Discussion Points Week 9

Assessments 2

Pedagogy of Science – EDCI 4650 Dr. Kadir Demir

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This week's articles for reflection are also based on assessments in the classroom. Abell & Volkmann (2006) explain that "assessments can provide incoming diagnostic information about student's science knowledge". Using the 5E Model of Science Instruction, one way to engage students is too build a common base of experience about the phenomenon being studied (Abell & Volkmann, 2006, p. 13). This squared with my thinking. In my professional learning community, we utilized a phenomenon to introduce each standard from the Georgia Standards of Excellence. This allows motivation of students in the classroom; it allows students to mentally engage and focuses students thinking on upcoming activities that will be presented.

The phenomenon is also used to connect prior knowledge and to introduce major ideas. The idea of phenomenon was introduced by the administration. Students become very engaged in the conversation about the content when a phenomenon is introduced. It is always good when students remember learning about a scientific concept in their earlier grades. This drives our scientific discussion in the classroom.

Abell & Volkmann (2006) list many formative assessments in the article. As a new teacher, these assessments circle in my mind. I strive to learn how to use utilized these assessments affectively in the classroom. Because I am teaching in a virtual environment, I am not sure how to affectively implement most of these assessment strategies. It has been a challenge to initiate assessments that are different

from information that can be written by the student and submitted over the learning platform. Many of my students are very challenged with technology and they are not able to move through various forms of technology at a rapid pace. In addition, many students lack motivation, therefore assessment of students is very challenging because there is no work to assess. Utilizing strategies to continue to engage students in order to complete some of the assessments is going to be key to my learning. I will utilize Abell & Volkmann (2006) ideal "that life sciences should address important big ideas about living in the world" to motivate students.

My concern is that there are only 20 to 30% of students who can for example, write one-page memos, complete self-evaluations, create a presentation on the PowerPoint or constructor response. However, these assessment strategies for the evaluate phase of the 5E model can only work if students are responding. In the classroom, it is easier to have all students participate. The question I have is what will the District do at the end of the semester or at the end of the year with students who clearly are not surviving the pandemic style of virtual learning.

My thoughts also circle around the challenges I personally have with evaluating these students who clearly are not doing well. When we were instructed to give the students zeros in place of missing assignments it did elicit a response of additional assignments submitted. Consequently, there must have been an outpouring of concern from parents because the following week the decision to give zeros was changed with an instruction to only give incompletes. Again, the challenge circles my mind in the virtual environment as to what will be the outcome for students and for students learning.

Coopers (2018) speak of how research also shows a correlation between teacher's self-reflection and teacher effectiveness (Giovannelli, 2003). When it comes to assessments re-formative assessments this pointing me in a new direction [triangle] to begin to attempt to integrate prior knowledge with open

ended prompts. Re-formative assessments seem to be pointing me in the direction of a pre-assessment tests that are giving at the beginning of each unit for our students. As Coppens (2018) indicates this will allow me to see student retention of knowledge student retention of concepts and to evaluate long term understanding. Utilizing probes as well as making comparisons in giving opening and prompts are something that I would utilize in my science classroom. I will be able to gain insight into each student thinking and shift instruction to allow them to gain greater understanding of the content.

"No Child Left Behind" brings so many questions to my mind. The thoughts circle considerably. It is like every child getting a trophy for playing the sport as opposed to having a real world of winners and losers. With testing and assessments given at specific intervals, are students' needs being identified affectively? This is a critical question that is raised by the article written by Trumbull & Lash (2013). I want to understand how the process is working in our school system whereby the testing is being correlated to instruction Ann curriculum enhancement. The challenges that circled in my mind relate to differentiating instruction in the classroom when the assessments are so varied.

In conclusion, in the classroom there is not time to address the gaps when the pacing is very stringent. Some students have deep understanding and others need greater assistance. Formative assessments are a good idea in my opinion. I will utilize this new information to assist students in greater depth knowledge, identify new learning tasks and to judge the student's ability to grasp the content.

Abell, Sandra & Volkmann, Mark. "Seamless Assessment in Science". 2006. https://gastate.view.usg.edu/d2l/le/content/2122795/viewContent/38407504/View?ou=2122795

Coppens, Katie. “Re-Formative Assessment”. 2018. https://gastate.view.usg.edu/d2l/le/content/2122795/viewContent/38407506/View

Trumbull, Elise & Andrea Lash. “Understanding Formative Assessment”. April 2013. WestEd. https://gastate.view.usg.edu/d2l/le/content/2122795/viewContent/38407512/View

Responses to classmates in discussion

Ryan, I believe that differentiation is very important in the science classroom. If we analyze our lessons for evidence in use our assessments to adjust in our lessons, it will benefit students learning. Perhaps we can review or deliver the content in a different framework which will allow for greater student retention and success in the classroom.

Steve, I like the thought that you presented and the question that you raised as to why assessments have not changed when there was such a wide range of information between the time periods of 2006 and 2018. The assessments in middle school tend to only be multiple choice in my science classes. These are the common formative assessments in the common unit assessments. I agree that it is refreshing to be assessed in various ways during our college courses.