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# Music Down Here: A Project Based Learning Approach

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**Abstract**

In this study, the subject of music and musical instruments has been studied with a project-based learning approach and a practical training program has been implemented in a kindergarten classroom. This paper describes a semester long curricular and instructional design project focusing on the design and implementation of a Music Down Here Project using Project Based Learning approach into a kindergarten classroom. The project took place in a university-affiliated child care setting in the Midwestern United States. The classroom had one classroom teacher, one teaching assistant, and 16 kindergarten students (10 girls, 6 boys). The project was performed in three stages and the topic of musical instruments was selected by the children participating in the project. In this study, activities were planned in line with the interest of children towards musical instruments. According to the findings of the study, the students' interest towards musical instruments increased as a result of the project. The project-based learning approach positively affected children's cognitive development about music and musical instruments. The project itself offered several opportunities for parents to get involved in children's education. It is suggested that preschool teachers might be encouraged to design and use project-based learning approach in their lesson plans.

**Keywords:** design case, kindergarten, music, musical instruments, pre-school, project-based learning.

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## Introduction

This paper describes a semester long curricular and instructional design project focusing on the design and implementation of a Music Down Here Project using Project Based Learning approach into a kindergarten classroom. The Music Down Here Project represents an instructional learner centered teaching method designed to change the focus of instruction from the teacher to the student. With this kind of a project-based learning approach, students conduct research and equip not only with knowledge, but also with tools to solve real-word problems and present solutions.

The project took place in a university-affiliated child care setting in the Midwestern United States. The classroom had one classroom teacher with a bachelor's degree, one teaching assistant, and 16 kindergarten students (10 girls, 6 boys). At the beginning of the project, possible project topics were discussed with the children in the class and a decision was made to pursue the topic of musical instrument. The study describes the design and implementation of a Music Down Here Project using Project Based Learning approach into a kindergarten classroom. The authors reflect on their experiences on the design process and implementation of the project. The aim of this paper is to share the design experience with the other designers with similar purpose.

## Project Based Learning

Learning is defined as acquiring and changing knowledge, skills, attitudes and behaviors. Learning cannot be directly observed, but it can be understood whether learning is realized by looking at its products and results (Schunk, 2011). Learning occurs when the learner establishes a relationship with the real life and adds meaning to what he/she learns. In project-based learning, students associate their previous knowledge with new learning during practice and encounter real-life examples during project completion. In addition, project-based learning approach is seen as the most appropriate technique for the implementation of contextual learning (Hudson & Whisler, 2007).

Working with projects allows students to learn with their own learning methods and allow them to work according to their individual differences (Saracaloğlu, Akamca & Yeşildere, 2006). The project-based learning approach is based on the constructivist approach and offers various teaching environments for students (Altun, Turgut & Büyükkasap, 2007). It is a technology-based learning process in which student learning is supported rather than direct-teaching, their daily life is transferred into the classroom, and families are active in the students' learning process (Erdem, 2012; Saracaloğlu, Akamca & Yeşildere, 2006). Group work in project-based learning environments is considered necessary for students to comprehend the importance of group work and scientific method processes (Korkmaz & Kaptan, 2001).

With the project-based learning approach, students can collaboratively work in small groups, in and out of school. In this approach, students try to produce a product by finding solutions to problems and putting their knowledge together. While the students try to produce products using their own experiences, the task of the teachers is to guide the students to facilitate their work (Demirel, 2011).

Teachers and students work together to find answers to questions about the subject (Demirhan & Demirel, 2003). The basis of this method is learning by questioning,

because the student works on the topic of interest. In fact, the definition of the project is the realization of in-depth research, analysis, application and product presentation on a subject worth learning (Tok, 2012). The problem-based learning approach, which is also used in preschool, is the case where children work in small groups or as a whole class about a topic that they are interested in and want to learn (Morrison, 2009).

According to Morrison (2009), project-based learning consists of three stages. The first phase of the project is the start of the project (revealing the previous learning). At this stage, students brainstorm a known subject, experiences are shared, notes are taken, a map of the students' ideas is prepared and questions to be researched are prepared. The second phase of the project is the development of the project (reviewing the issue). At this stage, questions and forecasts are written, questions to be asked to experts are prepared, information obtained is recorded, task sharing is made, general information on the subject is shared. The third phase of the project is the termination of the project (sharing the project). At this stage, situations to be screened are prepared, a report is prepared about the newly found information and the information obtained is shared (Morrison, 2009). In the studies conducted by Şahin, Güven and Yurdatapan (2011), it was determined that project-based learning approach positively affected children's cognitive development. In their study, Marilyn, Sallee and Harris (2003) found that children could learn geometric shapes more easily and solve problems through project-based learning. As a result of the study conducted by Beneke and Ostrosky (2009), it was determined that the project-based learning approach had an impact on children from different cultures and with different needs.

Project based learning is used as a method in teaching subjects such as science, mathematics, art, and music. Among the branches of art, music is considered to be the most influential (Öz, 2001). Music has positive effects on human behavior, it provides social and cultural ties in the community (Göncü, 2016). The use of music in education is important in the development of students' sense of responsibility and creativity (Öz, 2001). The use of music in preschool is also important for the development of cognitive processes as well as teaching children some values and concepts. Children's recall of the music they listen to, understand the concepts to be explained with music and cause-effect relationships support their cognitive development (Şen, 2006).

**Design Context**

In this study, the project-based learning method was used to teach music in a kindergarten classroom. In order to find the results of the Music Down Here project in kindergarten education, children’s experiences during the project and their drawings of musical instruments at the beginning of the study and at the end of the study were compared.

The project included 16 children (10 girls and 6 boys) aged 5-6 years attending a state-sponsored school in the midwestern United States. The study took in the classroom and the kindergarten teacher and project team were also part of the class. The kindergarten teacher had a bachelor's degree and 8 years of teaching experience. A music expert was also invited to the classroom as part of the project. In addition to the participants of the study, the project team visited the class twice a week within the scope of the project. The Music Down Here Project took place in a university-affiliated child care setting in the midwestern United States. The project took place over the course of one semester,

lasting from February through the end of May.

## Design Process

Before the project began, the students were asked about their interests and what topic would they like to work within this project. The project team attended the first-class session and discussed about possible project topics with the children. After a discussion about possible topics for the project, a decision was made to pursue the topic of musical instrument. After the topic was chosen, the PBL project has started and took place in three distinct phases.

## The phase I of the project

The phase I of project included a discussion about what the children know about musical instruments, a brainstorming activity, and preparing letter of information for parents. During the phase I discussion, a brainstorming activity was made about the musical instruments with the children. The first question asked to children was "what comes to your mind when we say music?" The answers were bells, cymbals, drums, maracas, xylophone, rhythm, and shakers. The discussion and the brainstorming activity took almost two days. The discussion was specifically directed to learn children's experiences with music in general and musical instruments. With the help of the discussion and the brainstorming activity, the children were able generate different ideas. After the discussion, the first question about music was asked the children and this time their answers broadened. Instead of just the name of musical instruments, we received different answers such as band, headphones, singing song, listening radio, playing a musical instrument.

Following the discussion, a mind mapping (see Figure 1) was created based on the answers during the brainstorming. Then, an anticipatory web (see Figure 2) was created showing the interrelationship among how to play xylophone, maracas, cymbal, bells, drum, tambourine, rainmakers; singing a song as a group; learning about the sounds of djembe, saxophone, trumpet, flute, clarinet, violin, guitar and piano.


Figure 1. Mind mapping


Figure 2. Anticipatory web

After the first discussion, a graphic organizer, KWL chart, was designed to help in student learning. KWL chart is included the questions of 'What They Know, What They Want to Learn, What They Learned.' In the Phase 1, the first two questions were asked. With the first question, 8 different subtopics about the musical instruments were

recorded. These were 'violin is a musical instrument, cymbal is a musical instrument, guitar is a musical instrument, how does guitar produce sound (they made sound like a guitar), we use headphones to listen music, we use radio to listen music, how to play drums (they pretended like playing drums), what is band (band is a group of people playing different instruments).' The second question 'What they want to learn' included 6 different topics that they want to learn about. These were 'what are the other musical instruments, how to play cymbal, how to make maracas, how to make a band, how to write a song, how to sing a song with musical instrument'. The information about what they know, what they want to know are shown in Table 1.

**Table 1.** The information about what they know, what they want to know

| What They Know | What They Want to Know | What They Learned |
|---|---|---|
| Violin is a musical instrument.<br>Cymbal is a musical instrument.<br>Guitar is a musical instrument.<br>How does guitar produce sound?<br>We use headphones to listen music.<br>We use radio to listen music.<br>How to play drums.<br>What is band? | What other different kinds of musical instruments?<br>How to play cymbal?<br>How to make maracas?<br>How to make a band?<br>How to write a song?<br>How to sing a song with musical instruments? | |

The students were specifically interested in learning different kinds of musical instruments and singing a song. Although the children had enough information to begin the project, they still had plenty of information to learn about. Thus, based on the subtopics that they wanted to learn, lesson plans were created that includes learning about different musical instruments, making maracas, writing songs, singing songs, etc. While the preparation for the actual PBL activity, an information letter was prepared for the parents. The letter was first prepared to encourage parents to have a conversation at home with their kids about music and musical instruments. Secondly, the parents were kindly asked to donate some clean recycled items that can be used during the music project. Those could be small plastic water bottles, storage containers, aluminum cans (no sharp edges) and some boxes to support our project. With the help of the letter, the parents donated some recycled materials that the children could use to create their own musical instruments.

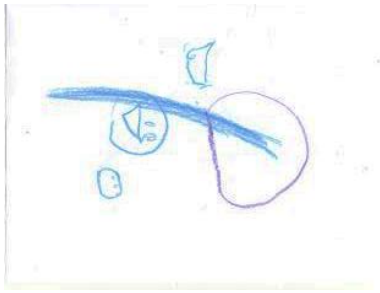
### The phase II of the project

The phase 2 of the project included drawing pictures, reading a story book, watching a movie about musical instrument, a nature walks to listen the natural music, creating their own musical shakers, dancing as a group, inviting a guest expert and writing a song collaboratively.

At the beginning of the phase 2, the students were asked to draw their imagined musical instruments, thus the researchers and teachers would have a chance to see what all the children know about musical instruments. However, some children did not have an idea about different musical instruments, so they drew about music or how they feel when they listen to music. Below are some examples from the children's drawings, for instead, Noah (5 years) draw a picture about smiley face and explained that 'I feel happy when I listen music,' Victoria (5 years) draw the picture below and said 'I listen music with my sister', Jacob (6 years) said 'my musical instrument' for his drawing,

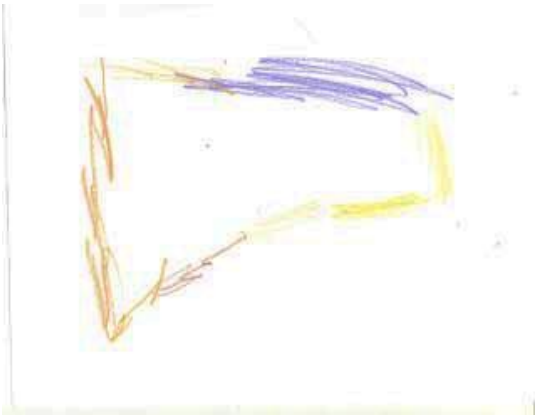
Lucas (6 years) draw a circle and said ‘this is my drum.’



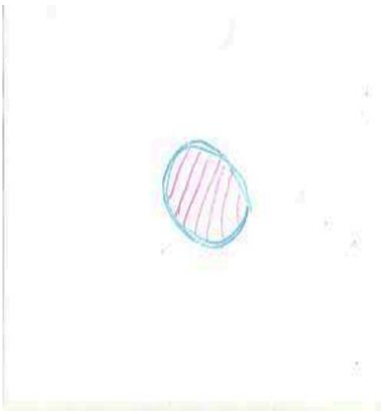
Noah (I feel happy when I listen music)



Victoria (I listen music with my sister)



Jacob (My musical instrument)



Lucas (My drum)

On the first day of the second week, the book Violet’s Music by Angela Johnson was read with the children. The book was about a girl who loves music; therefore, she plays and sings every chance she gets. This book was chosen because the children could be able to see and learn the pictures of musical instruments on the book. The next day, the musical instrument pictures, such as guitar, trumpet, drum, accordion, djembe, tambourine, xylophone and maracas, were printed out with the name tag on them. Thus, the children had a chance to see both the pictures of the musical instrument and the written version of them.

In the third week of the project, a PowerPoint slide about the different kinds of musical instruments was showed the children. Then, a video about musical instruments and their sounds was watched with the children thus they could hear and identify the sound of musical instruments. The next day, in order to create an interdisciplinary lesson, math and music activities were integrated into the project. The children counted the printed pictures 1 to 5; all the children were attended to the counting activity.

In the fourth week of the project, a nature walk with the children were made, they listened the nature and collected rocks during the walk. In addition, all the children brought their recycled materials to create their own musical shakers. The children, with the help of teachers, created their own musical instruments by using recycled materials, small plastic water bottles, storage containers, aluminum cans, dried materials (beans, rice, rocks). Then, the children created their own band by using their own shakers and

danced as a group. The next day's activity was writing a song as a group. A songwriter expert was invited to the classroom. As the first step of the activity, the songwriter asked the children about their preferences of the song's topic. Children came up with three different song topics, which were thanksgiving, musical instruments, and ice cream. Most of the children liked the idea about the ice cream, it was decided to write a song about ice cream and the children created their own song with the songwriter. The song came out to be

*'Ice cream is cold, Ice cream goes in the freezer, Ice cream is white, Ice cream can be strawberry, and Ice cream is chocolate. Ice cream, Ice cream is fun, Milkshakes, We like it. I like eating ice cream, Ice cream is yummy, I like ice cream warm, I like chocolate ice cream, and Ice cream can be hot. Ice cream, Ice cream is fun, Milkshakes. We like it. I feel good when I eat ice cream, I feel excited when I eat ice cream, I feel happy when I eat ice cream, Ice cream melts when eat it.'*

All the children sang the song alternately and together the chorus of the song. All the children used their own musical shakers, while singing the chorus.

The fifth week of the project, a box of musical instruments (see Figure 3) was brought in to the classroom. In the box, there were different kinds of musical instruments; xylophone, maracas, drums, tambourines, bells, cymbals, and a triangle. The children were able to touch all the instruments and play the musical instruments. The children played the musical instruments, while singing their own song about the ice cream.

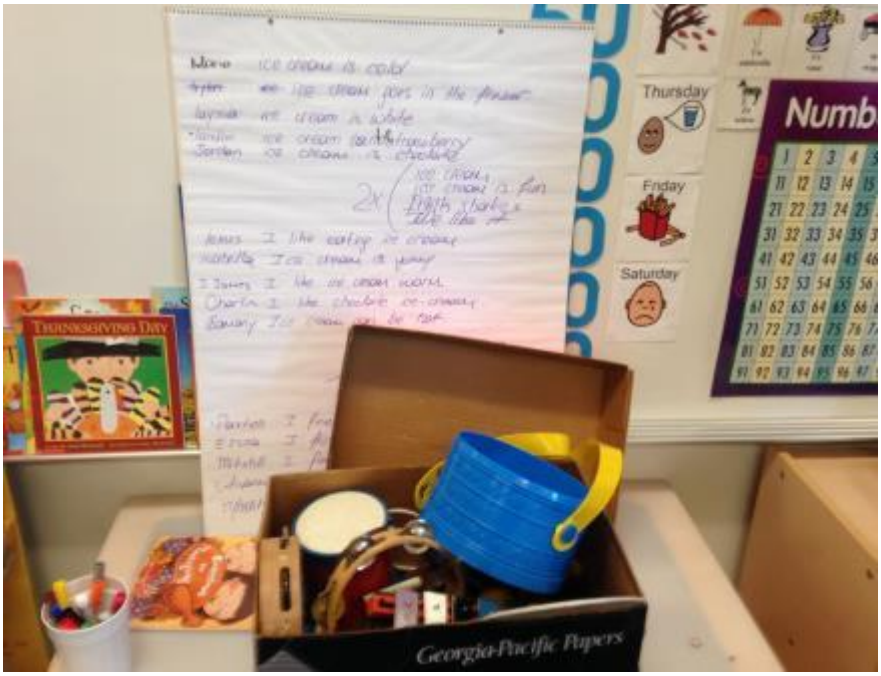



Figure 3. Box of musical instruments

**The phase III of the project**

In the phase 3, the project was continued by talking about the students' learning outcomes. Thus, the KLW chart that was created at the beginning of the project was completed. A discussion that refers to the third part of the chart, which was 'What They Learned,' was made with the children. The children's answers were 'we learned

different types of musical instrument; drums, xylophone, piano, trumpet, tambourine. We played cymbal. We make our own shakers. We created a band as a class. We wrote a song together as a class about ice cream. We played our musical shakers while singing our song.' The KWL chart with the information about what they know, what they want to know and what they learned are shown in Table 2.

**Table 2.** The completed KWL chart

| **What They Know** | **What They Want to Know** | **What They Learned** |
|---|---|---|
| Violin is a musical instrument.<br>Cymbal is a musical instrument.<br>Guitar is a musical instrument.<br>How does guitar produce sound?<br>We use headphones to listen music.<br>We use radio to listen music.<br>How to play drums.<br>What is band? | What other different kinds of musical instruments?<br>How to play cymbal?<br>How to make maracas?<br>How to make a band?<br>How to write a song?<br>How to sing a song with musical instruments? | We learned different types of musical instruments,<br>Drums<br>Xylophone<br>Piano<br>Trumpet,<br>Tambourine.<br>We played cymbal.<br>We make our own shakers.<br>We created a band as a class.<br>We wrote a song together as a about ice cream.<br>We played our musical shakers while singing our song. |

During the Phase I of the project, the aim was to learn what children know about musical instruments. According to children's answers, it was determined that the children knew violin, cymbal and guitar (f = 3). In the phase 2 of the project, after drawing pictures about music, reading a story book, watching a movie about musical instruments, a nature walks to listen the natural music, creating their own musical shakers, dancing as a group, inviting a guest expert and writing a song collaboratively, it was determined that children learned different types of musical instruments. The children learned drums, xylophone, piano, trumpet, tambourine (f = 5) musical instruments.

**Reflection**

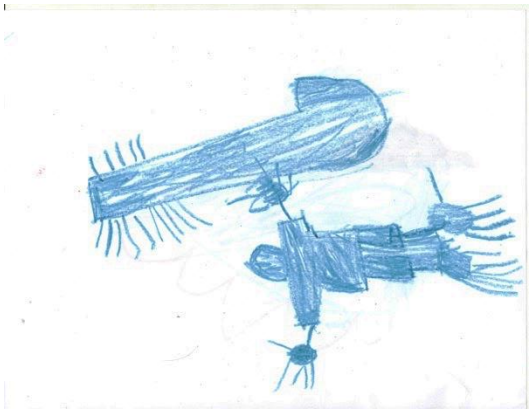
In Phase 1, it was determined that children wanted to have information about what other musical instruments are. It was also determined that children were curious about how

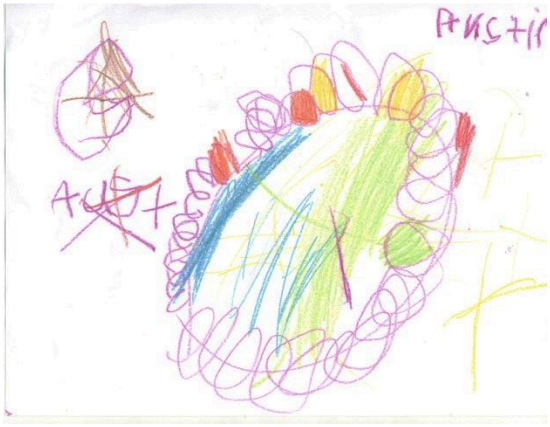
the cymbal and maracas were played, how a band was formed, how to write songs and how to sing with musical instruments. Preparations and activities were planned for the project based on what children know and what they want to learn. As a result of discussions and brainstorming activities with the children in Phase 1 and 2, it was determined that the children found the answers to the questions they were curious about. It was determined that reading, painting cards, video watching, counting, trekking, creating musical instruments, song writing, and singing were the activities that helped children learn about music in general and musical instruments specifically.

The next part of the phase 3, the children were asked to draw a picture about a musical instrument. The purpose of this activity was to compare the children's first drawings with their drawings at the end of the project. As a result of the study, it was determined that the children's knowledge and drawings were developed. For instance, at the beginning of the project one of the children did not know any information about the musical instrument but she was very excited about learning them. At the end of the project she drew a tambourine without asking any help and she just used her knowledge that she learned during the project. Below are some examples of children's drawings at the end of the project, such as Lucas (6 years) drawing with a circle with two sticks and he described it as 'my drum with sticks.' Lily (6 years) drew herself and a guitar saying that 'I play guitar.' Victoria (5 years) drew her mom, sister, and herself with xylophone as she described 'I play xylophone with my mom and sister.' Jacob (6 years) drew a tambourine and said, 'this is my tambourine.'

Lucas (This is my drum with sticks)



Lily (I play guitar)



Victoria (I play xylophone with my mom and sister)  Jacob (This is my tambourine)

At the end of the project, an event for parents was planned. The parents were invited to the school and were able to see the musical instrument drawings and listen the song that the children wrote.

As a result of the study, the number of musical instruments known by the children were increased. Before the study, the number of musical instruments that children know was three, but at the end of the project the children learned five additional musical instruments and the number increased to eight. At the end of the project, it was determined that musical instruments were more prominent in children's drawings and they depicted different types of musical instruments. It is found that the children were able to reflect the new information they gained during the project in their drawings.

The project-based learning approach is also important for the development of students' ability to work with the group. In this PBL project, children wrote lyrics with their classmates and it is an indication that they can work together as a group. In addition, the participation of parents in learning activities in the project-based learning approach shows that they can be a part of their children's education. In this project, the parents were asked to bring the residual materials from their homes and the participation of the parents was observed to a great extent.

It can be suggested that teachers invite parents in their projects and work in cooperation with them. In addition, with a project-based learning approach student actively engage in the process of learning and acquire a deeper knowledge about the topic. The students would be able to demonstrate their knowledge and skills by creating a product. In this project, by writing and singing their own song and creating their own musical instruments the students were able to create a product and demonstrate their knowledge and skills.

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