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Designing Educational Programs That Promote Cognitive Development and Success in the First College Year

Dottie Weigel
Messiah College, dweigel@messiah.edu

Tracy Skipper

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National Resource Center for
The First-Year Experience®
& Students in Transition
UNIVERSITY OF SOUTH CAROLINA

The Goals of Higher Education

- Development of the capacity for leadership and *decision-making* in order to make the fullest possible contribution to society
- To develop *critical thinking*, *extend the frontiers of knowledge*, and serve society
- The ability to *discover, create, evaluate, apply, and share knowledge*
- Cultivating *critical thought and creating knowledge*

Session Overview

- Theory Overview
  - Perry, King & Kitchener
- Assessment
- Case Studies
- General Discussion

Ethical and Intellectual Development
(Perry, 1981)

- Direct focus on early adulthood (college students)
- Importance in further research
- Nine "Positions"

Position 1: Dualism

- The world is divided into absolutes.
  - (good/bad, right/wrong)
- Authorities possess the Absolute Truth.
- A student's job is to listen to authority to receive the right answers.
- The world of Authority is free from conflict.

Position 2: Early Multiplicity

- Students become more open to the pluralism of answers, opinions, ideas, and points of view.
- Students begin to tolerate uncertainty, but uncertainty is still agitating.
- In areas of uncertainty, everyone has the right to a personal opinion.
- Authorities admit they do not have all the answers.
  - Students may divide subjects into definite (math & science) and vague (social sciences & humanities)

Position 3: Late Multiplicity

- Knowledge is viewed as contingent and contextual.
  - Better or worse rather than right or wrong.
- Students begin to argue with Authority.
- Eventually causes students to justify their *own* opinions.
- "The bridge to the new world is the distinction between opinion and supported opinion." (Perry, 1981, p. 100).

Position 4: Relativism

- "Authority" becomes "authority."
  - Authority loses its status as not being open to challenge.
- The capacity to think about one's own thinking.
  - Understanding, evaluating, and analyzing knowledge and values.
- Awareness of a path toward new identity through personal commitment.

Reflective Judgment Model
(King & Kitchener, 1994)

- Pre-Reflective Thinking (Dualism)
  - Real problems for which there are no answers do not exist. Evidence is not used to reach conclusions.
- Quasi-Reflective Thinking (Multiplicity)
  - Some problems are ill-structured. Knowledge claims about these problems contain certain elements of uncertainty.
- Reflective Thinking (Relativism/Post-Relativistic Thinking)
  - Knowledge claims are contextual and must be actively constructed.

Pre-Reflective Thinking

- Stage 1
  - Knowledge is concrete, absolute, and predetermined.
- Stage 2
  - Knowledge is certain, though it may not be available.
- Stage 3
  - Some knowledge is temporarily uncertain; all personal beliefs and opinions share equal validity.

Quasi-Reflective Thinking

- Stage 4
  - Knowledge is increasingly abstract, uncertain, and ambiguous. Evidence confirms previously held beliefs.
- Stage 5
  - Knowledge is contextual and uncertain. Multiple legitimate interpretations of a problem exist.

Reflective Thinking

- Stage 6
  - Knowledge is uncertain and context-bound. Authorities are valued experts.
- Stage 7
  - Knowledge is constructed by analyzing and synthesizing evidence and opinions into coherent explanations.

Relating Theory to Practice
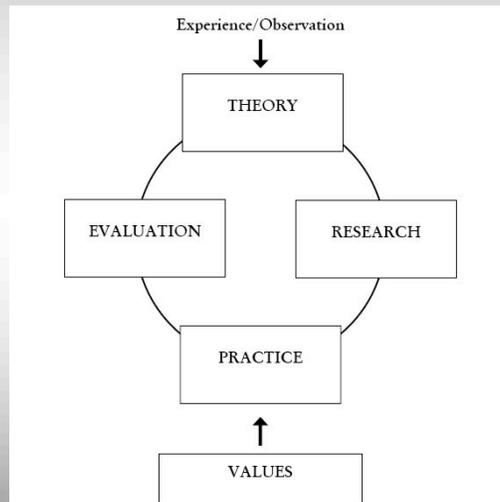
Challenges in Assessing Developmental Outcomes

- Long-term nature of development
- Developmental outcomes hard to measure directly
- Practice needs to be designed with assessment in mind
- Lack of expertise

Case Studies

Framing Questions

1. Why do students respond in this way?
2. What is it about this experience that might be challenging for students?
3. What are some appropriate outcomes for learning and development?
4. How will you structure/restructure initiatives to achieve these outcomes?
5. How will you assess what you have done?

Contact Us

Tracy Skipper

tlskipper@sc.edu

Dottie Weigel

weigel@gwm.sc.edu

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Perry's Scheme of Cognitive Development (1970, 1981)	King & Kitchener's Reflective Judgment Model (1994)	Notes
Position 1: Basic Dualism The world is divided into absolutes (good/bad, right/wrong). All questions have one right answer; Authorities know the answers and are responsible for having them.	*Pre-Reflective Thinking* Real problems for which there are no answers do not exist. Evidence is not used to reach conclusions. *Stage 1.* Knowledge is concrete, absolute, and predetermined. *Stage 2.* Knowledge is certain, though it may not be available. *Stage 3.* Some knowledge is temporarily uncertain. In these areas, personal beliefs and opinions are equally valid.	
Position 2: Early Multiplicity Students become more open to the pluralism of answers, ideas, and points of view. Everyone has a right to their own opinion. Authorities do not have all the answers. *Position 3: Late Multiplicity* *Knowledge is viewed as contingent and contextual (better or worse, rather than right or wrong). Students begin to argue with authority. Students begin to justify their own opinions.*	*Quasi-Reflective Thinking* Some problems are ill-structured. Knowledge claims about these problems contain certain elements of uncertainty. *Stage 4.* Knowledge is increasingly abstract, uncertain, and ambiguous. Evidence is used to confirm previously held beliefs. *Stage 5.* Knowledge is contextual and uncertain. Multiple legitimate interpretations of a problem exist.	
Position 4: Relativism *"Authority" becomes "authority." The capacity to think about one's own thinking. Awareness of a path toward a new identity through*	*Reflective Thinking* Knowledge claims are contextual and must be actively constructed. *Stage 6.* Knowledge is uncertain and context-bound. Authorities are valued experts. *Stage 7.* Knowledge is constructed by analyzing and synthesizing evidence and opinions into coherent explanations.	

I Already Learned That

You are a program coordinator in an office of multicultural programs. One of your colleagues from judicial programs has asked you to meet with a student who was part of a racial incident on campus where three white students put white pillow cases over their heads, with holes cut out for the eyes, and ran down the hall chasing each other. Several students who saw them reported to the residence hall director that they had seen students pretending to be the KKK. Bryan, a first-year student, was part of what he and his friends call a "stupid joke." He has come to your office today to meet with you to talk about the incident. You tell Bryan that you would like for him to attend a three-hour diversity training session to which he responds:

Bryan: "I don't think I should have to attend the diversity training. It was a stupid joke and we weren't trying to pick on anyone in particular. We were just being dumb. I mean, I know exactly what they want to teach us at the diversity training anyway…that I am prejudiced and hurt black people. I mean I learned all of that in high school."

Questions for Discussion

1. Given what we know about cognitive development, why might Bryan respond in this way?
2. What aspect of understanding and accepting differences might be challenging for Bryan? For first-year students in general?
3. What learning or developmental outcomes are appropriate for most first-year students who have made poor behavioral choices?
4. How can the program coordinator help Bryan achieve these outcomes?
5. How will the program coordinator assess the success of this initiative?

Frustrations with Writing Assignments

The major writing assignment for the first-year seminar at Big State University asks students to propose a solution to a vexing problem on campus or in the student's home community. Students were asked to present two or three well-reasoned claims supported by primary or secondary research suggesting why their proposed solution is worthy of consideration. They were also asked to identify likely opposition to their proposal and discuss the merits of these opposing opinions. As the instructor prepared to give back the assignments, he listed a number of areas where the essays fell short of his expectations:

- Several students had cited articles from popular magazines like *People* or *Parents* rather than relying on more credible news sources or essays in scholarly journals to support their claims.
- Students had a difficult time identifying potential objections to their proposals, often ignoring the potential objections highlighted by some of their own sources.
- When students did identify possible objections to their proposals, they usually minimized their importance. As one student wrote, "Some people might think that there are better ways to solve this problem. I can't say they are wrong, because everyone is entitled to his or her own opinion."

Questions for Discussion

1. Given what we know about cognitive development, why might students respond to this type of writing assignment in this way?
2. What aspects argumentative or persuasive writing are challenging for first-year students?
3. What aspects argumentative or persuasive writing might first-year students perform reasonably well?
4. How can courses that emphasize writing help students achieve these outcomes?
5. How will instructors or program directors measure students' growth in these areas?

Stopping the Conversation Before it Starts

You are a residence hall director for a building with first-year students. On the third floor of your building there is a living-learning community with the theme "Ethics in American Society." You have invited a professor to show the film "Million Dollar Baby" and lead a discussion afterward. In the film, the main character is paralyzed from the neck down in a boxing fight. She tells her trainer that she doesn't want to live this way and asks him to help her end her struggle. The trainer agrees to give her the injection that causes her to die.

In the discussion that follows the film, the professor opens the discussion with the topic of euthanasia. Two first-year students speak up right away and say that it is absolutely wrong in any circumstance to take the life of another. The rest of the students sit quietly. They are thinking about the situation, and you can see that some of them seem uncomfortable and unsure about what to say.

Questions for Discussion

1. Given what we know about cognitive development, why might some of the students who spoke first respond to the film in this way? Why might some of the students seem uncomfortable and unsure of what to say?
2. What aspects of the discussion could prove challenging for first-year students?
3. What might appropriate learning and developmental outcomes be for these kinds of discussions?
4. How can the professor and residence hall director help the students achieve their learning outcomes?
5. How can the professor and residence hall director measure students' growth in these areas?

Just Give Me a List

Susan goes to see her advisor near the end of the spring semester of her first year in college. She had entered as an undecided student and still doesn't have any clue about what to major in. She has liked most of her general education classes and has done pretty well in most of them. Well, she didn't really do well in biology, but she really liked the professor a lot. Susan hasn't given a lot of thought to possible majors—there are so many options, and she doesn't see where one has the advantage over any of the others. She hopes that her advisor will be able to suggest some possible majors based on the courses she took this year and the courses she's thinking about for the fall. That's the advisor's job is, after all, to tell students what their options are.

Questions for Discussion

1. Given what we know about cognitive development, why might   Susan respond in this way?
2. What aspect of choosing a major is challenging for Susan? For other first-year students?
3. What learning or developmental outcomes are appropriate for most first-year students making decisions about a major?
4. How can the advisor help Susan achieve these outcomes? How will the advisor assess the success of this initiative?

Selected Bibliography on Cognitive Development
Prepared by Tracy L. Skipper and Dottie Weigel
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Baxter Magolda, M. B. (1992). *Knowing and reasoning in college: Gender-related patterns in students' intellectual development.* San Francisco: Jossey-Bass.

Baxter Magolda, M. B. (Ed.). (2000). *Teaching to promote intellectual and personal maturity: Incorporating students' worldviews and identities into the learning process.* (New Directions for Teaching and Learning, No. 82). San Francisco: Jossey-Bass.

Baxter Magolda, M. B., & King, P. (Eds.). (2004). *Learning partnerships: Theories and models of practice to educate for self-authorship.* Sterling, VA: Stylus.

Cruce, T. M., Wolniak, G. C., Seifert, T. A., & Pascarella, E. T. (2006). Impacts of good practices on cognitive development, learning orientations, and graduate degree plans during the first year of college. *Journal of College Student Development, 47*(4), 365-383.

Evans, N. J., Forney, D. S., Guido-DiBrito, F. (1998). *Student development in college: Theory, research, and practice*. San Francisco: Jossey-Bass.

Hofer, B. K., & Pintrich, P. R. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of Educational Research, 67*(1), 88-140.

King, P. M., & Baxter Magolda, M. B. (2005). A developmental model of intercultural maturity. *Journal of College Student Development, 46*(6), 571-592.

King, P. M., & Kitchener, K. S. (1994). *Developing reflective judgment: Understanding intellectual growth and critical thinking in adolescents and adults.* San Francisco: Jossey-Bass.

King, P. M., & Kitchener, K. S. (2002). The Reflective Judgment Model: Twenty years of research on epistemic cognition. In B. K. Hofer & P. R. Pintrich (Eds.), *Personal epistemology: The psychology of beliefs about knowledge and knowing* (pp. 37-61). Mahwah, NJ: Lawrence Erlbaum.

King, P. M., & Kitchener, K. S. (2004). Reflective judgment: Theory and research on the development of epistemic assumptions through adulthood. *Educational Psychologist, 39*(1), 5-18.

Love, P., & Guthrie, V. L. (2000). *Understanding and applying cognitive development theory.* (New Directions for Student Services, No. 88). San Francisco: Jossey-Bass.

Nisbett, R., Peng, K., Choi, I., & Norenzayan, A. (2001). Culture and systems of thought: Holistic versus analytic cognition. *Psychological Review*, *108*(2), 291-310.

Pascarella, E. T., & Terenzini, P. T. (1991). *How college affects students: Findings from twenty years of research*. San Francisco: Jossey-Bass.

Pascarella, E. T., & Terenzini, P. T. (2005). *How college affects students, volume 2: A third decade of research*. San Francisco: Jossey-Bass.

Perry, W. G., Jr. (1970). *Forms of intellectual and ethical development in the college years: A scheme.* New York: Holt, Rinehart, and Winston.

Pizzolato, J. E. (2005). Creating crossroads for self-authorship: Investigating the provocative moment. *Journal of*

College Student Development, 46(6), 624-641.

Pizzolato, J. E., & Ozaki, C. C. (2007). Moving toward self-authorship: Investigating outcomes of learning partnerships. *Journal of College Student Development, 48*(2), 196-214.

Skipper, T. L. (2005). *Student development in the first college year: A primer for college educators.* Columbia, SC: University of South Carolina, National Resource Center for The First-Year Experience & Students in Transition.

Torres, V., & Baxter Magolda, M. (2004). Reconstructing Latino identity: The influence of cognitive development on the ethnic identity process of Latino students. *Journal of College Student Development, 45*(3), 333-347.

Torres, V., & Hernandez, E. (2007). The influence of ethnic identity on self-authorship: A longitudinal study of Latino/a college students. *Journal of College Student Development, 48*(5), 558-573.