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## Double-Loop Learning: An Approach to Critical Thinking

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# Double-Loop Learning: An Approach to Critical Thinking

### The practice and the need it addresses

#### Critical Thinking in College

There is a general consensus that critical thinking is an essential part of college. Instructors should therefore be aware of the following:

- How they define and conceptualize critical thinking
- How they are teaching critical thinking to their students
- Expectations for how students can exhibit critical thinking

#### Single-Loop

Research-based *how to* strategies would be an example of single-loop learning, one form of critical thinking.

For example, first-year experience students often learn research-based strategies for *how to* become financially literate.

#### Double-Loop

If students not only discussed *how to* manage their loans, but also if students *should* be in debt to go to college, they would then be engaging double-loop learning, another form of critical thinking. Double-loop *should* questions help students critically examine values and assumptions of relevant topics.

### Evidence this practice benefits UNLV Students

#### Procedural Evidence

Procedural evidence that double-loop learning benefits UNLV students is apparent from the intelligibility of this practice and its consistency with common-sense knowledge (Rychlak, 1974).

Asking students to question if they *should* be in debt to go to college or if they *should* volunteer in their local community while attending UNLV necessarily engages them in examining their own values and assumptions about these topics. This common-sense questioning:

1. Engages a form of critical thinking that critiques commonly held assumptions and values and
2. Benefits students by helping them engage more fully with course content.

#### Validating Evidence

Validating evidence that double-loop learning benefits students broadly in higher education is evidenced in our highlighted literature on double-loop learning.

Rychlak, J. F. (1974). The personality. In S. Arietti (Ed.), *American Handbook of Psychiatry: Volume 1*. Maryland: Basic Books.

### Resources and where to find them

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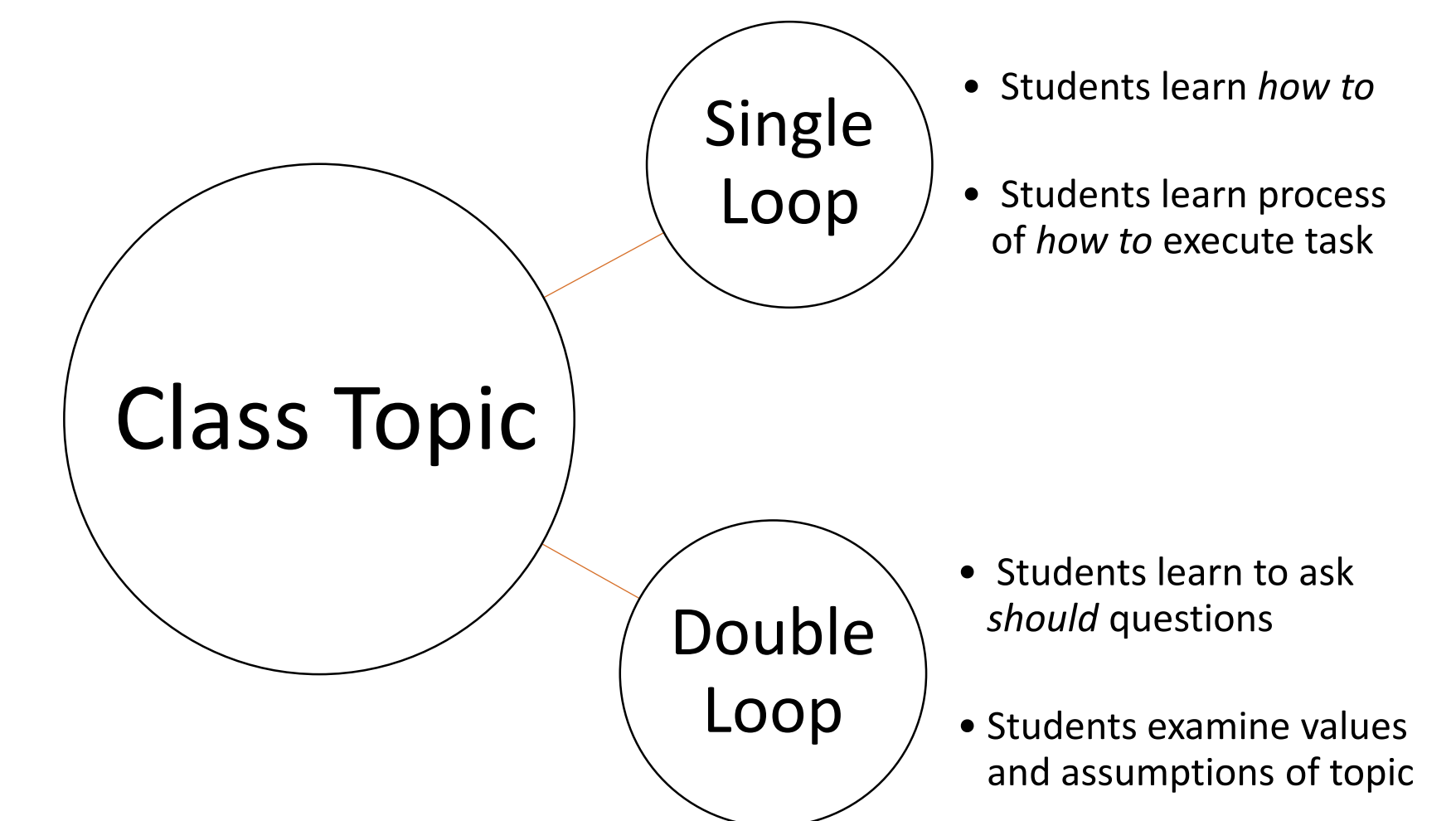
#### Literature

The following literature is informative for learning more about critical thinking and double-loop learning:

- Argyris, C. (1977, September-October). Double loop learning in organizations. *Harvard Business Review*, pp. 115-125.
- Discusses double-loop learning in the organizational context
- Cartwright, S. (2002). Double-loop learning: A concept and process for leadership educators. *Journal of Leadership Education*, 1, pp. 68-71.
- Analyzes the potential for double-loop learning in leadership education
- Ennis, R.H. (2018). Critical thinking across the curriculum: A vision. *TOPI*, 37, pp. 165-184.
- Hypothetically situates critical thinking within an entire college curriculum
- Paul, M.J. (2003). Double-loop diversity. Applying adult learning theory to the cultivation of diverse educational climates in higher education. *Innovative Higher Education*, 28, pp. 35-37.
- Applies double-loop learning to higher-education diversity initiatives.
- Resnick, L.B. (2010). Nested learning systems for the thinking curriculum. *Educational Researcher*, 39(3), pp. 183-197.
- Investigates how to implement a “thinking curriculum” (K-12 emphasis)
- Tagg, J. (2010). The learning paradigm campus: From single- to double-loop learning. *New Directions for Teaching and Learning*, 123, pp. 51-61.
- Applies double-loop learning to higher education at the institutional level

### How other UNLV teachers might adopt this practice

#### Application of Concept



Argyris (1977) gives an example of a thermostat, noting that when a thermostat learns to activate at a certain temperature, it is an example of single-loop learning. If the thermostat could also question if it *should* be set at a certain temperature, this would be double-loop learning.

Instructors can use the general concept to fit their respective subjects. For instructors teaching critical thinking itself, the concept itself can be explained, and then applied to a given subject of the curriculum.

When requiring students to exhibit critical thinking, assignments can be designed so that students must demonstrate they can identify *should* questions, as well as identify potential values and assumptions of a topic.

Argyris, C. (1977, September-October). Double loop learning in organizations. *Harvard Business Review*, pp. 115-125.