

BYRAM HILLS CENTRAL SCHOOL DISTRICT
ARMONK, NEW YORK

Author: Dawn Selnes-Rosen
Title: *What do you want to know? Exploring the role of curiosity in the classroom*
Year: 2011-2012
School/Grade: H. C. Crittenden Middle School/Enrichment Grades 6-8

SUMMARY OF INVESTIGATORS OF PRACTICE ACTION RESEARCH PROJECT

Context:

Curiosity, or rather the lack of it that I see in some middle school students, is fascinating to me. For the past two years, I've worked as the enrichment teacher at H. C. Crittenden. The students I see are selected to participate in different projects based on their classroom performance. In most cases, this means their class averages on tests, projects and homework.

My experience over the years indicates that many middle school students wait to receive information as opposed to seek new learning. When given open-ended questions and/or tasks that require the formation of personal questions, I've observed some students struggle. This almost always leads me to ask, "What do you want to know?" The responses I get to that question can range from, a shrug of the shoulders to a murmured, "What do you want me to know?" Students often express interest in their grades, however, so I began to wonder if their grade focus has replaced a certain amount of their innate curiosity. All of my observations have sparked my own curiosity, leading me to ask the following:

- What happened to their natural curiosity?
- When did they stop asking questions?
- Why did they stop asking questions?
- How does the lack of curiosity impact the classroom?

Action Plan:

With all of those questions floating around in my head, my first step was to focus. Ultimately, my research question became: *What is the role of curiosity in the classroom?* This allowed me to streamline my thoughts and get started. I began by reading several articles and attending a workshop. Some of the most influential things I read included: *4 Reasons Why Curiosity is Important and How to Develop It* by Donald Latumahina, *Fostering Curiosity in Your Students* by Marilyn P. Arnone and articles from a website entitled *The Curious Mind*. Everything I read confirmed my own beliefs about the importance of curiosity, from the idea that curious minds are active rather than passive and that the "exercise" of curiosity makes the "muscle" of your brain stronger, to this thought from Donald Latumahina: "By being curious you will be able to see new worlds and possibilities which are normally not visible. They are hidden behind the surface of normal life, and it takes a curious mind to look beneath the surface and discover these new worlds and possibilities." Attending an *Inquiry Boot Camp* workshop was also influential during this phase of my learning. I was introduced to various sources for furthering my research, as well as strategies to use with students.

With a stronger knowledge base, I entered the next phase of my research: Data

Collection. I began with a "Curiosity Questionnaire." Appendix A (This was inspired by a questionnaire I read in *Q Tasks: How to Empower Students to Ask Questions and Care About Answers*, by Carol Koechlin and Sandi Zwaan.) All 6th grade students were asked to respond to seven questions with the hope of gaining insight into their level of curiosity. At first glance, the data was overwhelming. Each question revealed a lot of information, but there were too many things to focus on. I elected to start out by using results from one question, "On a scale of 1-10 (10 being very curious), how curious are you?" as additional criterion in selecting students for an enrichment project, *Design for the Other 90%*, that required students to think "outside the box." For the project, students were required to research B-Corporations and come up with an idea that would benefit people in need on our planet that could ultimately be "pitched" to the company. Students with both strong classroom performance and a high self-curiosity rating were selected to participate. As students worked on the project, I made note of their ability to work independently, ask questions relating to their topic, as well as their ability to think creatively (as this was a large part of the project). I looked for a relationship between their work and their self-curiosity rating. In addition, I paid careful attention to the choices students made as they worked on the project (i.e., did they model their choices after examples provided in class, or did they come up with original ideas?).

In looking more deeply at all of the data from the questionnaire with our *Investigators of Practice* group, I was encouraged to focus in on responses to a different, open-ended question: "Please share one question you have that you would like to find out the answer to before you go to bed tonight." Student responses were varied, ranging from no response to things like, "Are all humans related?" After reading through all of the responses, I was able to identify clusters within the data. Most of the questions fit into one of the following themes/categories:

- Practical Wonderings (E.g., When can I go to *Michael's* to get more art supplies?)
- Academic Wonderings (E.g., How did I do on my Literature test? How do you subtract fractions?)
- Broad Wonderings (E.g., Why are there so many specific rules to follow when you want to do something very simple?)
- Ethical Wonderings (E.g., Should I regret doing something that I did today?)

Looking at these themes, I decided that I needed to collect more data through observation in order to establish connections between them and the role of curiosity in the classroom. I did this by structuring my Exploratory classes to either have a research (Independent or Collaborative) or a *Design for the Other 90%* (continuation of the project) focus. I made note of several students' choices and how those related to their initial questions theme. I.e., was a student who posed a "broad wondering" type question pursuing a "broad wondering" type research. I also noted how students chose to present their information to the group.

I should note that as I collected data, my focus began to widen. I began thinking and reading about the relationship between curiosity and creativity. One article, *Why Creativity Now? A Conversation with Ken Robinson*, discusses creativity as being an essential 21st century skill. I agree and feel that most people I know who are curious are also creative. If the two are linked, then how are schools meeting the needs of students before they lose some of their natural curiosity and creativity? The article also speaks to the difference between *teaching creatively* and *teaching for creativity*.

Results:

Students who believe themselves to be curious (i.e., rating themselves as highly curious with a 9 or 10 out of 10) showed great creativity and persistence with the *Design for the Other*

90% project. 30 (almost all with a curiosity rating of 8 or higher) of the 73 students participating in the project elected to continue their *Design for the Other 90%* work during their Exploratory classes. This required that they work independently to try and make their idea for their B-Corporation become a reality. Several students wrote letters to their B-Corporations. Others have been working to create prototypes of their ideas.

It has been amazing to watch these students grow, learn, and challenge themselves. I am very excited by the work these students have produced. (Two initial projects, as well as two follow-up letters are attached.) One student was invited to visit with the founder of the B-Corporation she studied. N. K., along with two classmates, met with the local B-Corporation and is inspired to help the company help others in our area by collaborating with the company and the HCC VIP Club in the coming school year.

While so many students chose to continue their *Design for the Other 90%* work in January, many hit stumbling blocks along the way. Rather than force them to stick with something they were not feeling passionately about, I allowed them to decide their own next steps. By May about 2/3 of the 30 students elected to leave their work behind to pursue independent or collaborative research projects. The topics of these projects have included: the monsters of the Harry Potter books (student's question was in the Practical Wonderings category), Medusa (student's question was in the Practical Wonderings category), pies-sweet and savory + pi-mathematical (student's question was in the Academic Wonderings category), polar bears (student's question was in the Academic Wonderings category), dreams (student's question was in the Practical Wonderings category), and colors (student's question was in the Broad Wonderings category). At this point I feel that I would need to look at a larger group to establish themes in my observations.

Implications:

Curiosity is complicated, as is determining its role in the classroom. From my research, I observed many students across the spectrum of curiosity. Is curiosity essential for learning? Probably not, as students learn in a variety of ways. Is curiosity, however, an important factor in developing and maintaining a love of learning? Most likely, as students who rated themselves as being very curious often exhibit additional habits of life-long learners. Some of these habits include creativity (often seen in the form of problem-solving) and persistence.

My research this year has opened the door to so many new questions. Most young children ask questions constantly. Why is the sky blue? Where does the sun go at night? Who...? What...? When...? Now, I REALLY want to know:

- What happened to their natural curiosity?
- When did they stop asking questions?
- Why did they stop asking questions?

PLUS

- Can children be coaxed back into asking those questions after they've stopped?

But, most importantly, for my research purposes, I would love to explore this question:

What are the best practices for sparking and nurturing curiosity, creativity, and persistence in the classroom with the intention of supporting a life-long love of learning?

Appendix A

Name _____
Questionnaire

Date _____
Section _____

This questionnaire is for informational purposes only; it will not be graded. Please select/fill-in an honest response for each question. **THERE IS NO RIGHT ANSWER!**

1. An average, how many questions do you ask during the school day?
 - a. 0-1
 - b. 2-4
 - c. 5-7
 - d. 8 +

2. Do you mainly ask questions:
 - a. to help you understand a topic more clearly?
OR
 - b. because you are confused?
OR
 - c. because _____
_? (Feel free to fill in another reason.)

3. Do you like it when other students ask questions? Y or N

4. Does asking questions help you learn? Y or N

5. On a scale of 1-10 (10 being very curious), how curious are you? _____

6. a. Do you know someone who is very curious? Y or N

b. If yes, provide another word(s) that you would use to describe that person?

7. Please share one question you have that you would like to find out the answer to before you go to bed tonight.

APPENDIX B

Dear EcoBags,

In my sixth grade enrichment class, we did a project on B Corporations and created an idea for a company. I did my project on EcoBags. This is my idea: people who are less fortunate deserve to be noticed and helped. You could accomplish this by creating a deal when customers buy EcoBags products, a percentage could be donated to a less-fortunate country like Mongolia.

Mongolians need to be helped. They have an extremely low life expectancy, and most doctors are undertrained. There's a shortage of most medicines, and healthcare facilities have inadequate equipment. As you can see, many Mongolian citizens clearly need help.

EcoBags should use this idea because EcoBags would make a larger profit. Consumers would want to buy more products, because people want to help others in need. It makes them feel good about themselves because they changed the lives of other people. In result, EcoBags would make a larger profit.

This idea would also benefit Mongolian people who are in great need of clean water, healthcare, and other things necessary to live healthily. On top of all of this, people will be using EcoBags instead of non-reusable bags, so the earth will be benefitted. Please consider my suggestions.

Sincerely,

Miss N

H.C. Crittenden Middle School

10 MacDonald Avenue

Armonk, New York 10504

APPENDIX C

Q. and T.
HCC Middle School
10 McDonald Ave.
Armonk, NY, 10504

IceStone Corporation
Attention Michelle Gibson
Brooklyn Navy Yard
63 Flushing Avenue, Unit 283, Building 12
Brooklyn, New York 11205

Dear Michelle Gibson:

We, Q and T, are 6th graders from HCC Middle School. Recently, we learned about how IceStone makes recyclable materials into durable countertops. We appreciate your company's ideas and goals and we believe you have the capability to not only continue but enhance the impact of your sustainable efforts.

In order to improve IceStone's effect on the global community, I have a proposal for the future project. In high-poverty areas like Africa, IceStone could use recyclable materials such as glass, plastic, and rubber from recycling centers and landfills to build bricks and tiles. These building materials could be imported to Tanzania and sold at low prices to help build homes for poor families there who have less fortunate living conditions. This project could really help provide poor families in dangerous areas decent shelter while sustainably recycling garbage.

IceStone has already done a lot to make the world a better place environmentally, but IceStone could also improve the lives of many people around the world as well.

Sincerely,

Q. & T.