

The Reflective Judgment Model: Implications for Service-learning and Reflection

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The attached table provides guidance to educators on an important student characteristic—stage of reflective judgment—that is likely to have a major impact on how students respond in service-learning educational environments. The table identifies the likely responses of students operating at different stages of reflective judgment and offers suggestions for stage-appropriate reflection questions. For a detailed discussion of the theory underlying the table, see Lynch et al. (1998).

The attached table includes the following items:

- ?? A brief summary of the epistemological beliefs (i.e., beliefs about knowledge) that might hinder student performance for stages 3-6 (out of 7) of the reflective judgment model of adult cognitive development (King and Kitchener, 1994). The beliefs were obtained from Lynch et al. (1998, 30-33, adapted from Kitchener and King, 1985/1996 and King and Kitchener, 1994).
- ?? A brief description of how students who operate at each reflective judgment stage are likely to respond to service-learning activities and the reflection (e.g., journal writing or class discussions) that they might be asked to perform. The discussion focuses on problems that educators might encounter with their students.
- ?? Suggestions for stage-appropriate reflection questions that educators can pose to their students to challenge their beliefs (adapted from Wolcott, 2000).

Reflective Judgment Level	Reflective Judgment Beliefs That May Hinder Performance ¹	Implications for Service-learning and Reflection	Suggestions for Reflection Questions ²
3	<ul style="list-style-type: none"> ?Uncertainty either does not exist or is merely temporary ?Knowledgeable persons or experts know or will find correct answers to all problems ?Until experts can agree, opinions are equally correct or equally biased guesses ?It is sufficient to view problems holistically without attention to realistic complexities 	<p>Students operating at this level expect "experts" to provide them with all answers, and thus are not likely to exhibit initiative in developing their own solutions to problems. They are also unlikely to engage in meaningful self-reflection because they do not understand their own role in their learning. They are likely to exhibit confusion in service-learning activities and reflection.</p>	<ul style="list-style-type: none"> ?Why might experts disagree about the best solution to this problem? ?Why is there no single "correct" answer to this problem? ?What aspects of the problem involve significant uncertainty? ?What are the possible solutions to this problem? ?What are some of the different perspectives related to this problem?
4	<ul style="list-style-type: none"> ?It is sufficient to simply stack up evidence that supports one's opinion ?Conflicting points of view for which evidence can be provided are equally valid ?Uncertainty is due only to specific limitations such as lost or incorrect reporting of data, limited resources, or inability to correctly predict the future ?Criticizing an argument is the same as criticizing the person who makes the argument ?Experts are biased persons who are simply promoting their own agenda 	<p>Students operating at this level tend to be open to new situations, and they no longer expect experts to solve all problems for them. Unfortunately, they tend to be rather limited in their understanding of problems. While they assert that they are open to others' viewpoints, they often stack-up support for their own position without giving careful consideration to alternatives. Their self-reflection is likely to appear superficial, and they are likely to be overly confident in their own performance.</p>	<ul style="list-style-type: none"> ?What factors might be considered in addressing this problem? ?How might various pieces of information in this problem be interpreted in multiple ways? ?Can you take a perspective other than your own and explain this problem from that perspective? ?What is the difference between evaluating an argument and judging people? ?How might you organize the information in this problem to help you reach a conclusion?

¹ Beliefs that may hinder performance were obtained from Lynch et al. (1998, 30-33, adapted from Kitchener and King, 1985/1996 and King and Kitchener, 1994).

² Adapted from Wolcott (2000).

(continued)

Reflective Judgment Level	Reflective Judgment Beliefs That May Hinder Performance ¹	Implications for Service-learning and Reflection	Suggestions for Reflection Questions ²
5	<p>?Endorsing one alternative denies the legitimacy of other alternatives</p> <p>?Problem solutions may be justified only within a given context or from a given perspective, making it very difficult to endorse and justify a solution as the best alternative</p> <p>?There are no overarching criteria by which to choose among competing evidence-based interpretations or solutions</p>	<p>Students operating at this level are capable of understanding problems in a very complex way. They can understand multiple viewpoints and qualitatively interpret evidence. These students' greatest difficulty is in reaching and defending a single solution as most reasonable when faced with open-ended problems. Accordingly, they are likely to have difficulty using reflection as a means to draw conclusions or make plans. They are also likely to be overly self-critical.</p>	<p>?How did you choose across alternative solutions?</p> <p>?Given your setting and audience, how might you articulate and justify your solution?</p> <p>?What were your initial preferences, and how did you control for them in reaching a conclusion to this problem?</p> <p>?How would you respond to arguments that support other viable solutions?</p>
6	<p>?Points of view about specific situations may be judged as better than others only in a very tentative way based on one's evaluations of experts' positions or the pragmatics of the situation at hand</p> <p>?There are no generalized principles and procedures that can be used to further investigate one's tentative resolution to the problem</p>	<p>Students operating at this level can not only analyze problems complexly, but they can also reach and adequately defend reasonable solutions to open-ended problems. Their difficulty lies in recognizing the ongoing nature of open-ended problems; they might not recognize the need to establish plans to monitor and adjust performance as new information is obtained or as changes occur. This difficulty is likely to also arise in their self-reflection activities.</p>	<p>?What are the limitations of your solution, and what are the implications of those limitations?</p> <p>?After introducing new information: How might the new information cause you to reassess your solution?</p> <p>?What strategies could be implemented to monitor the results of your recommendations?</p>

¹ Beliefs that may hinder performance were obtained from Lynch et al. (1998, 30-33, adapted from Kitchener and King, 1985/1996 and King and Kitchener, 1994).

² Adapted from Wolcott (2000).

Bibliography (Partially Annotated)

For a variety of workshop handouts, manuscripts in progress, and coursework examples see Susan Wolcott's web site:

<http://www.du.edu/~swolcott>

For a web-based problem solving tutorial see Cindy Lynch's web site:

<http://www2.apex.net/users/leehaven>

American Institute of Certified Public Accountants (AICPA). (1999). AICPA Core Competency Framework for Entry into the Accounting Profession. New York: AICPA. Available online at <http://www.aicpa.org/edu/corecomp.htm>.

Baril, C. P., Wolcott, S. K., Bayes, P. E., Cunningham, B. M., Fordham, D. R., & St. Pierre, E. K. (2000, work in process). Recommendations for the Design of Empirical Studies Examining Curricular Efforts to Develop Student Critical Thinking. A working draft can be obtained by sending email to swolcott@du.edu.

Fischer, K. W., & Bidell, T. R. (1997). Dynamic development of psychological structures in action and thought. In R. M. Lerner (Ed.) and W. Damon (Series Ed.), *Handbook of child psychology. Vol. 1: Theoretical models of human development* (5th ed., pp. 467-561). New York: Wiley. Critiques stage theories of human development, describes Fischer's skill theory and high support assessment conditions, and articulates very useful guidelines for assessing the development of thinking skills across the lifespan.

Hofer, B. J. & P. R. Pintrich. (1997). The development of epistemological theories: Beliefs about knowledge and knowing and their relation to learning. *Review of Educational Research* (Spring), 88-140. Critiques epistemological models and cites reflective judgment as the "most extensive developmental scheme with epistemological elements," which "may be most useful for educators who see reflective judgment as a desirable educational outcome" (102-3).

King, P. M., & Kitchener, K. S. (1994). *Developing reflective judgment: Understanding and promoting intellectual growth and critical thinking in adolescents and adults*. San Francisco: Jossey-Bass. This is the latest and most complete description of the reflective judgment model. It includes a meta-analysis of Reflective Judgment Interview research; reports of research examining the relationships between reflective judgment and reasoning, intellectual development, and character development; and a discussion of educational implications.

Kitchener, K. S., & King, P. M. (1985/1996). *Reflective judgment scoring manual with examples*. (Available from Cindy Lynch, 286 Lake Shore Drive, New Concord, KY 42076).

Kitchener, K. S., Lynch, C. L., Fischer, K. W., & Wood, P. K. (1993). Developmental range of reflective judgment: The effects of contextual support and practice on developmental stage. *Developmental Psychology*, 29, 893-906. Reports data that support the notion of developmental spurts in performance when critical thinking is assessed in a high support condition.

- Lynch, C. L. (1996). Facilitating and assessing unstructured problem solving. *Journal of College Reading and Learning*, 27, 16-27. Initial description of a skill-focused developmental model for understanding and assessing critical thinking and professional problem solving.
- Lynch, C. L., Wolcott, S. K., & Huber, G. E. (1998). A developmental guide to assessing and optimizing professional problem solving. Manuscript in progress. Available on Susan Wolcott's home page (address above). Presents a template, evaluation rubric, and annotated examples of essays used to assess critical thinking and professional problem solving.
- Lynch, C. L., Wolcott, S. K., & Huber, G. E. (1998). A developmental guide to assessing and optimizing professional problem solving. Manuscript in progress. Available on Susan Wolcott's home page (address above). Presents a template, evaluation rubric, and annotated examples of essays used to assess critical thinking and professional problem solving.
- Lynch, C. L., Wolcott, S. K., & Huber, G. E. (2000). *Optimizing your open-ended problem solving performance*. A web-based tutorial available at Cindy Lynch's home page: <http://www2.apex.net/users/leehaven>.
- Pascarella, E. T. & P. T. Terenzini. (1991). *How college affects students*. San Francisco, CA: Jossey-Bass. Chapter on cognitive skills and intellectual growth provides summary of cognitive development models and higher education research. Cites reflective judgment as "perhaps the best known and most extensively studied" model of adult cognitive development (p. 123).
- Wolcott, S. K. (2000, forthcoming). Designing assignments and classroom discussions to foster critical thinking at different levels in the curriculum. *Educational Innovation in Economics and Business V*. Dordrecht, Boston, London: Kluwer Academic Publishers. Describes how to structure the use of assignments to improve critical thinking skills. Provides an illustrated case assignment to demonstrate recommendations for students at different levels in the curriculum. A working draft can be obtained by sending email to swolcott@du.edu.
- Wolcott, S. K. (1999). Developing and assessing critical thinking and life-long learning skills through student self-evaluations. *Assessment Update* 11(4), July/August, pp. 4-5, 16. Describes how to use a self-evaluation form to help students understand and develop their own critical thinking and life-long learning skills.
- Wolcott, S. K. (1998a). Critical thinking development in the accounting curriculum: Focusing on ambiguity in introductory accounting courses. In D. F. Fetyko (Ed.) *Changes in accounting education: Implementation in specific accounting courses and subject areas* (1-16). St. Louis: Federation of Schools of Accountancy. Recommends strategies for developing critical thinking skills in introductory accounting courses.
- Wolcott, S. K. (1998b, work in process). MBA Student Assumptions About Knowledge and Critical Thinking in the Classroom. This working paper reports data from two sections of an MBA course and provides recommendations for critical thinking development of MBA students. A working draft can be obtained by sending email to swolcott@du.edu.
- Wolcott, S. K., & Lynch, C. L. (1997). Critical thinking in the accounting classroom: A reflective judgment developmental process perspective. *Accounting Education: A Journal of Theory, Practice and Research*, 2(1), 59-78. Explains the usefulness of the reflective judgment model for coursework design, and describes how to design and evaluate reflective thinking essay assignments.

Wolcott, S. K. (1997, work in process). Student Assumptions About Knowledge and Critical Thinking in the Accounting Classroom. Explains how students' assumptions about knowledge affect their responses to classroom assignments and describes how professors can use information from the reflective judgment model to work toward improvements in student critical thinking. A working draft can be obtained by sending email to swolcott@du.edu.