

# The K–1 Coffee Company: Encouraging Entrepreneurship Through Project-Based Learning in the Early Grades

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## Abstract

This collaborative practitioner research was created by a team of early childhood teachers who used evidence-based practices on project-based learning to create a meaningful learning experience for 51 primary-aged students. Following the literature on project-based learning for early childhood learners, we designed an interdisciplinary social studies unit through a coffee shop, encouraging entrepreneurship with a goal of visiting Disney's Animal Kingdom as a field trip. Students learned about running a business, saving and spending money, applying and training for jobs, and working as employees. This practitioner research examines the impact of project-based learning on student learning of social studies content standards through the creation of the K–1 Coffee Company.

**Keywords:** project-based learning, entrepreneurship, interdisciplinary learning, early childhood, practitioner research, kindergarten, first grade, collaboration, inquiry-based learning

## Introduction

Each academic school year presents its own unique challenges, many beyond the immediate influence of classroom teachers. The Covid-19 pandemic showed us the many ways students struggle while learning. As schools transition back to post-pandemic schooling, the 2022-2023 school year represented a new opportunity to be more intentional with our teaching and learning experiences with a renewed emphasis on best practices for young learners centered around joy. This study takes place in the K–1 learning community at P.K. Yonge Developmental Research School (PKY), a PreK–12 public institution. Within the elementary school division, PKY is divided into three learning communities. Each learning community is composed of three teachers per grade level and one learning community leader. For the K–1 learning community, there are three kindergarten teachers, three first-grade teachers, and one learning community leader. The learning community leader (LCL) functions as a liaison between their community and administration. Additionally, the LCL supports their teachers and students by providing academic interventions beyond core instruction and communicating community-wide information to all families, among other administrative duties, to support efficient functioning within the community.

Each kindergarten and first-grade teacher work together as a team to form cross-grade level micro-communities. The idea is that within each learning community, the classes function together and collaboratively as a community, and each cross-grade level team also functions as a smaller micro-community for collaborative teaching and planning purposes. Although the project-based learning (PBL) unit was implemented by all six instructors in the K–1 community, the teachers included in this practitioner research reflect one-half of the K–1 learning community: two first-grade teachers and

one kindergarten teacher. Table 1 reflects the demographic makeup of our collaborative practitioner inquiry team.

**Table 1.** *Practitioner Research Demographics*

Teacher	Grade	Students	Race	Gender	Education	Experience
Ms. Jackson	1st grade	18	Black	Female	Masters	6 years
Ms. Raya	Kindergarten	17	White	Female	Masters	7 years
Ms. Shore	1st Grade	19	White	Female	Masters	2 years

## Research Purpose and Wondering

This year, we had new teachers join our learning community; without previous institutional knowledge and with procedural knowledge of traditional lessons, we were able to approach and design our social studies units with new perspectives and expertise to meet the learning needs of our collective students. Utilizing our varied teaching experiences, we created an economics unit that included each teacher’s voice in collaboration with meeting the needs of all classes was critical. Following the evidence-based research on project-based learning and hands-on, contextualized learning experiences for early childhood learners, the team was inspired to create a new social studies economic unit to support better student understandings of economics, which had been implemented with less intentionality and forethought in previous years. To make a cross-curricular connection, the team envisioned taking all 108 students in our learning community to Disney’s Animal Kingdom, connecting a learning goal to their non-fiction animal publishing project unit that occurred within the writing curriculum.

Given the fact that we would need to fundraise and generate consistent revenue, we brainstormed different fundraising opportunities and considered ways to make the students active participants in the process. As a team, we decided to situate their economics unit within the context of running a coffee shop called K–1 Coffee Company to meet the necessary Florida State Standards for kindergarten and first-grade students, implementing a PBL approach to incorporate social studies, literacy, and mathematics standards, an interdisciplinary economics learning experience. The K–1 Coffee Company would exist as an avenue for experiential, hands-on learning for the students, while simultaneously functioning as a fundraising opportunity to meet our broader financial goal to visit Animal Kingdom.

Considering the research on PBL with primary-aged students and the challenge of creating a new social studies economics unit, this collaborative practitioner research addressed the following wondering: *How does a real-world project-based learning experience shape K–1 students’ conceptualization of economic concepts?*

## Supporting Literature on Project-Based Learning

We found inspiration in the project-based learning model (PBL), not often used with young learners, to support our unit development grounded in research literature. According to Condliffe (2017), effective PBL should include the following elements: significant learning goals, projects to promote learning, and sufficient time to investigate the problem or question thoroughly. PBL allows students to engage in problem-solving skills that persist over an extended period while addressing various learning goals necessary for their grade-level content development. In practice, PBL includes

essential elements regarding curriculum and instructional practices. PBL is rooted in constructivist ideals and emphasizes students as active participants in their learning and knowledge construction (Thomas, 2000) rather than as passive participants absorbing information from their instructors. To aid students' knowledge construction, the problem or big questions guiding the PBL should cultivate student engagement and motivation to persist in finding solutions (Parker et al., 2013). It is critical that students feel a sense of purpose and investment in the PBL process from the onset, which will help sustain their motivation long-term throughout the project duration. For our PBL economics unit, our students sustained their motivation for learning by engaging in running the coffee company to raise enough money to go to Disney's Animal Kingdom, an exciting experience for five-, six-, and seven-year-old learners.

A methodology highly compatible with interdisciplinary social studies (Duke et al., 2020), PBL allows students to extend and connect their school-based learning experiences to real-world authentic experiences. To support students in generalizing their learning to the real world, students should be given opportunities to share their knowledge with a public audience. Sharing their work in public spaces increases student motivation and takes their education beyond the walls of their classrooms into the real world for an authentic feeling (Darling-Hammond et al., 2008; Thomas, 2000). Specifically for primary grades, PBL is an excellent opportunity for students to develop social skills and an understanding of the world around them while engaging in critical thinking skills within a real problem or project context. Within the context of our PBL economics unit, students engaged in using real-world skills, such as learning about coffee shop jobs, applying for a job, working their job, and earning money to save towards a financial goal. Students also learned about financial concepts including money, loans, saving, and spending. To extend their learning into the public setting, students served their coffee products to faculty and staff members at our school in the mornings. Duke et al. (2021) found that students involved in PBL displayed 63% higher gains for social studies than their peers taught social studies using a more traditional curriculum, a goal we hoped to attain by contextualizing economics within a real-world hands-on learning experience.

Additionally, Duke et al. (2021) discovered that students whose teachers implemented PBL more consistently displayed higher levels of motivation, writing, and informational reading than those whose teachers could have implemented the PBL with the same consistency. PBL also allows primary-aged teachers to make interdisciplinary connections across content areas, such as social studies, literacy, and mathematics, an advantage for primary-aged educators tasked with teaching multiple subjects and standards daily.

## **Research Design and Methods**

To protect the privacy of the institution, teachers, and participants, all names used in this collaborative inquiry article are pseudonyms. As faculty members of a research institution, we highly value student and family privacy and rights and have only included student participants whose families have provided informed consent for their child to participate in teacher practitioner research. PKY maintains appropriate IRB consent from students' families that attend our institution to engage all faculty members in yearly practitioner inquiry cycles for continued professional learning.

### ***Designing the K–1 Coffee Company***

In collaboration with seven K–1 teachers, three first-grade teachers, three kindergarten teachers, and one LCL, our team engaged in immense planning for the K–1 Coffee Company over several days; over the course of a few weeks, we spent about 10 hours with our initial planning and then continued to meet weekly as we ran our coffee company. As a team, we identified the Florida state standards for kindergarten and first-grade economics; we compiled a list of standards and grouped them based on similar learning goals (Appendix A). We also identified social emotional learning goals that we

wanted to build upon and strengthen throughout this unit. Once the anchoring social studies standards (economics) were chosen, the team intentionally sought to integrate standards from other disciplines, including mathematics and English Language Arts, for an interdisciplinary approach. For example, when teaching about money and its purpose, we integrated first-grade mathematics concepts around counting dimes and pennies, which connects to the broader learning goal of understanding two-digit number place value as a set of tens and ones. Next, the team created a set of learning goals for the project’s duration guided by the necessary standards identified. These learning goals laid the foundational knowledge necessary for the students to successfully participate in and understand the process of running a business as a member of a work community (Appendix B).

**Figure 1.** *K–1 Coffee Company Planning Timeline*



Before students engaged in running the K–1 Coffee Company, they built an understanding of the following grade-level appropriate knowledge of economic concepts: identifying wants, needs and US currency, the purpose of money, how to make money, saving and spending, and jobs and the workforce community. These concepts were taught using K–1 team collaborative lesson plans that targeted each specific learning goal (see Appendix C for sample lesson). As a learning community, the students sought to answer the question, “How can we raise enough money to reach a big goal like going to Animal Kingdom?” Although the idea of visiting Animal Kingdom may seem unrelated, the students were simultaneously engaged in a non-fiction writing project, in which each student researched an animal and created a non-fiction book as a product of their learning. Each of the six classes allowed students to brainstorm ideas for ways we could earn money, and the teachers guided students to think of the coffee company given the available resources and proximity to an available consistent customer base. We came to a common agreement that teachers love their daily morning coffee and that our school is filled with K–12 teachers, which supported our collective rationale for starting the K–1 Coffee Company. A planning timeline can be seen in Figure 1.

### **Data Collection**

Data collection took many forms through the K–1 Coffee Company, including student work worksheets from lessons as assessments, discussion conversations, job applications, and responses to a post-assessment survey. Three teachers surveyed their kindergarten and first-grade students after their experience running the coffee company. Each class consisted of 17–19 students from diverse racial-linguistic, economic, and academic backgrounds, for a total of 51 students out of the 108 in our learning community. Each student was asked the same set of questions that asked them to demonstrate their understanding of critical financial concepts related to the unit learning goals. The survey asked questions about wants and needs, goods and services, the concept of money, the purpose of the coffee shop, and their recommendation for future students using this project to learn about economics. Other data sources included the student’s operation of the coffee shop, marketing artifacts, and anecdotal comments regarding the coffee shop throughout the project.

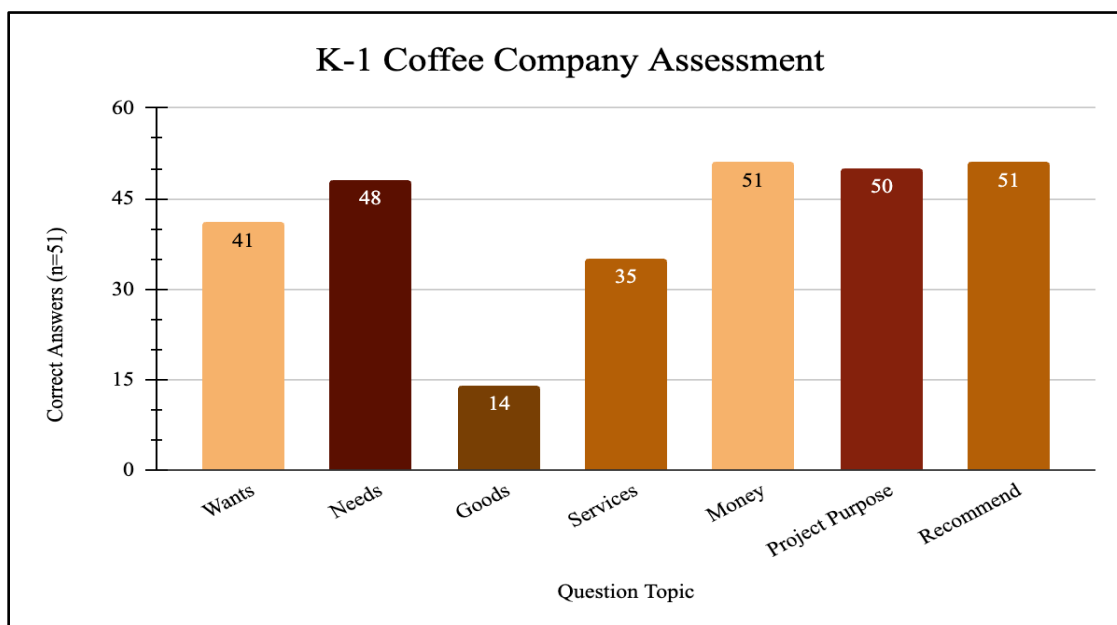
After generating a list of coffee shop jobs, students attended a job fair where they rotated within the learning community and learned about each position from a different teacher. After the job fair, students completed job applications for the job they wanted to do and included a sentence to justify why they believed they deserved the job (Appendix A). The teachers reviewed the applications and determined which jobs students would be assigned based on choice and student skillset. Job training occurred next. Faculty members across our K–12 school placed online orders via Google Forms, and students were trained to transfer the information onto the order form and match the form to the appropriate cup for the baristas to fulfill the order. The baristas learned to read the order forms, pour the appropriate milk and flavor options, and add sweetener packets. For the hot drinks, the baristas pressed the “brew” button on the Keurig, and with the help of an adult, they mixed the hot chocolate packets. Once the drinks were made, an adult put the lids on the drinks and placed the drinks on the cart. Drink orders were delivered to appropriate faculty members on our coffee cart, guided by a teacher but pushed by the coffee delivery team. Students greeted the faculty, collected money, provided change when necessary, and thanked faculty members for supporting their business. When the empty coffee cart returned, the students selected for the “janitor” job helped clean the cart and wipe the kitchen counters to get ready for the next coffee day. Each class ran the coffee company three times a week for three weeks. Upon completing their rotation at the coffee shop, students participated in their post-assessment survey (Appendix D).

## Results

Across the three classes highlighted in this practitioner research, all students accurately described and discussed the concept of money as it related to our economics unit (See Figure 2).

80% or more of our students were also able to describe the concepts of wants (81%) and needs 94% as well as the purpose of our K–1 Coffee Company; it is important to note that in addition to describing wants and needs, each student provided an appropriate example to support their reasoning. When asked if they would recommend this learning experience to future students entering K–1, all the students suggested this project. One student specifically referenced the learning model, stating “Yes, because that’s a good strategy,” and another shared that other students who engage in this learning experience “could learn a-lot.” One student coined the day as “the best day of my life.”

**Figure 2.** *K–1 Coffee Company Assessment Results*



Contrarily, over 50% of the students struggled with recalling and discussing goods (27%) and services (69%). Many students described goods as something “being good for you” or stated “I don’t know” when asked to talk about goods and provide an example. Many also likened goods to their behavior or food—something that was good for their body or a treat-like “goodie.” One student responded, “A good is something good you do, like raise your hand in class.”

Almost all students engaged in a verbal dialogue that accurately described the purpose of running the K–1 Coffee Company. Many students expressed the practical need to raise money because Disney is an expensive trip, and others responded more emotionally, sharing their motivation to serve grown-ups a beverage to enjoy each morning and participate in the coffee company by doing their job. One student shared the following about this learning experience: “I liked that the coffee always puts smiles on peoples’ faces, and when it puts smiles on people’s faces, it makes them really happy and sometimes it puts a smile on my face.” Students felt excited and proud of their work through running the K–1 Coffee Company.

## Implications for Future Research

### *Limitations*

The success our students experienced was a product of the immense time commitment of their teachers collaboratively planning, a learning community leader with the flexibility to support the coffee shop’s daily operations, a school with a budget to provide a loan, and an incredibly supportive school faculty that ordered coffee for months to help our students reach a big financial goal. We are aware of the privileges that allowed us to experience success in this project that other public schools may not have to support a project of this scale. Our interpretation of PBL was also adjusted to meet the needs of our young students, which some may argue is not entirely aligned with all elements of PBL. Theoretically, PBL should be mostly student constructed with teachers supporting student decisions and processes (Condliffe, 2017). Still, the teachers put much effort into heavily guiding students to think of selling coffee to make money, which was the origin of the coffee shop. Lastly, the gap between students running the coffee shop and the formal post-assessment could have impacted data collected for different classes. Some classes worked at the coffee shop months after teaching core concepts, which created a gap in connecting those concepts learned in style to the relevant aspects of running the coffee company.

## Conclusions

As a result of the intentional and collaborative teacher planning for and student time, effort, and commitment put into the K–1 Coffee Company, the students raised more than enough money to take their learning community to Disney, an experience many students from the local community may not have experienced because of financial insecurity. Our youngest learners experienced what it takes to run a successful business as a community from an age-appropriate perspective, which communicates that they can develop the knowledge and skills to engage in entrepreneurship and social skills necessary to be productive in the workplace, all while meeting academic standards.

Across the three classes highlighted in this practitioner research, students were able to gain understanding of economics concepts related to the standards and learning goals of our K–1 Coffee Company. Students were most successful in describing and providing examples of the concepts of wants, needs, and money, while they struggled to accurately describe the concepts of goods and services. Almost all of our students could describe the purpose of our project, and every student recommended the K–1 Coffee Company as a learning experience for future students. This provided us

evidence that our project-based economics unit had areas of strength and growth related to students' success with meeting the standards.

This PBL experience demonstrates how collaborative, interdisciplinary, hands-on, real-world contextual experiences are meaningful for young learners. These memorable experiences can shape students' future self-perception and passions as they develop critical memories that will shape who they become and their career motivations into adulthood—collectively, providing our students with the opportunity to experience a glimmer of insights into the possibilities of entrepreneurship in the United States.

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## Appendix A

### Florida State Standards Covered

- SS.K.E.1.2: Recognize that United States currency comes in different forms.
- SS.K.E.1.1: Describe different kinds of jobs that people do and the tools or equipment used.
- SS.1.E.1.1: Recognize that money is a method of exchanging goods and services.
- SS.1.E.1.2: Define opportunity costs as giving up one thing for another.
- SS.1.E.1.3: Distinguish between examples of goods and services.
- SS.1.E.1.4: Distinguish people as buyers, sellers, and producers of goods and services.
- SS.1.E.1.5: Recognize the importance of saving money for future purchases.
- SS.1.E.1.6: Identify that people need to make choices because of scarce resources.
- MA.1.AR.1.2: Solve addition and subtraction real-world problems using objects, drawings or equations to represent the problem.
- MA.1.M.2.2: Identify pennies, nickels, dimes and quarters, and express their values using the ¢ symbol. State how many of each coin equal a dollar.
- MA.1.M.2.3: Find the value of combinations of pennies, nickels and dimes up to one dollar, and the value of combinations of one, five and ten dollar bills up to \$100. Use the ¢ and \$ symbols appropriately.

## Appendix B

### K–1 Coffee Company Learning Goals

#### Academic Learning Goals

- I know that US money comes in coins and bills.
- I can describe a want and a need.
- I can describe the difference between wants and needs.
- I can discuss the purpose of money (to exchange for goods and services)
- I can explain the difference between goods and services.
- I can identify pictures of people buying, selling, and producing goods and services.
- I can differentiate between a time to save and spend money based on resources.
- I can add and subtract within 20 (money related to payment during coffee sales).

#### Social-Emotional Learning Goals

- I can work as a member of a team.
- I can describe how my job is important to the team.
- I can listen and follow directions to do my job.
- I can describe how running a business takes a group of people working together towards a common goal.

## Appendix B

### K-1 Coffee Company Job Application

Name: \_\_\_\_\_

### K/I Coffee Company Application

 <p>Coffee Delivery</p>	 <p>Janitor</p>
 <p>Order Organizer</p>	 <p>The Night Shift</p>
 <p>Barista</p>	 <p>Name Writer</p>

#### First Grade Example of Job Application: Rationale

I want  
to be a  
chef.

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I have  
good hand  
writing

## Appendix D

### Student End of Unit Assessment and Scoring Rubric

**End of Unit Quiz (administered orally)**

1. What is a want? Give me an example. (3 points)
2. What is a need? Give me an example. (3 points)
3. What is a good? Give me an example. (3 points)
4. What is a service? Give me an example. (3 points)
5. What is money? What do we use money for? (3 points)
6. Why did we have the coffee company? (3 points)
7. What did you learn from running our coffee company? (3 points)
8. What did you like about running the coffee company? (Qualitative analysis only)
9. Do you think other kids should use the coffee company to learn about wants, needs, and money? (Qualitative analysis only)

<b>K/1 Coffee Company Quiz Rubric</b>					
	<b>Meeting Expectations (3)</b>	<b>On Track (2)</b>	<b>Below Benchmarks (1)</b>	<b>Not Meeting (0)</b>	<b>Total (%)</b>
<b>Wants</b>	Student can accurately define a want and provide an example	Student can somewhat define a want and accurately provide an example	Student inaccurately define a want or provide an example	Student cannot define a want or provide an example	
<b>Needs</b>	Student can accurately define a need and provide an example	Student can somewhat define a need and accurately provide an example	Student inaccurately define a need or provide an example	Student cannot define a need or provide an example	
<b>Goods</b>	Student can accurately define a good and provide an example	Student can somewhat define a good and accurately provide an example	Student inaccurately define a good or provide an example	Student cannot define a good and provide an example	
<b>Services</b>	Student can accurately define a service and provide an example	Student can somewhat define a service and accurately provide an example	Student inaccurately define a service or provide an example	Student cannot define a service and provide an example	
<b>Money</b>	Student can accurately define money and its purpose	Student can somewhat define money and/or its purposes	Students inaccurately defines money or its purpose	Student cannot define money and its purpose	
<b>Purpose</b>	Student can accurately identify the purpose of the Coffee Company	Student can somewhat identify the purpose of the Coffee Company		Student cannot identify the purpose of the Coffee Company	
<b>Learning</b>	Student can clearly express what they learned from the Coffee Company	Student can somewhat express what they learned from the Coffee Company		Student cannot express what they learned from the Coffee Company	
<b>Total (21)</b>					