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Christi Batamula

Bobbie Jo Kite Herbold

Julie Mitchiner

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“Can a snowman have more than three snowballs?” Conducting Project Studies with Young Deaf Children

Christi Batamula, Bobbie Jo Kite Herbold, & Julie Mitchiner

Abstract

This study explored conducting project studies with young deaf children in two American Sign Language (ASL) and English bilingual schools for deaf children. Project studies involve teachers' facilitation of exploration on a topic that interests young children. In projects, children learn by doing, starting with questions based on children's curiosity about a topic and finding answers to the questions through investigation, field trips, and play. Children then represent their understanding and ideas about the topic in various ways. This study used ethnographic methods by observing specific strategies that teachers used to facilitate deaf children's learning in multiple early childhood classrooms. The study also included focus group interviews to listen to the perspectives of families and teachers about using the project approach with young children in deaf education. The findings include descriptions of deaf children's experience conducting projects that took place in both schools. It revealed the benefits of conducting project studies with young deaf children to enhance their learning experiences.

Keywords: *deaf education, project approach, Reggio Emilia approach, early childhood education*

Snowman Study: A Vignette

We begin by sharing a vignette of one of the several projects we observed during our research. Each of the classrooms in our study was engaged in different projects and in different phases of their project studies. During one of two school visits, we observed and documented an end-of-project-study celebration in a preschool classroom. The preschool class invited their families to participate in their morning meetings as part of their daily routine. The teacher, Janice, stood next to a SmartBoard and explained in American Sign Language (ASL), with ASL and English interpreters, to the families about their two-month long Snowman project and displayed documentation of children's learning experiences.

The exploration of snowmen began when the children were playing in the snow during the school day. The kids were fascinated with snow. Janice observed children's responses as they played in the snow. They showed excitement and curiosity with the snow through their play and exploration. To get a sense of the children's interest in exploring snow further, Janice placed several books about snow on the bookshelf in the reading area. Janice observed that they were mostly interested in books specifically about snowmen. To build and engage children's interest in the topic of snowmen, Janice introduced clay for the children to build a model of a snowman. She showed techniques to make balls in different sizes with clay. After the children made their own snowman with clay, they began to have their own ideas about their snowman, moving away from a traditional perspective of a snowman. One of their snowmen became a "snowdeer," an imaginary animal with a long tail. Another child made a princess snowperson. Some snowmen became other creative characters. In order to elevate their thinking, Janice asked deeper questions about snowmen. The questions included, "What is a snowman? What do they look like? Must they have three snowballs? Do all of these balls have to be connected? Must they be white?" It prompted children to become more creative with their own interpretations of a snowman. Throughout the project, they collectively agreed that there were many ways to make a snowman. At the end of the two-month study, families came for a closing

celebration. During the morning meeting time, families watched videos of their kids learning through play and exploration. Then, families were invited to participate in different hands-on activities that were similar to what the children experienced throughout the project. Families made their own snowman with various materials and they were invited to read children's portfolios and documentation boards that showcased their play experiences in the project. Janice encouraged the families to engage their children in conversations about their work while making their snowman.

Children in the preschool room were excited to wrap up their snowman project. They had a wide variety of work to showcase their thinking and learning throughout the project. The children varied in their language developmental skills: half of the children had just begun learning sign language and the other half are native ASL signers. However, all of the children were able to express their ideas and stories about “snowpeople” through various ways, such as drawing, clay, dramatic play, telling stories through props, and in ASL. Janice challenged their thinking and ideas with questions as they planned and worked.

This vignette is taken from observations in one classroom from an ethnographic study to explore using Reggio Emilia inspired teaching with Deaf¹ children in two ASL and English bilingual schools. This article will highlight the use of the project approach, one of key principles of the Reggio Emilia approach, in participating classrooms with young Deaf children. The premise of this article is based on research done in two early childhood education programs in two schools for the deaf that follow the principles of Reggio Emilia. Reggio Emilia is an inspiration that guides teaching and learning (Mitchiner, Batamula & Kite, 2018). While it is primarily implemented in early childhood education, the principles of Reggio Emilia can be applied

1. In the present article, the term Deaf refers to a person who is Deaf or hard of hearing. “With the capitalization of [the word], Deaf brings within it the true recognition that all Deaf and hard of hearing children have a birthright to ASL, Deaf culture, healthy identity, and being a part of the Deaf community” (Miller, 2015, slide 64).

beyond early childhood education. Reggio Emilia-inspired teaching is constructivist and child centered. The role of the teacher is a facilitator in the child's learning through discovery and exploration in a supportive, stimulating environment (Gandini, 2008).

Research has documented the success and benefits of Reggio Emilia-inspired programs with children (e.g., Massey & Burnard, 2006; Vandermass-Peeler & McClain, 2015; Zhang, Fallon, & Ki, 2010). However, this research is one of two known studies to examine the benefits of Reggio Emilia-inspired programs with Deaf children. Only one study using the Reggio Emilia with Deaf children was found (Pizzo, 2016). Pizzo (2016) that interviewed teachers about their beliefs and their philosophy of education as well as their experiences in one ASL and English bilingual school using the Reggio Emilia approach with young Deaf children. The teachers valued the Reggio practices as they aligned with their own beliefs and values about children's early education. While this study only explored teachers' beliefs, our study extends the research on this topic by including observations of children's learning experiences and interviews with teachers, school leaders, and families, focusing on using this approach with young Deaf children within the Deaf Education system.

Historically, the standards in Deaf Education are often low (e.g., Antia, Stinson, Gaustad, 2002; Garberoglio, Gobble, & Cawthon, 2012; Johnson, Liddell, & Erting, 1989; Lang, 2003; Marschark, Lang, & Albertini, 2002; Simms & Thumann, 2007). One of the reasons for low standards in Deaf Education is teachers' attitudes and beliefs about Deaf children. Typically, teachers of the Deaf hold medical-pathological perspectives towards Deaf children, focusing on children's deficits (Simms & Thumann, 2007). With this perspective, hearing parents and teachers often resort to more academic, teacher-directed instruction leading to Deaf children becoming passive learners (Marshark & Knoors, 2012). They receive more direction and assistance towards their learning, which reduces their opportunities to become independent learners and problem solvers, and to develop cognitive flexibility. Schools and programs with the Reggio Emilia

approach typically have strength-based perspectives towards young children, who they perceive as capable learners (Caldewell, 1997; Dahlberg, Moss, & Pence, 1999; Edwards, Gandini, & Forman, 2011). With this perspective, also called “image of the child,” children are seen as equals and their ideas are highly valued, leading to higher expectations for meaningful learning experiences (Caldewell, 1997; Dahlberg, Moss, & Pence, 1999; Edwards, Gandini, & Forman, 2011).

Some 90% to 95% of Deaf children are born to hearing families, who, with the best of intentions, do not always have all of the information and resources available to provide their Deaf child with an accessible, language-rich environment from birth (Humphries et al., 2012; Karchmer & Mitchell, 2003; Lederberg, Shick & Spencer, 2013). Therefore, language deprivation is a serious threat to many Deaf children (Hall, Hall, & Casselli, 2019). Even when emerging signing families are learning to sign along with their child, the Deaf child can often miss out on incidental language learning opportunities in their environment. Examples of incidental language learning can include overhearing the conversations of others around them, listening to the radio in the background, or asking questions to others outside of their home (Hall, Hall, & Casseli, 2019; Kite, 2017).

The project approach allows various real-world situations and curiosities to be re-created and explored in the classroom and on field trips while Deaf children can have full access to learn and connect language relating to the experience. Using the project approach with this population empowers the child to decide what they are interested in investigating. Then, through play and exploration, the child learns the relevant language as they explore the topic. This article will focus specifically on the benefits of using the project approach with young, Deaf children as observed by the researchers and reported by the children, their teachers, and their families.

Using the project approach in early childhood classrooms has been a part of progressive education for nearly 100 years in the United States (Spodek & Saracho, 2003). The Reggio Emilia approach

originated from Italy in the 1970s and encompasses the project approach in their principles (Edwards, Gandini & Forman, 2011). The process of implementing the project approach with young, Deaf children includes three main components (Helm & Katz, 2016). The first is observing children's play and choosing a topic for the project. This most often happens organically through the child's play. It can be related to something happening in their environment, such as the impending birth of a new sibling, or it could be related to something in the classroom, such as playing with blocks. It can also be a "provocation" created by the teacher by bringing an object or an idea to the classroom to observe if it will provoke children to become curious or excited about the object or the idea (Edwards, Gandini & Forman, 2011).

Once a topic is chosen, the next step is to map out what the children know and want to know about the topic (Helm & Katz, 2016). The teacher also considers curricular possibilities related to the chosen topic to meet the child's developmental milestones and early learning standards spelled out by the school or by the school's district or state (Edwards, Gandini & Forman, 2011). After that, the teacher collaborates with the students and, ideally, the families, to create an environment and experiences to enable the students to explore and learn. As the students work in the environment, the teacher is observing and documenting their interactions and their learning, and deciding how to continue to expand their learning as the project evolves (Edwards, Gandini & Forman, 2011). Students represent their ideas and knowledge of the topic through various means of expression, such as dramatic play, art, construction, and writing (Edwards, Gandini & Forman, 2011; Helm & Katz, 2016). As the children learn through play and exploration, the teacher serves as a facilitator and observer. The teacher watches the children and thoughtfully adds language, materials, and ideas as she asks questions, makes observations, and documents the children's conversations (Edwards, Gandini & Forman, 2011; Helm & Katz, 2016). The final stage is the production of the project.

This article will expand, in detail, using the project approach with young Deaf children. This will include many examples, including narratives, quotes from interviews, and photographs from the classrooms who participated in the research.

Reggio Emilia and the Project Approach

The Reggio Emilia approach takes into consideration the cultural context, language, history, geography, political, and economic life of the region; therefore, it is not a model to copy, but rather a model to inspire others to make their own (Wein, 2008). Each school is unique in its own community characteristics, as are the two Deaf schools in this study. The Reggio Emilia approach advocates for the children and teachers to be viewed as capable, resourceful, and powerful agents of their life experiences (Malaguzzi, 1998; Rinaldi, 1998). Through the framework of the Reggio Emilia approach, the schools are viewed as an interconnected “living system,” therefore the system requires constant growth, nurturing, processing, and valuing from all components of the school, including the classrooms, children, and teachers (Malgauzzi, 1998).

Before we dive into the project approach, it is critical to understand another Reggio Emilia principle, the Hundred Languages of Children, as Edwards, Gandini, and Forman (2011) describe the process of allowing children to express, explore, and share their thoughts, feelings, and imaginations in many meaningful ways. The Hundred Languages principle is symbolic, open-ended, and interconnected with the curriculum (Edwards, Gandini & Forman, 2011). This means children can express their ideas by acting out, building, drawing, or telling stories. They are not limited to writing or speaking. The Hundred Languages is intertwined with the project approach as a medium of learning and sharing (Edwards, Gandini & Forman, 2011).

The project approach is a central part of the Reggio Emilia approach, which encourages young children to be active, creative thinkers about their world (Katz & Chard, 2000). Beneke, Ostrosky and Katz (2019) describes the project approach as “...an in-depth

study of the topic through firsthand investigation and research” (p. 2). Gandini (1997) further defines the project approach as “...the backbone of children’s and teachers’ learning experiences” (p. 7). The children take ownership of their learning through curiosity, exploring their environment, and finding ways to express their ideas. The goal of the project approach is for the children to learn more about a topic through exploration and discovery rather than to seek the right answers to the questions asked by the teacher (Katz & Chard, 2000). The project approach also allows for an integration of the curriculum and standards while providing the flexibility of covering multiple subjects in a project (Helm & Katz, 2016). The children initiate ideas for project topics and are involved in the subsequent decision-making processes about exploring the project topics (Helm & Katz, 2016).

Traditionally, academic subjects or skills are taught in isolation through the banking concept in which children are viewed as passive-learners (Freire, 1972). Through the banking concept, children are often on the receiving end, memorizing information, while the teachers are viewed as experts, holding all the information (Freire, 1972). While it is the case that constructivist teaching for early childhood education (ECE) is spreading through Western countries, with the push for kindergarten readiness and focus on early reading and testing, most public early childhood education options remain “traditional” (direct instruction) in their pedagogy (Alford et al., 2016). On the opposite end of the traditional, direct instruction would be the project approach as the children lead the hands-on investigations and create representations of their learning (Beneke, Ostrosky & Katz, 2019). With the project approach, the emphasis is on the integration and application of content and skills from real-world experiences (Helm & Katz, 2016). Children are natural investigators. Therefore, they learn skills in mathematics, scientific reasoning, literacy, problem-solving, global citizenship, and technology in meaningful ways that are connected to their lives (Helm & Katz, 2016; Weim, 2008). The children do not perceive learning in separate and isolated experiences (Helm & Katz, 2016). The crucial elements in creating a positive, child-centered project

approach in an ECE classroom: following children’s interests, collaboration, inquiry, and documentation (Katz & Chard, 2000; Helm & Katz, 2016).

Following Children’s Interests

By following the children’s interests, the learning is authentic and a natural motivator for young children (Helm & Katz, 2016). In the project approach, the children are provided with opportunities to apply skills and viewed as experts about their needs. Allowed to take charge of their learning, the children develop their own intrinsic motivation towards learning (Katz & Chard, 2000). Because it follows the children’s initiation and decision-making, the children take ownership of their learning, which reflects the philosophy of the project approach.

Collaboration

Using the lens of social learning (Vygotsky, 1978), the project approach encourages children to learn to articulate similarities and differences between their ideas and to respect each other (Katz & Chard, 2000). The teachers support the dynamic processes of the project, which include questioning, predicting, representing (Beneke, Ostrosky & Katz, 2019). The children and teachers work together on projects through collaborative discussions and brainstorming sessions, and then apply their ideas in a study group (Helm & Katz, 2016).

Inquiry

The process of inquiry is the most important element of self-learning and children are empowered to ask their own questions (Katz & Chard, 2000; Lanphear & Vandermaas-Peeler, 2017). Teachers may support the children’s learning process by offering additional questioning (Helm & Katz, 2016). This process also allows teachers to learn more about children’s background knowledge about a topic they are studying (Lanphear & Vandermaas-Peeler, 2017).

Documentation

Documenting the process of the project is a key component to track children’s ideas, reactions, and progress through all phases of the project work (Helm & Katz, 2016). In the project approach,

documentation is a critical part of the teaching and learning process. While the children are engaged in exploration and play, the teacher is taking pictures and videos, collecting students' work, and documenting comments and conversations between the teacher and the student and between the student and other students. The documentation is often referred to throughout the process to compare or build upon previous ideas (Katz & Chard, 2000). This might be done by displaying the documentation on the walls or making the documentation into a book. In the project approach, the result of the project is no more important than the process that led to the result. This is where the learning has happened. The children's documentations are a representation of their learning process and it may include artifacts such as drawings, observation notes, or photographs (Helm & Katz, 2016).

The next section will detail the steps in the project approach. It is important to be familiar with the "hundred languages of children," another principle of Reggio Emilia, before moving on to understanding the project-approach process. The principle of the hundred languages of children is based on the premise that children have many ways to express their knowledge and understanding of the world around them. It is not limited to formal language and vocabulary (Edwards, Gandini, & Forman, 2011). When working with Deaf children, where the children are sometimes language deprived due to lack of accessible language in their daily environment, this principle sets a framework of seeing the child as full of knowledge and understanding about many things in their world, regardless of their formal language knowledge. This knowledge can be expressed through art, dance, dramatic play, writing, modeling with clay, music, and many other ways. The role of the teacher in this principle is to provide many avenues for the child to communicate and to observe and document as the child creates (Wurm, 2005).

The Phases of a Project

There are three phases of the project approach: a) Beginning and Developing the Project, b) Investigation and Representation, and

c) Concluding the Project (Helm & Katz, 2016). The project topics should encourage questions from children: How do things work?; What do people do?; What tools should people use? (Katz & Chard, 2000).

Phase 1: Beginning and Developing the Project. First, the children and teachers are continuously engaged in several discussions about several topics. The children or teachers can propose a topic for discussion; however, the topic should be closely related to the children’s everyday experiences (Katz & Chard, 2000). Standards (i.e., early learning standards, common core standards, or state standards) can be integrated into project work (Helm & Katz, 2016). Many academic skills are encouraged in the project approach, such as observing, hypothesizing, investigating, and predicting, as well as reading, writing, and counting (Helm & Katz, 2016). Finally, the topic should be rich enough that it can be explored at a school for at least a week (Katz & Chard, 2000). The degree of engagement and interest in the topic from the children and the potential for integrating children’s understanding of the curriculum should drive the topic selection (Helm & Katz, 2016).

When a topic has been agreed upon by the children and teachers, the next step is to brainstorm through an anticipatory map to support their investigation by recalling past experiences or raising new ideas/questions about the topic (Katz & Chard, 2000). However, the teacher may need to provide several opportunities and experiences for children from diverse backgrounds to reach a common understanding of a topic. This is because children need enough knowledge about the topic to be able to develop questions (Helm & Katz, 2016).

Phase 2: Investigations and Representations. This phase allows the teachers to re-examine the planning web and to integrate curriculum goals, planning for meeting the needs of children with disabilities, and preparing for investigation. The focus during this phase is introducing investigating the information about the topic and finding answers to the questions asked in the anticipatory

web (Katz & Chard, 2000). Possible examples of investigations may include visiting field sites, talking to experts in the field, reading books, reviewing photographs, or examining artifacts (Helm & Katz, 2016; Katz & Chard, 2000). The children will then represent what they have learned from their “finding answers” sessions through writing, drawing, constructing, or dramatic play (Helm & Katz, 2016). Through this process, the teachers and children will revisit the webs and develop new questions to their new information (Helm & Katz, 2016). This process is cyclic and will continue for most of the project work.

Phase 3: Concluding the Project. In this phase, the children will summarize what they have learned and bring their work to completion. Children then will decide how they will represent what they have learned and how they will share their project work (Helm & Katz, 2016). Some ideas may include setting up an exhibit, writing reports, hosting an open house, developing a book, or creating a play about their topic. Documentation and reflection are two critical components of the final phase (Helm & Katz 2016). Samples of children’s work may include drawings, paintings, constructions, or stories (Katz & Chard, 2000). Lastly, the children and teachers reflect on the process and assess the goals of the project work (Helm & Katz, 2016).

Katz and Chard (2000) concluded that it is important for children to “elaborate what they have learned so that its meaning is enhanced and made personal” (p. 84). Allowing children to articulate what they have learned through their project work helps them integrate information from different experiences (Helm & Katz, 2016). The project work allows children to explore their world through their lens, and the methodology section will discuss how the project approach was explored at two Deaf schools.

Method

This ethnographic study examined two ASL and English bilingual schools that serve young Deaf children and are Reggio Emilia-inspired programs for more than 10 years. We observed and documented snapshots of children’s learning experiences in their

early childhood classrooms through two video cameras, photographs, and field notes for five days at each school. In addition to observing, we conducted two one-hour focus group interviews with members of each school on their reflections and perspectives on using the Reggio Emilia approach with Deaf children. The first focus group interview consisted of teachers and school leaders. A separate focus group consisted of several families of children who attended the school.

This study stemmed from the realization that there is a deep need for research and conversations about infusing the principles of the Reggio Emilia approach in Deaf education. The members of the research team are early childhood Deaf educators who have used the Reggio Emilia approach in their teaching with young Deaf children before moving to higher education. Two members of the team are Deaf and one is hard-of-hearing, and all of us are bilingual in ASL and English. We recognized the value of infusing the Reggio Emilia principles when teaching young Deaf children in heightening the quality of Deaf Education. We observed that Deaf children in our classrooms were facilitated to express their ideas and perspectives about various topics through a variety of modes. It helped to level the playing field between children who did not have access to language at home and children who came to school with full access to language at home. Conducting projects in our early childhood classrooms allowed us to capture and pursue children’s interests, which motivated their learning and exploration, leading to meaningful growth of skills and knowledge. Their curiosity and excitement about a topic were piqued, which allowed children to develop skills and knowledge constructively. Project approach has supported children to become more confident with themselves and become more motivated with their learning (Beneke & Ostrosky, 2009).

The findings presented in this article are taken from a larger study and focus on two overarching research questions and a sub-question (Mitchiner, Batamula & Kite, 2018):

1. What principles of the Reggio Emilia approach are evident in the selected early childhood classrooms for Deaf children?

Sub-Question: How are the projects supporting the young children and teachers' learning experiences?

2. What is promising and challenging about these practices for young Deaf children?

This study was approved by our university's Institutional Review Board (IRB). After obtaining approval from the IRB, we contacted schools for the Deaf that are Reggio Emilia-inspired for their participation in the study. Schools who expressed interest in the study also had internal reviews of the study. After the internal reviews were cleared, the research team worked with the school to arrange school visits and to communicate with families about the study. The teachers and families from each school signed consent forms to participate in the study and to have their children filmed and photographed. Family members who participated in the focus group interviews also gave consent to participate and were filmed in the interviews.

We used a modified version of a video cued, multi-vocal ethnographic approach in our research (Tobin, 1999). This approach allowed us to gather participants' reflections and reactions about their teaching practices and children's experiences by viewing selected video-recorded observations. We filmed multiple classrooms in each school for five consecutive days. Before the fifth day, we selected video clips from our observations and edited the videos into one 20-minute video that showed parts of the classroom activities. The 20-minute edited video was shown to each focus group during the interviews on the fifth day of our visit. The videos prompted participants to share their thoughts and reflections about what they witnessed in the videos. During the fifth day of our visit, we filmed special events with families that contributed to our collection of observations of infusing the Reggio Emilia approach with Deaf children.

Participating Schools

Two ASL and English bilingual schools that integrated the Reggio Emilia approach for more than 10 years were recruited to participate in the study. The first school (School #1), located in the northeastern part of the US, is a private school for Deaf children from birth to 12th grade. School #1 adopted the Reggio Emilia approach after the early childhood program director learned about it at a local workshop. They gradually implemented the Reggio Emilia principles in the program, starting with one classroom, and it grew to the entire early childhood program. Their early childhood programs include parent-infant, preschool, and kindergarten classrooms. Both the preschool and kindergarten classes, a total of 24 children, were observed in this study.

The second school (School #2), located in the southwestern part of the US, is also an ASL and English bilingual school for the Deaf that serves Deaf children from birth to 12th grade. School #2 began infusing the Reggio Emilia approach in their program after recruiting a teacher from another school who used it. The teacher became the school principal and led the implementation of the Reggio Emilia inspiration in their early childhood education department. The early childhood education department is divided into four classrooms for toddlers, preschoolers, pre-kindergarteners, and kindergarteners. The preschool, pre-kindergarten, and kindergarten classes, with a total of 19 children, were the focus of this study.

Both schools dedicated time assigned for teachers and staff to focus on Reggio Emilia work for planning and documentation. They also had ongoing Reggio Emilia training and workshops to maintain their practices using the Reggio Emilia approach.

At the time of our visits, the Early Childhood Director at School #1 was in her 16th year of running the Early Childhood Center and the Early Childhood & Elementary School principal in School #2 was in his 11th year running both programs. The teachers in both schools ranged from 5 to 15 years of teaching experience in their role at the time of our visit.

Data Sources

We utilized ethnographic methods for data collection to capture the cultural elements and practices of conducting projects and infusing the Reggio Emilia approach in both schools. The data sources include: 1) classroom observations including artifact collection using photographs, which included photos of children's work and documentation of projects on classroom and school walls and 2) focus group interviews with members of both schools including families.

Classroom Observations. At each school, we spent five days observing the daily routines and classroom activities. We set two separate video cameras to capture different angles of the classroom. If the teacher was standing in front of the class, one camera was directed towards the teacher and a second camera was aimed in the opposite direction, toward the children. Meanwhile, we took photographs of children's work and artifacts. We also took descriptive and reflective field notes to document children's and teachers' interactions and actions.

Semi-Structured Formal Focus Group Interviews. After collecting observation videos for four consecutive days at each school, we selected various clips from each day and put it together into a one 20-minute edited video. At the beginning of each focus group interview, we asked the participants to watch the video and take notes of their thoughts and responses on what they saw on the video. We also had a set of open-ended questions. We asked questions about why and how the school became inspired by the Reggio Emilia approach and how they implemented it in their classrooms. The interviews were conducted in ASL along with sign language interpreters for hearing parents who participated in the focus group interviews. The interviews were transcribed into written English. The transcriptions were reviewed with the video in ASL to check for accuracy.

Data Analysis

To answer the research questions, we identified various project studies conducted in both schools and put together descriptions

of the events in each project. Then we analyzed the descriptions alongside the video data and the interview transcriptions using the elements and principles of the project approach (Emerson, Fretz, & Shaw, 2011; Maxwell, 2012).

Findings

We observed and documented several project studies at various phases happening in both schools. The next section highlights the projects at different stages following the sequence of phases and a summary of Deaf children’s learning experience at each phase.

Phase 1: Beginning the Project

We were able to witness how a new project emerged during our observations in School #2. On our second day of observations during snack time, a pre-kindergartener stood in front of the class whiteboard calendar with his teacher, Kim.

A pre-kindergartner drew a picture of a train on the day of his birthday on the class calendar. Kim then left the calendar area to talk with two other children. Meanwhile, the pre-kindergartner added another drawing on the calendar on a specific day, May 26th. He tapped Kim on her shoulder and told her he wanted to host a dance party on that day. Kim thought it was an interesting idea since the school will end in a few weeks and decided to check with the rest of the class. She flashed the classroom light and signaled the children to the table and pointed to May 26th on the calendar. Kim pointed to the pre-kindergartner who drew on the calendar and signed, “He added a drawing on the calendar. He drew something there.” She asked him to share his ideas with the class. He signed “(I want to) dance.” Kim extended his answer and asked the question to the class, “He wants to host a dance party here. Do you all want to host a dance party in the classroom? Decorate the classroom with balloons and streamers?” All of the children nodded with excitement. Kim signed, “Hmm, that is a good idea. I will set up the party.” Next, Kim was bombarded with many ideas for the dance party from the children. She signed, “Hold on! Let me grab a clipboard so I can jot down your ideas on paper. I can’t remember all of your ideas.” She

wrote down a list of children's ideas for the party. One child said she wanted to bring her high heels to the dance, and she ran to her cubby to show her high heels. One child wanted to bring in disco lights. One child wanted to invite families to the dance. Another idea came from a child to move the tables away so they can have space for the dance and bring in refreshments. Others continued to share different ideas for the party and Kim made sure everyone in the class contributed their ideas. Kim asked, "Can we start the dance? No, we need to discuss this first, with who?" They signed, "Scott." Scott is the school's principal. Kim nodded and signed that she will need to check with the principal for his approval. After receiving his approval, the class will need to plan for the party. Kim said, "We could make invitations and make a list of food to bring." The children shared a list of food they wanted to bring; hot dogs, cookies, sweets, soda pop, and even a bowl of salad. This led to a brief discussion about healthy versus unhealthy foods. Kim summarized the next steps and moved on to discussing their current project on parks.

The children returned to the table after lunch. Kim decided to pull up a YouTube video on the SmartBoard of Nyle DiMarco dancing with his partner from "Dancing with the Stars," which was aired the night before. She pointed to Nyle on the video and signed, "He is Deaf," and asked the class, "What about the lady he was dancing with?" One child signed, "(She is) hearing." Kim nodded and explained that the lady helped and taught Nyle how to dance. Kim suggested that the children make a video invitation for Nyle to join the dance party. She asked if it was a good idea and the children agreed. Another child commented that Nyle should dance in the middle of the room when he gets to the party so everyone can watch him. Then the children discussed who they wanted to dance with. One child said, "A girl and a boy must dance together." Kim signed "It does not matter. A boy can dance with another boy, a girl can dance with another girl, or a girl can dance with a boy." They continued their discussion about dancing partners before moving on to an outdoor activity.

Kim reported weeks later that the dance party was a success. The children worked together to make arrangements for the party,



Figure 1. Children watched a brief clip of “Dancing with the Stars.”

including sending out invitations, decorating the classroom, and creating activities for the party.

This short-term project was initiated by a pre-kindergartener who randomly picked out a date on the class calendar for a dance party. The teacher checked in with the rest of the class and it was clear that the children were highly interested and motivated. At that point, the teacher decided the idea was worth pursuing. The project study can be initiated by one child, a small group of children, or a teacher sharing their interest or idea. From a focus group interview with teachers at school #2, Kris, a kindergarten teacher, commented that Kim was listening to children’s ideas, which gave them the confidence to contribute their ideas by writing them down. Kris stressed that it is important to show children that their ideas are valued. Sha-Shonie chimed in and said when they feel their ideas are valuable, they are more motivated to build on their ideas.

Through the social lens by Vygotsky (1978), the children and Kim worked together to brainstorm ideas for the event. Kim supported the children’s learning process by offering additional questioning and allowing children to dictate what they’d like to contribute to the event. Kim followed the child’s lead and encouraged collaborative

discussions between the children. The children used their previous knowledge of “parties” and reviewed the YouTube video of Nyle DiMarco on the “Dancing with the Stars” show. While the idea was originally generated by the child, Kim supported his idea by bringing props (YouTube video clip, clipboard) to expand the project and to solicit dialogue from other students. In reference to Figure 1, the children asked questions about the party and Kim is talking through the video with students to help them answer their own questions.

Phase 2: Field Studies and Representation

During our observations at both schools, we identified three project studies; the majority of the studies were in phase two of the project study. The students were engaged in examining and exploring ideas for their projects and the length of the learning experience was determined by project progression. The field studies and representation work are emphasized in phase two of the project study, investigation and representation work. We will highlight the experiences of three studies we observed and showcase how each study addresses various elements of the project approach as well as integrating curricular goals and developmental milestones.

School #1. During our third and fourth day at School #1, we observed the kindergarten class in the middle of their project study on Egypt. The study on Egypt was initiated by the teacher’s motivation for her students to study different countries around the world. Next, we share a snapshot of our observation during their project time:

The kindergarten children sat around the whiteboard and watched a video of the kindergarten teacher, Carrie, taking them on a “tour” through Egypt in ASL, providing information and explanations of the pyramids and talking about mummies. Carrie paused the video at various photos to allow her kindergarteners to make comments and ask questions about what they were seeing. It was then Carrie decided to get a doll to demonstrate how they wrapped mummies in Egypt. This inspired one child to get a toilet paper roll from the restroom to wrap up the doll. The children wanted to create a casket for their doll mummy, so Carrie went

with them out into the hallway where they dumped out wooden blocks from a large basket that was the perfect size for the doll's sarcophagus. The children brought the basket back to the classroom and remembered that the Egyptians stored valuable possessions in the casket of the mummies. One child went immediately to the writing area of the classroom, grabbed the jars of markers, and dumped them all into the sarcophagus. Carrie asked the child why the markers. The child explained that the mummy valued them. It was then they realized that the basket had no cover. They decided to return to the block area, located in a nook in the main hallway, and get several long, rectangular blocks to enclose the doll mummy in the casket. They were proud of their work. But they were not finished there. They remembered that mummies were placed in tombs. One child drew a picture of an Egyptian pyramid on the whiteboard and explained that mummies go inside it. Carrie affirmed it and asked them what to do next? They moved the sarcophagus across the room, dropping blocks and toilet paper as they moved the heavy basket. They placed it under a table that was pushed against the wall and placed the blocks and toilet paper messily back on the basket. One of the children hurriedly started collecting cardboard bricks and stacking them to block the front of the table, enclosing the tomb. This excited the others and they rushed to join. Within minutes, the tomb was closed. Then, after admiring their work, one child smashed through the “brick” wall and stole the mummy and valuables. They all laughed. Carrie had been sitting closely, but purposefully watching and allowing the play to take shape as the children expressed what they understood about ancient Egypt.



Figure 2. The kindergarten class represented their understanding of mummies in ancient Egypt through dramatic play.

Dramatic play and reenacting events that happened in ancient history are one of the many ways that children can represent their thinking and their understanding of the events. They also applied concepts they learned from:

viewing a video presentation in ASL about Egypt and discussing this topic. Children also wrote short stories and drew pictures about Egypt and then video-recorded their stories in ASL. This indicated children had many opportunities to share their understanding and ideas about Egypt through different mediums. The teacher, Carrie, played the role as a facilitator by providing props and making the information about Egypt accessible to the children. Carrie carefully observed how the children interacted with the materials as they demonstrated their perspectives and stories about Egypt. Carrie asked questions and prompted children to take lead in the dramatic play of building a sarcophagus. The children were fully engaged and confident in their play and making their creations.

School #2. Two of the projects we observed at School #2, the zoo study, and the park study, were also in phase two of their project study. The zoo study was inspired by a recent visit to the local zoo in the preschool classroom and the park study was initiated when students



Figure 3. A kindergartener telling stories about Egypt in ASL

in the pre-kindergarten class had a different definition of what constitutes a “park”. Why doesn’t a local skateboard park have swings? Are trees always a part of the park? We were able to observe the teachers facilitating and creating an environment that sparked learning and innovation from the students during their project time in the classroom.

Zoo Study. At school #2, the preschool class was in the middle of their project study on Zoo animals after visiting a local zoo a week before our visit. The preschool teacher, Sha-Shonie, reported that the class was in between projects when the Zoo Study came into fruition. Sha-Shonie introduced several provocations to the classroom to see which would spark interest in her young children after the

completion of a previous project. Her provocation about animals sparked lively discussions about zoo animals for several days while the teacher documented what they knew about them. Sha-Shonie created a field trip opportunity to the local zoo to observe their interests. The Zoo Study was ignited by dialogue about different habitats the children saw at the zoo. This was based on their previous experience of visiting a zoo and they described how people would watch (observe) animals in their “homes,” aka the habitats.

In the block area, Sha-Shonie and the children set up three major habitats they felt were important for their animals and they were a) desert, b) pond, and c) grassy lands. The children included a house nearby that also had two cars. The family members would pile up in the cars and drive to the zoo. However, the children realized the family needed roads to direct them to the zoo, so they built a roadmap from their house to the zoo. When they arrived at the zoo, they realized they needed two parking lots. They used tape to create a road map and two parking spots on a piece of cardboard. The materials used in the block area were brought in from nature such as grass and sticks for the grassy lands, sticks and leaves and rocks for the desert landscape, and a small plastic dish filled with water as well as a blue plastic wrap to mimic water in the aquatic habitat.



Figure 4. A visual image of the habitats for the Zoo Study in the preschool classroom. The children are discussing how to feed the tiger safely.

The preschoolers engaged in a dialogue about how people should observe the animals carefully by being mindful of the fences around the habitats, how to feed the animals carefully without being bitten, and what foods the animals should have that will not make them sick. They recalled information from various sources: prior knowledge from the visit to the zoo, books, and videos. They also reenacted scenarios of walking carefully around the fence and even pretended to fall into the habitats to be rescued by their family members. The animals did not attack, because they knew their children were their “friends.” The children used toy animals and figurines to tell stories and talk about the events surrounding a trip to the zoo. It was not the only opportunity for the children to study zoo animals in the classroom. There were several other stations in the classroom where children could expand their exploration of zoo animals. In the dramatic area, Sha-Shonie set up a table with a long mirror where children could watch themselves putting on face paintings and animal costumes. Behind the table, were three large connected cardboard boxes that functioned as a shelter for animals. The children added stuffed animals in the cardboard boxes. Next to the cardboard boxes, the children used large plastic animals and dipped their feet in the paint to create “walking tracks.” The children experimented with various animal tracks (elephant, giraffe, turtle, and tiger) and compared their feet features with each other. The children also told stories while creating walking tracks on the paper. Next to the paint center was a tasting station where children cracked open various large nuts and voted whether they liked or disliked them. They discussed how the nuts tasted and wrote down their thoughts (with the support of the adults in the classroom). The children also discussed which animals liked to eat nuts. They kept a tally of how many children liked and disliked various nuts. They counted the tally marks and compared the categories. At the front of the classroom, Sha-Shonie set up a video of various animals eating food in the wild on the Smartboard. The children could pause the video to examine closely how animals ate (using hands, trunks, mouth) as well as remarking about foods the animals

ate (plants, nuts, other animals). Next to the smartboard was a fine motor activity where children had to dig out alphabet letters buried in two large vats of rice using a spoon. The children had to match the alphabet letters to flashcards that spelled out various animals (i.e., elephant, tiger, lion, monkey).

The role of the teacher in this preschool classroom was very much also a facilitator. Sha-Shonie continually monitored the children’s conversations, and either brought in props or asked questions to further support the children’s dialogue. Sha-Shonie was constantly by the children’s side, never once stood up to make any declarations in the center of the classroom as one would in a traditional classroom. She knelt by the children and observed their work before suggesting an idea or making notes to herself. The environment was very supportive of the children’s learning and the children were free to make adaptations to their environment. The role of the teacher also included language modeling such as “be careful how we feed the tigers, remember what we saw at the zoo? Yes, that’s right. We need to stand behind the fence to feed them.”

It was very clear from the classroom environment that the children are actively learning about the zoo through their own constructions, which included the parking lots, a house, three different habitats, food for the zoo animals, animal tracks, and stories about the animals. The teacher also addressed developmental milestones of young children by incorporating opportunities for the development of skills in the following categories: fine motor, problem solving, tallying, counting, comparing, role-playing, digging, using pincer grasp to move objects as well as literacy skills through books, conversations, and drawings. Next, we will visit the pre-kindergarten classroom where a park study has been ongoing.

Park Study. After several weeks of visiting several local parks, including the school’s playground, the pre-kindergarten children began to have a better understanding of what makes a “park.” They shared the similarities and differences among the parks and discussed different features found at each park. The pre-kindergarten teacher,

Kim, proposed that the class create a collaborative 3D model of the parks they visited, with recyclable materials and found items, as creating a diorama would meet one of the curriculum standards. The class was divided into two groups to work on making a 3D model of the park they visited. Each group reviewed a couple of pictures from their visit to the park and began to identify features to include in their 3D model.

One group worked on building a model of a local park near the school. Children were prompted to choose an object or a structure they saw at the park to create a model. One child wanted to build a model train to resemble an actual train parked at the local park. Another child wanted to build a water tunnel found at the park. One child chose to build a model of a circular structure people could sit on. After deciding what they want to build, they went to their art studio in another room to collect materials for their models, such as wood scraps, cardboard tubes, foam pellets, game pieces, and containers. When they returned to the classroom with their materials, they shared their plans to each other. The child who was building a train model was stumped on how to build a model, so Kim encouraged him to ask his classmates for ideas. The classmates suggested they could use a wooden cylinder as a body and game chips as wheels, and the child went right at it to build the model train. The child who worked on building a water tunnel model, used an empty toilet paper tube and inserted a strip of blue cellophane paper inside it to represent water running through the tunnel. The child who built the circular structure used a flat wooden piece shaped like a donut to represent the bottom part of an actual structure and he added small foam pellets on top of the wooden piece to represent rocks. After working on their separate diorama pieces, the children added their pieces on a flat cardboard to create one large diorama of their "park."

Although Kim proposed the idea of creating a 3D model of the park, the children took charge of deciding how their model would look. Kim, along with the children, developed a checklist collaboratively that would evaluate their 3D model of the park. This was used as a guide throughout the project. The children worked



Figure 5. Children created a 3D model of the local park the class visited. A child explains his idea to build a circular structure found at the park. (second picture) a child builds a railroad track for his model train.

collaboratively by collecting materials, discussing what they wanted to be included in their 3D model, and problem solving various issues within the project. Kim played the role of a facilitator by offering ideas, asking questions, and guiding children’s process in creating the diorama of the local park. Children relied on pictures and natural and found materials to build their own pieces for the collaborative model. They first shared their plans through ASL and then built the piece themselves with support from Kim and each other (Figure 5).

While this was a group project, the children agreed to work on individual components of the 3D model and share their structures with each other. One child had difficulty in making his train structure roll smoothly on the train tracks; other children piped in with various ideas to ensure the train would glide easily on the tracks. This challenge took a portion of the class time but there were many skills addressed: problem solving, negotiating, dialoging, sharing ideas, fine-motor, and listening to others.

Phase 3: Concluding a Project

As presented earlier, the preschoolers at School #1 were wrapping up their Snowman project and made preparations for the concluding event with their families to showcase what they have learned. The teacher, Janice, facilitated the planning of a family gathering where the children could celebrate their learning and share the experience with their families.

Daily, in the closing meeting, Janice would spend some time talking about the upcoming family gathering. The children shared who would be coming. On the day of the family gathering, the children were very excited to have family members attend. They started off in the room where the class typically holds their morning and closing meetings. Janice arranged the space to show various displays of the student work accompanied by documentation of their learning.

Families and the children viewed the documentation and engaged in discussions about the work (Figure 6.). All of the children were excited about their work and proud to share it. There was a variety of ASL development levels among both the children and families, but that did not hinder their ability to communicate with one another using the ASL they knew in combination with the visuals of their work. There were also interpreters present for family members who needed them.

During the presentation portion of the event, Janice summarized the project, how it started, and used the smartboard to share photos and videos of the children exploring, creating, and expressing their knowledge. Each time a photo of a child or their work appeared, the child in that photo would excitedly say, "That's me!" which was often followed by their added comments about their work. It was evident that all of the children had developed specific vocabulary about snow and snowmen. It was also obvious that the children used a variety of mediums such as clay, paint, drawings, videos using ASL, and Styrofoam creations to express themselves.



Figure 6. A preschooler showing his mother his snowman made out of clay.

At the culmination of the presentation, the families moved into open stations to decorate a snowman edible treat and participate in art creation experiences alongside their child. This helped the families not only connect with their child and their learning but also get a better sense of the process of the project approach. During the focus group with the families, they each shared their support for this approach to learning, with specific references to language development. One mother fluent in ASL with a child who was new to ASL shared that project-based learning in a Reggio Emilia program has allowed her son to develop language through play and exploration of things that interest him. She shared that it started with trains. What she saw as an obsession with trains turned into a complex play and learning, both at school and at home, as the teacher noticed this passion and embraced it through project learning. It was an opportunity for the child with a limited language foundation to express all that he knew and understood about trains. It was also a key opportunity to add ASL and English as formal languages to complement his expression.

In phase three, we were able to observe firsthand the positive impact of using the project approach with Deaf children. They learned about snowmen, but that was not all. They learned key curricular concepts throughout the project such as math, science, language arts, ASL, and English. The families benefited too by being able to make clear connections with their child about their learning and creating opportunities for communication and shared experiences with one another.

Discussion

The findings from this study were as the researchers had expected. As mentioned earlier, the inspiration for this study came from the fact that there is a multitude of research on the benefits of Reggio Emilia-inspired programs for children, but very limited research on Reggio Emilia-inspired programs with children who are Deaf. It is important to note why there should be a distinction

between hearing children and Deaf children. As mentioned earlier, education for Deaf children often starts with early intervention programs and focuses heavily on encouraging language acquisition. Many Deaf children enter early intervention programs with very limited language knowledge, which differentiates them from their hearing peers, and, as this study indicated, points to the value of applying the Reggio Emilia principle of the hundred languages to Deaf children.

In addition, incidental learning is important for all children, but even more crucial for Deaf children. Hearing children are able to partake in incidental learning throughout their day by having access to spoken language and conversations all around them. They share a common language with their families, making it easy and natural to have verbal exchanges about various topics throughout the day. Even when not part of the discussion, they can overhear conversations by both children and adults. They also experience incidental learning through hearing the TV, radio, chatter in the store or restaurant, and essentially, everywhere they go. For Deaf children, the opportunity to connect language with experiences is limited to having access to a visual language environment (VL2, 2011). There is less opportunity for them to “overhear” a conversation or background chatter in their daily environments. Most Deaf children do not live in homes where sign language is used, and they may be missing out on conversations and background noises happening with their family. For children who do have access to visual communication in the home, they are limited to accessing incidental information through a visual environment, which is limited outside of the home. The children are still observing and making sense of the world around them throughout the day, but they are often limited in acquiring the language to connect with what they are observing or experiencing. Therefore, school plays a pivotal role in creating or re-creating a variety of experiences for the children to learn the language associated with that experience. For example, in the snowman study, the children had all experienced snow and

had seen a snowman, but now they were able to learn vocabulary associated with snow, math, gender, science, to name a few. They were able to ask questions and transform what they knew into something deeper.

The teachers are constantly “on” while they are observing the children learn. Our study pointed out that the teachers are having internal dialogue while they observe and interact with the teacher. This is how they decide how much to sit back and allow the children to explore and create, and when to intercede to ask questions to further understanding, or to suggest additional mediums or pose additional questions to add to their exploration and play. If the teacher interjects too often, the child will pick up the hidden message this sends of looking to the teacher as the holder of knowledge and power instead of looking within themselves.

There are three “teachers” in the Reggio-inspired classroom (Gandini, 2008). The first is the family. The second is the classroom teacher(s). The third is the environment. The family, whether or not they share a recognized language with their child, plays a pivotal role in the child’s learning and development. Schools can often overlook the important role of the family. In Reggio inspired programs, however, families are a central part of the learning. Children form and build on their foundational knowledge through their experiences with their families. Families’ participation is encouraged in the planning, implementation, and culmination of projects throughout the school year. The teacher also engages with each family and brings pieces from each family home and culture into the classroom and into the projects. In this study, the snowman project ended with a celebration party with the teachers, the children, and their families. Each immediate family was able to attend, and some extended family members attended. The families were a part of the celebration as the children shared their learning throughout the project. The families also participated in further art and other activities set in the classroom. The children radiated pride at showing their families what they knew and all of the work they had done.

Family engagement is also a key component in School #2. They have weekly playgroups for families to attend where the school provides various activities for the families and children to engage in together. In the parent focus group, one mother shared that she was invited to lead an experience making prickly pear juice from a cactus. In both schools, families were informed of the happenings in the classroom through newsletters, photos, and videos of their children working hard as they learned through play.

The second teacher is the classroom teacher(s). Classroom teachers, in many ways, synthesize the learning from all three “teachers” to create environments where children can continuously learn and benefit from all three “teachers.” Teaching in a Reggio inspired classroom is, in some ways, similar to teaching in a traditional classroom. Teachers plan, assess, and provide classroom management. However, there are differences. When teachers are following the lead of their children, plans need to constantly change and shift from day to day, and often, throughout the day. Teachers must maintain an individualized education program (IEP) or an individualized family service plan (IFSP) with curriculum goals and objectives while shifting the learning activities and topics used to teach these goals. The teacher must always be actively listening, observing, and documenting while the children explore. It is a lot of work, but it is worth it, particularly for Deaf children.

The teachers in this study were noticed sitting away from the exploring child, documenting and taking pictures, and making decisions about ways to further build or stimulate deeper learning. They were also, at times, sitting beside the child, or children, both observing and facilitating learning and discussion by provoking curiosity through a question or suggestion as a role of a facilitator. They were also taking notes and assessing the skills and development of each child. The classroom teachers regularly communicated what the child learned and experienced at school to the families. They also set up and managed the classroom environment and materials throughout the day.

Through this approach, the child is viewed as fully capable of thoughts, ideas, problem solving, and learning. Allowing the child to learn through trial and error, without frequent feedback or approval, tells the child that they are capable and builds confidence to continue to take risks that will lead to meaningful learning. The children can work on all of the target developmental skills in a way that feels and is natural to the child, through play and internal motivation. The Deaf child, instead of feeling that they are lacking something, as they might if given frequent feedback or more direct instruction, builds confidence and motivation from within. The children who enter the classroom with language deprivation are not defined by that label. The knowledge and experience they bring are valued and the teacher ensures that the environment and experiences will allow the children to showcase and expand their knowledge and understanding in a variety of ways.

All of the Deaf children in our study are dual language learners (DLLs) which means they are learning two (or more) languages at the same time. To support language acquisition, it is important for teachers to “intentionally activate knowledge and concepts in the first language and then explicitly help the child transfer this knowledge to the new language” (Espinosa, 2015, p. 80). The project approach encourages informal conversations about what children already know, thus giving the teacher opportunities to support new concepts in the new language (Beneke, Ostrosky & Katz, 2019). The teachers in the study support children’s language through expanding their play and providing various experiences from field trips to constructions of what they learned through ASL and English bilingual approaches. The long-lasting approach of the project work allows teachers many opportunities to develop meaningful contexts in two or more languages and allows for families to participate in the project work (Beneke, Ostrosky & Katz, 2019). Children’s language is tied to their familial and cultural experiences, and the project approach emphasizes strengthening relationships with families and their home contexts.

Engaging in a project stemming from the interests of the child allows this to happen naturally, building on the strengths and assets of the child (Harte, 2010). The project topic, pace of learning and discovery, and method of expression of knowledge are all led by the child, with the teacher facilitating. One of the principles of Reggio Emilia is that it values children expressing what they know and understand in a “hundred” ways. For Deaf children, who have been observing the world since birth, this empowers them to share what they understand beyond their ASL or English vocabulary knowledge. The teacher builds on that, adding language to help them make the connections from their understanding of ASL and English. In the projects described in this study, children used a variety of art and building methods to express themselves including drawing, sculpting, building, and painting. They also used dance and dramatic play. Each of these expressions was then translated, by the child, with the guidance of the teacher, into ASL and English through written and video documentation.

The third teacher is the environment. Teachers set up the environment with provocations for diverse students from different backgrounds and language experiences. This empowers the student to explore and experience both familiar and new things, based on their interest and curiosity. This leads to a day filled with incidental learning. Incidental learning is one of the guides for instruction, instead of being just a “teachable moment” that pauses the curriculum to explore a topic for a brief period and then return to the curriculum. An example of this is Egypt study. While the teacher was talking about pyramids, the children became curious about the tombs. The teacher went to the environment, using a doll to show them a mummy. The children immediately connected to the provocation and created a dramatic learning experience, wrapping the “mummy” in toilet paper, placing her in a basket that once contained blocks, adding treasures from the classroom, and then building a tomb under a table, closing it with cardboard bricks. They then looted the tomb to steal the treasures. The children knew the environment

enough to see everyday things in a different role that added to their play. This was an expression of their understanding of the pyramids, mummies, and tomb raiding in ancient Egypt.

As evidenced in this study, each child was dynamically engaged in various projects in their own way. They all added to the play and the learning by sharing what they each knew, adding ideas, and asking questions leading to deeper exploration. Humans are naturally curious. When a toddler starts to crawl and walk, it is well known that from that point on, caregivers must be constantly vigilant as they will touch and explore everything within reach. This curiosity and thirst for new experiences and understanding are still evident as they grow older. Tapping into this will lead the child to enthusiastically explore and learn, often without even realizing what they are learning. Playing a leading role in their learning leads to the confidence to continue to try new things.

This study adds to the literature on the benefits of using constructivist, project-based learning with young deaf and hard of children. It showed using the project approach with young, deaf children allows the children to learn and explore relevant topics and experiences that are important to their daily lives. It also allows for the teacher to meet the children where they are in terms of linguistic knowledge and development while continuing to foster their natural curiosity and understanding of the world around them. When the teachers recognize the 100 languages of each child, the knowledge and experiences they bring to the classroom add value to the learning experiences and the teacher can use this to scaffold learning through project work. Given the opportunity to learn and explore beyond the labels or limitations placed on Deaf children by society and the educational system allows the children to develop a sense of pride, accomplishment, and confidence in their own knowledge and ability to learn and try new things.

The Reggio Emilia project approach does not limit the learning to the teacher and student interaction. The children are learning from their environment, their families, and from the classroom teachers.

This recognition values the continuous learning that happens with young deaf and hard of hearing children, regardless of their access to language outside of the classroom. It frames the children as knowledgeable and eager to learn. It enables the teacher and the children to create learning experiences to explore and learn together.

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