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Peer tutoring in Music Education: A literature review

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Abstract

The focus of this study is the review of literature on peer tutoring, a powerful cooperative strategy where interaction within a pair of students is organised between tutor and tutee, working together providing assistance, instruction and feedback. Although the previous literature reviews showed peer tutoring was beneficial among K-12 music students, this review aims at providing data on the benefits, but also limitations present in studies in formal and informal music education at all academic stages. All of this, with the aim of discussing how peer tutoring can contribute to reducing barriers in music education. Overall, 51 studies published from 1980 to 2021 in peer-reviewed journals, dissertations, and books were analysed. The results reveal the potential of peer tutoring in music education, as well as point to specific elements to be considered to make the most of this pedagogical tool for teaching and learning music.

Keywords

Cooperative learning, Music Learning, Peer assisted learning, Peer mentoring, Peer tutoring.

Music teachers in classrooms and ensembles typically provide instruction in a transmissive and unidirectional teacher to student structure, minimizing any possible interaction between learners (Allsup, 2003; Green, 2008). However, in the last couple of decades, however, a conception of education has emerged, which, in addition to declarative knowledge, considers it necessary

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to provide students with opportunities for peer interaction, making them participants in their own learning and promoting the development of social skills (Topping et al., 2017). In music education, the starting point of this conception could be located in the practices that emerged in the 1960's, with programmes that used student-to-student instructional processes, contributing to the overall education of the participants. Within music education, this conception is justified by the idea that there is nothing more cooperative than playing in an orchestra (Gaunt & Westerlund, 2013), where musicians must be part of a team in order to perform music and make the audience feel this music.

Peer learning, widely recognized in general areas of education, has gone through different generations of research that support its educational potential (Duran, 2018). The first, focussed on comparing cooperation versus individual and competitive learning, concludes that cooperation, besides being equally effective, leads to the development of social skills and a deeper learning in the subject matter (Johnson & Johnson, 1989; Kaplan & Stauffer, 1994; Slavin, 1995). The second generation studied the effects of different cooperative methods, understood as teaching designs capable of promoting learning through cooperation (Johnson & Johnson, 2002; Roseth et al., 2008). The last and most recent one aims at seeking an explanation, through the analysis of interaction, on the mechanisms and the causes responsible for the learning (Backer et al., 2012; Roscoe & Chi, 2007). In the area of music education, although in a more limited way, peer learning is seen as a valuable tool in terms of cognitive, technical and attitudinal development in a wide variety of environments, objectives and levels, capable of fostering inclusive spaces (Darrow, 2003) and promoting the development of skills required in the students' professional future (Berg, 1997; Sheldon, 2001; Webb, 2012).

Peer tutoring

Based on the characteristics of interaction, Damon and Phelps (1989) described a continuum with three scenarios of peer learning: peer tutoring, cooperative learning and collaborative learning. In formal education, peer tutoring is understood as a learning strategy based on pairs of students, with an asymmetrical relationship (resulting from the role they play as tutor and tutee) and working with a common goal which is known and shared, through a highly teacher-structured interaction framework (Topping et al., 2017). The different educational practices have given rise to different peer tutoring models in terms of structure (reciprocal or nonreciprocal); age (cross age or same age); procedural components (e.g. method of pairing students, number of sessions) and focus (acquisition or practice) (Topping, 2000).

In peer tutoring, the climate of confidence to express doubts, as well as the possibility to personalize feedback and support, offered by the one-to-one relationship between the two students (Backer et al., 2012), could explain the advantages of peer tutoring over the help provided by the teacher when working with a large group of students. There are multiple meta-analyses that note peer tutoring as a beneficial tool with high potential in different fields and academic stages: elementary school (Fantuzzo et al., 1992; Greenwood et al., 1989; Rohrbeck et al., 2003), middle and high school (Alegre-Ansuategui et al., 2018; Bowman-Perrott et al., 2013; Jun et al., 2011; Ritter et al., 2009) and all educational stages including university (Leung, 2015; Roscoe & Chi, 2007). Such effectiveness depends on the previous training of the students, the distance of educational skills or the acquired knowledge, and a structured interaction by the teacher and the development of projects extended over time (Cohen et al., 1982). Peer tutoring is considered a facilitator of social skills development and inclusion, taking advantage of the differences between students and using them as a pedagogical tool (Bowman-Perrott et al., 2013; Fantuzzo et al., 1992; Greenwood et al., 1989; Rohrbeck et al., 2003).

In this sense, the purpose of this educational strategy is that students learn both: the tutee receives personalized help from the peer tutor; and the tutor learns to teach their tutee (Duran, 2017), through transforming information with the aim of explaining and questioning it (Roscoe & Chi, 2007). This mediation could be as effective as that performed by a teacher, resulting from close vocabulary and greater sensitivity towards potential frustrations (Good & Brophy, 2000). Among the difficulties that any practice can entail, Topping (2000) stated that, although the tutor can offer an amount of help similar to the one provided by a teacher, the help provided by the tutor may involve certain risks to instruction by not detecting errors, reinforcing erroneous information or showing impatience. In addition, the possibility of an excess of power and assertiveness in the tutors and a feeling of imposition towards the partner is highlighted (Topping et al., 2017).

In music education there are four tutoring literature review articles. In the first, based on three available studies, Luce (2001) described large gains in the face of few difficulties: students who do not want responsibilities and the fact of learning without a textbook. Among the benefits, they pointed out the development of dialogue, social skills, freedom of thought and interdependence. Subsequently, Cangro (2016) performed a review on collaborative musical learning projects, incorporating only some peer tutoring studies. This review, focussed on creation, interpretation and responding projects, concluded the need to change the current paradigm, involving the student and encouraging the teacher to become a guide. Goodrich (2018) elaborated a review focussed on peer mentoring studies in general music and youth instrumental and vocal ensembles among K12. This study, focussed on a very specific educational stage, pointed out for the first time the advantages of learning by teaching and also the difficulties regarding the time devoted to implementation, organization, planning and consolidation. Recently, Goodrich (2021b) performed a review on online peer tutoring, exploring and contextualizing the relevant findings with research on face-to-face peer tutoring in secondary-level music education research.

The main purpose of this literature review is to study the benefits, the limits, and the potential of peer tutoring in music education, incorporating studies published from 1980 until 2021 and extending it to all academic stages, including university stage and informal music education spaces, excluded in previous studies (e.g. Cangro, 2016; Goodrich, 2021b; Luce, 2001). In addition, it is intended to include studies in which the previously defined characteristics of peer tutoring are distinguished: pairs of students with asymmetric roles, working towards a common and shared objective and highly structured by the teacher.

Method

Throughout the initial review phase of the studies found, this practice was observed to have different names, but the concept was similar. In this sense, 'peer tutoring' was typically understood as a component of peer-assisted learning (as in Johnson, 2017), involving students considered to be of similar or equal abilities, tutoring each other. However, 'peer mentoring' (as in Goodrich, 2018) can also involve a more knowledgeable peer mentoring a less knowledgeable peer, or even non-hierarchical structures. This literature review covers research on peer tutoring in music education in all academic stages in peer-reviewed journals, dissertations, and books of national and international distribution published from 1980 until 2021. Terms and concepts used in searches were the combination of the terms 'peer tutoring', 'peer mentoring' and 'peer assisted learning' in music education. Sources were searched using EBSCOhost, JSTOR, Psycinfo, ERIC and OpenDissertation.

Fifty-one studies, out of a total of 80, were included for being framed in an organized way and with didactic content typical of music education, conceptual frameworks, literature reviews and articles with specific instructions. On the contrary, 29 sources were excluded from the selection because they did not refer to the tutoring process as understood in this research work (Topping

et al., 2017). Excluded sources framed other areas of teaching which are understood as relationships between teachers; teacher and student; in groups of more than three students and those organized as a simple accompaniment of the student in tasks related to the school organization.

Results: Approaches of peer tutoring in music education

Three types of studies are distinguished: articles focussed on conceptual frameworks and specific indications; descriptions of educational peer tutoring projects; and studies on these practices. For the purpose of this review, they are organized into five categories, developed from the coding of the literature, with the aim of determining the influence of peer tutoring in music education: (a) the acquisition of musical knowledge and skills, (b) inclusive education, (c) teacher training, (d) informal practice and (e) instrumental group practice.

Peer tutoring in the acquisition of musical knowledge and skills

The studies found in this section cover the three academic stages: primary, secondary and university; both in general music education classrooms and in specific music training lessons. Teaching objectives such as reading and understanding music theory stand out. In a study on a highly structured reciprocal peer tutoring project focussed on the learning of keys in a music group lesson of primary education, Darrow et al. (2005) showed that all the students had improved, corroborating that they had learned by teaching. However, the lack of a comparison group did not allow to affirm that the effectiveness depended exclusively on the proposal. These results are in line with Kusek (2017) who, in a project for the study of rhythm, confirmed that the use of peer tutoring was a valid strategy for the acquisition of curricular content.

Through the study of a highly structured fixed peer tutoring project for rhythm reading fluency, Duran et al. (2020) concluded that this was a valid tool for the improvement of pulsation, rhythmic precision, analysis and meta-cognitive reflection. However, the scores obtained in comprehension suggested a limitation in the type of help provided in this aspect, decreasing the opportunities of the tutors when reflecting on and building their own learning. The conclusions of this study pointed to initial training on how to provide scaffolded help and to the organization of interaction on a cooperative basis as essential conditions in peer tutoring projects.

Johnson (2011a, 2011b, 2015) described different structured proposals for peer tutoring focussed on the development of listening, harmony, rhythmic reading, transcription and memory. Despite lacking quantitative data, peer tutoring was observed as a valid tool for the music learning, the active participation in one's own learning and the development of individual responsibility, commitment, and social and listening skills. Later, Johnson (2017) conducted a quantitative study for the development of commitment, sight reading and assimilation of musical content, comparing symmetric and asymmetric same-age reciprocal peer tutoring. The author concluded that regardless of the type of interaction, the economic status and even regardless of the tutor's mastery on the subject, students improved all the variables, especially students with lower socio-economic levels. These results, like the ones provided by Graham (2020), confirm the potential of peer tutoring for the development of sight reading. With the aim of improving listening skills in university students and considering existing limitations, Furby (2016) focussed on the time control of the sessions and the quality of the interactions if they are not structured.

Further studies revealed that benefits would go beyond knowledge transfer. Torsney (2015) explored the use of this tool in a project on understanding modulations, harmony and pulsation and highlighting the increase of self-esteem and confidence among tutees; while student tutors' motivation also improved when realizing they were capable of developing the role. These results were

supported by Baker (2008), who provided positive qualitative results in an experience focussed on pianistic sight reading with university students. In an ethnographic study, Foster (2014) described how student tutors used multiple skills such as empathy to work with their peers.

Peer tutoring in inclusive music education

The potential and limits of peer tutoring in the creation of inclusive spaces can be regarded from two main approaches: the inclusion of students at risk of social exclusion and the inclusion of students with special educational needs. Madsen et al. (1988) developed a project with fixed roles, where primary school students with disruptive behaviour helped pre-school students learning general basic knowledge through songs. Despite the positive results, it could not be concluded to what extent the reward of participating in the role of tutors had been affected.

Darrow et al. (2009) explored the benefits of participating in a music and peer tutoring project, where young students at risk of exclusion were proposed as tutors of students with special educational needs. Although in the analysis of final reports, no significant differences were found in the improvement of self-esteem among the intervention groups, other benefits were observed in the tutors such as: higher self-esteem, tolerance, respect, empathy, motivation, and interest in professional opportunities like education. Difficulties revolved around the tutors' prejudices, as well as the need for training on how to address tutees with respectful terms. These results were shared by Creaney (2020), who noticed an increase in self-esteem and the will of young offenders to re-engage with the educational system as peer tutors in a project for musical learning.

The role of tutees in students with special needs was observed by Van Weelden et al. (2017) in a project developed in the heart of a choir of adolescents, with the aim of helping them in daily musical tasks. Although the results on self-esteem seemed to worsen after peer tutoring being put into practice, it was attributed to an improvement in self-perception, concluding that peer tutoring was a great tool to develop skills awareness and the ability to boost them. Heuser (2011) qualitatively described the result of involving students from a school band as tutors of similarly aged children in a homeless shelter. Despite the initial rejection and difficulty of abandoning a teaching based on competition, it was observed that peer tutoring fostered respectful learning environments breaking down barriers and prejudices. Later, Taylor (2016), in a study focussed on musical accompaniment in newcomer students, and despite positive results in communication and in the individualization of learning, observed limitations regarding students' continuity and teachers' prejudices.

In order to develop resilience and the inclusion of the LGBTQIA+ community through music, Goodrich (2020) promoted the importance of providing students with the possibilities of being tutors, regarding themselves as leaders, and favouring the development of social skills and positive environments. Sheldon (2001) wrote about the importance of these structures, pointing out this strategy as a support to the teaching practice, making it more effective. These results were shared by Walkup-Amos (2020), who attributed the success of peer tutoring to the use of reciprocal roles, previous training, preparation of materials and monitoring.

Peer tutoring in initial teacher training

The literature shows the use of peer tutoring with the aim of offering students possibilities to develop teaching strategies and learn from their peers. In the area of music education, its use in the university stage is regarded with the purpose that students discover themselves as teachers. In the secondary education stage, in addition to favouring the development of the teaching role, peer tutoring is seen as an opportunity to offer specific extra help which may allow the students to improve.

Flowers and Coddington (1990), through peer tutoring practices, concluded that future teachers increased their confidence and were more positive. Supporting these results, Madsen (2011) confirmed the importance in tutors, of the development social skills and their own discovery as future teachers. The conclusions confirmed the importance of feedback and observation of the teacher both for tutors and tutees. In the study of the effects of four different peer tutoring activities in university students, Goodrich et al. (2018) confirmed the objective of students leaving their comfort zone, seeing themselves as future teachers and exploring their limits by learning from each other. However, the need to carry out various practices extended over time and the importance of teacher feedback in order not to limit experiences were emphasized.

Hanken (2016) described several peer learning projects for the purpose of creating environments that allow teachers and students to learn from each other. The reflections on this practice described the promotion of the students' autonomy, as well as musical decision-making in their own interpretation. Such results were also observed by Draves (2017) in a peer tutoring project for future teachers, highlighting the importance of collaborating in relation to professional growth.

In the secondary education stage, Webb (2015) observed how three pairs of students in a youth instrumental ensemble worked through peer tutoring with fixed roles. In turn, this experience had the objective of offering private instrument lessons to those students who could not afford them. The conclusions described that the most experienced students within the instrumental ensemble used preconceived knowledge about teaching, reproducing traditional forms of teaching and putting into practice strategies that they had observed or experienced. Despite the fact that the results showed greater awareness, adaptation to criticism, a feeling of community by learners and an improvement in the interpretation of the group, it was pointed out that the presence of prior preparation, more teacher feedback and the use of the reciprocal modality would have brought greater benefits.

The improvement of social skills was also explored by Gelb (2010) who indicated that tutee students improved not only technical skills and the predisposition towards musical learning, but also the development of communication skills. MacLeod et al. (2020), with the aim of offering students without resources the possibility of receiving individual instrument classes, observed peer tutoring. Although significant results were not obtained statistically, they showed the development of perseverance, leadership, and collaboration, contributed to create spaces in which to explore their potential as musicians, leaders, and members of a community. In a study with a highly structured interaction by the teacher, Goodrich (2021a) observed the use of fixed roles tutoring. Goodrich (2021a) concluded that the tutoring had been carried out before, during and after the rehearsal, sharing knowledge of basic aspects such as fingering. In this case, potential limitations such as the teacher's role or the reinforcement of misinformation were blurred through an active role of the teacher who was constantly observing, modelling and structuring the task.

Peer tutoring in instrumental practice in informal spaces

Beyond the social benefits of peer tutoring, this section concentrates those studies that placed special emphasis on musical learning through informal interaction between the students, where the role of the teacher was not present and neither the assimilated learning was posed, specified, or verified. According to Folkestad (2006), the aim in informal spaces is not to learn about music, but to play, listen, dance and communicate through it. Consequently, learning is observed as a result of the interaction of participants, their musical experiences, knowledge and the implementation of abilities and skills.

One of the first informal spaces to be analysed were the garage bands. Campbell (1995) studied the self-organization of these spaces, concluding that, in most cases, it took the form of spontaneous peer tutoring, with a 'leader' figure that would play the role of organizer, monitoring the rehearsals and explaining and performing musical examples. Berg (1997) supported this statement,

observing the existence of a similar figure in chamber groups. This role would also be part of other types of groupings such as the characteristic youth bands of Japan, where the main objective was that expert students guide the learning of new students in their free time, basing the relationships between young people on imitation and effort (Hebert, 2005).

In this sense, there is a series of studies that support the ability of students to teach music to their peers, even in informal structures. Brand (2003) corroborated that primary school students could teach their classmates to play the guitar from different perspectives and with different pedagogical tools. Woody (2007) observed how students rehearsed and, later, Odegard (2019) noticed how they were able to help themselves with technical musical problems. Such results are in line with Green (2002, 2008), through informal tasks on popular music, as well as with Jackson and Price's (2019) study in the university stage. This last research highlights the importance and influence of verbal and non-verbal interaction among students at all educational stages, in order to promote social relationships, foster peer learning, rethink new learning models, make decisions and create large communities of learners.

Peer tutoring in ensemble instrumental practice

This section considers those studies focussed specifically on instrumental ensembles, where the entire instrumental ensemble participates and follows a peer tutoring structure in order to improve the quality, the level and the general commitment of musicians are included. Alexander and Dorow (1983) explored the use of a fixed role tutoring project in school band students. The quantitative results showed that peer tutoring group performed better than the comparison group. Although greater improvements were found in the intervention group with positive feedback, it was not possible to conclude exactly which aspects of the relationship had led to such improvement. However, the authors proposed three different possibilities: (1) high opportunities to respond, (2) the individualization of the tasks and (3) the monitoring of the learning process by someone more expert and closer.

Goodrich (2007) studied the potential of fixed roles peer tutoring in a jazz youth band with the aim of improving rehearsal efficiency, learning jazz language, and developing social skills. The results of the qualitative study showed the development of excellence in motivation, responsibility, discipline and more positive relationships within the musical ensemble. However, limitations such as the organization within the group class and the possibility of the student tutor being idolized could also be observed.

Similar results were found by Scruggs (2008) who, in a comparative study with a youth orchestra, concluded that, despite not finding differences in the final performance, peer tutoring favoured musical maturity, commitment and the empowerment of students. Webb (2012) reflected on the importance of promoting peer tutoring structures within rehearsals, exposing benefits in tutors and tutees. However, in the study of influences in musical learning in an amateur choir, Bonshor (2016) highlighted the importance of organizing such interactions so that the musical objective was not lost in rehearsals. From another perspective, Fay (2013), through interviews with teachers of recognized youth bands, observed how peer tutoring was considered a recurring learning tool inside and outside rehearsals. This corresponds to the aim of understanding musical content or skills as well as how to sustain motivation and engagement.

Conclusions

This analysis highlights the importance of considering other types of learning structures beyond linear teacher-student conceptions. Researchers conducting empirical based research affirmed that peer tutoring does not compromise the acquisition of knowledge (e.g. Darrow et al., 2005; Duran

et al., 2020; Johnson, 2011a, 2015). Those authors also revealed multiple benefits of peer tutoring such as the development of social and musical skills, inclusion, commitment and even higher musical performance (e.g. Goodrich, 2018, 2021a; Webb, 2012, 2015). These studies showed that there was learning in both members of the pair, even in the tutor, who reinforced and developed content and assimilated skills when carrying out explanations, according to so called learning by teaching (Duran, 2017). As a consequence, tutees developed a better retention of information when it came from their peers (Darrow et al., 2005; Scruggs, 2008), even improving their attitude towards learning (Goodrich, 2007; Johnson, 2011a).

However, like in any educational practice, a number of limitations to take into account exist. In the area of music education, the rejection towards change, the reinforcement or transfer of erroneous knowledge, the feelings of imposition or idolization towards the pair and the fear of less demand and worse interpretation are to be found. With the aim of reducing these difficulties, the importance of establishing shared learning objectives among students and an interaction structure that allows them to share high-quality knowledge is pointed out. Therefore, this tool becomes a meaningful learning experience (e.g. Darrow, 2005; Duran et al., 2020; Goodrich, 2007; Johnson, 2015). This structure would encourage students to know their role and function, allowing more flexibility over time. Accordingly, there are studies that confirm a positive use of initial training (e.g. Duran et al., 2020; Walkup-Amos, 2020), so that students get to know the conceptual bases of peer tutoring and have a first contact with their peer, the materials and the roles.

The organization of this peer tutoring structure highlights the importance of an active role on the part of the teacher, necessary to build scenarios which ensure correct interdependence and interaction between pupils, and which also encourages constructive relationships, dialogue, and communication. However, the researchers show that in the role described, teachers must transfer part of the protagonist to the students, converting the classroom into a community of learners in which the students learn from the pedagogic help they give each other, under the supervision and support of the teacher. In this sense, Topping et al. (2017) promote the importance of offering feedback on the progress of the students as well as the self-assessment of the members within the pair. Such assessment, with the help of the teacher, would allow students to become aware of the development of their role and make decisions. This new role seems to require continuity, persistence, and the collaboration of the entire educational community to be truly effective (Goodrich, 2020; Taylor, 2016).

Existing literature confirms that peer tutoring is a viable practice in music education, regardless of the modality of peer tutoring used. In this sense, especially in primary and secondary education, the literature shows that the instrumental ensembles and group classes could take advantage of the opportunity of incorporating this pedagogical tool, formalizing the relationships that would have already been naturally internalized and naturalized within the group. Furthermore, in higher stages of education, the use of peer tutoring would allow the creation of spaces and communities of students who learn while they teach, fostering their freedom to interpret, negotiate and make their own decisions as well as boosting adaptation, self-criticism and joint evaluation. This tool is shown to be capable of breaking real barriers around exclusion, and, on the contrary, reinforcing empathy, commitment, responsibility, motivation and the general level of group interpretation in all educational stages (e.g. Furby, 2016; Goodrich, 2007; Johnson, 2015, 2017; Scruggs, 2008; Van Weelden et al., 2017). Therefore, peer tutoring is an ecological approach to education, offering explicit opportunities for all students to get involved.

Future research

In order to face effective practices in the musical field, it is important to continue studying the interaction between pairs which lead to determine the moments and actions that generate improvements

and benefits for the students. Although the research justifies that the tutee learns through the personalized help received from the tutor, the tutor's learning must also be ensured for the peer tutoring to be successful (Topping et al., 2017). For this reason, beyond tutoring with fixed roles, research should still be focussed on the duality between the level of musical skills and the age or school year of the participants, promoting other types of tutoring modalities which involve rich and beneficial practices. In the same way, it is important to continue investigating which types of peer tutoring modalities help to create more inclusive environments, including reciprocal tutoring with students with special educational needs, with diverse characteristics and in different environments.

Literature has shown that peer tutoring structures need practice time to be assimilated by students (Topping et al., 2017). In addition, the deep learning intended to promote with these structures needs to be evaluated in a sufficiently long time interval to observe its consolidation. For this, it seems important to continue studying the use of peer tutoring in a longitudinal way with long-term projects as well as its effect on the motivation and commitment of the students in the long term. Future research should perhaps examine the role of the teacher in peer tutoring, and specifically on highly structured practices.

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