**A Capstone Experience: Impacts of a Behavioral Style Learning Unit on Team Project Success**

M’Randa R. Sandlin

University of Hawai‘i at Mānoa

Melissa R. Price

University of Hawai‘i at Mānoa

Kauahi Perez

University of Hawai‘i at Mānoa

**Abstract**

Colleges of agriculture and natural resources are uniquely positioned to train students in soft skills by incorporating them into existing learning experiences. The purpose of this study was to explore impacts of a behavioral style learning unit on team project success with 15 students enrolled in a senior-level undergraduate capstone course. The research objectives were to (a) explore students’ preflections and reflections for the self-perceived impact of the behavioral style learning unit on their team’s capstone project and (b) explore instructor observations of team dynamics. Qualitative content analysis methods and basic quantitative methods were used to examine the preflections and reflections of the students, as well as instructor observations. Students found the behavioral assessment improved understanding of their own behavioral needs, and allowed them to flex their style to meet the needs of team members. The instructor observed that relationship compatibility, based on behavioral styles within teams, correlated with the ability of team members to accurately perceive their contributions to tasks, relative to peer-based perceptions of contributions. Based on these results, it is recommended that a behavioral style learning unit, or a similar psychological type unit, be integrated into courses where soft skills are a desired student learning outcome.

**Keywords:** behavioral style, experiential learning, teamwork, team project, soft skills

**Introduction**

The integration of hard and soft skills has become increasingly important to employers. Now, more than ever, they are searching for applicants who possess soft skills—sometimes called 21st century, interpersonal, or transferable skills (Bennett, 2002; National Research Council, 2012). These 21st century skills include critical thinking, problem solving, teamwork, collaboration, effective communication, and self-management (Crawford, Lang, Fink, Dalton, & Fielitz, 2011; Roberts, Harder, & Brashears, 2016). In 2002, Bennett found that employers believed the interpersonal skills of current graduates were poorer than in previous generations, yet more current studies have found that the soft-skill competencies once expected of seasoned employees are now the expected norm of graduates when they enter the workforce (Clem, Doerfert, Akers, Burris, & Brigham, 2014; Connaughton, 2015; Crawford et al., 2011; Hart Research Associates, 2015).

Crawford et al. (2011) identified seven soft skills clusters—including teamwork and communication skills— deemed important for recent graduates to be successfully competitive for employment in agriculture, natural resources, and related careers. These same soft skill competencies were again identified in 2015 as critical for successful employment in natural resources management (Sample, Bixler, McDonough, Bullard, & Snieckus, 2015) and as important training needs for in-service agriculture teachers (Davis & Jayaratne, 2015). Thus, 21st century students must be equipped with these competencies upon graduation if they expect to be competitive in the workforce (Bennett, 2002; Connaughton, 2015; Dunne & Rawlins, 2000). Despite the importance of effective collaboration to professional advancement, many natural science degree programs (i.e., hard sciences or technical sciences) do not emphasize the importance of these nondisciplinary skills.

Colleges of agriculture and natural resources are uniquely positioned to deliver 21st century skills to students. In addition to teaching disciplinary skills, instructors can facilitate the development of soft skills in their students by incorporating them into existing learning experiences, including field experiences, in-service training, study abroad, and service learning (Bennett, 2002; Lamm, Carter, & Melendez, 2014; McCubbins, Paulsen, & Anderson, 2016). While there are a number of educational venues that allow for the constructive use of soft skills, team projects are one of the most common educational experiences used to teach them (Dunne & Rawlins, 2000). Team projects can facilitate students’ understanding of interpersonal communication, self-management, teamwork, and collaboration skills (Dunne & Rawlins, 2000; Lamm et al., 2014; McCubbins et al., 2016).

While teamwork is an effective learning experience, team dynamics are a general concern of instructors and students. Research on psychological type and team composition has shown that, while personality cannot predict team effectiveness or performance, it is an influencing factor (Varvel, Adams, Pridie, & Ulloa, 2004). Further, the authors found that student’s awareness of their team members’ psychological type allowed for “effective communication, trust, and interdependency” (p. 146) and students were able to better tolerate types that were unlike their own. In terms of specific aspects of personality, a meta-analysis conducted by Peeters, van Tuijl, Rutte, and Reymen (2006) found that the presence of higher levels of agreeableness and conscientiousness in teams resulted in higher performance.

While 21st century skills have been identified as critical for graduate success (Crawford et al., 2011; Sample et al., 2015) and team-based learning has been identified as an effective delivery method (McCubbins et al., 2016), few tools are given to help students navigate team dynamics. Likewise, information on team dynamics can prove beneficial for instructors when assigning teams, as “ineffective teams may be the product of inappropriate team composition” (Bradley & Hebert, 1997, p. 1). Behavioral style assessment is another tool that can enhance collaboration and teamwork, improve communications, and facilitate overall improvement in team performance (McKenna, Shelton, & Darling, 2002).

**Context of the Study**

[Department] at [University] teaches a natural science-based curriculum and is working to integrate social science components to produce holistically prepared graduates. Capstone courses require students to integrate and apply material from their discipline (Hauhart & Grahe, 2015) and offer learning experiences wherein social science components can be incorporated. The capstone course, [Course], integrates a project to allow students to apply the theories, core concepts, and skills in natural resources and environmental management to an environmental or management question. The teams were self-selected based on topic interest. The teams identified a project mentor at the city, county, state, or federal management level, and defined a problem of interest that was under the jurisdiction of the mentor. During this study, students selected topics including wastewater mitigation, food waste reduction, management of marine wildlife-human conflicts, management of an invasive pest species, and sea level rise adaptation for a coastal city.

The project components were based on a structured decision-making process, as described by Conroy and Peterson (2013). In this process, students were to (a) engage decision makers and stakeholders; (b) work with stakeholders to identify fundamental objectives and potential solutions; (c) gather available information from peer-reviewed literature and subject experts to weigh potential solutions; and (d) identify an optimal solution for the set of defined objectives (Conroy & Peterson, 2013).

The instructor of [Course] included a behavioral style learning unit in the curriculum to support social content integration and facilitate team project success. The learning unit consisted of students taking the DISC Behavioral Style Assessment (DISC), participating in a lecture with a certified DISC practitioner who interpreted the individual results and integrated lessons for teamwork and general interpersonal interaction, and preflection and reflection prompts for the students to learn the material. The instructor hoped the behavioral style learning unit would: (a) help students understand personal motivations, strengths, and areas where growth was needed; (b) recognize and avoid the potential for negative interactions among student team members; and (c) increase students’ abilities to understand others’ behavioral styles and flex their own behavioral styles to create effective working relationships with team members and decision makers.

Although this study is a content analysis of the student preflections and reflections, we believe it is important for the reader to have a basic understanding of the DISC model and instrument. The DISC model is often used to improve team dynamics and understand communication styles in team situations. The DISC model categorizes how people behave into the four dimensions of Dominance (D); Influence (I); Steadiness (S); and Compliance (C) for how one behaves naturally (Natural) and how one behaves in a particular setting, for instance, at work (Adaptive). Each student’s adaptive style was the basis of the preflections and reflections, which were analyzed for this study. The dimensions are on a continuum from low to high expression of each dimension’s characteristics. People are a combination of all four dimensions; a person’s dimension combination results in a unique behavioral pattern, also called the behavioral profile (Bonnstetter & Suiter, 2011). The letters are listed in descending order of a person’s behavioral dimension scores. It should be noted that although individuals may have the same behavioral profiles (order of letters), each profile is unique in terms of expression level in each of the dimensions, as well as characteristics not measured by this instrument (e.g., personality, environmental conditions, etc.).

The DISC instrument is validated and published by Target Training International, Ltd. (TTI). The online instrument is comprised of 24 items. Each item presents respondents with four behavioral phrases and asks them to rank the behavior from 1 = *Most like you* to 4 = *Least like you*. Upon completion, a personalized computer-generated report is sent to the certified DISC practitioner for review. This allows the practitioner to check for any abnormalities and/or errors before distributing the profiles to the participants in a workshop. A database of 16,950 responses was used to run the reliability and validity statistics (Target Training International [TTI], 2012). The internal reliability was found to be good for each of the four scales: Adaptive D (α = .89); Adaptive I (α = .85); Adaptive S (α = .86); and Adaptive C (α = .83). Content validity, criterion-related validity, and construct validity tests were used to establish instrument validity (TTI, 2012).

**Theoretical Framework**

The framework for this study was Kolb’s theory of experiential learning (Kolb, 1984) with the addition of preflection (Jones & Bjelland, 2004). Preflection, as defined by Jones and Bjelland (2004), is the “process of being consciously aware of the expectations associated with the learning experience” (p. 963). Facilitated preflection primes students to learn from their experiences, and thus increases their capacity to reflect upon their experience. Consequently, this enhances students’ overall learning experience. When used as a starting point in Kolb’s theory of experiential learning, students are able to reflect upon concrete learning experiences to a greater degree, as opposed to students who do not do any preflection prior to a learning experience.

When applied to this study, facilitated preflection allowed students to be cognizant of the expectations regarding the application of behavioral styles in the context of their capstone projects. The students were then guided through their capstone project with the stages of Kolb’s theory of experiential learning (Kolb, 1984). Students implemented their capstone project (concrete experience) and reflected on their project experiences (reflective observation), learned from their experiences (abstract conceptualization), and conceptualized the learned information in their future interactions (active experimentation).

Experiential engagement with content has proven to be successful in agricultural education. At the secondary level, Baker, Robinson, and Kolb (2012) showed alignment between Kolb’s experiential learning theory and the three-circle agricultural education model. Another study also found that students who were taught through experience-based learning had higher creativity and practical scores than those taught through direct instruction (Baker & Robinson, 2016). Adult learning theorists, Knowles, Holton, and Swanson (2011), indicated that adult learners, like the college-level students in this study, prefer to learn information that is relevant to their situation, and prefer to learn through hands-on activities. This was corroborated by Lamm et al. (2011) in a study of learning styles of college-aged adults in an international experiential learning context focused on agricultural sustainability.

**Purpose and Objectives**

The purpose of this study was to explore impacts of a behavioral style learning unit on team project success. The research objectives that guided this study were to (a) explore students’ preflections and reflections for the self-perceived impact of the behavioral style learning unit on their team’s capstone project and (b) explore instructor observations of team dynamics.

According to the 2016-2020 American Association for Agricultural Education’s National Research Agenda, Research Priority 3 targets a sufficient scientific and professional workforce that addresses the challenges of the 21st century, and Research Priority 4 is concerned with meaningful, engaged learning in all environments (Roberts et al., 2016). Our study aligns with these two priorities. Our study examines needed competencies for an agriculture and natural resource workforce; effective methods, models, and programs in preparing people to work in a global agriculture and natural resource workforce; and how we can make project-based learning more relevant and contemporary in agriculture and natural resources (Roberts et al., 2016).

**Methods**

Qualitative and simple quantitative methods were used to guide this study. Qualitative content analysis methods were used to examine the preflections and reflections of the students in this study and instructor observations. Participants were purposefully selected (Merriam, 2009) based on their enrollment in [Course]. There were two researchers, including the course instructor and the DISC practitioner, who is a faculty member in a different department in the college that provided an impartial perspective of the students’ behaviors.

Each student completed a DISC Behavioral Style Assessment in the first week of the course. Table 1 shows the behavioral profiles for each student in the context of their self-selected teams.

|  |  |  |
| --- | --- | --- |
| Table 1  *Team Assignments and Team Member Behavioral Profiles* | | |
| Team | | Behavioral Profile |
| Team 1 | |  |
| S1 | ISCD |
| S5 | CSDI |
| S6 | DICS |
| Team 2 | |  |
| S2 | SICD |
| S4 | CISD |
| S8 | CSID |
| S11 | SCDI |
| Team 3 | |  |
| S10 | CSDI |
| S13 | SICD |
| S15 | IDSC |
| Team 4 | |  |
| S7 | CSID |
| S9 | CSID |
| S12 | ISDC |
| Team 5 | |  |
| S3 | ISCD |
| S14 | ISCD |
|  | | |

Students then participated in a lecture that interpreted their results and presented information as to how behavioral styles interact with one another to create team dynamics. After the lecture, students preflected on the potential impacts of their behavioral styles on team project success by responding to four prompts. The prompts asked students to describe their behavioral style and their personal reaction to the results, describe how they foresaw using the information from their profile and the lecture in their project, consider how their behavioral style could contribute to the success of the project, and consider how they may need to flex their style to promote project success.

After completing the team project, students reflected on their experience by responding to five prompts. The prompts guided students to reflect on how they actually used the information from their profiles and the lecture during their projects; describe which aspects of their profile were most useful in their team efforts; if they had to flex their style, describe how they did so; describe how they foresee using this information in a future career; and provide recommendations for the use of the behavioral style learning unit in future iterations of [Course].

At the end of the course, an end-of-course interview was conducted with the course instructor. The instructor provided insight as to the dynamics of each team. Insights were also gained about the overall project process and expectations.

Since the preflection and reflection prompts were given as course assignments, consent was obtained during the last class period, after all assignments were submitted, so as not to influence their responses. All 15 students who were enrolled in the course gave consent to analyze their responses. Names were redacted from the documents and coded (S1-S15) to ensure confidentiality. [University] IRB approved this study.

The data were analyzed by categorizing student responses into themes (Glaser & Strauss, 1967; Merriam, 2009). Lincoln and Guba’s (1985) standards of trustworthiness were used to establish rigor. Trustworthiness is upheld through credibility, transferability, dependability, and confirmability. Credibility was established by incorporating participant quotes and triangulation, transferability was established by using a purposive sample and thick description, a dependability audit and a reflexive journal were used to ensure dependability and confirmability (Lincoln & Guba, 1985).

**Researchers’ Observation Analyses**

At the end of the course, we conducted an analysis of the students’ peer evaluations in comparison with behavioral style compatibility information found in the DISC training materials (Leadership Resources and Consulting, n.d.). For the peer evaluations, students had to distribute 100 points among all of the members of their team based on contribution. Simple calculations were then conducted to identify the difference between each student’s self-score and the average of their peer’s scores of their performance. Therefore, negative values indicated that individuals overestimated their own contribution to team tasks when compared with the perception of other team members, positive values indicated that individuals underestimated their own contribution relative to the perception of the rest of the team, and a zero indicated that individuals scored their contribution equally to the perception of the rest of the team.

The behavioral style compatability materials show the anticipated work relationships between two individuals based on their primary behavioral style. The relationships are categorized as Requires Work, Requires Effort, or Great Relationship. For example, an S - C pairing is anticipated to have a Great Relationship while an I - I pairing is anticipated to Require Work. We first identified the anticipated style compatibility pairings in each self-selected team (Table 2).

|  |  |  |  |
| --- | --- | --- | --- |
| Table 2    *Anticipated Working Relationships Between Team Members of Each Team* | | | |
| Teams | Great Relationships | Requires Effort | Requires Work |
| Team 1 |  | XXX |  |
| Team 2 | XXXX |  |  |
| Team 3 | XX | X |  |
| Team 4 | X | XX |  |
| Team 5 |  |  | X |
|  | | | |

In a convergent parallel mixed method approach (Creswell, 2014), we analyzed the quantitative calculations and qualitative data separately and then merged the findings to identify relationships, convergence, or divergence in the data. These scores were then used to draw conclusions about the behavioral style dynamics in each team.

**Results**

**Preflection**

Two themes were identified in the preflection responses: (a) perception of the DISC profile assessment and (b) anticipated use of the behavioral style learning unit in the capstone project. Students perceived the DISC profile assessment to be generally accurate. All students indicated that they were generally aware of their behavioral styles as described by the DISC profile assessment (S1-S15). “I agree with just about everything is says about me” (S13). For some, it “reinforced” (S1, S3, S5, S11) or “put into words” (S8) what they already knew about themselves. In the profile assessments there was a section indicating how the individual may be perceived by others when under stress. Some were troubled with their assessment (S1, S3, S5, S9, S15). This was particularly evident when the comments referenced student egos (S15, S3), their emotions (S1, S5, S6), or their assertiveness, or lack, thereof. “The hardest thing for me to read was essentially that I am a doormat….I have been trying so hard in the last year to get better at standing up for myself….I don’t like making people upset or causing unpleasant situations” (S12).

The second theme was students’ anticipated use of the behavioral style learning unit in the capstone project. Students anticipated using the results to create a conducive environment by leveraging and/or accommodating each members’ behavioral styles (S4-S5, S7, S9, S13-S15). Student S15 stated, “With my ability to motivate and inspire urgency, I hope to encourage my team to make consistent and meaningful progress, while also having fun along the way.” Student S14 indicated, “The positivity I bring can keep the mood up when things aren’t exactly going our way and no dream is too big for us to try and achieve." Other comments were about improving communication. For example, knowing about DISC will “give me insight to knowing how to communicate better with [my team members] in order to make better more efficient use of our time and resources” (S13).

Students S9, S4, and S15 also wrote that understanding their behaviors and being able to read the behaviors of others would help in their stakeholder interactions. “It will help when reaching out to prospective decision makers to be able to relate to them to form a good professional relationship” (S9). Student S15 wrote, “In facilitating stakeholder discussion, I will be careful not to manipulate the conversation.”

**Reflection**

Four themes emerged in the student reflections: (a) actual use of the behavior style learning unit in the capstone project, (b) disadvantages of the behavioral style learning unit in a team project, (c) future use of the behavioral style assessment learning unit, and (d) suggestions to improve the behavioral style learning unit. In terms of the actual use of the behavioral style learning unit information, students were able to identify how their behavioral characteristics contributed to the capstone project processes (S1-S15), and found the DISC assessment helped them to understand their own behavioral needs (S1-S15) and flex their style to meet the needs of their team members (S2-S3, S8-S9, S11, S15) as they engaged in their projects. Student S4 wrote, “By strategically using the information from the assessment, I was able to meet certain demands in my personal and work environment for the project.”

The behavioral style learning unit also gave students the tools to create an environment conducive to project success by recognizing efficiencies (S8, S10). Students found that the behavioral style learning unit positively impacted communication with their teammates and stakeholders (S1-S15). “It helped me prepare and adapt to potential situations” (S10). Similarly, they were able to recognize behavioral styles and cues in their teammates and stakeholders (S1, S2, S4, S5, S9, S10, S13, S14) and adjust their message and/or behavior to achieve desired outcomes and positively impact work efficiency (S1, S5, S6, S11, S13-S15).

I was able to analyze [teammates’ and stakeholders’] behavior to understand how to communicate effectively with them. It also helped me to figure out my role in the group and where I could play up my strengths if one of my group members was lacking in that area. (S9)

While the students indicated positive perceptions of their experience with the behavioral style learning unit, they also identified disadvantages. The most frequently mentioned disadvantages had to do with self-analyzing. Students wrote that knowing your behavioral style makes you aware of your weaknesses, and this can lead to using them as a crutch (S1, S7). “If we knew we were not strong in a certain area, we would almost use that ‘weakness’ as an excuse...instead of working on the areas [of the project] that we needed to work on” (S7). Being aware of their weaknesses could also contribute to negative self-analyzing (S12) and lead to altering a personal characteristic that does not need to be changed (S3, S11).

The drawback to knowing my [profile] from the DISC assessment was constant self analyzing and being petrified that my behavior was coming off badly on other people. At first I was just worried about in person interactions, but then I started worrying that my email interactions were too dominant or that my fear of conflict was showing to all the professionals I emailed. (S12)

Students S3, S7, S8, S10, and S14 reflected that the DISC behavioral style profile summary should be “taken with a grain of salt” (S8), noting that the document is a summary, not a rulebook. When referencing their team and stakeholder interactions, students realized that they could incorrectly read people (S9, S14) and that they could use behavioral style as an expectation of team role (S6) instead of a pattern of behavioral norm.

The third theme in the student reflections included how the students believe they will use information from the behavioral style learning unit in a future career. All students (S1-S15) wrote that the experience and information would help them to improve themselves to be successful in a working environment. They indicated it would be a reference tool for understanding others (S9, S13, S15), improving collaboration skills (S7), and would help them better communicate to create a positive working environment (S3-S4, S6-S7, S13).

The students found the behavioral style learning unit valuable and suggested that other students engage in a similar learning experience (S1-S15). They suggested that the experience be offered earlier in students’ academic careers (S8, S15) to “allow me more time to refine my strengths and better my weaknesses before entering the professional work environment” (S8). In terms of process and structure, they wrote that the interpretation lecture given by the DISC practitioner should resemble a workshop with a teamwork focus (S9) and focus on how to deal with behavioral gaps in teams (S5). Lessons from the behavioral style learning unit should also be incorporated and referenced throughout the semester (S1, S12, S13, S15).

For future instructors, I would advise having an assignment in between the first reflection and the last, asking the students to identify as best they can the behavioral profile of their stakeholders. Or at least some sort of assignment to keep the students thinking about the DISC assessment throughout the course of the project. (S13)

The students also suggested the course instructor take the DISC assessment and share his/her experiences in relation to his/her profile with the students so students can understand how DISC is relevant to someone they know in the professional world (S10, S15). Student S4 suggested that instructors use the knowledge of their own DISC profile and the profiles of their students to improve teaching, learning, and general communication in the classroom.

**Instructor Observation Analyses**

Instructor observations revealed team dynamics for each team. Team 1 had good connections with their stakeholders and, because they knew from the behavioral style learning unit that all relationship pairings within the team were in the Requires Effort compatibility category, they put in effort to accomplish their project. The instructor found Team 2 to be the most analytical of the teams and very data driven. It was also noted that they were very critical of each other in the peer evaluations. Team 3 worked well together and were the most conscientious of any team, but were challenged by the structured decision making process that was to guide the project. The instructor also noted that there was some level of tension in Team 3 because the project topic and solution were chosen based on the ideals of one team member, rather than team identification of the topic and a solution based on stakeholder input or other available data types. Team 4 had difficulty deciding on a project topic; this affected their team dynamics, project timeline, and success. Team 5 communicated well with one another, but their project struggled; they both had ISCD profiles. The instructor did note that this situation forced Student S3 to lead Team 5.

Teams where a majority of the relationship pairings were predicted to be in the Great Working Relationships category (Team 2 and Team 3) had individuals that perceived their contributions to team tasks similarly to other team members, with differences in perceived contribution ranging from -3 to 6 points. Teams in which a majority of relationships were predicted to require effort (Team 1 and Team 4) consistently overestimated their own contributions to team tasks compared with other team members’ perceptions, with differences ranging from -2 to -15. Team 5 was excluded from this set of analyses as there were two team members and one student did not return the peer evaluation.

**Conclusions, Implications, and Recommendations**

The overall purpose of this study was to assess the impacts of a behavioral style learning unit on team project success. The study explored preflections and reflections by students on their experience with the behavioral style learning unit and researcher observations of team dynamics. The results align with findings from similar studies with psychological types (Peeters et al., 2006; Varvel et al., 2004) and team-based learning (Bradley & Hebert, 1997; McCubbins et al., 2016; McKenna et al., 2002), further supporting the incorporation of tools to foster soft-skill development in team project situations, thereby improving team dynamics.

The first objective was to explore students’ preflections and reflections for the self-perceived impact of the behavioral style learning unit on their team’s capstone projects. Based on these results, the behavioral style learning unit positively impacted team communications in the capstone projects in [Course]. The team-based learning experience (Dunne & Rawlins, 2000; McCubbins et al., 2016) gave students a venue to experience and experiment with soft skills in a relevant situation (Baker et al., 2012; Knowles et al., 2011; Kolb, 1984; Lamm et al., 2011), meeting a training need for communication skills (Davis & Jayaratne, 2015), part of the 21st century skills that employers in agriculture and natural resources desire in their workforce (Crawford et al., 2011; Sample et al., 2015).

It is recommended that a behavioral style learning unit, or a similar psychological type unit, be integrated into courses where teamwork is the learning methods and the development of soft skills is a student learning outcome. Similar to the findings of Varvel et al. (2004) and Peeters et al. (2006), this study finds that behavioral style cannot predict team effectiveness, but it does foster the development of soft-skills. In terms of process, it is recommended that, after the initial lecture, the content be threaded throughout the course. While Kolb (1984) places reflection after the experience in the theory of experiential learning, the students in this study suggested that periodic reflection points throughout the semester would be beneficial to keep the information current in their minds.

The second objective was to explore instructor observations of team dynamics. The instructor observed that teams with a majority of relationship pairings in the Great Working Relationships category on the relationship compatibility table had more accurate self-perceptions of their contribution in relation to their peers’ perceptions of their contribution. This may be an indication that these teams had increased communication and understanding as to individual expectations and follow-through. Teams with a majority of relationship pairings in the Requires Effort category all overestimated their contribution in relation to their peers’ perceptions of their contributions. This may be an indication of dysfunctional team dynamics, specifically communication and clear team expectations, as each individual felt they contributed more to the project than perceived by their peers.

Previous studies found that teams comprised of diverse psychological types were more effective (Neuman, Wagner, & Christiansen, 1999; Peeters et al., 2006). This study demonstrates that team effectiveness can also be related to team member relationship compatibility rather than individual differences. This finding has implications for team development and management, especially when there are team dysfunctions that must be addressed by the instructor.

Varvel et al. (2004) found (a) short trainings improved team communication, interdependence and overall attitude, and (b) teams who knew their team members’ psychological type had more “effective communication, trust, and interdependency” (p. 146). The findings from this study are in agreement and in contrast to these findings. The students found that—with the addition of recurring reflection points—the behavioral style learning unit was a positive experience that improved their team communications, but when assessed in conjunction with the instructor observations, there is room for improvement. There were two teams with functional dynamics and there were three teams with dysfunctional dynamics. It is recommended that more time be taken throughout team-based learning experiences to relate the content from the behavioral style learning unit to team-specific situations because team dynamics contribute to the desire to learn, peer motivation, critical thinking, and communication (McCubbins et al., 2016).

The 21st century is a time in which employers from various fields are seeking to hire employees with both hard and soft skills. However, soft skills take time to develop and are largely acquired through experiences that may not be provided by higher education. Universities are poised to deliver such experiential opportunities to students of the 21st century. This study demonstrates successes and provides suggestions to address the need for students in the natural sciences to gain experience in developing soft skills through the deliberate incorporation of a behavioral style learning unit in a capstone course project.

**References**

Baker, M. A., & Robinson, J. S. (2016). The effects of Kolb’s experiential learning model on successful intelligence in secondary agriculture students. *Journal of Agricultural Education, 57*(3), 129-144. doi:10.5032/jae.2016.03129

Baker, M. A., Robinson, J. S., & Kolb, D. A. (2012). Aligning Kolb’s experiential learning theory with a comprehensive agricultural education model. *Journal of Agricultural Education, 53*(4), 1-16. doi:10.5032/jae.2012.04001

Bennett, R. (2002). Employers’ demands for personal transferable skills in graduates: A content analysis of 1000 job advertisements and an associated empirical study. *Journal of Vocational Education and Training, 54*(4), 457-476. doi: 10.1080/13636820200200209

Bonnstetter, B. J., & Suiter, J. I. (2011). *The universal language DISC: A reference manual*. Scottsdale, AZ: Target Training International, Ltd.

Bradley, J. H., & Hebert, F. J. (1997). The effect of personality type on team performance. *Journal of Management Development, 16*(5), 337-353.

Clem, C. A., Doerfert, D. L., Akers, C., Burris, S., & Brigham, K. (2014). Expected as a minimum or no longer needed: Examining which employment-ready competencies may no longer be needed in agricultural communications programs. *Proceedings of the Western American Association For Agricultural Education Research Conference*, 279-292. Retrieved fromhttp://aaaeonline.org/Resources/Documents/Western%20Region/WRAAAE%20Proceedings.pdf

Connaughton, K. (2015). Forestry employment trends. *Journal of Forestry*, *113*(6), 571-573. doi: http://dx.doi.org/10.5849/jof.15-036

Conroy, M. J., & Peterson, J. T. (2013). *Decision making in natural resource management: A structured, adaptive approach.* West Sussex, UK: Wiley-Blackwell.

Crawford, P., Lang, S., Fink, W., Dalton, R., & Fielitz, L. (2011). Comparative analysis of soft skills: What is important for new graduates? Association of Public and Land-grant Universities, Washington, DC. Retrieved from https://ag.purdue.edu/oap/career/Documents/2012%20Soft%20Skills%20Survey%202011%20Crawford%20Lang%20Fink%20Dalton%20Fielitz.pdf

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). Thousand Oaks, CA: Sage.

Davis, R. J., & Jayaratne, K. S. U. (2015). In-service training needs of agriculture teachers for preparing them to be effective in the 21st century. *Journal of Agricultural Education, 56*(4), 47-58. doi:10.5032/jae.2015.04047

Dunne, E., & Rawlins, M. (2000). Bridging the gap between industry and higher education: Training academics to promote student teamwork. *Innovations in Education and Training International, 37*(4), 361-371. doi:10.1080/135580000750052973

Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory*. Chicago, IL: Aldine.Jones, L. K. (1996). *Job skills for the 21st century. A guide for students.* Phoenix, AZ: Oryx Press.

Hart Research Associates. (2015). *Falling short? College learning and career success*. Retrieved from Association of American Colleges & Universities, Employer Survey & Economic Trend Research website: https://www.aacu.org/sites/default/files/files/LEAP/2015employerstudentsurvey.pdf

Hauhart, R. C., & Grahe, J. E. (2015). Characteristics of the capstone course. In *Designing and Teaching Undergraduate Capstone Courses* (pp. 39-59). San Francisco, CA: Jossey-Bass.

Jones, L., & Bjelland, D. (2004). International experiential learning in agriculture. *Proceedings of the 20th Annual Conference, Association for International Agricultural and Extension Education, Dublin, Ireland,* 963-964. Retrieved from http://www.aiaee.org/2004 /Carousels/jones-carousel-NEW.pdf

Knowles, M. S., Holton, E. F., & Swanson, R. A. (2011). *The adult learner: The definitive classic in adult education and human resource development* (7th ed.). Burlington, MA: Elsevier.

Kolb, D. A. (1984). *Experiential Learning*. Englewood Cliffs, NJ: Prentice-Hall.

Lamm, A. J., Cannon, K. J., Roberts, T. G., Irani, T. A., Unruh Snyder, L. J., Brendemuhl, J., & Rodriguez, M. T. (2011). *An exploration of reflection: Expression of learning style in an international experiential learning context, 52*(3), 122-135. doi:10.5032/jae.2011.03122

Lamm, K. W., Carter, H. S., & Melendez, M. W. (2014). Investigating the linkage between intrinsic motivation and project team satisfaction in undergraduate agricultural leadership students. *Journal of Agricultural Education, 55*(3), 103-115. doi:10.5032/jae.2014.03103

Leadership Resources and Consulting. (n.d.). *Style compatibility*. Unpublished training material.

Lincoln, Y., & Guba, E. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.

McCubbins, OP, Paulsen, T. H., & Anderson, R. G. (2016). Student perceptions concerning their experience in a flipped undergraduate capstone course. *Journal of Agricultural Education, 57*(3), 70-86. doi:10.5032/jae.2016.03070

McKenna, M. K., Shelton, C. D., & Darling, J. R. (2002). The impact of behavioral style assessment on organizational effectiveness: a call for action. *Leadership & Organization Development Journal*, *23*(6), 314-322.

Merriam, S. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.

National Research Council. (2012). *Education for life and work: Developing transferable knowledge and skills in the 21st century*. Washington, DC: The National Academy Press.

Neuman, G. A., Wagner, S. H., & Christiansen, N. D. (1999). The relationship between work-team personality composition and the job performance of teams. *Group & Organization Management*, *24*(1), 28-45. doi:10.1177/1059601199241003

Peeters, M. A. G., van Tuijl, H. F. J. M., Rutte, C. G., & Reymen I. M. M. J. (2006). Personality and team performance: A meta-analysis. *European Journal of Personality, 20*, 377-396. doi:10.1002/per.588

Sample, V. A., Bixler, R. P., McDonough, M. H., Bullard, S. H., & Snieckus, M. M. (2015). The promise and performance of forestry education in the United States: Results of a survey of forestry employers, graduates, and educators. *Journal of Forestry*, *113*(6), 528-537. doi:http://dx.doi.org/10.5849/jof.14-122

Roberts, T. G., Harder, A., & Brashears, M. T. (Eds). (2016). American Association for Agricultural Education national research agenda: 2016-2020. Gainesville, FL: Department of Agricultural Education and Communication.

Target Training International, Ltd. (2012). *Behaviors technical report* (Report No. 052813). Retrieved from https://static1.squarespace.com/static/54ac5d10e4b0c9d38e230193/t/562faba7e4b0aaa589cd8b00/1445964711304/tech\_report\_tti\_behaviors.pdf

Varvel, T., Adams, S. G., Pridie, S. J., & Ulloa, B. C. R. (2004). Team effectiveness and individual Myers-Briggs personality dimensions. *Journal of Management in Engineering, 20*(4), 141-146. doi:10.1061/(ASCE)0742-597X(2004)20:4(141)