Assessing High-Impact Practices: The Role of Triple Loop Learning in Fostering Future Conservation Leaders

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INTRO
• High impact practices (HIPs), such as undergraduate research, service learning and internships help to augment traditional college classroom curricula (Campus Compact, 2016; Kuh, 2008).
• This study explored how HIPs in a conservation curriculum facilitated single, double, and triple loop learning.

LITERATURE REVIEW
• The triple loop learning model proposes that most actors in collaborative conservation planning are unaware of how their individual mental models effect collaborative decision-making (Biggs et al., 2011).
• Single Loop: Are we doing things the right way?
• Double Loop: Are we doing the right things?
• Triple Loop: How do we decide what is right? (Johannessen et al., 2018)

METHODS
• In 2015, the transdisciplinary Conservation Leadership (CL) minor was developed at Old Dominion University in collaboration with the U.S. Fish & Wildlife Service.
• The minor is comprised of HIPs (e.g. internships).
• Reflections were administered to students (n = 9) at the culmination of their internship experience.
• An a priori coding structure was used to analyze reflections. Cohen’s Kappa statistic (e.g., McHugh, 2012) was used to assess intercoder agreement.
• Descriptive coding was used to identify subcategories within each loop.

RESULTS
• Initial agreement was weak (K=.402). Upon subsequent coding sessions, intercoder reliability rose to strong (K=.965).
• The following representative quotes evidence single, double, and triple loop learning respectively:

Students learned...

1. “… that volunteering is a major key in networking and [finding] a potential future job opportunity. I also learned that there are a lot more invasive plants in our local area causing damaged then I had realized.”
2. “… the importance of looking at issues and paradigms from a systematic point of view instead of being too focused on highly specific, small details.”
3. “… having a team of individuals with various backgrounds is extremely helpful in approaching a problem systematically and it is critical in assessing information gaps between various subsets of groups.”

DISCUSSION
• While responses that stated interpersonal challenges were attributed to group work with fellow students, these responses may be seen as a training environment for real-world stakeholder interaction.
• Attribution of single and double-loop learning to specific HIPs was often unclear (internship vs. service-learning).
• Intrapersonal learning was not coded in the triple loop model but was evident throughout.

IMPLICATIONS
• CL minor achieves its goal of providing multiple learning pathways for budding conservationists.
• Triple loop learning could be enhanced through additional stakeholder outreach, training, and engagement.

Figure 1. Map of Locations for HIPs in CL