

PEDAGOGY

Music as a Management Tool in Elementary Physical Education: A Qualitative Investigation

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Abstract

Classroom management is an important aspect for a K–12 teacher in any content area. The same applies in physical education (PE). In PE, there are large spaces, students are moving, and in many cases, equipment (basketballs, rackets, Hula-Hoops, etc.) is involved, thus making PE a unique challenge in regard to classroom management for PE teachers. One tool an elementary PE teacher can use for classroom management is music. For this study, one school administrator, 19 elementary-aged students, and one PE teacher were interviewed about their perceptions of music as a management tool in elementary PE. Findings indicate that students prefer music as a management tool rather than the PE teacher using a whistle or loud voice.

For many K–12 teachers, the aspect of classroom management can be a major concern for them. Classroom management has been defined as “organizing and controlling the affairs of a class. It refers to how students are organized, started and stopped, grouped and arranged during class (Pangrazi & Beighle, 2013, p. 98). Teachers may have a student or a number of students in their class that make teaching difficult for them and challenging for the other students to learn because of student misbehaviors during class. This may also be true for physical education (PE) teachers. PE teachers, in regard

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to classroom management, have to consider students being in a gymnasium, on a large playing field outdoors, or in a weight room. Equipment such as basketballs, rackets, weights, cones, and jump ropes need to be managed so that students do not hurt themselves or their classmates and still learn as they are interacting with the equipment. Then there is the element of students moving during games or activities. All these examples and more are typical situations of classroom management in PE.

Literature concerning the effect of music in the education context is limited. Yet Chalmers et al. (1999) studied two types (classical and popular) of music on elementary-aged students' noise levels and behaviors in the lunchroom. For this study, the researchers had classical music playing for five lunch periods and then popular music playing for five lunch periods. They discovered that the classical music played during the lunch periods reduced the decibel level of the noise in the lunchroom by 7%. For the popular music, the noise level was reduced by 12%. The researchers stated that 7% and 12% may not appear to be significant, but the lunchroom monitors noticed the difference, which helped them to monitor the lunchroom more effectively. Another result from this study was the effect of music on student behavior during lunchtime. Before music was played, the lunchroom monitors were giving approximately 20 interventions (correcting students) during the 20-min lunch period. After both classical and popular music was played in the lunchroom, the lunchroom monitors were giving seven interventions in the 20-min lunch period. The researchers concluded that even through their study investigated the context of the lunchroom, music could positively affect students in math, science, and other content lessons.

The literature has highlighted the importance of classroom management at all stages of a PE teacher's career. This was illustrated when physical education teacher education (PETE) majors participated in a semester-long elementary PE practicum (Barney & Pleban, 2006). For this study, PETE majors were interviewed before (pre) participating in their practicum and interviewed again after (post) completing their elementary PE practicum. In both the pre- and postinterviews, classroom management was one of the main areas of concern in their teaching. During the prepracticum interviews many of the PETE majors were concerned with controlling

the students and keeping them on task during class activities. In the postpracticum interviews, students felt when students were on task their classes were well managed. One student stated at the end of her practicum that her classroom management skills got better, but she still worried about classroom management when she would be student teaching and eventually teaching her own classes. These concerns regarding classroom management can be in the forefront of many PE teachers' mind.

With the importance of classroom management in the PE context, PE teachers can use specific methods to manage students. For example, PE teachers can use their whistle, can split up students who are misbehaving, and can use consistent start and stop signals to manage their students (Pangrazi & Beighle, 2013). Another method of classroom management a PE teacher can implement is the use of music. The literature has primarily investigated the implementation of music in PE to increase student activity (Barney & Prusak, 2015; Brewer et al., 2016; Deutsch & Hetland, 2012) and student enjoyment (Barney et al., 2016) in PE class. When conducting research with music in a physical activity (PA) context, Karageorghis et al. (2006) created a conceptual framework. Four tenets make up this framework: (a) rhythm response, (b) musicality, (c) cultural impact, and (d) association. Rhythm response refers to musical rhythm, most notably tempo. Tempo refers to the speed of music as measured in beats per minute (BPM). Musicality refers to the responses to pitch-related elements such as harmony and melody. Cultural impact refers to the perverseness of the music within society. Association refers to extramusical associations such as emotions that a piece of music may evoke (Karageorghis et al., 2006). Karageorghis et al. (1999) presented this conceptual model using these four factors to predict the effects of asynchronous (i.e., absent of conscious synchronization between physical movement and accompanying musical rhythm such as background music) motivational music in the context of exercise and sport.

Limited research has studied music as a management tool in PE. Yet some studies have alluded to music as a management tool. Harms and Ryan (2012) discussed the use of music to enhance PE. They observed four elementary PE classes that used music as a management tool on a regular basis. For the first two classes, the PE teacher

used the music to start and stop students throughout the lesson. No major problems were observed in these two classes. For the final two classes, the researchers asked the PE teacher not to use music as a management tool. They noted the PE teacher was hesitant when asked not to use music in the lessons. For the last two lessons, the researchers observed more off-task behaviors, because no music was being played and many of the students were upset and angry because no music was being played. The researchers suggested that music has positive effects when used as a management tool in PE class.

A second study investigated PE teachers' perceptions of incorporating music in PE lessons and evaluated the influence of music on the classroom environment (Barney & Pleban, 2018). For this study, 26 K–12 PE teachers were surveyed. The survey consisted of open-ended questions requiring the PE teachers to explain their responses to the survey questions. After analysis of the survey questions, several themes were apparent. They felt that they were putting students in a better position to learn the content, that music helped provide a positive class climate, and that music served as a motivational tool. Yet one of the main themes resulting from this study was music played a part as a management tool. Many of the PE teachers stated that music was a positive tool to assist with classroom management. One of the PE teachers stated, "Instead of screaming and being loud to get the class to focus, I stop the music to get attention. The sudden silence of no music gets their attention quickly" (p. 203). Another PE teacher stated, "When music starts, students start activity. When the music stops, students stop and look at me, or students put away equipment and rotate etc. Music make signals and students immediately recognize it" (p. 203).

The results from both of these studies dealing with music as a management tool highlight music as having a positive effect in aiding PE teachers to manage students during class activities. The results from these studies are positive, yet still there is a paucity of research specifically regarding music as a management tool in elementary PE class. Thus, this study investigated music as a management tool in elementary PE from the perspectives of a school administrator, the PE teacher, and elementary-aged PE students.

Method

Participants and Setting

For this study, 19 elementary-aged students (7 males and 12 females), one female PE teacher (9 years of teaching experience), and one male school administrator participated. The school that the participants came from was a public charter school located in the Hawaiian Islands. It has a student population of approximately 330 students (PK–6). Ethnic breakdown of the student population was 61% Caucasian, 22% of two or more races, 9% Hispanic, 7% Hawaiian, and 1% Asian (Public School Review, 2020). University Institutional Review Board (IRB) and the charter school gave approval for the study to be conducted. Parental consent as well was obtained before the study proceeded.

Procedures and Data Collection

On the day of data collection, we interviewed the school administrator, the students, and the PE teacher at the school. The interviews were approximately 15 min in length. The interviews were semistructured and were audio-recorded. The interview questions were different for the participants. Students, the administrator, and the PE teacher were interviewed because of the consent they gave or was given by their parents. The interviews were designed to get the participants' opinions and experiences related to music as a management tool in elementary PE.

Survey Questions

A specific line of questions dealing with music as a management tool in PE was not found in the literature. Thus, we constructed interview questions for the PE teacher (11 questions), school administrator (4 questions), and students (7 questions). Content validity on the interview questions was established with three PETE faculty. Having three PETE faculty review item construction ensured the readability of items in terms of addressing music as a management tool in PE. The instrument was pilot tested with four elementary-aged students who did not participate in this study.

Interview Data Analysis

For the analysis of the interviews, participant responses were correlated and reviewed and preliminary coding categories were generated, with framework analysis methodology for participant responses, as outlined by Check and Schutt (2011). Framework analysis incorporated the stages of (1) familiarization, (2) thematic, (3) identification, and (4) charting and interpretation (Rabiee, 2004).

Music as a Management Tool in Elementary Physical Education Themes

We read and reread interview transcripts, identifying themes and phrases. From all survey responses, the most frequent management content themes were (1) start and stop signals, (2) music versus a whistle or a loud voice, and (3) music's effect on teacher instructions (see Table 1).

Table 1

Interview Themes Regarding Music as a Management Tool in Elementary PE

Interview themes	Comments
Start and stop signals	“When the music starts, we get moving, and when it stops we stop” “When the music stops our eyes are on Miss L.”
Music versus a whistle or loud voice	“I like the music so much more. The day the speaker wasn't working wasn't good.” “I don't use a whistle. I hate whistles.”
Music's effect on teacher instructions	“Miss L. tells us what to do when the music stops. She doesn't want to waste time.” “When the music stops, Miss L. gives us instructions on what to do and what not to do.”

Results

Start and Stop Signals

From the interview data, the use of music as a start and stop signal was a common and constant theme. Mike (school administrator) stated,

She uses it as a stop and start signal. A good management tool. Also, when Lori [PE teacher] has a substitute, they follow her lesson and when they [the substitute] play music the children do as they are supposed to do with the music playing. In large part because of what they do every day in their class.

A number of students who were interviewed stated when the music starts, we “get moving” and “when the music stops, we stop.” Mary stated, “When the music starts, you start to do what she tells you. For example, start skipping when the music starts. The class skips.” Sally stated, “When the music stops, we freeze. If we have equipment, we put it down as we freeze.” Julie said, “I like the music to start us going. It is better than her telling us to go.”

Music Versus a Whistle or Loud Voice

The second theme from the interviews dealt with the PE teacher not using a whistle or a loud voice for management. Casey was asked if Miss L. uses a whistle to start and stop the class. He said, “She used a whistle one time because the speaker wasn’t working. The next day, the speaker was working. I like the music better.” Lilly made the same observation as Casey regarding the speaker not working. Lilly said, “I like the music so much more. The day the speaker wasn’t working, that wasn’t good. I don’t like the whistle.” Beth stated, “I have gotten used to hearing the music. When the music starts, I get going. And when the music stops, I stop and face Miss L. When she doesn’t use the music and uses a loud voice, I am surprised.” Lori was asked if music as a management tool has made her life better as she teaches PE. She stated,

I don't use a whistle. I hate whistles. When the music stops, the kids stop and so I don't have to speak as loud. It saves my voice. Because of this I have learned to give short and concise instructions to the kids.

Music's Effect on Teacher Instructions

The final theme from the interviews was when the music stops, students are given instruction. Emily said, "Miss L. tell us what she wants us to do when the music stops. She doesn't want to waste time, and we move from one activity to another quicker." Steven said, "When the music stops, Miss L. gives us instructions on what to do and what not to do. When the music starts, we do what she told us to do." Paul said, "When she turns on the music, we have to be ready. And when she turns off the music we have to freeze. She wants us to listen to what she says." John stated it a little differently, but with the same intent: "The music helps me focus on what Miss L. asks us to do. So, I don't think of other things."

Lori said,

When I do Jump Rope for Heart, the parents see how I use music. That when the music stops, I give them their instructions for activity. I turn on the music and they do the activity. The parents see their children have been conditioned to the music and how they respond to it. The parents only say how much they like the kind of music I play. But it shows the parents that when the music is off I will give their children instructions on what I want them to do.

Discussion

This study investigated music as a management tool in elementary PE from the perspectives of a school administrator, the PE teacher, and elementary-aged PE students. The results from the interviews from this study found music as a management tool in elementary PE to be effective and preferred. Three themes came from interviews with a school administrator, elementary-aged students, and an elementary PE teacher: (1) music as a start and stop signal, (2) music

versus a whistle or loud voice for management, and (3) music's effect on the PE teacher giving instructions.

It was generally found that music is an effective tool for elementary PE teachers to use to manage their students. Also, from the student perspective, they like the music. The first theme shows that using music as a start and stop signal helps set the environment for the given class and lesson. For many students in elementary PE, they have been in their classrooms studying math, science, social studies, or other content. The question can be asked, how have they been studying? They have been sitting at their desks. When students come to PE class, the PE teacher will start and stop the students two or three times. This gives the students a chance to quickly warm up the muscles and gets the students to start and stop when the music starts and stops (Pangrazi & Beighle, 2013). This gets students thinking about things that are physical in nature. Barney and Pleban (2018) interviewed K–12 PE teachers who use music in their PE lessons. In one of the interviews, a PE teacher stated, “When music starts, students start activity. When music stops, students stop and look at me, or students put away equipment and rotate etc. Music makes signals instant and students immediately recognize it” (p. 203). Krystosek (2003) observed that students in PE classes without music were off task more than students in PE classes with music playing. Thus, music in the classroom frequently reminds students to stay on task and no music in the classroom creates more unnecessary work for the PE teacher. From this study, one student said, “When the music starts, I need to be moving, and when the music stops, I need to stop and face Miss L.”

The second theme was music was preferred rather than a whistle or loud voice for management. This theme affects both the students and the teacher. The students from this study preferred the music rather than hearing a whistle or the PE teacher's loud voice. During an interview, one of the students was asked if they preferred the music, a whistle, or a loud voice. The student replied, “The music.” The student was asked why. She stated, “The music is much more fun, and the whistle isn't fun. If Miss L. uses a loud voice, sometimes it sounds like she is yelling at us.” Ryan (2009) studied the effects of a sound-field amplification system on managerial time in a middle school PE setting. The results indicated that the field amplification system

reduced managerial time used in class, resulting in more instructional and activity time during class. Yet the researcher concluded that the aid of a sound-field amplification system will help with PE teachers' voice fatigue, which can be troubling for them (Gotaas & Starr, 1993; Masuda et al., 1993).

The final theme was when the music stops, students are given instructions from the PE teacher. Casey was asked why listening to the music is important. He stated, "You can do what Miss L. asks you to do." Other student comments regarding the importance of listening to the music included "She gives instructions," "We do what Miss L. wants us to do," and "She tells us to do a task when the music starts." Harms and Ryan (2012) found that when the music stops, students will stop, look, and listen to the teacher regarding their activity. When Barney and Pleban (2018) interviewed K-12 PE teachers, one said,

If implemented correctly, music can be used to manage the classroom by giving the students cues on what to do when they hear the music stop or when they hear the music start. If not implemented correctly, many classrooms can turn into a zone of poor management.

The conditioning of students in PE class to listen and then follow instructions may seem oversimplified. Yet this simple skill of listening to instructions will serve the student well in their education and then throughout their life in general.

Study Implications

The implications of this study have the possibility of benefiting elementary PE teachers, PETE majors, and PETE faculty. As this study shows, elementary PE teachers can successfully implement music as a management tool. During the interview with Lori, she stated, "It is pretty instantaneous with music when teaching students management. It is a matter of being consistent and doing it every day." PETE majors need to understand that music can be an effective management tool and experience this tool during the elementary PE practicum and student teaching. PETE faculty can introduce music as a management tool in their methods of teaching elementary PE. Then when the PETE majors go out to elementary school and teach,

the PETE faculty can encourage and help them to see how music can benefit and strengthen their management as they teach. Lori mentioned that in her undergraduate program she was introduced to the concept of music as a management tool by one of her professors. From there, she used music in her practicums, in student teaching, and now in her own PE classes. For PETE faculty, the use of music as a management tool can be discussed in class and modeled to the students before they participate in their elementary PE practicum. PETE faculty can go to the elementary school during the practicum to observe the PETE major teaching with music. After this, they can sit down with the PETE major to discuss their classroom management experiences with music.

Study Limitations

A limitation of this study is the inability to generalize these findings to other elementary schools in the other parts of the United States. Because of the use of a sample of convenience from one elementary school PE program, further generalization of this data must be approached with caution. Further study should explore the reproducibility of the process and findings with multiple elementary school PE programs at different schools and in different regions of the United States.

Conclusion

This study investigated music as a management tool in PE class. Because of the paucity of research on this topic, this study only helps strengthen and add to the literature. Results from this study appear to coincide with the limited literature in regard to music as a management tool in PE class. Pangrazi and Beighle (2013) stated that music as a management tool is effective with elementary-aged students. They continued by saying, “Managing student behavior is not easy. A class of children is a group of individuals, each requiring unique treatment and understanding” (p. 98). With the challenge of working with a variety of personalities, some more challenging than others, music can be used in teaching simple yet important skills that when learned and followed will benefit the student and have the potential to affect their learning in PE class. Barney and Leavitt (2019) feel that music helps create a positive environment, and with the use

of music in the capacity of management, there is the possibility of continuing the positive environment in the PE class.

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