resource room

One Teacher's Experience Using Inquiry-Based Learning

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The Minimum Essentials of Inquiry

Inquiry-based learning can seem intimidating because it questions the assumptions many of us make about the role of the teacher and the student in the classroom. It can seem unmanageable because many of us think it leaves students unguided in their learning and therefore lost. As I experimented with inquiry for the first time, I discovered that it does not need to feel intimidating or unmanageable when I approached it with baby steps. Inquiry-based learning is not an all-or-nothing approach as long as:

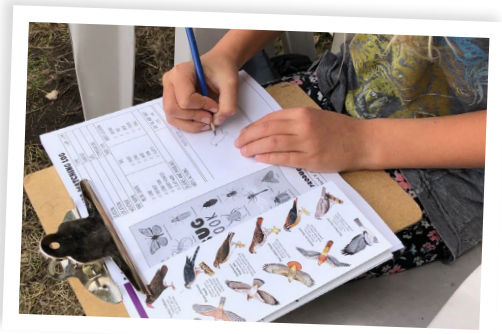
A. Students have a driving question that serves as a lens through which to examine and analyze information, and

B. Students have the freedom to make decisions about what to do with this information.

Arming students with a rich question to answer prior to engaging with content information helps them be active participants and provides them with the impetus to discuss and debate which information is most relevant and how to apply it to the question.

Inquiry works best when there is no clear-cut, 'google-able' answer to the question, which is very different from research projects where students only research and present information. Whether provided by the teacher or uncovered by students themselves, the information instead is used to hypothesize, argue, justify, explain, and conclude something about the guiding or focus question.

I observed with amazement the difference these small changes made as I began using inquiry on a small scale, which really only involved a bit of framing and providing time for my students to examine the content with a view to deciding what content will help them the best (and how). I also observed most students were motivated and took more ownership over their learning.



How Inquiry Changed My Classroom

As I used questions to guide my students and me in our thinking about what we were learning, I became confident enough to incorporate more inquiry-based learning into the classroom. As a result, my class has become much more student-centered as I have given-up a lot more control over the learning than I ever thought I would, including the total control over how students engaged with content knowledge. Indeed, much of my role has involved the creation of various contexts in which students make their own decisions about what content knowledge should be used (and how) to answer a complicated question, solve a problem, complete a task, or create a product. Rather than communicating a predetermined body of knowledge, the inquiry drives what content knowledge is needed and how it should be applied. The learning here tends to be harder to quantify, control, and standardize, but often has a positive and longer lasting impact on students as a whole. It also provides a way to focus assessment on feedback and various competencies as students work on a question that embodies a range of larger curricular goals.

In many ways, inquiry-based learning has provided my students with more varied experiences and decision-making ability in how they engaged and interacted with course content, with me and with each other. Students spend much of the time exploring a topic, generating authentic questions about things they were genuinely curious about, evaluating the usefulness of information and considering ways in which to use it. This approach affected the way I spend my time in my class, as I am now able to spend more time with small groups checking in on their progress, giving verbal feedback on their thinking, being responsive to their learning needs in the moment, and simply interacting with them more often. As well, my whole class instruction is more purposeful as I am able to use it to provide a context for the inquiry and respond to immediate learning needs of students rather than simply teaching what's next.

Starting Small

An inquiry can range greatly in scope and complexity, depending on the age of the students, how much time one intends to spend, and how much experience both the teacher and the learners have teaching and learning in this way. For example, having students investigate the degree of biodiversity in a backyard or local park, or consider whether the biodiversity of a forest can impact its recovery after a fire represents different levels of scope and sophistication for any grade depending on how the inquiry is set up and the focus question. And within each inquiry question is the potential to address it in varying levels of depth. I have worked on questions like these in multiple subject areas and grades and have found that inquiry can work even at the most basic level with inexperienced students using general steps such as the following:

1. Provide a project anchor to introduce the general topic and to generate students' interest.
2. Establish a driving question (determined by teacher or generated by student(s)).

3. Use the anchor and driving question to focus their efforts on defining terms and identifying specific information needed to address the question.
4. Students plan (with teacher help) who does what and how with respect to information gathering (information can be researched or provided by teacher – the key is that students use their inquiry question as a lens to contextualize the information and evaluate its usefulness).
5. Students decide (with teacher help) what information is helpful for which parts of their inquiry (not all of it may be, so they must put their critical thinking caps on!)
6. Students decide whether they have enough information to answer the question or whether they need more.
7. Once students have the information they need, they (with teacher support) use it to respond to the inquiry question as best they can, knowing it is an imperfect question that may have an imperfect answer that is open to debate.
8. Students prepare artifacts or some other way of sharing their conclusions and other learning with an audience (could be the teacher, the class, or wider).
9. Celebration of learning
10. For more resources on inquiry-based learning see hctfeducation.ca).

Each of these steps can be basic or complex, with students working at varying levels of independence, with the driving question (whatever it happens to be) guiding what happens at each step. Whether it is seeking to understand the concept of biodiversity, going outside to observe and record the different species of plants and animals in a park, learning how diverse and interconnected a forest is, or deciding what to do with gathered information, it is the need to address the question that guides student (and teacher) decision-making at each stage. It is this decision-making (and subsequent reaction to the results of those decisions) that make or break the inquiry process. This is the difference between active learning and passive learning.

What to Expect at the Start

Inquiry-based learning is challenging, and students who have very little experience with it are often not very good at it to start. But teaching students how to do inquiry is part of the point of doing inquiry, and I have found using a basic, short-term approach to start with is very helpful. To be sure, it is not always a smooth process. It can feel clunky at times, and students who are unaccustomed to this way of doing school may struggle initially. But it is more than worth it over the long term (and even in the short term) as students get the hang of it. And from my vantage point, I get to spend more time engaging in dialogue with my students, giving them feedback, provoking their thinking, and simply enjoy getting to know them. From both a learning and teaching standpoint, it is hard to imagine going back to what I was doing before. I hope you try it with your class.