Building Student Capacity for Reflective Thinking

When we ask students to reflect on content or experiences, what are we really asking

them to do? Like other functional academic verbs like *analyze* or *discuss*, the word *reflect* carries

deeper, more complex expectations which faculty members may falsely assume students

understand. This article offers a variety of constructions for reflective prompts that can be used

across disciplines to help students more meaningfully unpack their thinking and experiences as

well as a discussion on the role of faculty feedback in helping students develop as reflective

thinkers.

Constructing Fruitful Prompts

In a recent offering of a developmental reading support course, students learned reading

strategies and skills to help them be successful in college. The reading course was paired with an

environmental science (ES) general education course such that the skills learned were applied

directly to ES.[1] In addition to acquiring reading skills, students developed skills as lifelong

learners using the Effective Lifelong Learning Inventory (ELLI), a 74-item self-report that

measures student strengths in seven areas of "learning power": critical curiosity, changing and

learning, learning relationships, meaning-making, creativity, resilience, and strategic awareness.[2]

Starting with knowledge about themselves as learners gained from their ELLI scores, students

entered into a process of reflection, action-planning, and coaching (from peers and from faculty)

to strengthen the learner attributes that could help them be more successful in school and later in

the world of work.

Reflection was a key component in the change/improvement process, so I began by

asking students to reflect on significant learning events in and out of school – an abbreviated

version of a learning autobiography. As I read their journal entries, I was intrigued by the different levels of reflection that I saw. Some students wrote detailed accounts of meaningful (positive and negative) learning experiences and the impact they had on them.

> Near the end of my high school career my best friend and I had gotten really close with our counselor and graphics teacher, who were also coaches for our varsity baseball team. My friend and I thought it was be fun to manage that team so the coaches gave us that opportunity. It was such an amazing experience that I wish I could relive. Being able to go to all the games, cheer my team on, and bake goodies for them was awesome! My favorite experience was watching the boys go onto playoffs. They had worked so hard to get there and it was an honor being able to watch them play that game. The look on their faces after they had won was priceless, we were all proud of them. I had experienced so much in school, both good and bad, and I wouldn't trade it for the world.[3]

Others wrote only brief, surface accounts of themselves. "Traveling is another thing you did with your parents which we always did travel to different state to learn about everything we could from each state. Learning is just so much more fun when you are with your family."[4]

The differences that I saw in student responses told me I needed to do a better job of designing the reflective prompts so that students would write more meaningful reflections. I realized that by simply telling them to reflect on their experiences that I was oversimplifying a complex process. This is similar to asking students to *analyze* a situation, assuming they understand what that term means in all of its complexity. In the end, we are often disappointed by the resulting student work. This realization was the catalyst to update my reading about

reflection, in hopes of finding tips to structure assignments in such a way that made it more

likely that students would enter into the reflective space that I wanted.

One of the first articles I read was by Thomas Ullmann, Fridolin Wild, and Peter Scott,

called, *Reflection – Quantifying a Rare Good* which started me thinking about the different types

of reflective elements I might want to see in my students' writing.[5] Elements such as:

- descriptions of an experience (including how something could or should have been done
  differently)

- conclusions about an experience based on a given premise

- an awareness of other points of view

- descriptions of outcomes, or students' intentions to do something or interpret something
  in a new way based on new learning.[6]

I could see this list of elements as being very useful in constructing prompts for reflection.

Instead of simply asking students to *reflect* on a meaningful experience during which they

persisted towards their goals (too vague for many students), I could ask them to *describe* an

experience in which they struggled and failed to persist towards a meaningful goal, followed by a

second prompt to *re-write the story* with details about how they should or could have acted

differently to get a more favorable outcome. An example of this is illustrated in the following

excerpt from a journal entry in which a student imagines using a new strategy to stay engaged

with material that is not interesting:

> I would like to increase my learning power in terms of creativity over the next week by
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> playing with my mind and brain, I try to do it a couple of times when I'm doing a boring
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> homework or a speech I, pretend that I'm going to read it in front of the court or

somewhere important. I imagine things in my head and then I pretend that I'm living it. I

think that way it will help me more in my creativity and to make things more fun and

interesting.[7]

Jack Mezirow, in his article *On Critical Reflection*, writes of the important role that imagination

plays in helping people transform their lives through reflection: "Imagination, the capacity to

seek out alternatives and to look at things as if they could be otherwise, is central to adult

learning and to critical reflection."[8] In this case, the student's reflection gave her the opportunity

to articulate a strategy using imagination and creativity to persist in a task that before might have

just been dropped due to lack of interest. The prompt and subsequent reflection set the stage for

this new idea to come to life.

Mezirow and others like Stephen Brookfield[9] and Richard Paul and Linda Elder[10], who

write about critical thinking and reflection, describe the importance of unearthing the underlying

assumptions that impact our beliefs and actions. Helping students, through reflective practice, to

recognize these underlying assumptions marks a key developmental step for students'

intellectual growth and can be the beginning of understanding and positive change. One strategy

is to first have students identify assumptions that underlie the behavior of others, and then have

them compare these to their own. Through interviews or observation, students can start to see the

powerful influence of assumptions on things that happen in people's lives. The process can help

them to uncover their own assumptions and make connections between the assumptions and the

impact they may have on their beliefs and behaviors. In the following journal entry on resilience

and change by a non-native English speaker (who struggled all semester to gain a sense of

belonging and confidence about being in college), the student describes a pivotal moment at the realization that all students struggle in college.

> …at the beginning I though[t] I was the only one who was behind and didn't know a lot because [of] my language issue but I see now that everyone here is like me - they don't know everything as I though[t] and it help me to feel a little better of myself because I don't feel…less intelligent, so in this whole semester I learned different thing in area that I improve myself and no[t] give up… so on that way I feel proud [of] myself.[11]

This student continued on successfully through the next semester. I felt certain that it was a key moment to uncover and debunk the hidden assumption the student felt: that he/she was not as smart as others or did not belong in college. Reflection and an intentionally designed prompt created the opportunity and space for this student to identify the underlying assumptions that were impacting both confidence and perhaps retention in college.

Another reflection strategy that Brookfield describes is the Critical Incident Questionnaire (CIQ) in which people reflect on the significant aspects of important events.[12] Brookfield is writing for teachers as reflective practitioners, but the strategy could be used to help students reflect on their experiences across many different disciplinary activities such as internship experiences, group dynamics, or project-based coursework. Again, the key element for success is a meaningful prompt that directs student work. Instead of asking students to simply reflect on a disruptive aspect of a recent group project, ask them to describe the recent incident in detail and then design a set of rules for group work that would help the next class to work through the problem more effectively. A further step could be to write a brief paragraph with the

rationale to "sell" the plan to the class for adoption. Brookfield describes this deeper level of reflection as "putting flesh on the bones" of lived experience.[13]

Faculty Role in Developing Reflective Thinkers

Helping students to write better reflections takes not only well-written prompts, but also an understanding by the faculty member of where students are in their developmental process as reflective thinkers as well as strategies to teach them to think reflectively. Meeting students where they are developmentally and bringing them forward with intentionally crafted activities can result in great gains for students. Patricia King and Karen Kitchener, in *Developing Reflective Judgment,* describe seven reflective judgment stages in three broad levels: pre-reflective, quasi-reflective, and reflective.[14] According to the model, people progress through the stages of reflective judgment (often when solving ill-structured and complex problems) when they are confronted by their own assumptions that underlie their beliefs about knowledge and what they need to know to solve the problem at hand. [14] Their research found that most students enter college between stages three and four, meaning that these students often believe that absolute truth is only "temporarily inaccessible…knowing is limited to one's personal impressions about a topic,…and that most (if not all) problems are well structured (defined with a high degree of certainty and completeness."[15] The authors provide many suggestions for helping college students to move up through the developmental stages. One that I think works well in many situations is to provide students with complex and real-world problems to solve.[16] By creating student experiences that challenge their underlying assumptions about knowledge (i.e. that one "right" answer exists or that their current beliefs about a topic are sufficient to solve a problem), students can grow (with coaching, feedback, and instruction) in their ability to think

reflectively and critically.[17] In the reading course, students were challenged repeatedly to "solve" the messy problem of how to become a successful college student. The reflective prompts and feedback were designed to challenge student assumptions about learning and expectations about the college experience and to help them grow as reflective and critical thinkers. One student, in a final reflection about growth during the semester (based partially on ELLI post-semester scores), describes a shift in her own practice to include outside ideas, thus representing movement across a developmental stage:

> I'm pleased to see that I have grown in Strategic Awareness and Meaning-Making. I say that because when I'm learning something that doesn't apply to my life I usually won't even bother taking the time to learn it. But lately if things don't apply to my life I will still take the time to learn it because who knows it may benefit me in some way or another so I'm surprised by that…because usually I would just come up with something and write that down right away, but lately when I'm thinking on things in my head I write everything down so I have a whole thing of ideas that I have written and I could go [on] about.[18]

Finally, change can happen as a result of student insight alone, but timely and targeted feedback by faculty members accompanied by direct instruction of reflective practice can help students to move more quickly across developmental boundaries. Janet E. Dyment and Timothy S. O'Connell write about the limiting and enabling factors of quality reflections.[19] They emphasize the need for both student practice and faculty guidance which can motivate students to write more deeply, uncover hidden assumptions, encourage growth in self-knowledge, and

ultimately help students to grow as critical and reflective thinkers.[20] The important role of the faculty member in the on-going conversation with students cannot be overstated.

Conclusion

In summary, when faculty members encourage meaningful and deep reflections through the use of well-crafted, intentional prompts that direct students to consider real-world, complex problems, and when this is followed up with thoughtful and challenging feedback that takes into account developmental stages, faculty can build student capacity for reflective thinking. "When included as a part of learning, reflection requires purposeful thinking, integration of information, and the development of concepts... [It] facilitates the formation of memories, thereby strengthening the integration of learning and experience [which can then be] generalized, transferred, and applied to other settings and situations." [21] This kind of growth opens the door for students to complete the meaningful kinds of work we want them to accomplish in college, both academically and personally. The ability to think reflectively and critically gives students the power to transform their lives and by extension to positively influence the places where they will work and live. Evidence of lasting change in the way that students think and reason can also go a long way in convincing students and other stakeholders of the importance, value, and impact of a college education.

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[3] Student A, electronic journal entry, September 9, 2013.

[4] Student B, electronic journal entry, September 6, 2013.

[5] Thomas D. Ullmann, Fridolin Wild, and Peter Scott, "Reflection: Quantifying a Rare Good," Proceedings of the 3rd Workshop on Awareness and Reflection in Technology-Enhanced Learning in Conjunction with the 8th European Conference on Technology Enhanced Learning: Scaling Up Learning for Sustained Impact (2003): 29-40, Retrieved from http://ceur-ws.org/Vol-1103/.

[6] Ibid., 34.

[7] Student C, electronic journal entry, October 4, 2013.

[8] Jack Mezirow, "On Critical Reflection," *Adult Education Quarterly* 48, no.3 (1998): 185-198, doi:10.1177/074171369804800305.

[9] Stephen D. Brookfield, "Learning to Know Ourselves: The Value of Autobiography," in *Becoming a Critically Reflective Teacher*, (San Francisco: Jossey-Bass, 1995).

[10] Richard Paul and Linda Elder, "Self-Understanding," in *Critical Thinking: Tools for Taking Charge of your Learning and your Life*, (Columbus: Pearson, 2006).

[11] Student D, electronic journal entry, December 5, 2013.

[12] Brookfield, "Holding Critical Conversations about Teaching," in *Becoming a Critically Reflective Teacher*, (San Francisco: Jossey-Bass, 1995). 95.

[13] Ibid., 147.

[14] Patricia M. King and Karen Strohm Kitchener, "Reflective Judgment: A Neglected Facet of Critical Thinking," in *Developing Reflective Judgment*, (San Francisco: Jossey-Bass, 1994). 14-15.

[15] Ibid., 13.

[16] Patricia M. King and Karen Strohm Kitchener, "Fostering Reflective Judgment in the College Years," in *Developing Reflective Judgment*, (San Francisco: Jossey-Bass, 1994). 236.

[17] Ibid., 228.

[18] Student E, electronic journal entry, December 5, 2013.

[19] Janet E. Dyment and Timothy S. O'Connell, "The Quality of Reflection in Student Journals: A Review of Limiting and Enabling Factors," *Innovation in Higher Education* 35, (2010): 233-244, doi: 10.1007/s10755-010-9143-y.

[20] Ibid., 238.

[21] Cora M. Dzubak, "A Purposeful Pause: The Role of Active Reflection in Learning," *Synergy: A Journal of the Association for the Tutoring Profession* 6, (2013), http://www.myatp.org/resources/journal/synergy-volume-6/ .

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