

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.

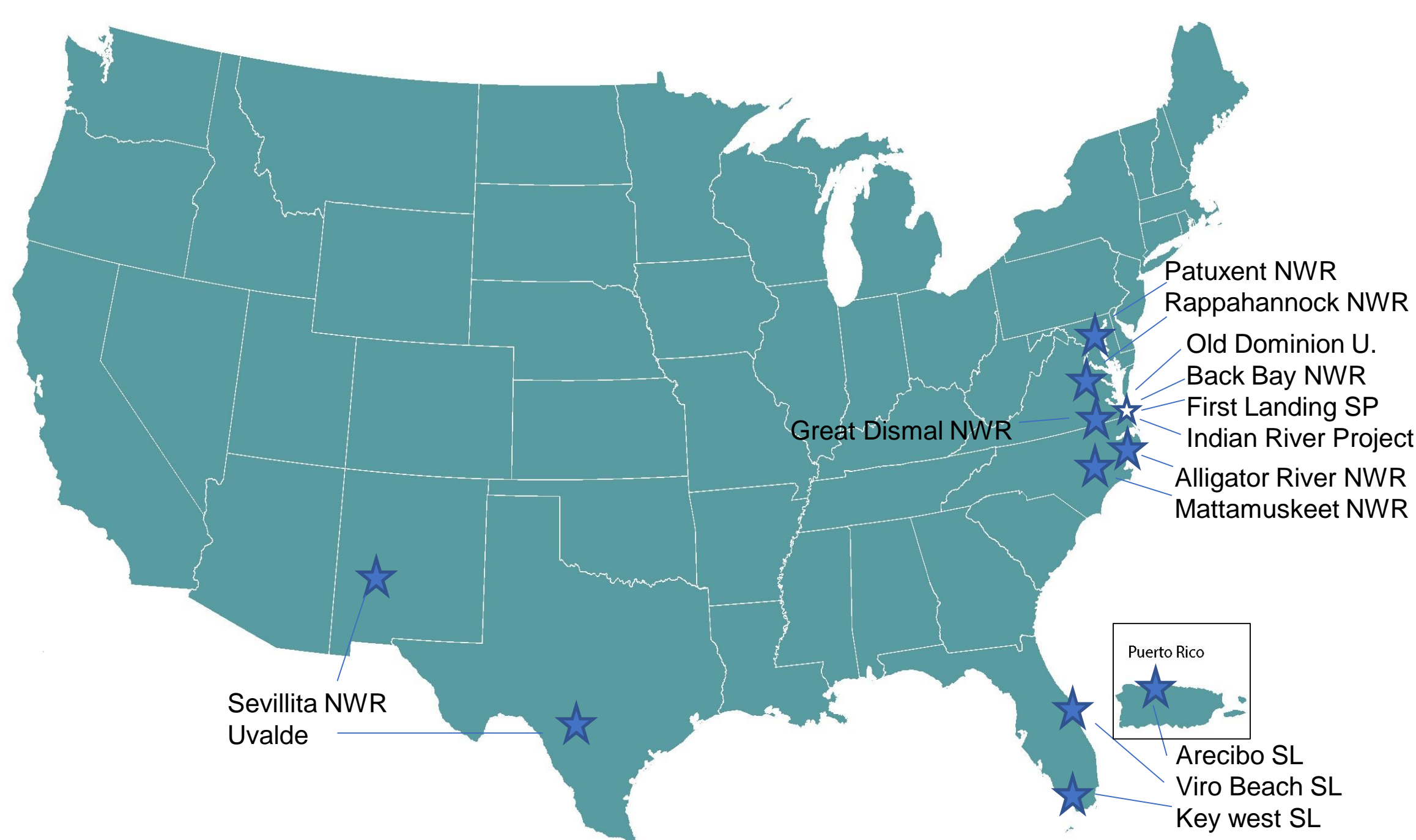
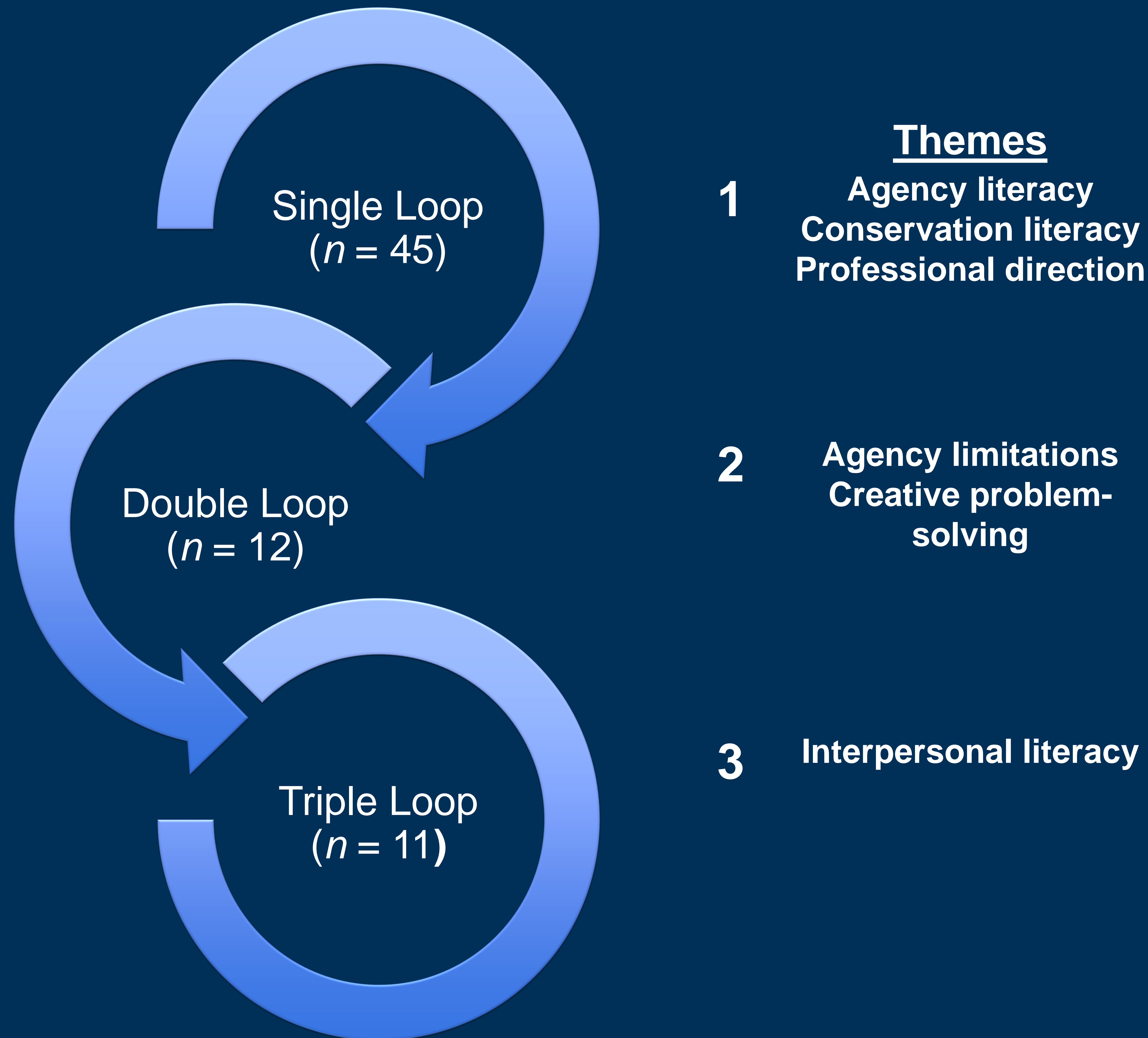


Figure 1. Map of Locations for HIPs in CL

Students learned...



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 response 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.



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