# Use Your Noodle:
# Student-Generated Questions in the Early Childhood Setting

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## Abstract

In early childhood education, nurturing curiosity is essential. It is widely recognized that encouraging students to ask questions is crucial. This practice fosters meaningful connections with literacy and language and boosts engagement, critical thinking, and problem-solving skills, especially among economically disadvantaged backgrounds. This article explores the practical use of the Question Formulation Technique (QFT) in teaching young children from under-resourced schools. We share our experiences implementing the QFT during a summer enrichment program. Through vignettes highlighting the children "using their noodles," we showcase how the QFT serves as an inclusive teaching tool and offer insights for educators on customizing it to meet the developmental needs of young learners.

***Keywords:*** student-generated questions, early childhood, critical thinking, pedagogy, oral language, question formulation technique, curiosity

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Today, in Avondale Park in Birmingham, Alabama, the statue of the legendary Miss Fancy proudly stands with children riding on her back. However, the park is often teeming with young families, few notice or think about the beloved elephant that left a permanent mark on Birmingham. Miss Fancy's storied history comes from her time at the Birmingham Zoo, nestled in the Avondale area, during the early 20th century. She was an iconic figure in the city, holding a special place in the hearts of residents and visitors. A diverse group of local students attend the summer enrichment camp, which involves reading, writing, and lots of wonder for diverse young learners in Birmingham, Alabama, many of whom did not know the story of Miss Fancy.


However, when learning about Miss Fancy, it is essential to acknowledge a sad chapter in history. During the Civil Rights era, young children of color were denied the opportunity to ride on Miss Fancy's back, reflecting the challenging times that shaped our nation.

## Introduction

Researchers have extensively investigated how teachers' questions influence student learning. For example, Strasser (2017) shares strategies for asking questions in her book *Big Questions for Young Minds*, emphasizing its impact on children's high-level thinking abilities. Teachers, guided by educational frameworks like Bloom's Taxonomy and Costa's Levels of Questioning, encourage children to remember information and understand, describe, apply, analyze, evaluate, and create knowledge. While extensive research has explored teacher questioning in the classroom, limited attention has been given to investigating questions generated by students. (İnönü & Demircan, 2023; Resnick, 2023; Salmon & Barrera, 2021).

Early learning is crucial for children as it marks the beginning of their journey to make sense of the world around them. In these formative years, highly effective learning environments play a pivotal role. Heick (2014) outlines 10 characteristics delineating a highly effective learning environment. The first three characteristics of such environments revolve around questioning, with

the first one highlighting the significance of student-generated questions as a fundamental aspect of the learning processTeachers assume that students naturally learn to ask effective questions. However, research shows that learners require explicit instruction to be successful with higher-level questions (Humphries & Ness, 2015; King & Rosenshine, 1993; Rosenshine et al., 1996).

This article explores a flexible instructional technique in which teachers guide students to ask their questions based on a common focus. The Question Formulation Technique (QFT), as described by the Right Question Institute (Rothstein & Santana, 2017), was chosen because it invites all learners into an inclusive learning space, no matter their ability level or background. We provide examples of the QFT in the student-directed investigation of the legendary Miss Fancy, highlighting its usefulness and empowerment for young learners. Vignettes from children help to describe each step of the QFT and also illustrate how the QFT serves as an equitable instructional strategy and how educators can tailor it to address the developmental needs of young children.

## Student-questioning

Understanding how young learners formulate and ask questions can shed light on their cognitive development and engagement with learning. Almeida (2012) highlights the importance of student questioning in engaging students in higher levels of thinking. Student questioning is vital for effective teaching and knowledge development. It enables students to express curiosity and actively participate in learning, deepening their understanding of content. This engagement through questioning enhances student participation and fosters critical thinking, problem-solving skills, and a lifelong learning mindset.

One significant outcome of encouraging student questioning is increased engagement. Zeegers and Elliot (2019) discovered that engagement and learning are positively impacted when students generate and use their questions. As students generate questions, they are more likely to become curious and independently explore complex concepts, leading to better retention and application of knowledge.

Another outcome of student inquiry is the development of critical thinking and problem-solving abilities. Through questioning, students are introduced to novel information, which allows them to synthesize new ideas and engage in problem-solving. Chin and Osborne's (2008) study highlights the positive impact of student-generated questions on problem-solving and conceptual understanding. Through questioning, students can identify knowledge gaps and actively seek solutions, fostering a sense of ownership over their learning journey.

Finally, student inquiry establishes a foundation for lifelong learning and academic success. When teachers consider children’s ideas and allow them to make choices, students become more autonomous and competent (Kocak et al., 2020). Aflalo (2021) suggests that students' ability to formulate questions is instrumental in independent learning. Learning to ask thoughtful questions equips students to handle challenges and adapt to emerging information paradigms.

## Use Your Noodle and QFT

The authors directed an early childhood enrichment camp, *Use Your Noodle*. This camp was specifically tailored for four to eight year-olds, most attending underperforming urban schools during the academic year. The summer program spanned three weeks and included children from various cultural backgrounds and exceptionalities. Out of the group of 40 students, 74% identified

as Black, 25% as White, and 1% as Hispanic. Most learners were at least one grade level behind in academics, with at least 15% of the students on an Individualized Education Program during the regular school year. *Use Your Noodle* centered its academic focus on Science, Technology, Engineering, Arts, and Mathematics (STEAM) integration through literacy activities, employing a play-based and inquiry-oriented teaching approach.

Site directors chose teachers purposefully for their curiosity, sense of wonder, and children's learning. The camp's main focus was to provide all children with a sense of belonging in an environment rich with inquiry pedagogy. Teachers in the program incorporated the QFT into their daily teaching practices throughout the three-week session, providing a structured opportunity for young learners to develop their questioning skills and engage actively in the learning process (Rothstein & Santana, 2017; Spencer et al., 2020).

### *The Question Formulation Technique*

The Question Formulation Technique (QFT) is an instructional method developed by The Right Question Institute (RQI) that encourages individuals to formulate, improve, and strategize their questions. It is designed to enhance critical thinking, inquiry skills, and the ability to ask meaningful questions. The QFT is an easy-to-use, flexible technique used in many educational settings to allow all children to enter the academic space regardless of their ability. It has enhanced critical thinking, problem-solving, and active learning (Rothstein & Santana, 2017).

The QFT is based on the idea that the ability to formulate thoughtful, purposeful questions is a skill that can lead to a deeper understanding of the content and more effective communication. While it was developed initially for adults, educators can use it with students of all ages. We chose this instructional strategy because it can be tailored to address all students' unique needs, developmental levels, and diverse backgrounds, fostering an environment where they can explore their curiosity within a structured learning framework (Minigan, 2017).

To illustrate the effectiveness of the QFT on young children, the authors have chosen to describe the process using an example of a QFT topic involving the historical study of Miss Fancy. The QFT process involves the following steps, and the vignettes highlighting children's learning provide rich examples of each step.

**Step 1. Introduce a Question Focus (Q-Focus)**: The teacher or facilitator presents a prompt, statement, image, or topic to the students, which is the starting point for generating questions. The purpose of the Q-Focus is to stimulate curiosity and discussion.

*"We have a surprise after snacktime," Ms Sims announces to the 4, 5, 6, and 7-year-olds as they move from journal writing. We have a field trip to the park next door to meet a new friend." The children are visibly excited as they eat their snacks and speculate who the new friend might be. In the park, Ms Sims and Ms Ramos introduce their students to Miss Fancy, the elephant statue. These childhood educators planned and frequently taught together as a team. The remaining vignettes highlight children from Ms. Sims and Ms. Ramos's classes.*

*At first, the students made general remarks about the elephant statue, "Look at the big elephant!" "I see the elephant." When prompted to ask questions, students asked, "Who is Miss Fancy?" "What are the people's names?" "Why did the kids get on the elephant?*

*Miss Fancy was the Q-Focus for Ms. Sims's and Ms. Ramos's weekly classes. While viewing the statue, the teachers recorded the children's questions about Miss Fancy. When students made*

*general comments, the simple teacher prompt, "What questions do you have?" encouraged the young students to direct the learning to what mattered to them.*

**Step 2: Brainstorm Questions**—Students have a set amount of time to generate as many questions as possible about the Q-Focus. During this phase, the emphasis is on quantity rather than quality.

*On the first day of the QFT, Ms. Ramos pointed their attention to the statue of Miss Fancy and said, "Oh, Wow! DeMarcus had a question. He asked, 'Why are there kids on her back?' What other questions do you have? We will write them down." Ms. Ramos began to write questions on individual sticky notes to take back to the classroom. With the excitement around asking their questions, students' questions flowed quickly. Jacob and his classmates generated questions quickly, "Why is this statue here?" "Why is it brown?" "Who made it?"Ms. Ramos had a problematic time transcribing every question. She divided the larger group into smaller groups, with an adult in each group to record each question exactly as the student had stated it. This accommodation allows all questions to be represented and captured during the brainstorming.*

*When Max said, "It's so big," Ms. Ramos said, "How can you make that into a question?" Max thought for a minute and said, "How did they make Miss Fancy so big?" and "How does the statue look just like an elephant?"*

*When Josephine commented that she knew the answer to the question, "Who is Miss Fancy?" Ms. Ramos acknowledged her and added that we were asking the questions now. There would be time to answer them later during the project investigation.*

*During the next few days, the children learned more about Miss Fancy through primary sources and a children's picture book written by a local author.*

**Step 3. Categorize Question**s- Students categorize their generated questions into open-ended and closed-ended questions after the brainstorming session. Open-ended questions require discussion or exploration and usually begin with "Why" or How." Closed-ended questions are straightforward, factual questions.

*Teachers read each question at the beginning of the QFT instruction time to categorize questions. All questions were displayed and discussed, regardless of their depth or validity. Because of the young age of the students, the definition of open- and closed-ended questions was simplified to closed-ended questions being answered with "yes" or "no" or having only one correct answer and open-ended questions having more than one possible answer. With each question, the teachers guided the students to decide whether the question was open-ended or closed-ended.*

*Using a think-aloud, Ms. Sims modeled her process for categorizing one of the questions. "Let's look at DeMarcus' question, 'Why are there kids on her back?' Could we answer this question with a yes or a no? Would this make sense? 'why are there kids on her back?' 'yes.'...hum, I don't think it would. This question needs more investigation to find out why the elephant has children on her back. So, I think this might be an open-ended question. What do you think?" The children agreed that it was an open-ended question.*

*For the remaining questions, Ms. Sims led the children as they decided on the category for each question. A debate arose when Julian and Talia found themselves at odds over the question, "What are the people's names?" Julian believed it fell into the open-ended category because there were many possible answers considering the world's population of 8 billion. Talia contended that it should be labeled close-ended because there is only one correct name. Ms. Sims encouraged*

*thoughtful discourse, but, in the end, because of the children's deliberations, they decided to categorize the question as open-ended because it could be anybody.*

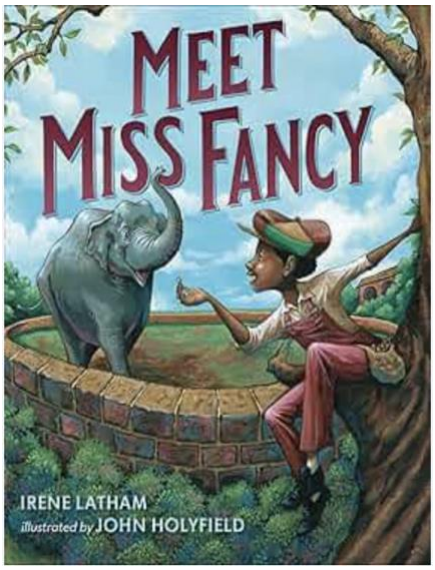
**Step 4. Prioritize Questions**—Students select and prioritize one or a few of the most important questions from the list.

**Step 5. Reflec**t–Students engage in a discussion about the questions they have selected. Part of the reflection might be why they have chosen their specific questions.

**Step 6. Planning**—Depending on the QFT's purpose, students may act based on their questions by conducting research, experiments, or pursuing further inquiry.

*The teachers involved in Use Your Noodle Camp combined the last three steps of the QFT by thoroughly discussing and asking the questions. Whereas older students may use this process to move from a general topic to a more specific topic appropriate to the curriculum, younger children may need more time and structure to explore topics. Teachers decided the QFT process was a multi-day study for this age child, and the class did not complete each step in one class session. Children asked the questions and spent several days exploring the answers individually and in small groups strategically facilitated by teachers in the room. The reflection and planning were embedded in the repetition of reading and re-reading the questions daily, guiding the students to answer those questions throughout multiple days. The questions were available on an anchor chart. As teachers provided more content for the students, the questions remained accessible. Moreover, students added questions as they naturally occurred.*

*During the study, Ms. Sims used the picture book Meet Miss Fancy by Irene Lathum (2019) as one of the Q-Focuses. The children asked, "Why is a kid in a tree feeding Miss Fancy?" Why is Miss Fancy coming to the boy?" and "Why did they call her 'Miss Fancy'?" Ms. Sims added newly generated questions on the whiteboard, and the children could reference the book and the questions during the day.*



*With the guidance of their teachers, the children revisited their questions and the various Q-Focuses throughout the day. During a morning meeting in Ms. Sims' class on day five, the students came together to share the insights they had gathered about Miss Fancy, ensuring they had addressed each of their questions.*

*Kate, a young white six-year-old, reported that she did not like Miss Fancy. "I found out that if we had lived back then, some of us would not have been able to ride on her back. She didn't let Black and Brown children ride on her back!" Kate was incensed and continued, "…like, I would have been able to ride her, but you wouldn't, and you wouldn't, and you wouldn't," pointing to her lack of brown friends in the circle. "That's not fair!' Her friends agreed that this was not fair. 'Why was Miss Fancy mean?' Ms Sims guided the class in an honest conversation about racial relations, focusing on what the children could do to contribute to positive change.*

## Using the QFT with Young Children

The overarching objective of the QFT is to nurture the children's innate curiosity and facilitate the development of their questioning skills (Minigan & Beer, 2017). The QFT has proven effective for adults and older adolescents, but there has been very little documentation of its use with younger children. While the RQI website has some examples of lessons that demonstrate the use of the QFT in early childhood, there are no explicit adaptations to show its ultimate and best use. While it is a teacher-directed strategy with explicit instructional steps, it is compatible with developmentally appropriate practice. It also allows flexibility in adapting to student interests, abilities, and prior knowledge. It gives teachers an easy way for the teacher to foster student curiosity and engagement in a structured environment.

At *Use Your Noodle*, site directors introduced the QFT to teachers unfamiliar with the technique, approaching it with open minds. Encouraging individualization, we urged them to adapt the technique to suit their students' unique developmental stages, learning styles, and cultural backgrounds. Every child participating in the program learned the essential skill of asking questions. Teachers saw the strength of teaching and encouraging children to ask questions. Through careful observation of their efforts, we identified common patterns, suggesting areas for improvement and best practices. This collective experience led to refining the QFT model, making it applicable and beneficial to all young learners.

The following suggestions are based on developmentally appropriate practices for the youngest children. These adaptations of the QFT allow for establishing meaningful connections to the QFT topic, implementing the QFT flexibly over multiple sessions and/or days, modeling both simple and complex questions, facilitating an appropriate question-generating process, teaching multimodal strategies, and fostering a diversity of student voices.

[See Appendix A: Adaptations for Implementing the Question Formulation Technique with Young Children]

## Culturally and Developmentally Relevant Q-Focus

Facilitators select topics or Q-Focuses that are culturally relevant and engaging for young children. They consider the cultural context of children, families, and communities. The more relevant, experiential, and accessible the Q-Focus, the more engaged the students will be (Muhamad, D. & Mat Noor, M., 2021). Traditionally, even teachers of early elementary-aged students provide the facts about historical events with no real connection to the student's current

experience. For example, a teacher may introduce a study on civil rights by stating, "We are going to learn about the civil rights movement. Read this history book and answer the questions at the back of the chapter." Instead, when using the QFT, the teacher may guide the students toward the same information in the history book but structure their experience around their current environment, such as the elephant in the park.

*Miss Fancy is a vital piece of the student community's culture. However, many children and adults at Use Your Noodle had not previously stopped to think about the elephant statue, the children on her back, and how it fits into Birmingham's historical context. Kate, whose family regularly visits the Avondale park, has never questioned the relevance of the elephant statue. After being introduced to Miss Fancy at camp, Kate insisted that her father take her to the park immediately after camp and subsequently to the adjacent library to learn more about the elephant. In her research, Kate discovered that children were divided into two categories in the world of Miss Fancy. Children with dark skin were not allowed to ride the famous elephant, and children with white skin were allowed to ride. The intrinsic curiosity demonstrated within Kate allowed a more personal connection with the history of civil rights at a developmentally appropriate level. Six-year-olds can be curious about these complex ideas when given an appropriate entre.*

*Teachers chose Miss Fancy and other Q-Focuses at Use Your Noodle Camp with the children's interests and cultural backgrounds in mind. They included classical music, photographs of basketball star LeBron James, Japanese picture books, a live cicada, and the art of breadmaking.*

**Flexible Implementation of the QFT**

Adapting the QFT for early childhood students requires a simplified and developmentally appropriate approach. Flexible implementation of the QFT includes spreading the steps over multiple days. Given young children's attention spans, keeping activities brief and aligned with other developmental considerations is essential. For example, the brainstorming step of the QFT may need to be divided into two or three time periods.

*When introducing the initial Q-Focus of Miss Fancy in the park, Ms. Ramos and Ms. Sims recognized that the park was exciting to the children and that the July heat made attention spans short. At the park, the period dedicated to collecting was brief, lasting less than ten minutes. Despite the short time for the QFT that day, it is worth noting that nearly every child either asked a question or contributed to someone else's question. Once inside the classroom, all questions were placed on the anchor chart. The teachers continued to collect questions later that morning.*

Presenting Q-Focus on specific content several days in a row provides the necessary scaffolds for young children to develop more questions. When young children come to school with diverse experiences, teachers should not assume their young students possess the necessary prior knowledge for Q-Focus.

*Ms. Ramos and Ms. Sims chose multiple Q-Focuses related to Miss Fancy to engage their students' curiosity. They incorporated the actual statue, historical photographs, and a captivating picture book into their teaching materials. These Q-Focus and the questions generated remained prominently displayed on the weekly whiteboard, encouraging the children to investigate and explore them further.*

*After the picture book was re-read, six-year-old Isa enthusiastically approached Ms. Sims. "I know the answer to the questions about Miss Fancy being mean! (referring to Kate's observation about Miss Fancy not letting Black and Brown children ride on her back). Isa*

*continues, "Miss Fancy found the boy and wanted to be his friend! Maybe it was the man who owned Miss Fancy that was mean and not the elephant." Ms. Sims follows, "I will write the answer here, Isa. Would you be willing to share that during our goodbye circle?"*

**Simple and Complex Question Modeling**

Modeling questions is important for formulation and encouraging more complexity. Teachers may need to model the ability to formulate questions, even teaching some students how to change a statement into a question. If the child cannot independently generate the question, the teacher can model the change from statement to question and encourage them to ask similar questions.

*On the first day in the park, Ms. Ramos allowed Max to rephrase his statement, "Miss Fancy is so big." into a question. Ms. Ramos asks, "Do you have a question about Miss Fancy being so big?" Max accurately rephrases the statement into a question and promptly follows it with more questions. "Hmm, I wonder why Miss Fancy is so big? Did she eat a lot of hay today? What did Miss Fancy eat, and who fed her?"*

Teachers can ask questions like "how" or "why" during natural conversations and point out those questions in real time. Further noticing and naming the students' questions draws attention to the student-generated questions and provides more examples.

*Throughout the camp day, Ms. Ramos and Ms. Sims could be heard asking, "I wonder why Josephine enjoys swimming?" or "How did Mr. Quinn (the custodian) figure that out?"*

Most classroom questions from teachers and students tend to be low-order basic factual questions (CITE). In an inquiry-based learning environment, using the QFT framework, young children can ask more complex questions that encourage deeper comprehension of academic content.

*During the study of Miss Fancy, Ms. Ramos presented a newspaper photograph of the actual Miss Fancy and her trainer as one of her Q-Focus. Children used the picture to add additional questions to their collection of questions about Miss Fancy. Children asked questions like "Why is the man with the elephant?" "Is the elephant his pet?" "Does he own the zoo, and is he trying to get a bunch of animals?"*


*James exclaims, "Wait, Miss Fancy is real?"*

*Caleb asks, "There is a zoo in the park?"*

*Ms. Ramos responds, "What kind of questions do you need to ask to find the answers to your questions?" "Well, I went to the zoo last week. Maybe I could ask the zookeeper?" Ms.*

*Ramos answers, "What would your question be to get as much information as we need to find the answers?" Caleb responds, "I know Miss Fancy's zoo was in Avondale. How did the zoo move to where you are now? Why did you move the zoo?" Ms. Ramos says, "Let's add those to our anchor chart."*

*In subsequent QFT investigations, Ms. Ramos and Ms. Sims found that sometimes a simple change in how they prompted children could lead to a greater number of and also more complex questions. For example, instead of asking, "What questions do you have?" they asked, "What are you wondering about?"*

## Question-Generating Process

*After reading Meet Miss Fancy, the children had many questions. Ms Sims realized she could capture them more effectively by dividing the children into three groups, each with an adult to transcribe the questions. The adults could write the questions more quickly, so the children did not have to wait and potentially forget their questions, allowing more children to share. Teachers placed individual questions on sticky notes for sorting and classifying later.*

Depending upon the children's writing abilities, teachers can transcribe questions as the students ask them or allow students to write their questions. If teacher transcription is warranted, divide students into small groups or one-on-one to facilitate dictation by children to adults. Use shared writing or "sharing the pen" to record questions. Because teachers recorded questions, the physical act of writing was not a barrier. Students could generate more questions when the teacher transcribed them because the teacher quickly wrote them. Furthermore, students became more confident in their strengths and abilities.

## Multi-Model Strategies to Promote Autonomy

Multimodal literacy strategies play a crucial role in young children's literacy development within a cultural context (Taylor & Leung, 2020). The Question Formulation Technique (QFT) facilitates social interaction through gestures, pictures, words, and movement, offering diverse ways for students to engage with information and process questions.

When sorting questions, teachers can use visual cues/labels or simple labels like "More" for open-ended and "Yes/No" for closed-ended questions. These categories provide a reference point throughout the investigation. Writing questions on sticky notes allows students to visualize and move them between the closed and open categories, promoting independent inquiry and deepening comprehension and curiosity. This method grants students greater autonomy in their exploration.

Repetition and consistent revisitation of the Q-Focus and their discoveries enable students to reassess their questions and identify new areas to explore continually. An anchor chart at the child's eye level displaying the Q-Focus and questions enhance accessibility, fostering independent and supported learning (Routman, 2014; Kocak et al., 2020). Whether teacher-led or student-driven, this iterative process motivates and engages, enriching the student's learning experience.

*During day one, Ms. Ramos facilitated conversations about what classified a question as "open" or "closed." She then used sticky notes to write the questions so they could easily be removed and placed in columns when the children decided whether they were open or closed-ended. Later in the day, Marta and Edward argued about whether one question was open or*

*closed-ended. They decided together that it might just be both. They brought their dilemma to Ms. Ramos, who encouraged them to make a "maybe" category that allowed for those unique questions.*

*After Ms. Sims re-reads the picture book, Isa and Kate take the book to the reading rug and, lying on their stomachs, retell the story, looking at the pictures. Isa realizes maybe Miss Fancy isn't mean after all. Because the anchor chart is at eye level and accessible to the children, they are motivated and can identify questions they can answer through the picture book.*

**Encouragement of Diverse Student Voice**

*Marta, a five-year-old child who primarily spoke Spanish, volunteered a question to Ms. Ramos' class. "Does Miss Fancy eat grass?" When asked to categorize questions, Marta confidently decides her question is open-ended. James countered, "That is NOT an open-ended question because the answer would be No!" Ms. Ramos asked Marta if she agreed or disagreed, and she responded, "It is open-ended. And I know this because Miss Fancy could eat grass, beans, or corn." Ms. Ramos tells the class, "Marta believes this is an open-ended question." The teacher understands the question is closed-ended; however, she also knows future exploration and revisiting will provide an opportunity to clear up the misconception. For now, the question remains in the closed column.*

Provide opportunities to learn in an equitable classroom. Young children learn to ask questions in an environment that encourages discourse and acceptance of all questions. When students can hear a variety of voices and also express their own, it provides an equitable classroom that celebrates all perspectives.

**Observations in the Early Childhood Classroom**

The educators reported shifts in the students' behaviors throughout the program. Once the expectation for questioning was established, students promptly generated their inquiries. This development transcended the confines of the QFT and the initial Q-Focus, permeating the entire classroom environment. Spontaneously, students began to document their questions as they read books. They began asking questions about the activities they engaged in independently. Furthermore, they revisited the questions collected during the QFT. These questions became a point of reference for students during various periods of the day, extending beyond QFT sessions to occasions such as morning meetings and lunchtime.

*In Ms. Sims' classroom, seaweed was the designated Q-Focus for one week. The children asked dozens of questions as they felt, touched, and observed the rectangles of scaly seaweed. They asked questions like, "Why is it bumpy?" "Can you eat it?" and "Why does it smell funny?" Ms. Sims transcribed these questions, displaying them on a large sticky note for the students' reference. Independently, students revisited the wall, examined the seaweed, and approached Ms. Sims with additional questions to add to the list. The children tasted flavored seaweed snacks at the end of the week. As they sampled the novel snack, several students pointed back to the compiled list of questions, actively engaging in answering them.*

In an educational setting where student questions are anticipated and expected, children feel empowered to ask questions about their interests and explore their inquiries. An environment that includes questioning fosters a heightened level of engagement among students. This engagement, stemming from the freedom to inquire, sets the foundation for a classroom culture of

curiosity. With curiosity and engagement, a dynamic learning community can emerge where the exchange of questions becomes a shared and celebrated practice. In this atmosphere, students receive knowledge and actively contribute to the learning process, giving them a sense of ownership in their educational journey.

Moreover, a questioning classroom culture creates an inclusive learning environment where diverse perspectives and interests are acknowledged and embraced. As students explore their questions, they deepen their academic knowledge, develop critical thinking skills, and naturally incline toward inquiry-based learning.

*During the three-week program, the students return to the park where Miss Fancy is permanently located. They go there for snacks, play on the swings and slides, and explore other parts of the park. Teachers observed the students frequently engaging in spontaneous inquiries about the park's history, demonstrating their ongoing curiosity and ability to relate the information to their lives. "Were there other animals in this park way back then, Ms. Ramos?" "Why is this lionhead here?" "Did water come out of its mouth, and other children played in it?" "Do you think other (Black and Brown) children may have goneded down this slide?" "Were they allowed in the park?"*

In essence, establishing an expectation for student questions and celebrating curiosity within a classroom lay the groundwork for an active, authentically stimulating educational experience. This proactive approach enhances student engagement and creates an inclusive environment where learners are empowered to explore.

## Conclusion

The case of *Miss Fancy* is an illustrative example of how the QFT can be tailored to meet the diverse needs of the youngest learners, who come from various backgrounds and possess various abilities and ages. Cultivating a questioning culture in educational settings is essential for effective learning (Shah et al., 2018; Pelo, A. 2017). It empowers active student participation, promoting deeper cognitive learning. More research on constructive teaching strategies is needed to enhance young children's question-asking abilities (Spencer et al., 2020). The QFT is a valuable tool that enriches children's educational experience and affords them greater autonomy in their learning process. Initially designed for older students and adults, its application in early childhood education has yet to be extensively explored. In the context of *Use Your Noodle*, the QFT provided a structured foundation for developing an inquiry-based teaching approach while further developing academic content.

In conclusion, integrating QFT has proven to be a powerful method of encouraging children's deeper learning while providing a simple method for teachers to create a culture of curiosity in the classroom.

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## Appendix A

***Adaptations for Implementing the Question Formulation Technique with Young Children***

| Adaptations for Implementing the QFT with Young Children |
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| 1. Developmentally and culturally relevant Q-Focus<br>a. Authentic connection with Q-focus<br>2. Flexible implementation of QFT<br>a. Reduced time for each Q-Focus<br>b. QFT implemented over days and weeks<br>c. Organization of students into small groups<br>3. Simple and complex question modeling<br>a. Use of question stems<br>4. Question generating process<br>a. Reduction of adult-to-child ratio for transcribing questions<br>b. Use of shared writing/sharing the pen for recording questions<br>5. Multi-modal strategies<br>a. Visual cues or simple labels for organizing questions<br>b. Continuous revisitation of Q-focus<br>c. Anchor chart at eye level<br>6. Encouragement of diverse student voice<br>a. Acceptance of all questions without judgment<br>b. Exposure to a variety of voices<br>c. Creation of a safe space for the expression of voices |