

Epistemology and knowledge



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Epistemology, or the study of knowledge, requires the scholar analyze the what, how, and why's of their own knowledge. Asking these questions of themselves is essentially applying that which they have learned. There are different origins of knowledge as conceptualized by philosophers, educators, and scientists. Early philosophers defined knowledge as “justified true belief” (Cooper, pg. 23). In order for an individual to know something it must be true, he or she must believe it, and the belief in it must be justified or rationally reasonable. Later, early modern philosophers required knowledge to be proven and absolute.

The scientific method was employed to provide proof for ideas and beliefs. The means by which knowledge is acquired varies. Feldman cites sources of knowledge as perception, expert testimony, memory, reasoning, and introspection (Feldman, 2003). As an educator, instructing primary age students on a daily basis, I must not only have great insight into what I believe, but I also must have insight into my student's knowledge as well. Instructors need to know a number of things about their students, such as: Do the students have adequate prior knowledge to understand the new material being presented?

Are the students sufficiently motivated to engage in the cognitive tasks required of them? Does the information fit an existing scheme of knowledge or will it require some alteration of current understanding? Understanding what my student know and at what depth they are able to apply that knowledge guides my instruction. My natural curiosity, a natural inclination for question, and a need for answers motivate the search for explanations.

Knowledge and wisdom give an understanding of our position, role, and function in the world.

Achterbergh and Vriens (2002) stated, “ The role of knowledge in generating appropriate actions is that it serves as a background for articulating possible courses of action (articulation), for judging whether courses of action will yielded the intended result and for using this judgment in selecting among them (selection), for deciding how actions should be implemented and for actually implementing action (implementation)” (pg. 223). Knowledge enables interpretation of experiences, predictions of consequences, and provides the ability to make informed decisions.

My own personal epistemology is a product of each of these views. Personal experiences have a major influence on beliefs and should be an acceptable source of knowledge but not the only consideration when acquiring knowledge. There is also a place for the scientific method which offers proven data to base knowledge. For me, knowledge is a product of reasoning (Feldman, 2003). I derive knowledge from information imported through different modes and from various sources, such as personal experiences, advice from experts, and data.

These inputs of information are cognitively processed and filtered with the reference to past experience and prior knowledge to become new “ justified true beliefs” (Cooper,). Thus, knowledge acquisition is a process involving the collection of raw data or information, reasoning, and judgment making. For example, after my students have taken a test, I look at the data, think about the patterns in the data, or the lack of a pattern using prior knowledge

and experiences as a filter. Finally, I decide what my next step or strategy will be.

Do I need to reteach the subject because the pattern suggests that most of my students did not fully understand the skill or concept? Or do I move on to another more complex skill or concept because my students have proven themselves knowledgeable? It is in this way that I acquire knowledge and apply that knowledge to planning lessons for my students. Many of my colleagues rely solely on the scientific method to make decisions in regards to student learning. They are satisfied with looking at a spreadsheet full of data and believe that it tells the complete story in regards to students.

They are also under the assumption that scores derived from a series of multiple choice tests given on a set of skills will reveal if a student has acquired the desired knowledge. Basing grades on these tests is also appropriate. I do not believe that this tells the full story of my student's knowledge. These tests may demonstrate the ability to regurgitate this knowledge within a certain context, but out of this context this may not be true. I do, however, use this data to help inform many of my decisions, however, I do not make decisions based exclusively on this data. There must be a balance of reasoning, using my 16 years of experiences and training, as well as raw data tells a more complete story of my student's knowledge and abilities.

I have worked for Porterville Unified School District (PUSD), in Porterville, California, my entire career. PUSD's vision and mission statements read as follows: " PUSD students will have the skills and knowledge to be prepared for college and career and to make a positive impact in a dynamic global

society. The mission of PUSD is to provide students a dynamic, engaging and effective educational experience that prepares them with the skills to be productive citizens in a global society. As a result, it is perceived that all students will develop and demonstrate “ critical thinking and problem solving skills; cultural awareness and the ability of collaborate with diverse groups; effective communication skills of listening, speaking and writing; creativity and innovation; leadership, self-management and organizational skills obtained through real world applications and community involvement; (and) the ability to navigate the global world of work and further their education (Porterville, 2012).

Porterville Unified (PUSD) has given explicit expectations for what students should know at the end of their educational career with the district, how students get to these end goals is a little less clear and left to the judgment of the teachers. There are some expectations of teachers and lessons presented to students given by the district. Many professional development hours have been spent on instructing teachers about the specific things that administrators will look for as they do brief observations of classroom instruction.

The expectations include teaching explicitly to the essential standards; posting of the essential standard being taught; 80% student engagement during the lesson; display of exemplary work; higher order questioning and thinking skills. Administrators collect this data and share it with grade levels and school wide to help teachers focus on areas that are lacking. Administrator walk-throughs give a quick snap shot of the type of teaching

and learning taking place during a lesson and they help to build a holistic picture of the teaching methods and resources being used (Hetzner, 2011).

PUSD has placed an emphasis on the strategies needed for effective lessons and, in turn, effective student learning. As a 4th grade teacher for Porterville Unified School District, my task is to create daily lesson plans that serve to guide me as I teach my students. My first step in creating these lessons is to determine my student's level of prior knowledge. I can accomplish this by looking at formal and informal assessments and data.

Observation of this data gives me a better understanding of what my next steps with my student should be. In some cases, I need to go back and reteach skills, while in other cases I can teach my students a new skill. I have to make an informed decision as to what cognitive level I need to teach to next. Awareness of how my students are performing as well as where I need to be as far as pacing and staying on track to get through all the skills needed to be taught within the year are vital to my daily task as a 4th grade teacher.

As I compare my personal epistemology with that of my district, I realize that I spend more time assessing data after the lesson has been taught while the district places more emphasis on data collected during a lesson. Both of these approaches are valuable and, in fact, the district does place value on the end result (i. e. State test scores), however, there is little action that can take place after the end of the year data is collected.

PUSD has placed an emphasis on good instruction because they see it as the road to a good education, as well as, the skills and goals they have set in the mission and vision statements. Our epistemologies align in that we both

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rely on the research of experts. I trust, as does PUSD, that the data given by experts is valuable to our own knowledge and it should guide how I teach my students. The district also views its teachers as experts in the field and has given many freedoms in the presentation and uses of resources when teaching students.

As I reflect on my school districts focus as compared to me I realize that even though our epistemologies are not exactly aligned we are aligned in our focus of the students. Students come first. That means I will use whichever strategies I need to in order to create effective student learning. Reviewing test scores and planning lessons are vital to student learning, however, I have been so centered on what I am teaching that my students have not been engaged as well as they could be and thus have not learned the subject matters to their full potential.

Also, although pacing is important, it should not be of top priority. Top priority should be assessing my students during the lesson and changing strategies, or even the skills being taught, if my students are not engaged. There is no point in plowing through a lesson if the majority of my students are not listening to what is being taught. This new insight will definitely help to drive my instruction and will help make me a more effective teacher.