The Post-Graduation Impact of Intentional Reflective Practices during Employment in a College Outdoor Program

Thomas D. Cox[1], Ed.D. & Kristin L. Gloystein[2], M.A.

Abstract

This article reports the results of research conducted in 2017 to examine the effects of the utilization of the reflection practices by colleges and universities in conjunction with employment in the on-campus outdoor adventure department. This article focuses on what the participants learning styles are according to Kolb's experiential learning cycle and how those learning styles affect the post-graduation use of Kolb's experiential learning cycle, the types of active and intentional reflection practices that were impactful for students during their employment, and if participants currently incorporate any of those practices into their personal or professional life. We gathered data from graduates of a large public southern, preeminent institution to examine their experiences from a post-graduation perspective. The purpose of the investigation is to examine the post-graduation impacts of the use of intentional reflection practices during employment in outdoor programs for college students. The impact of the utilizing this cycle as part of a student's job description is still largely unexplored.

Keywords: outdoor program, employment, experiential learning, reflection.

Introduction

A common component that unifies outdoor education with traditional colleges and universities is the experiential nature of the student's experience. Painting with a broad brush, part of the college student experience is to be constantly put into new situations that necessitate learning for future application. These experiences can occur in academic, social, professional, or other arenas that constitute a student's overall experience. However experience alone does not inherently necessitate learning. Reflection of these experiences is crucial to help make meaning and promote future learning and application (Blanchard et al, 2007)."Experience has to be arrested, examined, analyzed, considered and negated to shift it to knowledge" (Criticos, 1989). Reflection has been long promoted as a tool to guide people through periods of rapid change, risk, and uncertainty (Beck, 1992). Outdoor education has largely used experiential learning as a theoretical base with the application of adventure education to produce meaningful outcomes for students and participants. Intentional reflection, either through facilitation in the field (challenge course and adventure trips) or in staff training and development, is commonplace for student staff to either initiate or take part in. In accordance with Kolb's Learning Style Inventory, people learn and process information differently based off of several personality type variables (Kolb, 1984). The practice of adjusting reflection and facilitation styles and practices according to learning styles assists in the ability to create abstract conceptualization and meaning for students who hold a variety of world views and perspectives (Kazu, 2009).

Examining the connections between learning styles, student outdoor department work experience, and student use of reflection practices post-graduation will help articulate the impact and benefits of utilizing and implementing intentional reflection practices in collegiate outdoor education. The lasting effects of the practice of facilitating rumination and abstract conceptualization for student staff members is a rarely explored phenomena.

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[1] Associate Professor of Higher Education, University of Central Florida, USA
[2] Coordinator of Recreation and Wellness, University of Oregon, USA

This article seeks to study these effects and convey the findings in order to help college outdoor programs articulate the value of intentional reflection beyond the tenure of students' employment and shape effective practices and student management guidelines.

Review of the Literature

Reflection in Experiential Learning

One of the basic tenants of experiential learning and a driving force behind making meaning out of experiences is intentional reflection (Kolb, 1984). Reflection has been a driving force for critical engagement with knowledge claims since the work of founding philosophers such as Bacon, Hume, Locke, and Kant (Dyke, 2006). John Dewey, whose work and approach led to a field of study on the application of theory to reflective practice, was an early adopter of reflective inquiry in educational contexts (Dyke, 2006). In the 1916 work *Democracy and Education* Dewey advocated for reflection as the intentional consideration of future implications from ideas and concepts from the evidence presented and past experiences (Dewey, 1916).

David's Kolb model of experiential education seeks to reconcile the differences between theory and practice by promoting the learner him/herself to use their experience to create their own abstract theory that they can then apply to future situations (Kolb, 1984). The model consists of four main stages; active experimentation, concrete experience, reflective observation, and abstract conceptualization (see Figure 1). An important note is that although the process below is shown as circular and cyclical, often times stages are staggered, reverted back to, or overlapping one another in experiential education (Cheung &Delavega, 2014).
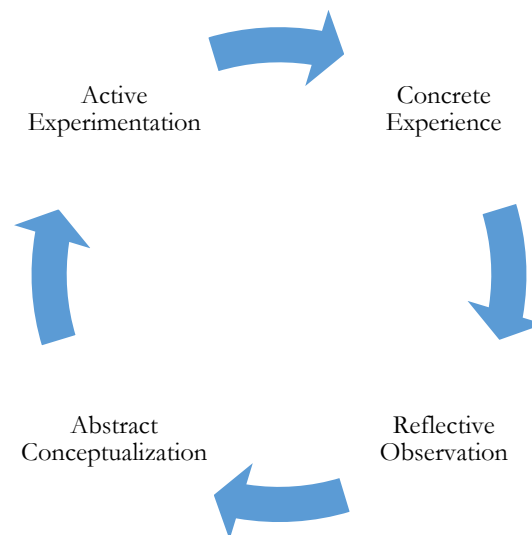

Figure 1: Kolb's Learning Cycle

The four stages are described in detail below (Kolb, 1984):

- Concrete Experience: hands-on activity that engages the learner. This activity provides the foundation for the skill, knowledge, or desired outcome.
- Reflective Observation: making connections between the concrete experience and the concepts that formed their experience. The learner engages in critical thinking about their experience.
- Abstract Conceptualization: forming the application of uses for real-life scenarios from the abstract concepts and ideas formed.
- Active Experimentation: the application of insights acquired from learned concepts to future actions.

Learning Styles Model

David Kolb's learning styles model contains four distinct learning styles; diverging, assimilating, converging, and accommodating. These learning styles are based off of the four-stage cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation as well as the axis's of perception and processing. It is important to understand how different learning styles utilize and make meaning from intentional reflection practices in order to inform best practices (Schenck & Cruickshank, 2015).
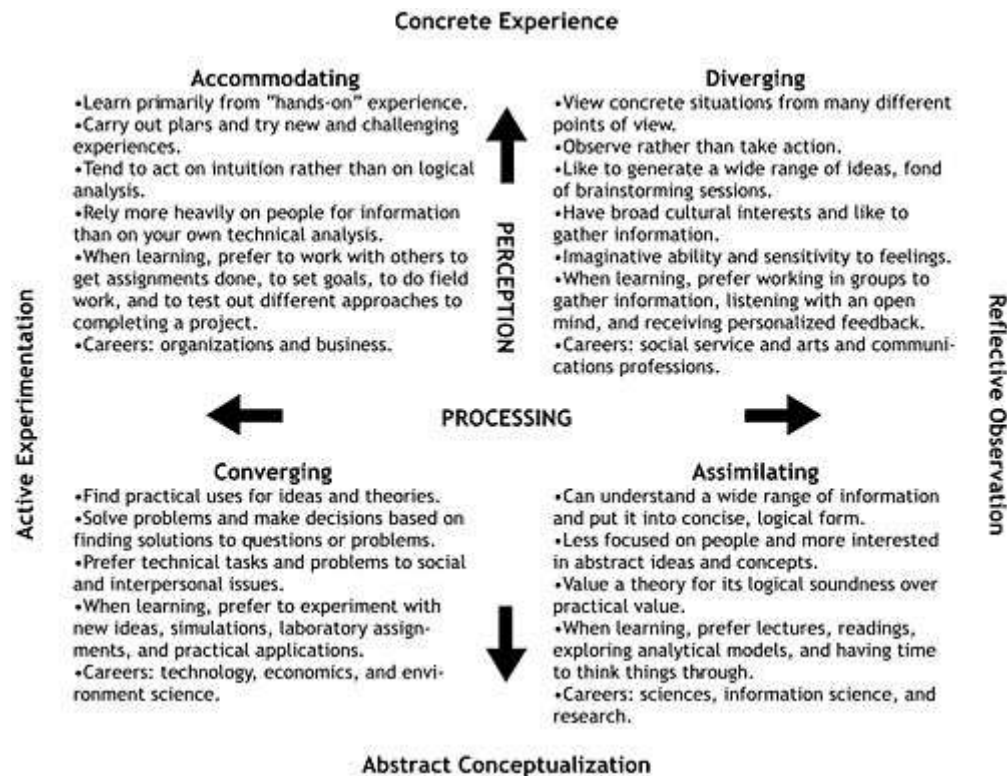
Concrete Experience

Accommodating
- Learn primarily from "hands-on" experience.
- Carry out plans and try new and challenging experiences.
- Tend to act on intuition rather than on logical analysis.
- Rely more heavily on people for information than on your own technical analysis.
- When learning, prefer to work with others to get assignments done, to set goals, to do field work, and to test out different approaches to completing a project.
- Careers: organizations and business.

Diverging
- View concrete situations from many different points of view.
- Observe rather than take action.
- Like to generate a wide range of ideas, fond of brainstorming sessions.
- Have broad cultural interests and like to gather information.
- Imaginative ability and sensitivity to feelings.
- When learning, prefer working in groups to gather information, listening with an open mind, and receiving personalized feedback.
- Careers: social service and arts and communications professions.

PERCEPTION

Active Experimentation

Reflective Observation

PROCESSING

Converging
- Find practical uses for ideas and theories.
- Solve problems and make decisions based on finding solutions to questions or problems.
- Prefer technical tasks and problems to social and interpersonal issues.
- When learning, prefer to experiment with new ideas, simulations, laboratory assignments, and practical applications.
- Careers: technology, economics, and environment science.

Assimilating
- Can understand a wide range of information and put it into concise, logical form.
- Less focused on people and more interested in abstract ideas and concepts.
- Value a theory for its logical soundness over practical value.
- When learning, prefer lectures, readings, exploring analytical models, and having time to think things through.
- Careers: sciences, information science, and research.

Abstract Conceptualization

Figure 2: Kolb's Learning Style Inventory Learning Styles
Eduweb.com

Kolb created a model for a self-descriptive test that measures strengths and weakness in a learner and encompasses all of the four learning styles mentioned above. There are four different modes of learning that are measured in Kolb's Learning Styles Inventory (LSI). They are the four stages of the experiential learning cycle also produced by Kolb (active experimentation, reflective observation, concrete experience, and abstract conceptualization). In the inventory learners earn a different score in each category depending on their answers (Kolb, 1984).

A high score in "concrete experience" indicates that the learner prefers an experience based approach in which they can become involved over theoretical learning (Zanich, 1991). This type of person tends to be oriented towards learning in a manner that emphasizes people in general and peers over authority. Kolb's theory states that they value conversation and feedback for learning purposes most greatly (Zanich, 1991). When learners score the highest in "abstract conceptualization" it indicates that they value an analytical and conceptual framework that favors theory and symbols. They are analystics/ architects and prefer to make decision based on facts and with as much information as possible (Harvey, 1999). Participants that score highly on "active experimentation" present a learner that is most likely extroverted and excels when they can engage in the curriculum (Zanich, 1991). They tend to enjoy learning environments that include energetic dialogues with their peers or other group members (Harvey, 1999). The final category is "reflective observation". When learners have a high score in this category is portrays a learner that prefers an impartial and careful approach to decision making (Zanich, 1991). They tend to be introverted and may avoid making unpopular decisions (Harvey, 1999).

Kolb's four basic learning style types are based on a learners two most dominant modes of learning and the descriptions for these four styles are based off of research and clinic trials (Zanich, 1991). A Converger's dominant modes of learning are "abstract conceptualization" and "active experimentation". This type of learning styles excel in traditional tests were there is one correct answer or solution to a problem. The strong areas for this learner are the implementation of theoretical ideas. In opposition to the Converger is the Diverger, which is a combination of high scores from the "concrete experience" and "reflective observation". This type of learner is talented at using imagination in brainstorming and can approach scenarios from many different perspectives (Zanich, 1991). Those learners with the greatest score in "abstracted conceptualization" and "reflective observation" are Assimilators. This style excels in abstract concepts, but are not as concerned about their practical application.

They have strengths in inductive reasoning (Zanich, 1991). The final learning style type is the Accommodator, which has the opposite strengths as the Assimilators scoring highest in "concrete experience" and "active experimentation". This type of learner is highly adaptable and tends to solve problems by trying multiple different solutions. Accommodators tend to be people oriented and like to take action with new experiences (Zanich, 1991).

Experiential Learning in Outdoor Education

Outdoor recreation and education has championed the use of David Kolb's experiential learning cycle as a philosophical foundation for learning through concrete experiences. It has become common practice to incorporate the intentional facilitation of the learning cycle as a part of the job duties of those who work in outdoor education and in education (Tomkins & Ulus, 2016). Many practitioners of outdoor education in the field have used Kolb as a base to build additional practices and application off of (Brennan, 2003). There have been many investigations into the utilization of meaning making for participants in the field who are participating in extended wilderness travel, but little insight into the effects of facilitating reflection as a component of a student staff position in a university or college setting and the post-graduation effects that carry forward in that student's life.

A study specific to a semester long program in a mid-sized Northwest public institution was conducted that suggested that students (non-staff) engaged in intentional experiential education practices tended to trend towards learning by concrete experience, regardless of other variables or place of progression in program (Shellman, 2003). That same study examined the effect of age on learning style preferences, which was not specifically examined in this study. Shellman found by students in the 18-20 range has significantly greater preference for learning by active experimentation.

There are critics of Kolb who state that the oversimplification of the experiential learning cycle and learning styles inventory needs to be re-conceptualized (Ord & Leather, 2011). Specifically Ord and Leather argue that outdoor educators can maximize meaning from adventure activities by revisiting and reinvigorating the theories of John Dewey. They suggest an interpretation for framework for outdoor experiential education that incorporates the concept of the experience itself being a transaction between the person and their environment. The proposed alternative model that incorporates Dewey's theories is referenced below.
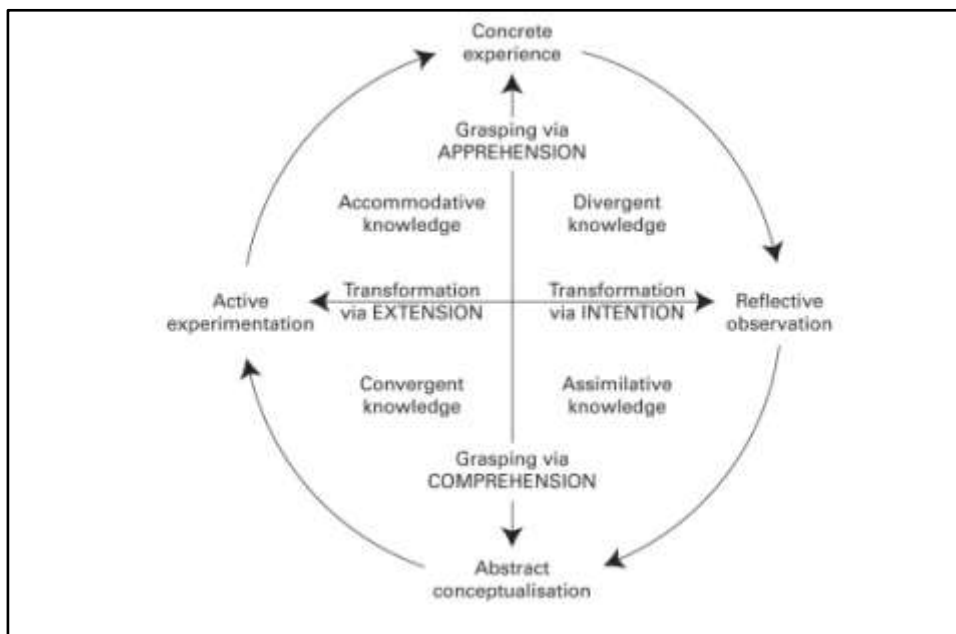
Australian Journal of Outdoor Education, Nov2011, Vol. 15 Issue 2, p13-23, 11p, 1 Color Photograph, 2 Diagrams Diagram; found on p16

Method

For this study we surveyed participants that had graduated from a large public preeminent southern institution within the last ten years. All of the surveyed participants had also, for some duration of time, worked for the outdoor adventure department on the university campus. These participants were identified by records kept by the outdoor adventure department and the university.

This particular institution hosts its outdoor department in a recreation and wellness center. The department consists of five separate areas; an outdoor lakefront and boat rental facility, a high and low challenge course, an indoor rock climbing wall, an adventure trips program, and a gear rental center. The department has approximately fifty student staff members at any given time.

Once the specific participants were identified they were contacted via social media groups specifically for graduates who worked in the outdoor adventure department and emails with an invitation to complete an online Qualtrics survey. Out of 89 potential participants who were contacted 11completed the survey for a 12 percent response rate. In the survey participants were asked questions pertaining to demographics, the tenure and areas of the outdoor adventure department that they worked in, the use and types of reflection used during employment, and the types, impacts, and use of intentional reflection practices post-graduation as well as their current career field. This survey also included Kolb's learning styles instrument, transposed into the electronic version to suit the method of information gathering through Qualtrics. This instrument identifies the participants learning style according to Kolb's experiential learning cycle. After we collected data we used basic comparison and descriptive statics to perform analysis, as is described below.

Results

Profile of Respondents

We asked the participants to report on the year and term that they graduated from the institution (see Table 1). A majority of the respondents graduated in 2013, with no responses from the graduate years of 2007, 2009, 2010, and 2014. We also inquired about the period of time for which they worked in the outdoor adventure department (see Table 2). The average length of time employed in the department was 2.27 years with a median tenure of 2 years. The minimum amount of time worked was 1 year and the maximum was 5 years.

Table 1: Graduation Year & Term

Year	%	Count
2007	0.00%	0
2008	9.09%	1
2009	0.00%	0
2010	0.00%	0
2011	18.18%	2
2012	9.09%	1
2013	27.27%	3
2014	0.00%	0
2015	18.18%	2
2016	18.18%	2
2017	0.00%	0

Table 2: Tenure in Outdoor Adventure Department
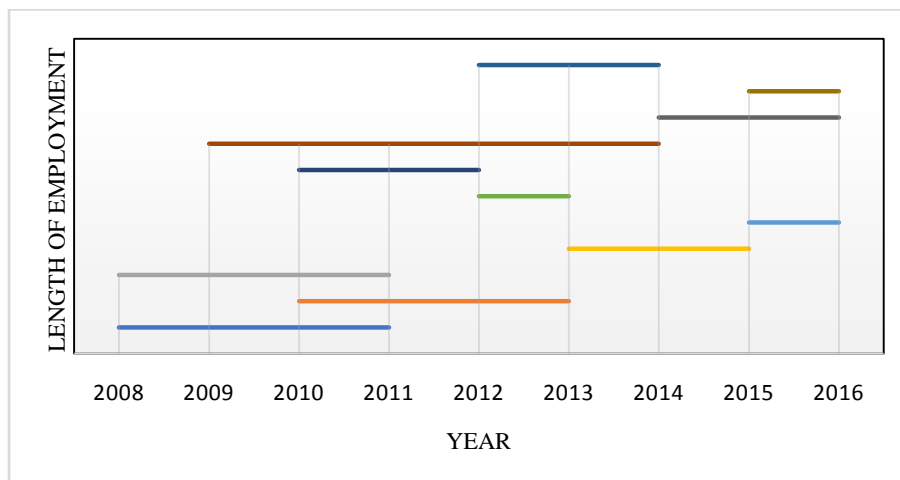
The survey additionally asked participants specific questions about the different areas of the department which they worked. They were asked to identify which department components they worked in, in which area they worked the longest in, and what area they considered their primary area of work during their employment (See Table 3).

Table 3: Department Area Specific Breakdown

Area	Worked in	Longest Area Worked	Primary Area
Waterfront Facility	63.64%	18.18%	9.09%
Challenge Course	54.55%	36.36%	36.36%
Adventure Trips	36.36%	27.27%	45.45%
Gear Rental Center	27.7%	9.09%	9.09%
Climbing Wall	27.7%	9.09%	0.00%

Participants were also asked what their current field of employment was. In order to not limit the field choices by conventional options they were provided a write in option for this portion. The answers were as follows:

Resident Physician, Retail Management, Campus Recreation, Teacher, National Forest Services, Staff Scientist, Graduate Assistant, Nursing, Unemployed, and Regional Camps.

Reflection Practices, Uses, and Impacts

The questionnaire additionally surveyed participants by using scaling to gauge how much reflection was incorporated into their positions at the time of employment (Table 4) and the impact and use of those reflection practices post-graduation (Table 5).

Table 4: Reflection Practices during Employment

1 = no use of intentional reflection, 5 = significant use of intentional reflection (at least once per week)

	1	2	3	4	5
Please rate your use of intentional reflection on experiences BEFORE beginning employment with Outdoor Adventure.	9.09%	45.45%	27.27%	9.09%	9.09%
Please rate your use of intentional reflection on experiences AFTER ending employment with Outdoor Adventure.	9.09%	0.00%	0.00%	54.55%	36.36%
How much was reflection a component of your job description at Outdoor Adventure with participants?	9.09%	0.00%	9.09%	36.36%	45.45%
How much was reflection incoroporated into staff trainings and events?	9.09%	0.00%	9.09%	36.36%	45.45%

Table 5: Impact and Use of Reflection Practices Post- Graduation

1 = no use of intentional reflection, 5 = significant use of intentional reflection (at least once a week)

	1	2	3	4	5
How much you think reflection allowed you to get more meaning out of your job	9.09%	9.09%	9.09%	45.45%	27.27%
How impactful reflection practices were in helping you to gain transferable skills and lessons from your employment.	9.09%	0.00%	18.18%	27.27%	45.45%
You were able to take what was learned in reflections are apply them to post-graduation experiences.	9.09%	0.00%	0.00%	45.45%	45.45%
There were specific processing and reflection techniques you learned while working.	9.09%	0.00%	27.27%	18.18%	45.45%
You now apply those techniques to your professional life	9.09%	9.09%	18.18%	18.18%	45.45%
You now apply those techniques to your personal life	9.09%	0.00%	0.00%	36.36%	54.55%

Participants were then asked about specific types of common reflection practices. They were asked to select if the specific type of reflection practice was; never used, effective for me in work practices, used currently in my professional life or used currently in my personal life. Table 6 presents the responses.

Table 6: **Common Reflection Practices**

	Never Used		Effective for me in work practices		Use currently in my professional life		Use currently in my personal life	
Use of metaphors	0.00%	0	90.91%	10	63.64%	7	72.73%	8
Comparisons	0.00%	0	100.00%	11	63.64%	7	54.55%	6
Repeating the same or a similar exercise	0.00%	0	90.91%	10	72.73%	8	36.36%	4
Inclusive discussions	0.00%	0	90.91%	10	81.82%	9	100.00%	11
Collective problem solving and data collection	0.00%	0	100.00%	11	90.91%	10	63.64%	7
Physical interpretations or re-enactments of events	0.00%	0	81.82%	9	54.55%	6	36.36%	4

Kolb's Learning Styles Inventory

Kolb's Learning Styles Inventory was also administered to the participants. The results showed that participants covered the spectrum of categories in terms of dominance in learning styles inventory, with a majority of participants scoring the highest in Active Experimentation.

Table 7: **Participant LSI scores.(Highest scoring categories are bolded***).*

Concrete Experience	Reflective Observation	Abstract Conceptualization	Active Experimentation
26.05%	21.01%	23.53%	24.37%
22.69%	17.65%	25.21%	**34.45%**
21.01%	24.37%	22.69%	**31.93%**
20.17%	**39.50%**	23.53%	19.33%
32.77%	20.17%	21.01%	**35.29%**
19.33%	23.53%	**38.66%**	20.17%
31.93%	28.57%	20.17%	21.01%
30.25%	**31.93%**	17.65%	23.53%
18.49%	27.73%	21.01%	**35.29%**
13.45%	**36.97%**	29.41%	22.69%
21.85%	12.61%	30.25%	**34.45%**

In addition to classifying participants according to their dominant learning style they were also sorted and categorized by learning type, current employment field, types of reflection used, and use of reflection practices pre- and post- employment. No respondents reported never using any of the types of reflection practices list (Use of Metaphors, Inclusive Discussions, Collective Problem Solving and Data Collection, Physical Interpretation or re-enactments of events, Repeating the Same or Similar Exercise, Comparisons). All participants conveyed an increase in their uses of reflection practices compared to before employment regardless of specific department area worked, year graduated, or how much facilitating reflection was a component of their job description. A majority of Divergers selected 'collective problem solving and data collection' as the reflection type used in their current personal life. The most highly selected category for Assimilators and Accommodators was 'use of metaphors'. Convergers selected both 'use of metaphors' and 'comparisons' as the type of reflection most used in their current personal life.

Table 8: **Learning Style Index and Employment Field Compared to Reflection Use/ Type**

1 = no use of intentional reflection, 5 = significant use of intentional reflection (at least once a week)

Current Employment Field	Learning Style	Reflection Types used in current personal life	Use of Reflection Practices Before Employment	Use of Reflection Practices After Ending Employment	Currently apply reflection practices in Professional Life
Unemployed	Converger	I.D	1	3	3
Recreational Camps	Converger	U.M, Comparisons, I.D	2	5	5
Unemployed	Diverger	U.M, Comparisons, I.D, C.C, P.I	2	4	5
Nursing	Assimilator	I.D, C.C	3	4	5
Graduate Assistant	Accommodator	U.M, C.C	2	4	5
Staff Scientist	Assimilator	U.M, Comparisons, I.D, C.C, P.I, R.E	2	5	5
National Forest Services	Diverger	U.M, I.D, C.C, P.I, R.E	3	4	4
Teacher	Diverger	U.M, I.D, C.C	4	5	5
Campus Recreation	Diverger	Comparisons, C.C	2	4	5
Retail Management	Assimilator	U.M, Comparisons I.D, R.E	3	4	4
Resident Physician	Converger	U.M, Comparisons, I.D, C.C, P.I, R.E	3	4	4

- U.M – Use of Metaphors
- I.D. – Inclusive Discussions
- C.C. - Collective Problem Solving and Data Collection
- P.I. – Physical Interpretations
- R.E. – Repeating the Same or Similar Exercise

Discussion

This study was the first to specifically look at reflection practice transference for student staff in outdoor recreation programs post- graduation. The sample size for this study was relatively small, with the initial pool of respondents also being a very specific subset of the population. One of the challenges in collecting data of this nature is contacting participants through viable networks once they have graduated and largely stopped checking communication channels the university has on file for them (example student email addresses). While this does impose limitations on studies of this type re-occurring in the future social media and other avenues are being more commonplace and theoretically should make outreach more reasonable.

The distribution profile of the respondents was generally representative of the population that was specifically reached out to. Their graduation date ranged from 2008 – 2016, representing a majority of the years the department had been functioning with student staff. There was also significant diversity in the amount of time worked at the department, which did not have any significance on their learning styles inventory or reported change in their use of reflection after working in the department. The respondents also represented all areas of the department, reducing the amount of bias in the answers from supervisor or area specific practice. The employment field of the respondents (when applicable) relatively aligned with current literature on which types of professions different learning styles tend towards, although exact data on this particular aspect was not collected in detail.

The answers that were collected largely followed trends set by other experiential literature. It showed that students were able to use reflection practices to make meaning out of their experiences and continue the trends of using those learning styles that they identify with.

It looked at participants as the learning style index they self-assessed as in relation to how they processed and utilized reflection techniques, both during their tenure as a student employee and in their personal lives after graduation. This was the essence of what this study sought to understand. There was no significant difference between the types of reflection practices used by different learning styles, all styles with the exception of Accommodator chose all practices between respondents. All participants indicating an increase in the amount of reflection they personally took part in after working at the department, which indicates that that their work experience was a driving factor in their use and practice of reflection. However most participants identified gaining transferable skills from reflection practices in the mid-range when asked "How impactful reflection practices were in helping you to gain transferable skills and lessons from your employment, indicating a disconnect between how student view the ability to reflect as a skill in itself.

Conclusion

There is a significant amount of colloquial knowledge about the benefits of working in a position as a student in outdoor recreation, most of which focus on transferable skills. There also needs to be the personal reflective value that is articulated. If student affairs or adventure education as a profession aims to view the student holistically and focus on their overall development, impactful and meaningful skills such as reflection need to be valued, practiced, and reinforced. It would behoove outdoor educators and others who educate a staff largely based on experiential learning models to present reflection as a tangible skill that will carry over into their time after their position as a student has come to an end. There is also the awareness with this study that there may be some reflection practices that accommodate some learning styles better than others, although more research is needed in this field in relationship to employment. The process of implementing and teaching cyclical learning practices is powered by student's ability to reflect and apply that reflection to future situations. This is clearly a skills that carries over to student staff after they have left their college/ university and stays with them long term.

References

Barney, L. S., & Maughan, B. D. (2015). Getting out of the way: Learning, risk, and choice. Complicity: An International Journal Of Complexity & Education, 12(2), 49-80.

Beck, U. (1992). Risk society: towards a new modernity. London; Newbury Park, Calif.: Sage Publications.

Blanchard, J., Strong, M., & Ford, P. (2007) Leadership and Administration of Outdoor Pursuits (Third Edition). Venture Publishing Inc.

Brennan, D. (2003). *A critique of Kolb's Experiential Learning Theory*. Oregon State University, Corvallis, Oregon.

Costas, Criticos (1989). Experiential learning in formal and non-formal education. Durban: Media Resource Centre, Department of Education, University of Natal.

Cheung, M., &Delavega E. (2014). Five-way Experiential Learning Model for Social Work Education. *Social Work Education* 33(8). doi: 10.1080/026154.

Dewey, J. (1916). Schools: Studies in Education, (12). 87. doi:10.1086/591813.

Dyke, M. (2006). The Role of the "Other" in Reflection, Knowledge Formation and Action in A Late Modernity. *International Journal of Lifelong Education*, 25(2), 105-123.

Harvey, H. (1999) The National Outdoor Leadership School's Wilderness Guide. Fireside Publishing.

Kazu, I. (2009) The Effect of Learning Styles on Education and the Teaching Process. *Journal of Social Sciences, 5*(2) ISSN 1549-3652.

Kolb, D. (1984) Experiential Learning: Experience as the Source of Learning and Development. Upper Saddle River, NJ: Prentice Hall.

Ord J, Leather M. (2011) The Substance Beneath the Labels of Experiential Learning: The Importance of John Dewey for Outdoor Educators. *Australian Journal Of Outdoor Education*. 15(2):13-23.

Schenck, J., & Cruickshank, J. (2015). Evolving Kolb: Experiential Education in the Age of Neuroscience. *Journal of Experiential Education*, *38*(1), 73-95.

Shellman, A. (2003). Learning styles of college students enrolled in an outdoor experiential leadership program. *Kinesiology Publications, University of Oregon.*

Tomkins, L.,& Ulus, E. (2016). 'Oh, was that "experiential learning"?!' Spaces, synergies and surprises with Kolb's learning cycle. *Management Learning*, *47*(2), 158-178

Zanich, M. L. (1991). Learning styles/teaching styles. Unpublished Manuscript, Indiana University of Pennsylvania, Teaching Excellence Center, Indiana, PA.