Music students' experienced workload in higher education: A systematic review and recommendations for good practice

Tuula Jääskeläinen (iD)
University of the Arts Helsinki, Finland

Guadalupe López-Íñiguez (iD)
University of the Arts Helsinki, Finland

Michelle Phillips
Royal Northern College of Music, UK

Abstract

While there is extensive research on student workload in higher education, research-based findings relating to music students' workloads are, to a great extent, lacking. In this study, we aim to review the literature systematically (a) to identify the factors that have an impact on students' experiences of workload (*experienced workload*) and (b) to better understand music students' experiences of their workloads in relation to their studies. The overall aim is to offer recommendations for students, teachers, administrators, and student health and well-being services as to how to deal with music students' workload. We conducted a systematic search of literature in 23 electronic databases and 19 music research journals following the Preferred Reporting Items for Systematic Reviews guidelines. Eligibility criteria consisted of design, sample, phenomenon of interest, evaluation, and type of research. Twenty-nine qualitative, quantitative, and multistrategy studies fulfilled the inclusion criteria. Data were extracted and the quality of the studies was appraised. Extended meta-ethnography was used to create a synthesis revealing specific themes offering recommendations for good practice to (a) increase music students' ability to cope with their workload, (b) provide tools for teachers to support music students to manage and cope with workload, and (c) develop learner-centered environments in higher music education. In addition to presenting recommendations for good practice, we conclude that more research using high-quality designs is needed to investigate music students' discipline-specific experienced workload.

Keywords

coping, extended meta-ethnography, stress, synthesis, themes

Corresponding author:

Tuula Jääskeläinen, Sibelius Academy, University of the Arts Helsinki, PO Box 30, FI-00097 Uniarts, Finland.
Email: tuula.jaaskelainen@uniarts.fi

Higher education is a vast and complex field to study, particularly when examining students' perceptions and experiences of their studies. Research by Salmela-Aro and Read (2017) indicates that studying in higher education can be a demanding task—often related to workload—which influences students' overall academic experience and well-being. For instance, in the context of higher education in Finland over recent years, psychological distress among university students has increased, which may reflect growing multifaceted environmental and institutional demands on them (Oksanen et al., 2017). In fact, recent research by the Finnish Student Health Service on students attending Finnish universities and universities of applied sciences (polytechnics) (e.g., Salmela-Aro & Read, 2017) suggests that burnout increases and engagement decreases as a student progresses through their program of study at the university.

The higher education context for music students differs from that of students in other disciplines, as it entails specific field-related challenges. For example, studying music may include performance anxiety, perfectionism, and career concerns that can cause discipline-specific sources of stress (e.g., Bernhard, 2007a). Painful musculoskeletal conditions and other health issues are also common concerns for music students (e.g., Ginsborg et al., 2009). Various aspects of the physical and psychological demands on music students have been examined in recent studies, such as music students' perceptions and behaviors concerning their health (Araújo et al., 2017); levels of burnout and engagement and their effects on music students' well-being (Zabuska et al., 2018); location and level of pain among musicians (Cruder et al., 2018); and music performance anxiety in classical musicians (Matei & Ginsborg, 2017). Also, Perkins et al. (2017) indicate that research is needed on the challenges, for students, of receiving feedback on their performance in high-pressure situations. The findings of an increasing body of research on music students' workload may help to improve learning and teaching environments and better support music students' well-being, learning, and future careers.

Defining students' workload in educational contexts

In educational research, workload is often defined objectively in terms of the hours that students spend in classes and independent study. In a qualitative study of students' perceptions of workload and the factors influencing it, Kember (2004) found that perceived and objectively measured workload were only weakly related and suggests that workload should be considered a complex construct, influenced by the teaching and learning environment. Kember and Leung (2006) therefore tested the hypothesis that perceived workload is influenced by seven elements of this environment, in a study using structural equation modeling (SEM), and found that it is directly (if weakly) influenced by teaching and teacher–student relationships. Given the impact of workload on students' daily lives, it is therefore worth exploring not only hours of study but also other elements of the teaching and learning environment. Thirty years ago, Chambers (1992) suggested that these should include the view held by the higher education institution on what constitutes a reasonable workload. Research published since then has addressed factors that have an impact on student workload, such as motives, expectations, interests, skills, abilities, and previous experience (Lockwood, 1999). Marsh (2001) defined good workload (hours spent on class believed to be valuable) as being useful in a student's development and education, whereas the effects of bad workload (total hours minus good hours) are negative. Karjalainen et al. (2008) considered an appropriate workload to be represented by students having enough time to complete tasks as part of their studies, when their own capacity to complete this work is taken into account. Bowyer (2012) suggested that student workload could be thought to consist of

the time needed for contact and independent study, the quantity and level of difficulty of the work, the type and timing of assessments, the institutional factors such as teaching and resources, and student characteristics such as ability, motivation and effort. (p. 240)

However, to our knowledge, no prior studies have focused on different degrees of workload associated with students' positive, negative, or neutral experiences during their programs of study. It may also be useful to consider the effects of specific disciplines on students' perceived workload. For example, bodily experiences are important in higher music education (Bresler, 2005), as music is made through and with the musician's body, and skill development in music may be more complex than in some other fields.

Kember (2004) argued that higher education institutions should pay attention to what is taught, and how, if students are to be supported to cope successfully with their workloads. Previous research on students' health and well-being also gives recommendations for supporting students to manage their studies through orientation or induction and counseling, and stress-, life-, and time-management techniques (e.g., Bernhard, 2010; Kausar, 2010; Renard & Snelgar, 2015). For instance, Renard and Snelgar (2015) recommend that students use both proactive coping styles and stress management techniques, such as "avoiding overloading, spending time on things of importance, avoiding interruptions and procrastination, keeping a diary, being assertive, and developing a problem-solving mode of thinking" (p. 180).

Norton (2016) emphasizes the complexities of the relationship between music teachers and students, which is typically highly influential on the latter. She questions the extent to which teachers should be considered responsible for their students' general as well as musical development. Renard and Snelgar (2015) suggest that teachers should provide constructive feedback on assessments and support students who are struggling to cope. Holistic and learner-centered teaching that promotes "a deep understanding based on the integration of students' prior knowledge and curricular outcomes, as well as helping students to take metacognitive control of their own learning" (López-Íñiguez et al., 2014, p. 158) can support student agency and make teaching and learning more engaging and satisfying for both teacher and student (López-Íñiguez & Pozo, 2016). The aim is for students to learn to regulate and manage their own cognitive and motor processes autonomously, and to develop their own individual musicianship, under the guidance and supervision of teachers who focus on their students' reflective, metacognitive, emotional, and affective processes (López-Íñiguez, 2017).

There are elements of students' lives affecting their workload over which teachers and course administrators have no control. For example, changes in the way higher education institutions are funded, and rising tuition fees, have resulted in financial concerns for students. They may have to take on (more) extracurricular paid work. Coupled with inequalities between students from different levels of family income and support, these are potential sources of stress (Beban & Trueman, 2018). Sudden, unexpected changes in learning circumstances such as those caused by the COVID-19 pandemic may also affect music students' well-being (Habe et al., 2021), practice habits and behaviors, and everyday life (Rosset et al., 2021), and these changes may, in turn, affect their perceptions of workload.

Research on students' experiences of their studies, including perceived workload, can provide knowledge that may be valuable for institutions when making decisions that have an impact on the academic community, and seeking to enable staff to support students as effectively as possible. We refer to students' experiences of their studies as *experienced workload*, since these experiences include students' perceptions of the components of workload, the factors contributing to it, and its consequences. We therefore conducted a systematic review to identify research on music students' experienced workload and offer recommendations for students,

teachers, administrators, and student health and well-being services as to how best to manage this. We defined *students* as people studying at higher education institutions and *music students* as students registered on an academic degree program, in a university music department or at a conservatoire, with the aspiration of becoming a professional musician or working in a music-related profession (e.g., orchestral, chamber, or church musician; solo singer or performer; conductor; composer; music teacher; festival manager). We defined *teachers* as people teaching music students at higher education institutions.

Aims of the study and research questions

In this study, we were interested in all aspects of students' workload during their years of study. We took a holistic approach, considering the nature, meaning, and components of workload, and how it is described in the published literature. We also considered students' curriculum-related workload (e.g., attendance at lectures, rehearsals, and practice sessions), and extra-curricular activities that may contribute to experienced workload (e.g., paid and unpaid work). We deliberately sought research revealing students' subjective experiences of workload and its consequences, rather than reporting objective measures (such as time spent studying, completed credits, grades, or effects on memory and cognition). Our definition of *workload* derived from the Finnish term *kuormittavuus* (load). According to the Finnish Thesaurus and Ontology Service (Finto, 2021), this encompasses the burden related to work under- and overload and includes both physical (e.g., musculoskeletal strain) and psychological (e.g., cognitive, ethical, emotional, mental, and psychosocial) aspects of workload, which can be experienced in positive, neutral, or negative ways to different degrees. Thus, in line with previous research on students' perceptions of workload (e.g., Bachman & Bachman, 2006; Hernesniemi et al., 2017; Jacobs & Dodd, 2013; Kember, 2004; Kember & Leung, 2006; Parkinson et al., 2006), we considered workload not in terms of objectively measured hours of study but as the complex construct suggested by Kember and Leung (2006), with a range of components and effects.

We aim to review the literature on students' workload systematically, focusing on music students' experiences of workload associated with their studies, so as to inform recommendations likely to be helpful for teachers, administrators, and student health and well-being services in supporting students to cope with their workload and plan their own studies. The following research questions (RQs) guided the review:

1. What factors have an impact on students' experienced workload?
2. What are music students' experiences of workload in relation to their studies?

Method

We conducted an extended meta-ethnography (EME), a method of systematic review developed by Booker (2010, p. 59) as an application of Creswell's (2003) concurrent nested strategy and Noblit and Hare's (1988) seven-phase meta-ethnography. Noblit and Hare pioneered meta-ethnography as a review method for synthesizing ethnographic and interpretive qualitative studies to create holistic interpretations as an alternative to meta-analysis based on quantitative studies. EME differs from Noblit and Hare's meta-ethnography in that quantitative studies are also reviewed. Instead of using data from primary studies, EME aims to aggregate and give meaning to previous studies by identifying and consolidating the findings of qualitative studies and interpreting and discussing those of quantitative studies. Our seven-phase EME is described in detail in Supplemental Appendix 1 and presented in figures and tables.

Having defined the research topic in Phase 1, we selected the relevant studies in Phase 2. The Preferred Reporting Items for Systematic Reviews (PRISMA) flowchart for the process of selecting studies is presented in Figure 1.

In Phase 2, we conducted the systematic literature search and drew up eligibility criteria for selecting the studies to be reviewed. When searching literature in relation to the first RQ, we used English and Finnish variations of the term *workload* in combination with keywords related to *student* and *higher education*. The results of the search were included in the first screening stage if the studies explored *student workload in higher education* and in the second screening stage if they explored *experiences of workload*. Studies were also considered relevant if they concerned students' perceptions of workload. When searching existing literature in relation to the second RQ, we used English and Finnish variations of the term *experience* in combination with keywords related to *student* and *higher music education*. The results were included in the first screening stage if the studies explored *studying music in higher education* and in the second screening stage if they explored *music student workload*. Details of how the searches were conducted are shown in Table 1 and the eligibility criteria are listed in Table 2.

In Phase 3, we read the studies to be included in the review and extracted the data by appraising the quality of their RQs and methods using the Mixed Methods Appraisal Tool (MMAT; Hong et al., 2018). We also conducted a thematic content analysis. The results are shown in Table 3.

In Phase 4, we further analyzed the studies we reviewed, and in Phase 5, we compared them. In Phase 6, we constructed an overall analysis, and in Phase 7, we finally formulated a complete synthesis of all of the interpretations emerging from previous phases. This process is presented in Figure 2.

Description of the process

Having defined the research topic in Phase 1, we selected the relevant studies that would form part of Phase 2. In Phase 3, we read the studies to be included in the review and extracted the relevant data to be used in the subsequent phases. The 29 studies included in this review were conducted in the United States ($n = 8$), the United Kingdom ($n = 5$), Australia ($n = 3$), Finland ($n = 3$), Hong Kong ($n = 2$), New Zealand ($n = 2$), Belgium ($n = 1$), China ($n = 1$), Italy ($n = 1$), Pakistan ($n = 1$), Puerto Rico ($n = 1$), Spain ($n = 1$), and Sweden ($n = 1$). A total of 13,596 students took part in the 29 studies, of whom 2,261 were music students. The search terms used to explore 23 databases in relation to the first RQ did not identify any relevant studies about music students. Therefore, the number of music students is based on the studies that were identified using the search terms to explore 19 music research journals in relation to the second RQ. We did not apply date boundaries in the article search because we did not find previous evidence indicating that relevant studies had been reported during a specific time period. This resulted in some outdated studies being included, for example, some that were published before the beginning of the 21st century. However, we felt that it was important to include these early studies as they provided evidence of when researchers began to be interested in students' experienced workload in higher education, and how this field of interest has developed since those initial studies. Most of the studies were quantitative ($n = 16$), with the remainder either qualitative ($n = 8$) or multistrategy, combining quantitative and qualitative approaches ($n = 5$). Data were collected via surveys (24 studies), one-to-one interviews (9 studies) and focus groups (3 studies), case studies (1 study), daily diaries (1 study), and video-recorded lesson observations (1 study). Using the quality appraisal categories developed by Dixon-Woods et al. (2007), we did not find any key papers. However, most studies were assessed as being of satisfactory quality
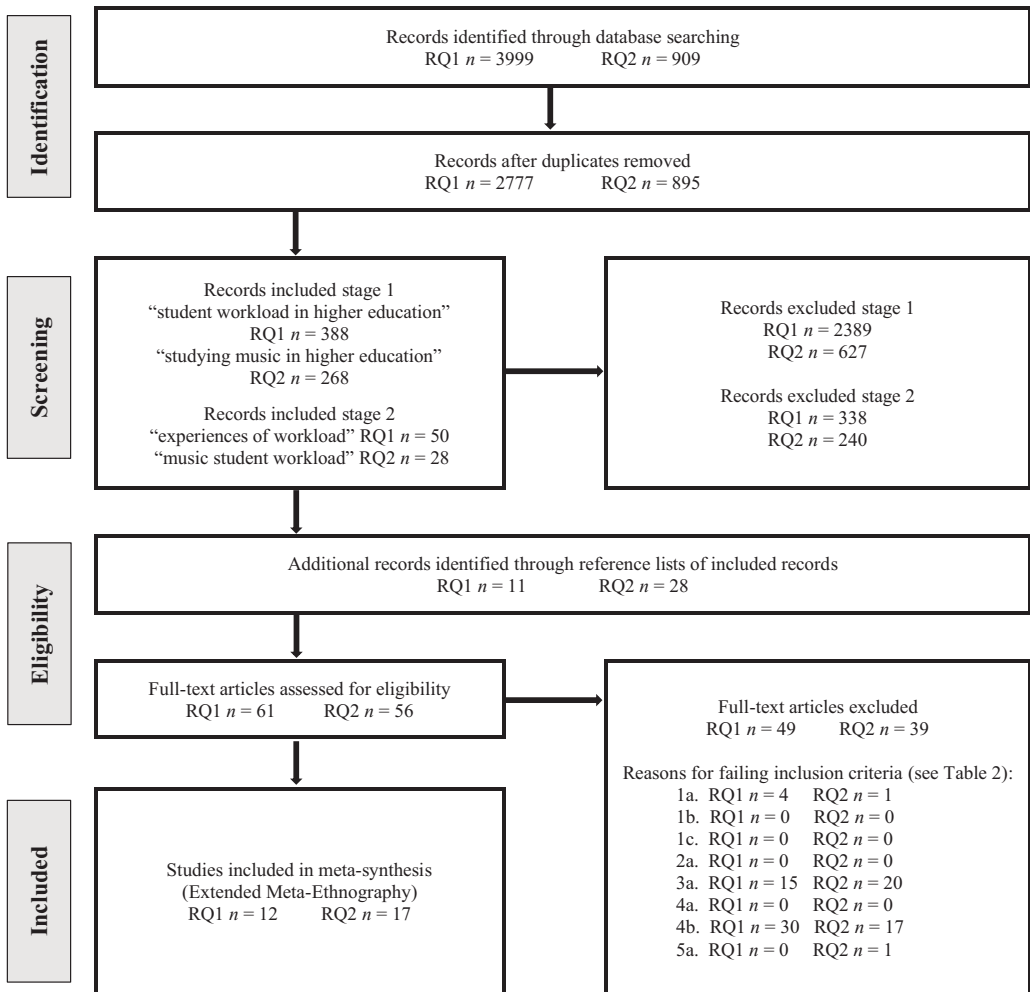
Figure 1. Process of selecting studies grouped by RQs in PRISMA flowchart (Moher et al., 2009).

($n = 26$), although the relevance of three papers was unclear, and there were no studies deemed flawed or irrelevant.

Using EME, we identified 13 codes across the 29 studies that related to students' experienced workload. Eight codes were identified in the 12 studies addressing the experience of students regardless of discipline: *approaches to learning, burnout, experiences in the first year of study, stress, organisation and management of a student's workload* (hereafter *structure of student workload), teaching and learning environments, time management*, and extracurricular paid and unpaid *work*. Five additional codes were identified in the 17 studies addressing the experiences of music students: *flow, health, musculoskeletal problems, one-to-one tuition*, and *performance anxiety*.

To analyze the 29 studies in Phase 4, we clustered these 13 codes into four categories: *organisation and management of workload* (hereafter *structure of workload), a student's workload, workload relating to teaching and learning environments*, and *psychological and physiological issues*. To compare the studies in Phase 5, we reorganized these four categories into three themes including the sources of students' experienced workload: *a student's experienced workload, workload arising from interactions with teachers*, and *workload arising from the environment* (i.e., studies and

Table 1. Search dates, terms, databases, and music research journals used in the literature search in English (EN) and in Finnish (FI).

Research Question 1	Research Question 2
Search dates: November 18–20, 2018 (EN) and January 11, 2019 (FI)	Search dates: February 2, 2019 (EN) and February 3, 2019 (FI)
Search terms: EN and FI variations of the term workload (i.e., workload, work-load, overload, and load) in combination with keywords related to student (i.e., student, undergraduate, and postgraduate) and to higher education (i.e., higher education, university, tertiary, college, and academic)	Search terms: EN and FI variations of the term experience (i.e., experience, perception, concept, conception, motivation, perspective, attitude, and opinion) in combination with keywords related to student (i.e., student, undergraduate, and postgraduate) and to higher music education (i.e., higher education, university, tertiary, college, academic, and conservatory)
Databases: 1. A + Education (EN) 2. Cochrane Library (EN) 3.-7. EBSCOhost (Australia/New Zealand Reference Center; Business Source Complete; CINAHL; MEDLINE; Music Index) (EN) 8. Embase (EN) 9.-13. ProQuest (Central; Dissertation & Theses; ERIC; Music Periodical Database; Performing Arts Periodicals Database) (EN) 14. PsycInfo (EN) 15. PubMed (EN) 16. SAGE Journals Online (EN) 17. Science Direct (EN) 18. Scopus (EN) 19. Web of Science (EN) 20. ARTO (FI) 21. Finna (FI) 22. Helka (FI) 23. Melinda (FI)	Music Research Journals: 1. *Action, Criticism, and Theory for Music Education* (EN) 2. *Australian Journal of Music Education* (EN). 3. *British Journal of Music Education* (EN) 4. *Bulletin of the Council for Research in Music Education* (EN) 5. *International Journal of Music Education* (EN) 6. *Journal of Music Teacher Education* (EN) 7. *Journal of New Music Research* (EN) 8. *Journal of Research in Music Education* (EN) 9. *Medical Problems of Performing Artists* (EN) 10. *Musicae Scientiae* (EN) 11. *Music Education Research* (EN) 12. *Music Educators Journal* (EN) 13. *Music Performance Research* (EN) 14. *Psychology of Music* (EN) 15. *Research Studies in Music Education* (EN) 16. *The Journal of Musicology* (EN) 17. *Update: Applications of Research in Music Education* (EN) 18. *Visions of Research in Music Education* (EN) 19. *Finnish Journal of Music Education* (FI)

paid and unpaid work both inside and outside the institution, and society). Finally, we constructed an overall analysis in Phase 6 that revealed three new overarching themes: *music students' ability to cope with their workload, tools for teachers to support music students to manage and cope with workload*, and *developing learner-centered environments in higher music education*. On the basis of these themes, we formulated a complete synthesis with 24 recommendations that are presented in Table 4 and, in more detail, in the "Results" section.

Results

Music students' ability to cope with their workload

The first overarching theme concerned students' general workload and their ability to manage it, which they may have developed by themselves and/or with some support from their teachers

Table 2. Eligibility criteria to identify studies to be included or excluded.

Criteria

1. Design

Research Questions 1 and 2

1a. Place of publication:

Included: Studies with full-text availability included in peer-reviewed journal articles, peer-reviewed conference proceeding articles, and PhD dissertations.

Excluded: Studies without full-text availability included in conference proceeding abstracts, project reports, bachelor's and master's theses.

1b. Study design:

Included: All types of research designs with or without control groups.

Excluded: Expert opinion papers and theoretical papers without empirical data.

1c. Language:

Included: The initial database search was limited to publications written in the English and Finnish languages. The given restriction was chosen because Finnish is the first author's primary language, all authors use English fluently as their working language, and English is the third author's primary language.

Excluded: Publications in languages other than English and Finnish.

2. Sample

Research Question 1	Research Question 2
2a. Students in higher education: *Included*: Students in higher education. If the study presented a participant group comprising both students in higher education and another group or groups (such as teachers and other staff in higher education, students in other educational levels, participants outside education), the study was included. *Excluded*: Studies of groups other than students in higher education.	2a. Music students in higher education: *Included*: Music students in higher education. If the study presented a participant group comprising both music students in higher education and another group or groups (such as teachers and other staff in higher education, students in other educational levels, participants outside education), the study was included. *Excluded*: Studies of groups other than music students in higher education.

3. Phenomenon of interest

Research Question 1	Research Question 2
3a. Students' experiences of workload in higher education: *Included*: Studies that examined students' subjective experiences of workload in higher education. Experience, in this context, includes perception, conception, concept, motivation, perspective, attitude, and opinion (or equivalent). Studies including time or grades of workload in relation to students' experiences of workload in higher education were also included. *Excluded*: Publications that only examined the following aspects: measured credits, time or grades of workload without students' experiences of workload in higher education, students' perceptions of measured credits.	3a. Music students' experiences of studying in higher education: *Included*: Studies that examined music students' subjective experiences of studying in higher education. Experience includes, in this context, perception, conception, concept, motivation, perspective, attitude, and opinion (or equivalent). *Excluded*: Publications that only examined pre-service classroom teachers' experiences of studying music in higher education.

(Continued)

Table 2. (Continued)

Criteria

4. Evaluation

Research Question 1	Research Question 2
4a. Quantity and quality of students' workload in higher education:	4a. Quantity and quality of music students' experiences of studying in higher education:
Included: Studies that examined quality or both quantity and quality of students' workload in higher education. Studies did not have to include the precise term "workload" to meet the criterion. Terms such as "load," "study load," "student load," "academic load," "course load," and "overload" may have also been used.	*Included*: Studies that examined quality or both quantity and quality of music students' experiences of studying in higher education. Studies did not have to include the precise term "experience" to meet the criterion. Equivalent terms introduced in criterion 3a may have also been used. Quantity and quality of music students' experiences of studying could include field-related workload, such as health, well-being, one-to-one tuition, practicing, performing, performance anxiety and assessment issues (or equivalent).
Excluded: Studies that examined cognitive load or memory load, or only quantity of students' workload in higher education.	*Excluded*: Studies that examined students' musical experience which was not related to studying or workload.
4b. Applicability to music students in higher education:	4b. Applicability in general to music students in higher education:
Included: Studies in which the outcome indicated that the method used was applicable to higher education in general or in the music learning and teaching context. Studies did not have to include participants in the field of music.	*Included*: Studies in which the outcome indicated that the method used was applicable to music students in higher education in general or in the music learning and teaching context.
Excluded: Studies in which the outcome was not generally applicable because it was related to specific students, field, study program, or course in higher education.	*Excluded*: Studies in which the outcome was not generally applicable because it was related to specific music students, music field, music study program, or music course in higher education.

5. Research type

Research Questions 1 and 2

5a. Data analysis:
Included: Studies presenting qualitative, quantitative, or multistrategy analysis of the data.
Excluded: Literature reviews, expert opinion papers, and theoretical papers without analysis of empirical data.

and institutions. It is essential to help students cope with experienced (general, i.e., not music-specific) workload because this is related to surface approaches to learning (Kember, 2004). Workload predicts perceived stress overload (Kausar, 2010), potentially leading to failure and attrition (Amirkhan & Kofman, 2018). To help students cope with their workload, we recommend that institutions provide the following for students:

1. *Orientation to studies.* At the beginning of the academic year, an orientation or induction session can familiarize students with learning, evaluation, and grading processes (Kausar, 2010). It is also important for every course to provide orientation regarding the course's expectations and requirements that the students must fulfill (Kyndt et al., 2014).

Table 3. Extended meta-ethnography Phase 3: Reading the studies to be included in the review and extracting the data.

Research Question 1
Description of studies included in data extraction:

No.	Author(s) (year)	Title of study	Design	Country	Participants	Sample	Data collection	Quality appraisal	Identified workload
1	Amirkhan and Kofman (2018)	Stress overload as a red flag for freshman failure and attrition	Quantitative	USA	University students	1200	Survey	Satisfactory	Stress
2	Beban and Trueman (2018)	Student workers: The unequal load of paid and unpaid work in the neoliberal university	Qualitative	New Zealand	University students	151	Survey, interviews	Satisfactory	Work
3	Betancourt et al. (2013)	Non-medical use of prescription drugs and its association with socio-demographic characteristics, dietary pattern, and perceived academic load and stress in college students in Puerto Rico	Quantitative	Puerto Rico	University students	252	Survey	Satisfactory	Stress
4	Clift and Thomas (1973)	Student work loads	Qualitative	Australia	University students	395	Survey, day diaries	Unclear relevance	Structure of student workload
5	Giles (2009)	An investigation of the relationship between students' perceptions of workload and their approaches to learning at a regional polytechnic	Multistrategy	New Zealand	University students	299	Survey, interviews	Satisfactory	Approaches to learning
6	Hernesniemi et al. (2017)	Perception of workload and its relation to perceived teaching and learning environments among Finnish and Chinese university students	Quantitative	Finland and China	University students	5344	Survey	Satisfactory	Teaching and learning environments
7	Jacobs and Dodd (2003)	Student burnout as a function of personality, social support, and workload	Quantitative	USA	University students	149	Survey	Satisfactory	Burnout
8	Kausar (2010)	Perceived stress, academic workload and use of coping strategies by university students	Quantitative	Pakistan	University students	150	Survey	Satisfactory	Stress

(Continued)

Table 3. (Continued)

Research Question 1
Description of studies included in data extraction:

No.	Author(s) (year)	Title of study	Design	Country	Participants	Sample	Data collection	Quality appraisal	Identified workload
9	Kember (2004)	Interpreting student workload and the factors which shape students' perceptions of their workload	Multistrategy	Hong Kong	University students	5	Diaries, interviews, case studies	Satisfactory	Structure of student workload
10	Kember and Leung (2006)	Characterising a teaching and learning environment conducive to making demands on students while not making their workload excessive	Quantitative	Hong Kong	University students	3320	Survey	Satisfactory	Teaching and learning environments
11	Kyndt et al. (2014)	"Time is not enough." Workload in higher education: a student perspective	Qualitative	Belgium	University students	40	Interviews	Satisfactory	Structure of student workload
12	Wennström (2006)	Haluaisin kyllä ymmärtää. Selvitys humanistisen tiedekunnan opiskelijoiden ensimmäisen lukukauden ajankäytöstä ja oppimiskokemuksista [I would like to understand. A report on the use of time and learning experiences of the students in their first semester in the Faculty of Humanities]	Qualitative	Finland	University students	30	Survey (open-ended questions)	Satisfactory	Time management

Research Question 2
Description of studies included in data extraction:

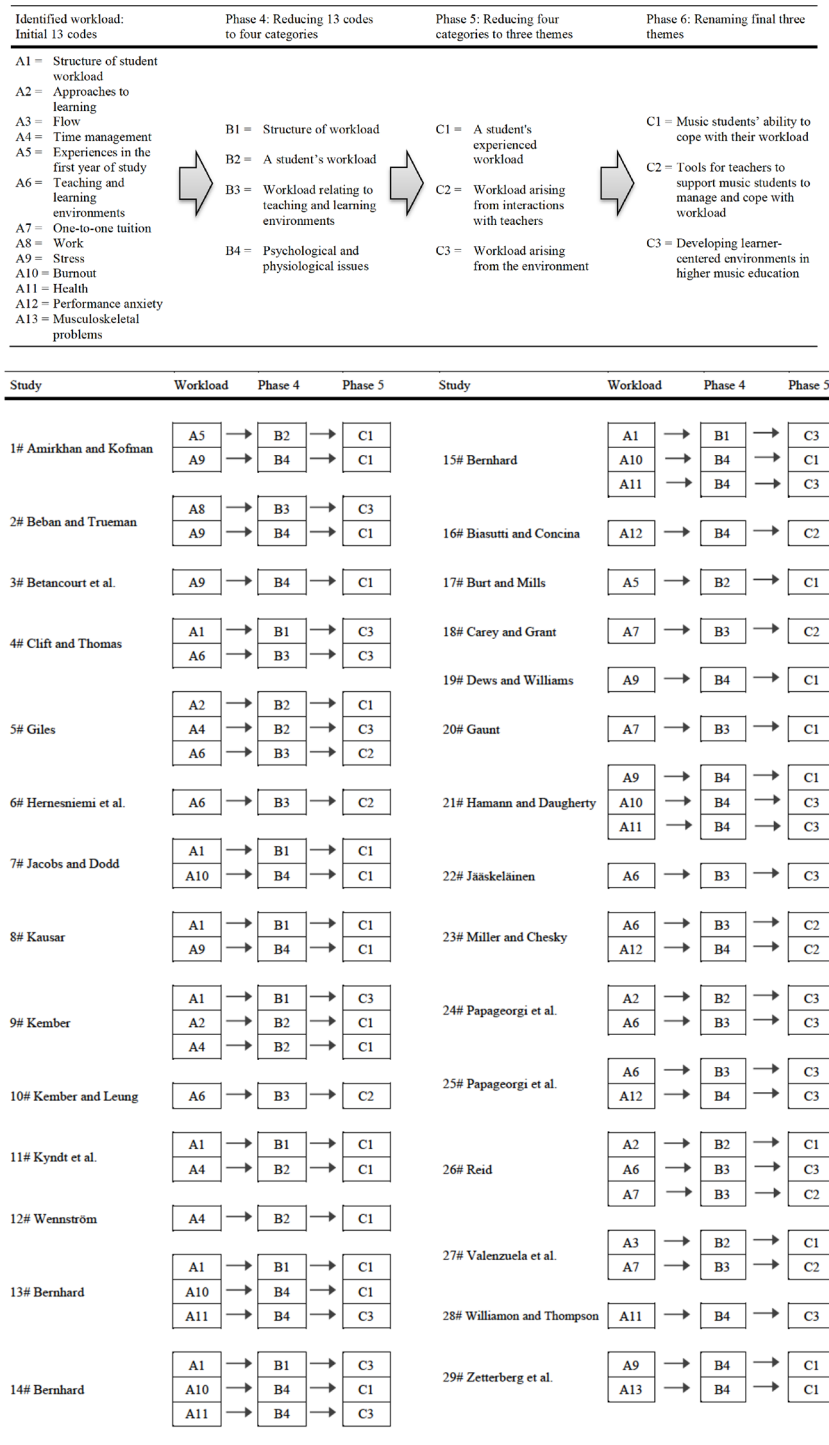| No.	Author(s) (year)	Title of study	Design	Country	Participants	Sample	Data collection	Quality appraisal	Identified workload
13	Bernhard (2007a)	Comparison of burnout between undergraduate music and non-music majors	Quantitative	USA	University students and music students	320	Survey	Satisfactory	Burnout
14	Bernhard (2007b)	A survey of burnout among college music majors	Quantitative	USA	University music students	203	Survey	Satisfactory	Burnout

(Continued)

Table 3. (Continued)

Research Question 2
Description of studies included in data extraction:

No.	Author(s) (year)	Title of study	Design	Country	Participants	Sample	Data collection	Quality appraisal	Identified workload
15	Bernhard (2010)	A survey of burnout among college music majors: a replication	Quantitative	USA	University music students	229	Survey	Satisfactory	Burnout
16	Biasutti and Concina (2014)	The role of coping strategy and experience in predicting music performance anxiety	Quantitative	Italy	University music students	97	Survey	Satisfactory	Performance anxiety
17	Burt and Mills (2006)	Taking the plunge: The hopes and fears of students as they begin music college	Qualitative	UK	University music students	20	Survey	Satisfactory	Experiences in the first year of study
18	Carey and Grant (2015)	Teacher and student perspectives on one-to-one pedagogy: Practices and possibilities	Qualitative	Australia	University music students	18	Interviews, focus groups, observation	Satisfactory	One-to-one tuition
19	Dews and Williams (1989)	Student musicians' personality styles, stresses, and coping patterns	Quantitative	USA	University music students	201	Survey	Satisfactory	Stress
20	Gaunt (2010)	One-to-one tuition in a conservatoire: the perceptions of instrumental and vocal students	Qualitative	UK	University music students	20	Interviews	Satisfactory	One-to-one tuition
21	Hamann and Daugherty (1985)	Burnout assessment: The university music student	Quantitative	USA	University music students	248	Survey	Satisfactory	Burnout
22	Jääskeläinen (2016)	Tavoitteena opetuksen kehittämistä tukevan luotettavan tutkimustiedon tuottaminen Sibelius-Akatemiassa—tapausesimerkkinä opiskelijoiden kokeman kuormittavuuden pilottitutkimus [Aiming to produce reliable research findings for supporting development of teaching in the Sibelius Academy—Pilot study in students' experiences of workload as a case example]	Multistrategy	Finland	University music students	28	Survey	Unclear relevance	Teaching and learning environments

(Continued)

Table 3. (Continued)

Research Question 2
Description of studies included in data extraction:

No.	Author(s) (year)	Title of study	Design	Country	Participants	Sample	Data collection	Quality appraisal	Identified workload
23	Miller and Chesky (2004)	The multidimensional anxiety theory: An assessment of and relationships between intensity and direction of cognitive anxiety, somatic anxiety, and self-confidence over multiple performance requirements among college music majors	Quantitative	USA	University music students	71	Survey	Unclear relevance	Performance anxiety
24	Papageorgi et al. (2010a)	Institutional culture and learning I: Perceptions of the learning environment and musicians' attitudes to learning	Multistrategy	UK	University music students	170	Survey, interviews, focus groups	Satisfactory	Teaching and learning environments
25	Papageorgi et al. (2010b)	Institutional culture and learning II: Inter-relationships between perceptions of the learning environment and undergraduate musicians' attitudes to performance	Multistrategy	UK	University music students	170	Survey, interviews, focus groups	Satisfactory	Teaching and learning environments
26	Reid (2001)	Variation in the ways that instrumental and vocal students experience learning music	Qualitative	Australia	University music students	14	Interviews	Satisfactory	Approaches to learning
27	Valenzuela et al. (2018)	Self-determination theory applied to flow in conservatoire music practice: The roles of perceived autonomy and competence, and autonomous and controlled motivation	Quantitative	Spain	University music students	162	Survey	Satisfactory	Flow
28	Williamon and Thompson (2006)	Awareness and incidence of health problems among conservatoire students	Quantitative	UK	University music students	63	Survey	Satisfactory	Health
29	Zetterberg et al. (1998)	Musculoskeletal problems among male and female music students	Quantitative	Sweden	University music students	227	Survey	Satisfactory	Musculoskeletal problems

Identified workload: Initial 13 codes	Phase 4: Reducing 13 codes to four categories	Phase 5: Reducing four categories to three themes	Phase 6: Renaming final three themes
A1 = Structure of student workload			

A1 = Structure of student workload
A2 = Approaches to learning
A3 = Flow
A4 = Time management
A5 = Experiences in the first year of study
A6 = Teaching and learning environments
A7 = One-to-one tuition
A8 = Work
A9 = Stress
A10 = Burnout
A11 = Health
A12 = Performance anxiety
A13 = Musculoskeletal problems

B1 = Structure of workload
B2 = A student's workload
B3 = Workload relating to teaching and learning environments
B4 = Psychological and physiological issues

C1 = A student's experienced workload
C2 = Workload arising from interactions with teachers
C3 = Workload arising from the environment

C1 = Music students' ability to cope with their workload
C2 = Tools for teachers to support music students to manage and cope with workload
C3 = Developing learner-centered environments in higher music education

Study	Workload	Phase 4	Phase 5	Study	Workload	Phase 4	Phase 5
1# Amirkhan and Kofman	A5 / A9	B2 / B4	C1 / C1	15# Bernhard	A1 / A10 / A11	B1 / B4 / B4	C3 / C1 / C3
2# Beban and Trueman	A8 / A9	B3 / B4	C3 / C1	16# Biasutti and Concina	A12	B4	C2
3# Betancourt et al.	A9	B4	C1	17# Burt and Mills	A5	B2	C1
4# Clift and Thomas	A1 / A6	B1 / B3	C3 / C3	18# Carey and Grant	A7	B3	C2
5# Giles	A2 / A4 / A6	B2 / B2 / B3	C1 / C3 / C2	19# Dews and Williams	A9	B4	C1
6# Hernesniemi et al.	A6	B3	C2	20# Gaunt	A7	B3	C1
7# Jacobs and Dodd	A1 / A10	B1 / B4	C1 / C1	21# Hamann and Daugherty	A9 / A10 / A11	B4 / B4 / B4	C1 / C3 / C3
8# Kausar	A1 / A9	B1 / B4	C1 / C1	22# Jääskeläinen	A6	B3	C3
9# Kember	A1 / A2 / A4	B1 / B2 / B2	C3 / C1 / C1	23# Miller and Chesky	A6 / A12	B3 / B4	C2 / C2
10# Kember and Leung	A6	B3	C2	24# Papageorgi et al.	A2 / A6	B2 / B3	C3 / C3
11# Kyndt et al.	A1 / A4	B1 / B2	C1 / C1	25# Papageorgi et al.	A6 / A12	B3 / B4	C3 / C3
12# Wennström	A4	B2	C1	26# Reid	A2 / A6 / A7	B2 / B3 / B3	C1 / C3 / C2
13# Bernhard	A1 / A10 / A11	B1 / B4 / B4	C1 / C1 / C3	27# Valenzuela et al.	A3 / A7	B2 / B3	C1 / C2
14# Bernhard	A1 / A10 / A11	B1 / B4 / B4	C3 / C1 / C3	28# Williamon and Thompson	A11	B4	C3
				29# Zetterberg et al.	A9 / A13	B4 / B4	C1 / C1

Figure 2. Extended meta-ethnography: Phase 4 (Analyzing the studies), Phase 5 (Comparing the studies), and Phase 6 (Constructing an overall analysis).

Table 4. Recommendations for good practice.

Recommendations for good practice

Recommendations relevant to students' experienced general (i.e., not music-specific) workload:

Students' ability to cope with their workload	Tools for teachers to support students to manage and cope with workload	Developing learner-centered environments in higher education
1. Orientation to studies 2. Counseling 3. Stress management skills 4. Time management skills	1. Continuing professional development for teachers 2. Assessment that supports learning processes 3. Constructive cooperative teaching	1. Understanding the demands and challenges of combining studying and working life 2. Discussing students' workload problems in the institution 3. Developing systems for collecting feedback from students

Recommendations related to workload, specifically in relation to studying music in higher education:

Music students' ability to cope with their workload	Tools for teachers to support music students to manage and cope with workload	Developing learner-centered environments in higher music education
1. Encouraging feedback 2. Discipline-specific counseling 3. Support in dealing with psychological and physical issues 4. Knowledge about music learning	1. Develop students' metacognitive abilities and psychological skills 2. Teach methods of coping with performance anxiety 3. Develop one-to-one tuition methods 4. Support for practicing 5. Learner-centered teaching	1. Introductory classes to help students cope with discipline-specific workload 2. Utilizing knowledge of music students' experienced workload when developing curricula 3. Developing an inspirational learning culture 4. Understanding discipline-specific workload 5. Understanding discipline-specific workload related to psychological and physical issues

2. *Counseling.* Counseling should be readily available for students to help them to cope more effectively with everyday challenges in their studies (Kausar, 2010) and to develop generic study skills (i.e., those that are necessary for students to be able to succeed in their studies, such as writing skills for assignments and reading skills in preparation for exams; Giles, 2009).
3. *Stress-management skills.* Good peer relationships seem to help students to cope with stress experienced in relation to their studies, and leisure activities can support students to reduce stress when studying (Kyndt et al., 2014). Negative coping strategies may intensify stress and cause problems with alcohol intake, lack of sleep, lack of exercise, and less time spent with friends and family (Beban & Trueman, 2018) and increase the non-medical use of prescription drugs (Betancourt et al., 2013). Students should therefore be offered stress management programs.

4. *Time-management skills.* Students need time-management skills for setting priorities and planning to use their time efficiently. It helps if they understand that their experienced workload may be different from their actual workload (Kyndt et al., 2014). For example, Wennström (2006) found that students in their sample who felt that they had a heavy workload used only half of the time allocated to study in the curriculum for studying.

More research is needed to understand how daily activities and stress management and time management skills may be related to students' workload, learning, stress, and burnout in higher education (Amirkhan & Kofman, 2018; Jacobs & Dodd, 2003; Kember, 2004).

This theme also included music-specific workload and, in particular, music students' ability to cope with it. Some aspects of music students' workload may be discipline-specific so it is important to identify these aspects when developing suitable support systems; the nature and amount of work music students are required to complete in the course of their studies should be acknowledged. Bernhard (2007a, 2007b, 2010) found that more academic and performance demands are made on music majors than non-music majors, especially at the undergraduate level. They are therefore likely to experience high levels of psychological problems such as performance anxiety, perfectionism, and career concerns. There can also be differences attributable to program of study, music genre, and sex or gender. For example, in a study of university music students by Zetterberg et al. (1998), those studying to be church musicians had the highest psychosocial demand scores (evaluated by work environment factors influencing mood, bodily tension, and somatic symptoms), and women experienced more stress than men. To help music students manage their music-specific experienced workload, we recommend that institutions provide:

1. *Encouraging feedback.* It is crucial to give encouraging feedback to students, especially at the beginning of their studies, to support them in giving their first performances, and to help them to cope with possible feelings of inadequacy, given that they will find themselves among many outstanding musicians (Burt & Mills, 2006).
2. *Discipline-specific counseling.* Music students may need the support of specialized counselors who are familiar with the demands of the music profession and the unique challenges associated with studying music (Dews & Williams, 1989). Counseling is important—even for what might be perceived as minor workload and stress-related issues—to prevent student burnout and provide support for students in dealing with other issues, which have an impact on students during their studies and also after they graduate (Hamann & Daugherty, 1985).
3. *Support in dealing with psychological and physical issues.* Music students need support not only to deal with psychological issues such as performance anxiety, but also to manage any physical issues that may arise, as music students experience a high incidence of musculoskeletal problems, especially in areas such as the shoulders, neck, wrists/hands, and thoracic spine (Zetterberg et al., 1998).
4. *Knowledge about music learning.* Administrative staff in higher education institutions, as well as teachers, should have some understanding of music students' practice habits and interactions with music teachers. Better knowledge of how students learn music may help institutions improve teaching and learning environments so that students are better supported as individual learners and have more positive experiences of their workloads. Institutions could do this by creating more carefully designed course content, using more diverse teaching methods, and investing more in support systems for

students. Reid (2001), for example, recommends adapting teaching strategies and techniques to the needs of individual students. In addition, research on flow among music students by Valenzuela et al. (2018) shows that perceived competence and motivation affect variations in flow. This knowledge may help the teacher set optimal challenges for each student and give them more effective feedback, thus promoting students' competence and intrinsic motivation, which may then result in improved student well-being, high-quality performance, and persistence.

Tools for teachers to support music students to manage and cope with workload

The second overarching theme concerned workload in relation to, or arising from, interactions between teachers and students. To help teachers support their students to manage their experienced workload, we recommend that institutions and teachers (as appropriate) provide:

1. *Continuing professional development for teachers.* According to Giles (2009), teachers can support students to manage their workload by continually updating their own professional knowledge and pedagogical skills. Professional development can involve learning how to review and develop curricula and assessment and/or how to create more stimulating and responsive methods of instruction, for example, by being enthusiastic about a subject, and showing empathy and understanding when students encounter difficulties. Professional development can also help teachers to create networks within the community of an institution and students to develop important skills for studying.
2. *Assessment that supports learning processes.* According to Hernesniemi et al. (2017), those modes of assessment that align with the students' learning journey may help students to feel that their workload is suitable. For example, assessments could involve students being required to engage in peer assessment throughout a module consisting of multiple activities, rather than students being required to complete multiple-choice and essay examinations at the end of the module.
3. *Constructive cooperative teaching.* When teachers deliver what Kember and Leung (2006) describe as "constructive cooperative" teaching (p. 195), they can expect more of students without making them feel overloaded. For example, teachers can give the students attending the course a sense of belonging by aiming to form warm and supportive relationships with them, and encouraging such relationships between students.

Specific recommendations for teachers to help music students manage their experienced workload are as follows:

1. *Develop students' metacognitive abilities and psychological skills.* Biasutti and Concina's (2014) results highlight the importance of understanding the psychological processes underlying the study of music and music performance in higher education. Music teachers wishing to support music students' well-being should also focus on developing their metacognitive abilities and psychological skills, for example, helping them to cope with the psychological challenges associated with performing.
2. *Teach methods of coping with performance anxiety.* Miller and Chesky (2004) compared music students' and teachers' perceptions of performance anxiety by measuring intensity and direction of cognitive anxiety, somatic anxiety, and self-confidence in relation to music students' performance requirements. One issue highlighted by their results is that teachers may find it hard to recognize music students' performance anxiety. Miller and

Chesky suggest that, once it has been acknowledged, performance anxiety can be reduced by using methods directed at the particular type of anxiety that is experienced. For example, cognitive anxiety affects undergraduate students and women in particular, so it is vital to include cognitive strategies in interventions to prevent performance anxiety. Other methods for reducing or preventing the symptoms of performance anxiety experienced by some music students include mindfulness strategies (Czajkowski et al., 2020). Matei and Ginsborg (2017) emphasize that the complex relationship between performance quality and performance anxiety needs to be acknowledged when investigating these methods.

3. *Develop one-to-one tuition methods.* One-to-one instrumental/vocal tuition is a large and essential part of music students' training. According to Carey and Grant (2015), although one-to-one tuition has benefits for instrumental and vocal teaching and learning, it could be improved. For example, teachers could enhance their relationships with their students by considering their individual needs, dependency, and self-sufficiency. In addition, the dominant position of one-to-one tuition could be reconsidered in the context of collaborative teaching-learning environments.

4. *Support for practicing.* Within the one-to-one model of tuition, teachers can help students with their practice, especially in their learning of techniques, such as recommending warm-ups and exercises to be performed prior to singing or playing that are based on the learner's current needs and circumstances (Gaunt, 2010).

5. *Learner-centered teaching.* Students learn in different ways, so teaching approaches and methods should be tailored to them as individuals, to support their learning (Reid, 2001) and agency (López-Íñiguez & Pozo, 2016). Teachers can do this by understanding their students' individual psychological needs and providing optimal challenges for promoting their perceived competence and intrinsic motivation, which may increase their experience of flow when practicing and playing (Valenzuela et al., 2018).

Developing learner-centered environments in higher music education

The third overarching theme of learner-centered environments related to workload associated with the social and environmental factors involved in studying music in higher education, and to ways in which institutions could help students cope with experienced workload by focusing on their agency and thus increase their engagement in and satisfaction with learning. These include:

1. *Understanding the demands and challenges of combining studying and working life.* To fully understand the experience of students in higher education, generally, the complex, often contradictory, subjectivities of students navigating the neoliberal university and the world of work (Beban & Trueman, 2018) must be acknowledged. If the workloads associated with combining studying with both paid and unpaid work were understood better, institutions would be more likely to find ways of supporting students' engagement in their studies.

2. *Discussing students' workload problems in the institution.* It should become policy and practice in higher education institutions that administrative staff, teachers, and students discuss the workload problems of students in relation to teaching and learning environments, curricula, assessment, capacity of students to study, and support services for students (Clift & Thomas, 1973; Giles, 2009). Such discussion could focus on students' capabilities and knowledge, which, in turn, could increase their satisfaction

with learning. For example, Kember (2004) suggests that "by making effective use of feedback and evaluation data teachers can work towards the implementation of courses which do encourage students to put in many hours of study towards quality learning ends" (p. 182).

3. *Developing systems for collecting feedback from students.* Systems should be developed for collecting feedback from students on multiple aspects of the curriculum. Such feedback should be gathered using what Kember (2004) calls an "open approach" (p. 182). For example, students could provide feedback in focus group interviews about specific aspects of the curriculum, and be encouraged to suggest changes that may help them to meet the course learning outcomes.

Specific recommendations for helping music students to manage their experienced workload by developing more learner-centered environments include the following:

1. *Introductory classes to help students cope with discipline-specific workload.* Introductory classes focusing on the demands of studying music in higher education could help first-year students to develop coping strategies to support their learning. Such classes could help them manage a healthy lifestyle, gain support and respect in the community, and deal with music-specific challenges to studying, such as performance anxiety, perfectionism, and obtaining a balance between practical music-making and academic studies (Bernhard, (2007a). These should also be available to students from the second year onwards, either as part of the curriculum or as an extracurricular activity (Bernhard, 2007b, 2010).

2. *Utilizing knowledge of music students' experienced workload when developing curricula.* Course credits should reflect the amount and quality of work that students are expected to do (Bernhard, 2010). They may be prevented from learning by programs that are too intensive, courses that are overloaded, and scheduling conflicts (Jääskeläinen, 2016). Staff should discuss methods that could be built into institutional systems and procedures for preventing burnout in students and helping music students to cope with its symptoms (Hamann & Daugherty, 1985). Curricula that allow for reasonable workloads may help students regulate and manage their own learning autonomously.

3. *Developing an inspirational learning culture.* Students may have positive experiences of learning when they see themselves as members of an inspirational learning community, for example, when the institutional culture is such that they have opportunities to meet and work with other musicians, and when it supports their personal interests and development as both academic and performing musicians (Papageorgi et al., 2010a).

4. *Understanding discipline-specific workload.* Music students have varying self-efficacy beliefs and coping strategies for performance anxiety (Papageorgi et al., 2010b). It is essential for higher education institutions not only to teach music but also to develop students' skills for coping with the stress of performing and the mental challenges of studying music, and practicing techniques (Papageorgi et al., 2010b). This may help students to hone their metacognitive skills. In addition, they should be familiarized with artistic, social, political, and cultural debates and topics during their studies to help them find their own approaches to learning music and ways of becoming musicians (Reid, 2001).

5. *Understanding discipline-specific workload related to psychological and physical issues.* Many music students experience physical pain and psychological problems associated with performing and intensive practice (e.g., Williamon & Thompson, 2006), so higher

education institutions should pay particular attention to such problems. Students are more likely to seek initial advice from their teachers rather than experts in physical and psychological health. To promote students' self-regulation, it is essential for institutions to provide students and teachers with knowledge of music-specific workload and sources of professional help for students with physical and psychological issues.

More research into music students' workload is needed. Institutions aiming to develop more learner-centered teaching of music should have the resources to acquire and utilize research-based knowledge of music students' workload, medical problems, health, and well-being (Williamon & Thompson, 2006).

Discussion

This systematic review explored the published literature reporting research on students' workload in higher education. Its aims were, first, to understand experienced workload better, particularly that of music students, and second, to inform recommendations likely to be helpful for teachers, administrators, and student health and well-being services in supporting music students to cope with their workload and plan their own studies. RQ 1 asked what factors have an impact on students' experienced workload. To answer this question, we selected publications describing the general workload of students in all disciplines including music. RQ 2 asked about music students' discipline-specific experiences of workload, and to answer this question, we selected publications describing the experiences of music students only.

The 29 studies included in this systematic review were conducted in 13 countries. Sixteen of the studies were quantitative, eight were qualitative, and five used a multistrategy approach. We identified eight codes in the 12 studies, all of which addressed the experience of students of a variety of disciplines, which suggests that this research topic has already been investigated widely. Five additional codes that did not appear in studies of students' general workload were identified in the 17 studies addressing the experiences of music students in particular. In the 29 studies included in this systematic review we did not find any entirely novel results related to students' coping strategies, teachers' pedagogical methods, or institutional structures. However, we were able to gain more detailed insight into music students' experienced workload. Crucially, we were able to show how students could be supported to cope more effectively with their studies, as musicians typically use coping strategies that are different in many ways from those required in other fields of education.

The overall analysis of the 29 studies revealed three overarching themes on the basis of which we formulated a complete synthesis to make specific—and in some cases overlapping—recommendations for good practice. The first theme, *music students' ability to cope with their workload*, highlights the need for institutions to provide orientation (or induction) sessions and counseling, and teach stress- and time-management skills; also, for more research to be carried out in the institutions themselves, on this topic. Perceptions of workload are only weakly influenced by time spent studying (Kember, 2004); students may feel that they have a heavy workload even though they do not use all their allocated study time (Wennström, 2006). Jacobs and Dodd (2003) claim that it is the subjective experience of overload, which is related to personality, rather than measured workload, that often contributes to burnout. Workload-related interventions, such as teaching students to use all of their allocated study time efficiently and cope with stress, can help students to develop their study skills. However, Beban and Trueman (2018) argue that workload is not just a personal problem for students. Rather, neoliberal policies recently introduced in higher education have increased students' (already extensive) paid

and unpaid work commitments, which may contribute to high stress levels and lead to structural inequalities in their experiences as students. Therefore, it is crucial to investigate and understand students' experienced workload, to be able to provide suitable social support for them and to create institutional programs promoting greater academic and personal fulfillment for students (Jacobs & Dodd, 2003).

In relation to music students' ability to cope with workload, it is wise to provide encouraging feedback, offer discipline-specific counseling and support for psychological and physical issues in studying music, and gather more knowledge about music learning. Bernhard (2010) has shown that university students' perceptions of workload—rather than workload as it is measured—relate to burnout. If burnout is related to personality, as suggested by Jacobs and Dodd (2003), then their individual study needs must be considered (Burt & Mills, 2006) as the consequences of burnout can include health problems, dropping out of studying, and even suicide (Hamann & Daugherty, 1985). It is crucial that teachers and administrators in higher education institutions understand the discipline-specific characteristics of music students including perfectionism, motivation for studying music, and major stressors such as the psychological issues associated with practicing and performing, conflicts between musical and personal life (Dews & Williams, 1989), the challenges of balancing studying and working, and career concerns (López-Íñiguez & Bennett, 2020).

The second theme, *tools for teachers to support music students to manage and cope with workload*, points to the importance of teachers' continuing professional development, assessment that supports learning processes, and constructive cooperative teaching (Kember & Leung, 2006). Excessive workload can have a negative effect on students' well-being and success in their studies (Hernesniemi et al., 2017), so it is worth trying to reduce it. When teachers promote a cooperative atmosphere in their teaching, for example, they can both make more demands on students and improve the quality of their learning without increasing their perceived workload (Kember & Leung, 2006).

To support music students, in particular, to cope with their workload, it may be helpful for teachers to develop students' metacognitive abilities and psychological skills, teach methods of coping with performance anxiety, develop methods for delivering one-to-one tuition and more learner-centered teaching, and provide support for practicing. One-to-one tuition is essential in music education and is appreciated by music students but can limit learners' autonomy (Gaunt, 2010; López-Íñiguez et al., 2014). Problems can occur when teachers' practices and students' expectations diverge (Carey & Grant, 2015). Music students typically experience performance anxiety, so higher education institutions should offer courses on coping skills in relation to music performance (Biasutti & Concina, 2014). Institutions should also utilize evidence-based approaches to developing music students' self-confidence (Miller & Chesky, 2004). Teachers should be aware of research findings on flow in one-to-one tuition to be able to present optimal challenges to their students and increase their perceived competence; both of these are crucial to flow experiences (Cohen & Bodner, 2021; Valenzuela et al., 2018).

The third theme, *developing learner-centered environments in higher music education*, underlines the importance of understanding the demands and challenges of combining studying and working life, discussing students' workload problems in the institution, and developing systems for collecting feedback from students on their experiences. Beban and Trueman (2018) argue that the neoliberal university culture can be a challenging learning environment for students trying to find an optimal balance between studying, paying bills, managing debt, caring for family members, and securing their future employability in an uncertain world. Women with large unpaid work commitments, students from minority groups and lower-socioeconomic backgrounds working long hours are particularly likely to experience more stress than their

fellow students. This may result in poorer academic outcomes and fewer career opportunities for them, thus reproducing social inequality in the institutional culture. However, it is possible to increase students' motivation and the time they devote to learning if workload is considered carefully when designing curricula, teaching, and assessment (Kember, 2004).

Teachers can help music students to cope by offering introductory classes on managing their discipline-specific workload, utilizing knowledge of music students' experienced workload when developing curricula, developing an inspirational learning culture, and understanding discipline-specific aspects of music students' workload including performance and its associated psychological and physical issues; in addition, more research on music students' workload is needed and institutions should have the resources to make use of it when developing curricula. These should be examined and revised to optimize both workload and musical expectations to the likelihood of music students experiencing burnout, and help them manage their academic and personal lives better (Bernhard, 2007a, 2007b, 2010). Although Zabuska et al. (2018) found in their sample of 331 music performance students that only one in ten could be classified as burned out, they highlight the importance of raising awareness of its symptoms and the coping strategies that students can use to avoid or mitigate it. Institutions can also help to reduce burnout in music students by considering individual students' goals (Hamann & Daugherty, 1985).

A transparent curriculum, including a clear outline of its content and how it has been designed with music students' workload and associated needs in mind, can help students to cope. It is essential to offer appropriate financial support and assistance to students when needed. It is important for the development of learning and teaching processes in music settings that students are encouraged to participate in educational research and can give feedback, and that teachers should show themselves willing to acknowledge and act on it (Jääskeläinen, 2016). The institutional environment should promote student collaboration and initiate learning activities that allow students to flourish and realize their potential (Papageorgi et al., 2010b; Reid, 2001). Finally, universities should provide teachers and students with up-to-date findings regarding musicians' and music students' health and well-being (Williamon & Thompson, 2006; Zetterberg et al., 1998).

Limitations

The limitations of this systematic review must be acknowledged. First, we selected studies only in English and Finnish, which means that we probably did not review all the research that has been published on the topic. The findings of research reported in other languages might shed more light on students' experienced workload. Second, future reviews could consider different definitions of music students' experienced workload. Third, methodological differences between studies, and the fact that several dealt with experiences in both educational and musical contexts and used non-replicable methodologies, meant that we could not conduct a meta-analysis as is more typical in medical and health sciences. Instead, we used EME. Fourth, we did not take account of when studies were published, so some of the studies we analyzed are now out of date. In addition, further research may have been published since we searched the literature.

Implications for further research and interventions

It is worth noting that, for the past 20 years and more, some higher education institutions at least have offered lectures and counseling on health issues and lifestyle management that could help music students to cope with their experienced workload (e.g., Joukamo-Ampuja et al.,

2007; Matei et al., 2018). Conducting research using both qualitative and quantitative approaches to studying students' workload would produce further information on how to develop teaching and learning environments to help them. It is essential to provide research evidence for teachers to help them to develop their pedagogical practices to plan suitable workloads for students. This could be done through promoting relevant research at learning and teaching conferences and in other institutional events (e.g., staff conferences). Conducting, analyzing, and interpreting longitudinal studies, in particular, with samples more representative of the population, would provide further evidence to support the planning of effective interventions to help students to cope with their studies. Longitudinal studies are also needed to test potentially causal relationships between music students' strategies for coping, such as time- and stress-management, and experienced workload. Future studies should explore the characteristics of those studying music and their relationship with students' experienced workload, including sex and gender, degree level, music genre, and program of study. Given the rise of globalization, research on music students' experiences in multicultural societies may help identify culture-specific musical and pedagogical factors, and their connections with workload (e.g., Westerlund et al., 2015).

Conclusions

The findings of this systematic review support those of previous research in different learning domains by strengthening the understanding of the characteristics of music students' experienced workload. The findings give rise to the recommendation that teachers, administrative staff, and student healthcare personnel should make informed decisions when planning learning and teaching environments to optimize students' learning and health (Perkins et al., 2017). They also show where efforts should be made to help students overcome challenges associated with studying and resolve health issues (Ginsborg et al., 2009). Students too may benefit from learning within an evidence-based framework that can help them to reflect on their workload and make changes as necessary to cope better with it. More research using high-quality designs is needed to investigate music students' discipline-specific experienced workload.

ORCID iDs

Tuula Jääskeläinen [iD] https://orcid.org/0000-0003-0619-9674

Guadalupe López-Íñiguez [iD] https://orcid.org/0000-0002-4428-1356

Supplemental material

Supplemental material for this article is available online.

References

*Reviewed articles

*Amirkhan, J. H., & Kofman, Y. B. (2018). Stress overload as a red flag for freshman failure and attrition. *Contemporary Educational Psychology*, *54*, 297–308. https://doi.org/10.1016/j.cedpsych.2018.07.004

Araújo, L. S., Wasley, D., Perkins, R., Atkins, L., Redding, E., Ginsborg, J., & Williamon, A. (2017). Fit to perform: An investigation of higher education music students' perceptions, attitudes, and behaviors toward health. *Frontiers in Psychology*, *8*, Article 1558. https://doi.org/10.3389/fpsyg.2017.01558

Bachman, L., & Bachman, C. (2006). Student perceptions of academic workload in architectural education. *Journal of Architectural and Planning Research*, *23*(4), 271–304. http://www.jstor.org/stable/43030781

*Beban, A., & Trueman, N. (2018). Student workers: The unequal load of paid and unpaid work in the neoliberal university. *New Zealand Sociology*, *33*(2), 99–131.

*Bernhard, H. C. (2007a). A comparison of burnout between undergraduate music and non-music majors. *Visions of Research in Music Education*, *9/10*, 1–13.

*Bernhard, H. C. (2007b). A survey of burnout among college music majors. *College Student Journal*, *41*(2), 392–402.

*Bernhard, H. C. (2010). A survey of burnout among college music majors: A replication. *Music and Health*, *3*(1), 31–41.

*Betancourt, J., Ríos, J. L., Pagán, I., Fabian, C., González, A. M., Cruz, S. Y., González, M. J., & Rivera, W. T., & Palacios, C. (2013). Non-medical use of prescription drugs and its association with sociodemographic characteristics, dietary pattern, and perceived academic load and stress in college students in Puerto Rico. *Puerto Rico Health Sciences Journal*, *32*(2), 89–94.

*Biasutti, M., & Concina, E. (2014). The role of coping strategy and experience in predicting music performance anxiety. *Musicae Scientiae*, *18*(2), 189–202. https://doi.org/10.1177/1029864914523282

Booker, R. A. R. (2010). Examining the inclusion of quantitative research in a meta-ethnographic review. *Journal of Ethnographic & Qualitative Research*, 4(2), 57–74.

Bowyer, K. (2012). A model of student workload. *Journal of Higher Education Policy and Management*, *34*(3), 239–258. https://doi.org/10.1080/1360080X.2012.678729

Bresler, L. (2005). What musicianship can teach educational research. *Music Education Research*, *7*(2), 169–183. https://doi.org/10.1080/14613800500169399

*Burt, R., & Mills, J. (2006). Taking the plunge: The hopes and fears of students as they begin music college. *British Journal of Music Education*, *23*(1), 51–73. https://doi.org/10.1017/S0265051705006741

*Carey, G., & Grant, C. (2015). Teacher and student perspectives on one-to-one pedagogy: Practices and possibilities. *British Journal of Music Education*, *32*(1), 5–22. https://doi.org/10.1017/S0265051714000084

Chambers, E. (1992). Work-load and the quality of student learning. *Studies in Higher Education*, *17*(2), 141–153. https://doi.org/10.1080/03075079212331382627

*Clift, J. C., & Thomas, I. D. (1973). Student work loads. *Higher Education*, *2*(4), 447–460. https://doi.org/10.1007/BF00158529

Cohen, S., & Bodner, E. (2021). Flow and music performance anxiety: The influence of contextual and background variables. *Musicaescientiae*, *25*(1), 25–44. https://doi.org/10.1177/1029864919838600

Creswell, J. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE.

Cruder, C., Falla, D., Mangili, F., Azzimonti, L., Araújo, L. S., Williamon, A., & Barbero, M. (2018). Profiling the location and extent of musicians' pain using digital pain drawings. *Pain Practice*, *18*(1), 53–66. https://doi.org/10.1111/papr.12581

Czajkowski, A.-M. L., Greasley, A. E., & Allis, M. (2020). Mindfulness for musicians: A mixed methods study investigating the effects of 8-week mindfulness courses on music students at a leading conservatoire. *Musicae Scientiae*, *26*(2), 259–279.

*Dews, C. B., & Williams, M. S. (1989). Student musicians' personality styles, stresses, and coping patterns. *Psychology of Music*, *17*(1), 37–47. https://doi.org/10.1177/0305735689171004

Dixon-Woods, M., Sutton, A., Shaw, R., Miller, T., Smith, J., Young, B., Bonas, S., Booth, A., & Jones, D. (2007). Appraising qualitative research for inclusion in systematic reviews: A quantitative and qualitative comparison of three methods. *Journal of Health Services Research & Policy*, *12*(1), 42–47. https://doi.org/10.1258/135581907779497486

Finto. (2021). *Finnish thesaurus and ontology service*. https://finto.fi/en/

*Gaunt, H. (2010). One-to-one tuition in a conservatoire: The perceptions of instrumental and vocal students. *Psychology of Music*, *38*(2), 178–208. https://doi.org/10.1177/0305735607080827

*Giles, L. (2009). *An investigation of the relationship between students' perceptions of workload and their approaches to learning at a regional polytechnic* [A thesis presented in partial fulfillment of the requirements for the Degree of Doctor of Education]. Massey University.

Ginsborg, J., Kreutz, G., Thomas, M., & Williamon, A. (2009). Healthy behaviours in music and non-music performance students. *Health Education*, *109*(3), 242–258. https://doi.org/10.1108/09654280910955575

Habe, K., Biasutti, M., & Kajtna, T. (2021). Wellbeing and flow in sports and music students during the COVID-19 pandemic. *Thinking Skills and Creativity*, *39*, Article 100798. https://doi.org/10.1016/j.tsc.2021.100798

*Hamann, D. L., & Daugherty, E. (1985). Burnout assessment: The university music student. *Update: Applications of Research in Music Education*, *3*(2), 3–8. https://doi.org/10.1177/875512338500300202

*Hernesniemi, E., Räty, H., Kasanen, K., Cheng, X., Hong, J., & Kuittinen, M. (2017). Perception of workload and its relation to perceived teaching and learning environments among Finnish and Chinese university students. *International Journal of Higher Education*, *6*(5), 42–55. https://doi.org/10.5430/ijhe.v6n5p42

Hong, Q. N., Pluye, P., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M.-P., Griffiths, F., Nicolau, B., O'Cathain, A., Rousseau, M.-C., & Vedel, I. (2018). *Mixed methods appraisal tool (MMAT), version 2018*. Canadian Intellectual Property Office, Industry Canada. http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/fetch/127425851/MMAT_2018_criteria-manual_2018-04-04.pdf

*Jääskeläinen, T. (2016). Tavoitteena opetuksen kehittämistä tukevan luotettavan tutkimustiedon tuottaminen Sibelius-Akatemiassa—tapausesimerkkinä opiskelijoiden kokeman kuormittavuuden pilottitutkimus [Aiming to produce reliable research findings for supporting development of teaching in the Sibelius Academy—Pilot study in students' experiences of workload as a case example]. *Finnish Journal of Music Education*, *19*(1), 60–67.

*Jacobs, S. R., & Dodd, D. (2003). Student burnout as a function of personality, social support, and workload. *Journal of College Student Development*, *44*(3), 291–303. https://doi.org/10.1353/csd.2003.0028

Joukamo-Ampuja, E., Heiskanen, J., Peltomaa, M., Porander, K., & Arjas, P. (2007). *Do you know enough about playing practice?* Sibelius Academy, University of the Arts Helsinki. https://sites.uniarts.fi/en/web/harjoittelu

Karjalainen, A., Alha, K., & Jutila, S. (2008). *Give me time to think: Determining student workload in higher education* (2nd ed.). Teaching Development Unit, University of Oulu.

*Kausar, R. (2010). Perceived stress, academic workload and use of coping strategies by university students. *Journal of Behavioral Sciences*, *20*(1), 31–45.

*Kember, D. (2004). Interpreting student workload and the factors which shape students' perceptions of their workload. *Studies in Higher Education*, *29*(2), 165–184. https://doi.org/10.1080/0307507042000190778

*Kember, D., & Leung, D. Y. (2006). Characterising a teaching and learning environment conducive to making demands on students while not making their workload excessive. *Studies in Higher Education*, *31*(2), 185–198. https://doi.org/10.1080/03075070600572074

*Kyndt, E., Berghmans, I., Dochy, F., & Bulckens, L. (2014). 'Time is not enough': Workload in higher education—A student perspective. *Higher Education Research & Development*, *33*(4), 684–698. https://doi.org/10.1080/07294360.2013.863839

Lockwood, F. (1999). Estimating student workload: Implications for quality learning. *Staff and Educational Development International*, *3*(3), 281–289.

López-Íñiguez, G. (2017). Constructivist self-regulated music learning. *Finnish Journal of Music Education*, *20*, 1134–1138.

López-Íñiguez, G., & Bennett, D. (2020). A lifespan perspective on multi-professional musicians: Does music education prepare classical musicians for their careers? *Music Education Research*, *22*(1), 1–14. https://doi.org/10.1080/14613808.2019.1703925

López-Íñiguez, G., & Pozo, J. I. (2016). Analysis of constructive practice in instrumental music education: Case study with an expert cello teacher. *Teaching and Teacher Education*, *60*, 97–107. https://doi.org/10.1016/j.tate.2016.08.002

López-Íñiguez, G., Pozo, J. I., & De Dios, M. J. (2014). The older, the wiser? Profiles of string instrument teachers with different experience according to their conceptions of teaching, learning, and evaluation. *Psychology of Music*, *42*(2), 157–176. https://doi.org/10.1177/0305735612463772

Marsh, H. W. (2001). Distinguishing between good (useful) and bad workload on students' evaluations of teaching. *American Educational Research Journal*, *38*(1), 183–212. https://doi.org/10.3102/00028312038001183

Matei, R., Broad, S., Goldbart, J., & Ginsborg, J. (2018). Health education for musicians. *Frontiers in Psychology*, *9*, Article 1137. https://doi.org/10.3389/fpsyg.2018.01137

Matei, R., & Ginsborg, J. (2017). Music performance anxiety in classical musicians: What we know about what works. *BJPsych International*, *14*(2), 33–35. https://doi.org/10.1192/s2056474000001744

*Miller, S. R., & Chesky, K. (2004). The multidimensional anxiety theory: An assessment of and relationships between intensity and direction of cognitive anxiety, somatic anxiety, and self-confidence over multiple performance requirements among college music majors. *Medical Problems of Performing Artists*, *19*(1), 12–22.

Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & The PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses. The PRISMA statement. *PLOS Medicine*, *6*(7), Article e1000097. https://doi.org/10.1371/journal.pmed.1000097

Noblit, G., & Hare, R. (1988). *Meta-ethnography: Synthesizing qualitative studies*. SAGE.

Norton, N. C. (2016). Health promotion for musicians: Engaging with instrumental and vocal teachers. *Arts and Humanities as Higher Education*. http://www.artsandhumanities.org/health-promotion-for-musicians-engaging-with-instrumental-and-vocal-teachers/

Oksanen, A., Laimi, K., Björklund, K., Löyttyniemi, E., & Kunttu, K. (2017). A 12-year trend of psychological distress: National study of Finnish university students. *Central European Journal of Public Health*, *25*(2), 113. https://doi.org/10.21101/cejph.a4438

*Papageorgi, I., Haddon, E., Creech, A., Morton, F., De Bezenac, C., Himonides, E., Potter, J., Duffy, C., Whyton, T., & Welch, G. (2010a). Institutional culture and learning I: Perceptions of the learning environment and musicians' attitudes to learning. *Music Education Research*, *12*(2), 151–178. https://doi.org/10.1080/14613801003746550

*Papageorgi, I., Haddon, E., Creech, A., Morton, F., De Bezenac, C., Himonides, E., Potter, J., Duffy, C., Whyton, T., & Welch, G. (2010b). Institutional culture and learning II: Inter-relationships between perceptions of the learning environment and undergraduate musicians' attitudes to performance. *Music Education Research*, *12*(4), 427–446. https://doi.org/10.1080/14613808.2010.520432

Parkinson, T. J., Gilling, M., & Suddaby, G. T. (2006). Workload, study methods, and motivation of students within BVSc program. *Journal of Veterinary Medical Education*, *31*(2), 5–24. https://doi.org/10.3138/jvme.33.2.253

Perkins, R., Reid, H., Araújo, L. S., Clark, T., & Williamon, A. (2017). Perceived enablers and barriers to optimal health among music students: A qualitative study in the music conservatoire setting. *Frontiers in Psychology*, *8*, Article 968. https://doi.org/10.3389/fpsyg.2017.00968

*Reid, A. (2001). Variation in the ways that instrumental and vocal students experience learning music. *Music Education Research*, *3*(1), 25–40. https://doi.org/10.1080/14613800020029932

Renard, M., & Snelgar, R. J. (2015). Using the Proactive Coping Inventory to measure southern African university students' coping styles. *South African Journal of Psychology*, *45*(2), 168–181. https://doi.org/10.1177/0081246314561542

Rosset, M., Baumann, E., & Altenmüller, E. (2021). Studying music during the Coronavirus pandemic: Conditions of studying and health-related challenges. *Frontiers in Psychology*, *12*, Article 651393. https://doi.org/10.3389/fpsyg.2021.651393

Salmela-Aro, K., & Read, S. (2017). Study engagement and burnout profiles among Finnish higher education students. *Burnout Research*, *7*, 21–28. https://doi.org/10.1016/j.burn.2017.11.001

*Valenzuela, R., Codina, N., & Pestana, J. V. (2018). Self-determination theory applied to flow in conservatoire music practice: The roles of perceived autonomy and competence, and autonomous and controlled motivation. *Psychology of Music*, *46*(1), 33–48. https://doi.org/10.1177/0305735617694502

*Wennström, M. (2006). *Haluaisin kyllä ymmärtää. Selvitys humanistisen tiedekunnan opiskelijoiden ensimmäisen lukukauden ajankäytöstä ja oppimiskokemuksista* [I would like to understand. A report on the use of time and learning experiences of the students in their first semester in the Faculty of Humanities]. Teaching Development Unit, University of Oulu.

Westerlund, H., Partti, H., & Karlsen, S. (2015). Teaching as improvisational experience: Student music teachers' reflections on learning during an intercultural project. *Research Studies in Music Education*, *37*(1), 55–75. https://doi.org/10.1177/1321103X15590698

*Williamon, A., & Thompson, S. (2006). Awareness and incidence of health problems among conservatoire students. *Psychology of Music*, *34*(4), 411–430. https://doi.org/10.1177/0305735606067150

Zabuska, A., Ginsborg, J., & Wasley, D. (2018). A preliminary comparison study of burnout and engagement in performance students in Australia, Poland and the UK. *International Journal of Music Education*, *36*(3), 366–379. https://doi.org/10.1177/0255761417751242

*Zetterberg, C., Backlund, H., Karlsson, J., Werner, H., & Olsson, L. (1998). Musculoskeletal problems among male and female music students. *Medical Problems of Performing Artists*, *13*, 160–166.