Assessments, Assignments, and Awareness

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My exploration of threshold concepts has taken a few different forms this semester and led to both personal and more global understandings about the process of learning and the role that thresholds play in this process. In their nature, threshold concepts are defined as troublesome, transformative, discursive, irreversible, and integrative (Land, Cousin, Meyer, & Davies, 2005, p. 53). While the idea of threshold concepts is both hard to explain and difficult to wrap one's mind around, it was furthermore challenging to attempt to uncover how these thresholds can be seen in relation to individuals as well as in classroom settings.

A Personal Exploration

My personal exploration of threshold concepts involved both looking within myself and seeing and hearing about the learning experiences of others. The TLI program allowed me to engage in each of these processes. The weekly meetings provided structure and opportunities for reflection, which helped to guide my own thoughts and revelations, which I was then able to challenge and change as I observed the experiences of other students in my faculty partner's classroom.

One aspect of threshold concepts that has been brought up a few times in TLI discussions is the role of time in crossing a threshold. I, like other students, first thought that crossing a threshold as an "aha" moment, meaning that you cross over from one side of the threshold to the other in just one moment. As we took the discussion a bit further, it became clear that crossing a threshold must entail a longer process that may culminate in a moment of realization, the "aha" moment. While these moments may be apparent to each individual as they occur, it was then our challenge to figure out how to see these moments in other individuals.

Since I realized it would be a challenge to see students crossing a threshold in the classroom setting, I started by trying to reflect on times that I felt I had crossed a threshold. These were times that I felt I had come to a deeper, more meaningful, and more complete understanding of the material. I found that in the past, these were times where I was given the opportunity to sculpt and present my knowledge in a somewhat formal way. In other words, these moments occurred when I took exams or wrote papers that allowed me to demonstrate what I had learned. I usually came out of these experiences with a fuller understanding of the material, feeling that I had somehow learned while being assessed. But, as I thought more about what may have been happening during these times, I realized that I became more aware of my learning as I completed these large assignments and assessments, and this awareness may have been what guided me across the threshold of whatever concept I had been studying.

I believe that the awareness of one's own knowledge is sparked by assignments and assessments, and may be one of the catalysts involved in crossing a threshold. As researchers have previously found, testing may potentially benefit student learning. Roediger and Karpicke (2006) found that testing allows students to build new pathways of association with the material and that it may be a more efficient than traditional studying for longer-term retention. Similarly, I believe that testing may also facilitate crossing thresholds by increasing the students' own awareness of their

knowledge. When we are studying, we are never really sure what we know and what we don't know. However, after coming out of a test it is much easier to articulate what concepts you do and do not know because you have just been asked to recall these concepts. I think that something transformative may occur while students take tests or complete assignments that leads them to become more aware of their own knowledge. This is particularly true for more cumulative tests that ask students to make larger connections about what they have learned.

Thresholds in the Classroom

When I first approached the idea of threshold concepts in the classroom, I realized this could be tricky because crossing a threshold was not necessarily an external process, especially at this stage of education. In college, learning is more internal and independent, whereas when we are younger, learning is more guided and explicit. Children are more likely to narrate their thoughts as they approach a challenge, and the learning processes is more likely to be one-on-one with a teacher. This makes it easier to keep track of the student's progress and level of understanding of a certain concept. In college, this process is much more internal, and crossing thresholds seems more likely to occur as students work or think on their own or with a peer. This makes the process less visible externally, especially for the professor, who may not have very much one-on-one interaction with the student.

The class that I was a student consultant for was a larger, lecture based class. In an effort to make the students' learning more explicit, we had the students fill out two feedback surveys over the course of the semester; one asked for feedback about one of their problem sets, and the other asked for feedback about their midterm. Each survey was given to the students after they had completed the assignments, so they were able to give feedback about their experience taking the midterm and completing the problem set. The students filled out the survey for the problem set after they had seen the answer key and were able to compare their answers. We found that they provided more specific feedback about the areas they found troublesome on the problem-set questionnaire, which was likely due to the fact that they were able to see what they had answered correctly and incorrectly.

My faculty partner and I were able to find concepts that were consistently troublesome for many of the students between these two assignments. These concepts seemed to be very plausible threshold concepts within this particular field of study, and we thought more about how to approach these concepts in the classroom and through assignments. While we were able to use the feedback on the class assignments and assessments as a tool to help us to uncover potential thresholds in the classroom, these feedback tools did not allow us to look into *how* students crossed these threshold concepts in the class. It does not seem likely that all students cross thresholds in the same way, so deeper investigation in this area will most likely be complicated to say the least. However, I do think that awareness of one's own knowledge plays a key role in crossing a threshold and may be a more universal aspect of crossing a threshold. It also seems true that good, thought-provoking assignments provide a way for students to become aware of what they know in a more integrative and transformative way, which may facilitate a more irreversible level of understanding that allows them to cross the threshold.

References

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