lessons on a principal instrument per student. In comparison, The Arctic University of Norway (UiT) which also offers a specialist program in music teaching, does not include principal instrument teaching.

**Table 2** Principal instrument lessons in SMTE

Institution Path	INN	Nord	UiA	HiVolda	NMH	HVL	UiT
SMTE	2160 min	2160 min	2880 min	810 min	3735 min	2160 min	0 min

SMTE: Specialist Music Teacher Education

The studies in music performance, musicology, and the 1-year course in music are equally diverse in the amount of lessons provided on a principal instrument, but since these types of programs are not first and foremost music teacher education, we refer readers to appendix 3 for further details.<sup>5</sup>

To summarize the findings: Although many of the aforementioned education programs provide qualifications for the same music teacher professions in primary and lower secondary schools, the differences between them are evident. These differences not only relate to the different programs but also to different institutions. Which university the students choose, therefore, determines if and how many lessons they will get on their principal instrument.

<sup>5</sup> Students with education in music performance or musicology will, in either case, need PPU to become qualified to teach music from the 5th grade and up. Fulfilled conservatory education or musicology, with PPU, does not qualify one to teach music in grades 1–4.

## Analysis of the Reflection Texts

As described, six reflection texts were gathered, three from educators in the generalist music teacher education program [no: grunnskolelærerutdanning] and three from educators in the specialist music teacher education program [no: faglærerutdanning]. The analytical work on these texts was geared towards describing the contexts and the educators' reoccurring themes about the principal instrument. In the following subsections, we first employ the reflection texts to describe these two types of education programs, (i) specialist music teacher education and (ii) generalist teacher education, and then we (iii) discuss the identified themes (subject-specific, human-specific, and learning-specific aspects) in relation to the concepts *techné* and deep learning.

### *(i) Specialist Music Teacher Education*

Three of the reflection texts (E<sub>1</sub>, E<sub>2</sub>, E<sub>3</sub>) were from teachers in specialist music teacher education programs. The descriptions of the different educations show variations in the practice fields that the educations target; e.g. Nord University targets: primary, lower and upper secondary school and UiT targets primary and lower secondary school. In E<sub>1</sub>–E<sub>3</sub>'s texts, the principal instrument seems emphasized not (only) as a main sole subject, but as a basis for other subjects, such as “music and communication” [no: musikkformidling] and “ensemble and leading” [no: samspill og ensembleledelse]. Specialized skill on one main instrument is explained in all three texts as a prerequisite to be able to play with others, perform for an audience, and conduct qualified and varied music lessons. Educator 3 describes this as follows:

Without skills on a principal instrument, I think the teacher will be poorer as a music-expert and will lack much insight into what it means to acquire a craft. These skills are transferable to other instruments and are absolutely fundamental to understanding what can be expected of a given group in specific situations. (Reflection text, E<sub>3</sub>)

Here, not only the specialized expertise but also the process of gaining expertise on a main instrument are emphasized as crucial in terms of becoming aware of future pupils' endeavors to take part in and perform

music in given situations. The reflection texts from the teachers in this type of music teacher education program explain that the students learn several instruments and might change their choice of a principal instrument over the three-year educational program. Educator 2 sees this as problematic in relation to a continuous and deepening learning process:

This means that students cannot access deep learning on their instrument, which is required if you are to be able to develop and have a good and constructive process. (Reflection text, E2)

According to this educator, the students should stick to the same principal instrument throughout their whole education to ensure they experience a long-term, ever-deepening, and continuous learning process.

The three educators from the music-specific teacher education program all describe an educational culture in which the principal instrument is regarded as a cornerstone of their programs, and where there is a broad consensus that aspiring music teachers need specialized knowledge and skills on an instrument to learn about themselves as well as about music and teaching. Teacher E6's expressions (which has a background from both GTE and SMTE) undermines this and shows a reluctance towards E1–E3 description. E6 points to a culture where the principal instrument has not been emphasized. He explains a culture where to have competence on several instruments are seen as more important than having one dedicated principal instrument.

### *(ii) Generalist Teacher Education*

Educators 4, 5, and 6 are teachers in the generalist teacher education program, which clearly targets the primary and lower secondary schools and qualifies the students to teach several subjects (for example, music and mathematics). In this program, all the students receive training in band playing and experience with band instruments, such as piano, guitar, bass and drums. This is explained by E4 and E5 as fundamental, and the band instruments are considered the most useful instruments through which to teach classroom music. E6 also points to that the relevance of a principal instrument in a classroom setting depends on which instrument the

teacher or teacher student plays. The principal instrument is not emphasized in the same way as in the subject-specific music teacher education program, but the “skills to play” are highlighted as important in both E4’s and E5’s texts. E5 explains that:

... the skills to play are demanded in order to function as a music teacher in compulsory schools, both to play for and with the pupils, support their learning processes, understand music from a performer’s perspective, and adjust the learning content/music according to the pupils and contexts. (Reflection text, E5)

However, music teacher students in these two generalist teacher education programs cannot necessarily choose the principal instrument that they know from before or want to learn. E4 writes that “the students have to choose either singing, guitar or piano,” and E5 points out that the students can only choose a principal instrument that is offered by the teaching staff in the institution, and that the subject “principal instrument” occurs for the first time in the 4<sup>th</sup> year of the education program.

The principal instrument is positioned in a different way in these reflection texts than in the texts from the educators in the music-specific teacher education program. E4 and E5 describe educational cultures in which the music educators agree that the student’s skills to play and sing are fundamental, but that the instrumental training as well can happen on “useful” instruments for classroom teaching, such as guitar and piano.

### *(iii) Principal Instrument – Art, Craft, and Deep Learning*

From the descriptions of the two types of music teacher education programs above, we now will discuss the three themes that reoccurred in the educators’ reflection texts about the role of the principal instrument. These themes relate to the use of the principal instrument for (a) *subject-specific concerns*, (b) *human-specific concerns*, and (c) *learning-specific concerns*. These are discussed in the following paragraphs and elaborated in relation to this chapters theoretical premises.

A topic emphasized in all six reflection texts is that mastering an instrument is essential to understanding and being able to teach music.

Even though the principal instrument is not the most weighted subject in the student's timetable, the ability to play for and with others is explained as a basis for understanding music as a subject, as well as an important area of learning. One educator explained that the principal instrument is the foundation for all music disciplines, such as music communication, choir, projects, concerts, and piano accompaniment (E3). These diverse musical disciplines and activities all include communication with others, and insights around finding and taking one's right place. For example, in a band setting, a musician's role is different when playing the bass or a percussion instrument or singing solo. The fundamental aspects of the music (steady rhythm, correct harmonical progression, etc.) need to work in order for the melody to be revealed or to support the soloist. Experience and security playing a principal instrument are fundamental to this. Primary school music teachers have been shown as especially vulnerable in relation to security and self-confidence in this area (Hennessy, 2000; Holden & Button, 2006). From the six reflection texts in this study, the emphasis on skill with a principal instrument in the teacher education program is seen to contribute to a safe platform that reassures teachers of their musical skills. Thus, the subject-specific explanations explicitly underline handicraft knowledge as crucial. This includes not only the technical skills to play an instrument, such as the ability to play both easy and advanced music and handle difficult passages, but also the musical sensitivity to create, perform, and be affected by musical expression. Handicraft, in this sense, refers not to the superficial skills necessary to produce music, but rather the insights into oneself as a player in relation to one or several music instruments and diverse pieces or styles of music. In mirroring these explanations to the Greek concept *techné* (Aristotle, 2011; Heidegger, 2006), handicraft concerns both art and craft as interdependent, in a form of knowing that is essential for musical creation and communication. Exactly this type of knowing might seem a prerequisite to operationalizing the subject of music in school as described in the curriculum (The Norwegian Directorate for Education and Training, 2019). In their reflections, all the educators underline that mastering an instrument is the basis of knowledge for teaching music in school – not only for their own confidence and

musical knowledge – but also to facilitate their pupils’ learning paths. Music teachers are viewed as requiring the ability to play both with and for their students, which is a basic part of their role. As E1 writes, “Without mastering an instrument, they would become ‘fake’ music teachers,” and thus this ability relates to their trustworthiness, knowledge, and responsibility as music teachers. Several of the educators point to the fact that many music teachers in primary and secondary schools in Norway have no formal music education and emphasize the importance of music teachers knowing how to play an instrument and sing. Although there were variations between the generalist teacher educators and the specialist music educators regarding their view on what instrument the students should choose (most useful in classroom or freely chosen with reference to previous music education or other preferences), all six point to the process of learning an instrument as crucial and beneficial to teaching music, regardless of the instrument.

Closely interrelated with the subject-specific theme are the reoccurring explanations of skill with a principal instrument as an area that expands one’s insights in terms of identity, personality, and human relations. This concerns the students’ gradual development of a music teacher identity, as well as their abilities to understand and support the learning processes of their future pupils. Earlier studies point to a lack of confidence as a problem for primary school music teachers without specialized musical knowledge (e.g., Hennessy, 2000; de Vries, 2015). Similarly, it can be said that a lack in special competence in playing and singing contributes to a lack of perspective about the relation between the music teacher and the pupil, as well as in relation to the common references of musical works and to the characteristics of being a music teacher. Dobrowen (2020) describes being a music teacher in primary school as a “lonely professionalism”, and this might be encompassed and broadened, progressing from the educators’ reflections in this study. For example, learning an instrument through long-term effort can be related to learning about people, something that is common to teachers in all subjects in school. Knowing a principal instrument is explained as important both for meeting and dealing with the various pupils and groups that music teachers encounter in school, and also for differentiating for the learners the learning content

(what is meant to be played or sung) and the musical progression. To have experienced the same process as the pupils are engaged in is described by E<sub>3</sub> as fundamental to gaining perspective on each pupil's level, prospects, and paths. E<sub>1</sub> states this as crucial in gaining respect from prospective pupils, as well as having respect for the handicraft and subject of music itself. Sennet (2008, p. 65) points to how the knowledge to make something exists in both the hand and the head, as well as in the heart, and warns against making a separation between "arts" and "craft," as these are seen as two sides of the same coin. Techné-knowledge, as explained by Heidegger (2006), goes even deeper and suggests that the ability to create something is a way of knowing that is essential for humans. Learning a handicraft, as a principal instrument, is a quality-driven process, aiming for unique expression as well as good relationships – for example, in a musical context as a choir or a band. The six educators' pinpointing of the "identity" aspects related to mastering an instrument at the advanced levels might also be deepened through Nielsen's elaboration of the musical work and its correspondence with human consciousness on different levels (Nielsen, 1998, pp. 137–139). The innermost layers in music are here explained as existentially oriented, connected to an awareness of what it is to be a human, and what reality is or should be. Even though the principal instrument, especially in the music-specific program (ii), seems to be taught through one-to-one lessons, all six educators point out that an important aspect is the ability to play with and for others. This points to a relational understanding of music and to the notion of music as something that one does together with others. In Small's theories about music as "musicking," these perspectives on music are fundamental. Here, musical works and individual mastery are subordinated to the musical activities' potential for revealing the "relationships between person and person, between individual and society, between humanity and the natural world and even perhaps the supernatural world" (Small, 1998, p. 13). From this perspective, promoting the role of the principal instrument in music teacher education could serve as a human-oriented approach that not only considers individual music teachers and their qualified abilities to perform and experience music, but also facilitates and advances musical expressions and engagements with groups and societies.

Most of the educators (E1-E5) emphasize the principal instrument with regard to the process and quality of learning, whereas E6 is using more general terms; e.g. “principal instrument certainly has a value in itself”. E3 states that “there is no ‘quick fix!’” and explains how the thorough process of learning an instrument demands patience and endurance and provides insight into the gaining of knowledge that facilitates the learning processes in all school subjects. This explanation is hardly distinguishable from how deep learning is described in the educational literature, research, and curricula (e.g., Fullan et al., 2018, 2013). Deep learning is explained as “meaningful” (Ferm & Johansen, 2008) in that it involves character, self-understanding, and subject knowledge in engaging with the same learning content and learning activities over an extended time (Fullan et al., 2018). Approaches to learning that aim for *deep* understandings of subject knowledge, connections between subjects, and an understanding of humans, cultures, and societies are portrayed with the same thorough and passionate approach that the six educators employ in their reflections on the place of the principal instrument in music teacher education. The contradiction to deep learning is often articulated as superficial learning, which refers to how learners in today’s society can access all kinds of information rapidly, with minimal effort and engagement. However, to support more engaged, healthy, and visionary individuals, experiences with deep learning processes are seen as vital (Fullan et al., 2018; Østern et al., 2019). Three of the educators in this study warn against giving the students possibilities to constantly change their principal instrument (for example, from drums to piano), because this threatens the student’s experiences with long-time processes and deep learning. Even though classroom music teaching demands skills on different and specific instruments (e.g., piano, guitar, song), the process of “learning how to learn” (E3, E1) is best achieved on the same instrument throughout one’s whole education. From this; fundamental learning, skills on other instruments and in different musical styles can be gained more superficially, but a specialization on a principal instrument may lead to a deeper understanding of music, craftsmanship, and human relations.

Together, these three themes suggest a discussion about what kind of subject music should be, both in schools and in music teacher education

programs. From the educators' reflections in this study, discussed with reference to the concept of *techné* (Heidegger, 2006; Varkøy et al., 2020), deep learning (Fullan et al., 2018; Østern et al., 2019), and craftsmanship (as explained by Sennet, 2008), the principal instrument can be seen to nurture many kinds of knowledge and various ways of knowing, based on the notion of music as a primarily practical and aesthetic subject. The principal instrument is seen as necessary in the development of music teachers, regarding their knowledge, skills, identity, and character, and as a unique means for learning how to learn and relate to different persons and groups.

## Concluding Remarks

The research question for our study was: *How is the principal instrument emphasized in music teacher educations in Norway?* The mapping of the diverse music teacher education programs shows great variation in whether and how a principal instrument is prioritized in the different programs, as well as between institutions that offer the same programs. The institutional emphasis towards principal instrument instruction, reflected in the course plans and timetables of specialist music teacher education and generalist music teacher education program, varies between 0 and 3735 min. Educators E1–E5 in this study emphasize the principal instrument as crucial to (i) develop broad and deep knowledge and specialized skills in music (subject-specific), (ii) develop broad and deep knowledge to meet diverse pupils as individuals and groups, as well as insight into oneself and the development of a secure and robust music teacher identity (human-specific), and (iii) to “learn to learn” (learning-specific). Their emphasis of a principal instrument in music teacher education intersects the division between arts and crafts, and positions skill with an instrument as crucial for both music-specific knowledge and for knowledge about learning and teaching that is needed to work as and, perhaps equally important, to be a music teacher.

The content, forms, and aims in music teacher education are the topics of ongoing discussions in the international field of music education research (e.g., Angelo et al., 2021; Bowman, 2007; Kaschub et al., 2014). A

central topic in these debates is the tension regarding specialists or generalists as best suited to teach music in primary and secondary schools (e.g., de Vries, 2015; Holden & Button, 2006; Wiggins & Wiggins, 2008). In these discussions, the place and weight put on learning a principal instrument are vital. Traditionally, the handicraft to play one or several music instruments has been a cornerstone of music education and in music teacher education. As mentioned in the introduction, the impact of music technology is bringing new perspectives to this view and the students may well be taught their principal instrument by their “virtual craft guild”, e.g. via YouTube. Regardless, this study reveals great variations between educational programs as well as between different institutions in terms of the time spent learning a principal instrument. A main question after this examination is: what is the time and effort spent, in music teacher education when it is not given to playing and singing? This question needs follow-up studies to be answered. Still, earlier studies on higher education in general, as well as on higher education in music, point to how the processes of academization have heavily influenced how time is spent in higher education for many vocations and professions (Angelo et al., 2019; Gies, 2019; Messel & Smeby, 2017; Wolter & Kerst, 2015). The music teacher students in GMTE, SMTE and PPU programs in this study are expected to write bachelor’s and master’s theses (or similar) and to engage in research-informed literature about music and education.<sup>6</sup> This might increase future music teachers’ critical reflections on music and education and perhaps strengthen the place of music in the educational systems, but it is also a time- and effort-consuming path that might challenge the time for learning music-specific skills and mastery. Although subject-specific skills can be seen to discredit a pedagogical competence to equalize with students, and to remove the fear of failure (Lindgren & Ericsson, 2011), there are good reasons to question the lack of skills to play and sing among music teachers in schools. In 2019, around 60% of the teachers that teach music in primary and secondary schools in Norway

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6 see e.g. regulations relating to the framework plan for primary and lower secondary education (Ministry of education and Research, 2016a, 2016b), and National Curriculum Regulations for Teacher Education in Practical and Aesthetic Subjects for Years 1–13 (Ministry of Education and Research, 2020).

had no formal music education (Statistisk sentralbyrå, 2019). From this study, the ability to play an instrument for and with the pupils can also be questioned with regard to the 40% of the teachers that actually have music as part of their education. According to the discussions in this chapter, the curriculum's emphasis on deep learning and the portrayal of music as a practical subject with the power to urge creativity and experimentation can be seen as thoroughly enabled through the time and effort spent on learning a principal instrument in music teacher education programs.

In this study, learning and practicing a principal instrument is expounded as providing thorough understandings and critical insights related to the subject of music, to the essence of being human, and to the deep processes of learning through long-time study, with constant examination of the connection of previous knowledge to the learning process. In this regard, the principal instrument can be seen as occupying a valuable place in music teacher education programs that combine arts, crafts, and deep learning. Thus, it can provide future music teachers with the artistic sensitivity to better grasp diverse expressions, and, intertwined with their technical knowledge, the enhanced skill to make and form unique expressions. Indeed, without this ability, words such as *creating*, *experimenting*, and *exploring* might seem unqualified, empty, and utopian.

The students referred to at the beginning of this chapter discussed whether specialized or generalized musical knowledge was most important in becoming a school music teacher. This spurred our curiosity and demanded a deeper discussion about what content and activities are seen, and should be seen, as central in music teacher education. Through explicating the potentials of techné, arts, and crafts in relation to deep learning processes, this study gives music teachers and music teacher educators a perspective for viewing the specialization on a main instrument as *general* education, with processes that provide insights on learning how to learn. This also intersects the division found in music education research between supporting students' general growth and well-being and developing their music-specific knowledge and skills. Instead of discussing the craftsmanship that disappeared, this provides us with a perspective to argue for the craftsmanship to reappear in music teacher education that qualifies people to teach music as one or several subjects in school.

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## Appendix 1

Fra: Fritz Flåmo Eidsvaag fritz.f.eidsvaag@ntnu.no  
 Emne: Hovedinstrumenttimer i musikk lærerutdanning.  
 Dato: 11. desember 2018 kl. 10:47  
 Til: [REDACTED]

Hei!

Jeg er med i en forskningsgruppe som heter [Musikk lærerutdanning i utvikling \(MIU\)](#) og jobber i den forbindelse med en kartlegging av de ulike veiene for å bli musikk lærer i grunnskolen. Jeg ser spesielt på hvor mange timer hovedinstrumentundervisning (antall og varighet) den enkelte ferdig utdannede grunnskolelærer har fått gjennom studieløpet. I den forbindelse lurer jeg på om du kan sende meg en enkel oversikt over antall hovedinstrumenttimer som tilbys i de ulike utdanningsveiene deres og som kvalifiserer til å undervise i grunnskolen (eventuelt ved å ta PPU i tillegg). For studenter ved [REDACTED] sin del vil vel dette dreie seg om de som går MGLU med Musikk 1 og eventuelt Musikk 2 om jeg ikke tar helt feil.

Studien vil publiseres som en vitenskapelig artikkel i Open Access-antologien *Musikk lærerutdanning i utvikling* (Universitetsforlaget, red: Angelo, Knigge, Waagen, Sæther), høsten 2020.

mvh

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## Appendix 2

Fra: Fritz Flåmo Eidsvaag fritz.f.eidsvaag@ntnu.no  
 Emne: [REDACTED]  
 Dato: 8. februar 2020 kl. 11:04  
 Til: [REDACTED]

Hei!

Jeg er med i en forskningsgruppe som heter [Musikk lærerutdanning i utvikling \(MIU\)](#) og jobber i den forbindelse med en kartlegging av de ulike veiene for å bli musikk lærer i grunnskolen. Jeg ser spesielt på hvor mange timer hovedinstrumentundervisning (antall og varighet) den enkelte ferdig utdannede grunnskolelærer har fått gjennom studieløpet og i den forbindelse ønsker jeg og medforfatter Elin Angelo å intervjuet et par ansatte ved ulike musikk lærerutdanninger angående dette temaet. Spørsmålene er formulert slik:

"Vi ber deg i dette skrevet om å reflektere rundt hovedinstrumentets plass i musikk lærerutdanning på din institusjon.

1. Hvordan opplever du at hovedinstrumentet er vektlagt i musikk lærerutdanningen hos dere?
2. Er det tradisjonelt slik at dine studenter jobber i grunnskolen som musikk lærere når de er ferdig utdannet? Beskriv.
3. På hvilke måter trengs hovedinstrumentkunnskap/-ferdigheter hos musikk lærere i grunnskolen?
4. Beskriv kulturen for (og forhandlinger/meninger om) hovedinstrumentundervisning på din institusjon.»

Intervjuet vil være fullt anonymisert, både i forhold til personopplysninger og institusjon.

Studien vil publiseres som en vitenskapelig artikkel i Open Access-antologien *Musikk lærerutdanning i utvikling* (Universitetsforlaget, red: Angelo, Knigge, Waagen, Sæther), høsten 2020.

Mvh Fritz

## Appendix 3

Table of principal instrument teaching in education programs qualifying for music teaching in primary and lower secondary school in Norway. “Semester in total” means how many semesters with principal instrument lessons.

Specialist teacher education	Musicology	Music performance	One-year music course	Generalist teacher education
INN: 36 lessons of 60 min, (6 semesters in total)	UiO: Bachelor: 8 lessons of 45 min (compulsory) 2 elective courses, each one with 8 lessons of 45 min. MA: 24 lessons of 45 min (elective)	Barratt Due: BA: 120 lessons of 60 min + 14 lessons w/accompanist MA: 48 lessons of 60 min	NTNU: 25 lessons (2 semesters in total) One-year study in church music: 27 lessons (2 semesters in total)	OsloMet: Music 1: 7 lessons of 15 min Music 2: 7 lessons of 15 min MA: 0 min
UiT: 0 min	NTNU: BA: 37 lessons (3 semesters). MA: 25 lessons (2 semesters)	UiT: BA: 104 lessons of 45 min. (8 semesters in total)	HVL: 13 lessons	NTNU: Music 1: 0 lessons Music 2: 5 lessons of 30 min (1 semester in total) MA: 450 min
HVL: Specialist T. E.: 48 lessons of 45 min (6 semesters in total)/ Community music: 42 lessons of 45 min. (6 semesters in total).	UiB: elective course w/ admission test 10-12 lessons	NMH: BA: Classical: 116 of 60 min. (8 semesters in total), Jazz: 104 lessons of 60 min (8 semesters in total) Folk music: 135 lessons of 75 min (8 semesters in total) Church music: 116 lessons of 60 min (8 semesters in total)	HiØ: not specified	UiA: Music 1: 8 lessons of 22,5 min (2 semesters in total)
UiA: 64 lessons of 45 min (8 semesters in total)				INN: Music 1: 0 lessons Music 2: 0 lessons

Specialist teacher education	Musicology	Music performance	One-year music course	Generalist teacher education
Nord: 48 (8 per semester, 45 min)		NTNU BA: Classical 108 lessons (8 semesters in total), Jazz 81 lessons (6 semesters in total)	UiA: 0 lessons	USN: 0 lessons
HiVolda: 18 lessons of 45 min		UiB: BA:108 lessons (8 semesters in total)	Nord: 8 lessons of 45 min	UiS: 0 lessons
NMH: Candidate study in music pedagogy: 87 lessons of 45 min (8 semesters in total)		UiA: BA: 72 lessons à 45 min (6 semesters in total)	INN: 0 lessons	UiT: 0 min
			Hivolda: 9 lessons à 45 min	HVL: Music 1: 0 lessons Music 2: 8 lessons à 45 min MA: 0 min

INN: Inland Norway University of Applied Sciences

UiT: The Arctic University of Norway

HVL: Western Norway University of Applied Sciences

UiA: University of Agder

HiVolda: Volda University College

UiO: University of Oslo

UiB: University of Bergen

UiS: University of Stavanger

NMH: Norwegian Academy of Music

NTNU: Norwegian University of Science and Technology

HiØ: Østfold University College

USN: University of South-Eastern Norway

OsloMet: Oslo Metropolitan University

Nord: Nord University