

Steering through Turbulent Waters While Developing a Community of Practice: Struggles in an Undergraduate Agricultural Leadership Course Based on Service-learning



Cary J. Trexler
Assistant Professor

Amanda C. Saunders
Research Assistant

School of Education/Agriculture
University of California
Davis, CA 95616

Abstract

This study explores teaching practices to share insights with others who may struggle when developing communities of practice. Communities of practice develop as people engage in shared, purposeful, and patterned activities, which contribute learning. This qualitative study a classroom ethnography chronicles the teaching of an undergraduate agricultural leadership course based on service-learning. Learners participating in the community of practice struggled through interpersonal conflicts among themselves and with their teachers. During the early stages of the service-learning project, antagonism and distrust inhibited learning. The teacher/researchers found Tuckman's (1965) theory of small-group development helped "make sense" of what students experienced and provided a heuristic for adjusting teaching pedagogy to steer learners through the process. Written and oral reflection and active learning groups enhanced student learning. Understanding that communities of practice struggle through predictable developmental stages can aid teachers and learners as they make sense of interpersonal conflict on the road to forming successful groups. Researchers found service-learning to be a viable context for leadership education and helped students apply theory to practice while concomitantly motivating them to learn. Because undergraduate leadership education is challenged by a new paradigm, service-learning, well-planned reflective practices, and an understanding of Tuckman's group developmental stages may help educators shepherd communities of practice to meet the ideals of this new paradigm.

Introduction

Relating abstract theory to workplace situations has been one of the greatest difficulties when teach-

ing university level courses (Olien & Harper, 1994). In addition to relating, part of the learning process has included helping students experience workplace roles and situations, including teamwork and leadership (Fritz & Foster, 1992; Olien & Harper, 1994). Over the years leadership theories (Bass & Avolio, 1994; Daft, 1999) have shifted to a focus on group process and motivation. Townsend and Throp (1997), however, have argued that current university level leadership education has not shifted to this new paradigm.

To meet this new paradigm, Townsend and Throp (1997) and Bruck (1997) called for the teaching of leadership theory and the use of simulations to help students grasp the abstract concepts of leadership and teamwork. Along a similar vein, Conger (1992) suggested that to provide high quality and efficient leadership development programs in higher education, subject matter should include four components: (a) personal assessment of skill competencies; (b) presentation and comprehension of concepts and theories; (c) skill-building simulations; and (d) feedback, or reflection on the previous three components. Critics have argued that Conger's "ideal" scenario would fail in university settings because: (a) reliance on traditional didactic modes of instruction inhibit students from connecting course content to workplace problems (Conger, 1992); (b) the individualized nature of traditional classrooms pits students against one another and inhibits social interaction (Johnson, Johnson, & Smith, 1991); and (c) the decontextualized presentation of theory hinders students from developing accurate schema through reflection (Brookfield, 1995). Based on a review of the literature, we believed that learning leadership theory void of a meaningful context limited the learner's ability to construct meaning. In other words, we agreed with Conger's call for reflec-

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tion, but disagreed that simulations were the most fruitful place in which to situate learning.

With this in mind, we sought to teach a junior-level undergraduate leadership course that would engage students in problem-oriented situations where learners could put their existing knowledge about leading into practice. The situated-learning model (Greeno, 1989; Brown, Collins & Duguid, 1989) was used as the theoretical frame for the course. This model hinges on the theory that learning and cognition must take into account the social interaction and physical activity in which learners engage. A central component of this theory was the notion of a “community of practice” in which people participated in shared, purposeful, and patterned learning (Lave & Wenger, 1991). In their ethnographic studies of communities of practice, Lave and Wenger found that learners co-constructed the meaning of their work through cooperative activities. Consequentially, learning, it can be argued, is enhanced through increased participation in communal experiences and essentially became a function of practice.

Considering the notion that learning can be enhanced through shared purposeful activity, an agricultural leadership course was designed that featured cooperation among learners and engagement in activities that benefited others. We believed as do Townsend and Thorp (1997), Bruck (1997), and Conger (1992) that teaching the new paradigm of leadership required theory, personality self-assessment, and reflection, but also included another component—application—that required instructors to situate learning in real-world contexts.

In this case, the service-learning (SL) model provided a real-world context for learning. O’Connell (1990) defined SL as the “combination of the performance of a useful service for society and the disciplined interpretation of that experience for an increase in knowledge and an understanding of one’s self” (p. 594). Fritz and Brown (1998) pointed out that an experiential component provided personal experiences that students could use to attune their conceptual understanding of leadership. In addition, Kunin, (1997) argued that SL helped teachers by “rekindling students’ interests” (p.150), whereas Whittington and Newcomb (1992) suggested that if students’ interests were reawakened, their interest could be sparked and their cognition increased.

This study’s theoretical framework was based on the idea that knowledge of interest to practitioners (architects, medical doctors, psychologists, planners, and in this case teachers) was often generated through a “kind of knowing inherent in intelligent practice” (Schon, 1983, p. 50). Schon has referred to this type of knowledge as coming from an epistemology of practice. A key element to this type of knowl-

edge production is practitioner reflection on everyday practice. In the education field, Mundy and Russell (1994) have brought this epistemology, sometimes referred to as reflective inquiry, to the fore and suggested that practical experience was a significant form and source of knowledge in the learning to teach process. Cole and Knowles (2000, p. 2) defined reflective inquiry as “...an ongoing process of examining and refining practice, variously focused in the personal, pedagogical, curricular, intellectual, societal, and/or ethical contexts associated with professional work, perhaps, but not necessarily, from a critical perspective. Unpinning all such reflective practice is the idea that assumptions behind all practice are subject to questioning.”

Context of the Study

This study described an assistant professor’s and teaching assistant’s first attempt at teaching an upper-level undergraduate agricultural leadership course. The course was based on the premises that learning must be contextualized and occurs within communities of practice. With these premises in mind, three goals were outlined in the course syllabus: (1) The course’s culminating outcome was to acquire understandings and skills necessary for effective leadership and group participation; (2) the SL project would serve to provide a context for learning leadership concepts, skills, and theories; and (3) the SL project’s goal was to surround the College of Agriculture’s administration building [the building in which the course was taught] with thousands of donated flower bulbs (tulips, crocus, daffodils, etc.)

As students engaged in the SL project, interpersonal conflict among themselves and between the instructors arose. During the early stages of the SL project, we felt this antagonism and distrust-inhibited student learning and sought to understand what was taking place in these groups. Tuckman’s (1965) theory of small group development was a fruitful heuristic to “make sense” of what the students were experiencing. Tuckman concluded that small groups go through predictable, sequential stages as they develop and carry out tasks. He labeled these developmental stages as: (a) Forming, (b) Storming, (c) Norming, and (d) Performing. After several years of application, Tuckman and Jensen (1977) modified the theory by adding a fifth stage—Adjourning.

Tuckman (1965) found that initial group behavior was characterized in the Forming stage by individual testing of what was acceptable; this takes place on both an interpersonal level among members and with the leader(s). In this stage, individual dependence on the leader or some other powerful group member is high. In the second stage—Storming—inter-group conflict is the most

notable characteristic. Members become hostile toward one another and the leader as they express their individuality and resistance to group formation. In the third stage, Norming, the group overcomes resistance and moves onto cohesiveness “as new standards evolve and new roles are adopted” (Tuckman, p. 396). In addition, group members were more comfortable with peers and expressed their personal opinions more readily. Performance characterizes the fourth stage, Performing. Group members in this stage actively complete or solve tasks; individuals adapt to the interpersonal structure created by the group, roles become more functional, and group energy increases and focuses on meeting the goal. In the final stage, Adjourning, members become aware of the group's demise and experience sadness and remorse, and sometimes find it difficult to disengage from task behaviors.

This above theory of group development has been well accepted in psychological circles and applied by educators in leadership development courses (Carter, 2001; Trexler, 1999). These stages hold promise for helping teacher-practitioners understand the struggles that may occur as communities of practice develop within classrooms based cooperative groups and/or SL.

Purpose and Objectives

The purpose of this classroom ethnographic study was to critically reflect on the teaching/learning process and share insights with other practitioners who teach university-level agricultural leadership courses, specifically:

1. To describe how involvement in a SL project influenced the development of a community of practice;
2. To document pedagogical practices that the teacher/researcher used to promote the development of a community of practice; and
3. To evaluate the effectiveness of reflective practices in helping students link the SL project to leadership theory.

Methods

This study employed classroom ethnographic techniques. Hammersley (1990) suggested that the goal of classroom ethnography is to bring forth “patterns of intention and motivation which produced it” (p. 100). To form such an interpretation, data were gathered following Lensmire's (1994) strategies for classroom ethnography. Three specific pieces of his design were incorporated in this study: (1) field notes composed of narratives of the day's teaching as well as students' and teachers' reflections on specific pedagogical and methodological problems and issues, and (2) teacher and classroom documents including lesson plans, lists of rules and procedures,

and forms (Burton, 1985 as cited in Lensmire, 1994); and (3) student-produced writing and project artifacts such as brochures, intra-university memos, press releases, project designs, and reflective essays. Data were used as benchmarks and as indicators of progress.

The case study's population consisted of 28 undergraduate College of Agriculture students enrolled in a three-credit, semester-long leadership course. The students were juniors and seniors from a variety of majors: agricultural education, agricultural studies (the course was required for this major), agricultural communications, agronomy, and animal science. The students were predominantly male, with 19 males and seven females. All students were Northern European-American, and most were from rural communities.

Analysis involved teacher/researcher and student reflections on the course in a continuous process of accommodation to scaffold learning. Learning is often thought of as a process of assimilating new information into existing mental frameworks, or as the accommodation of new information into revised mental framework, through a process of reconstruction. In this context, scaffolding can be thought of as the supports teachers provided students to construct progressively higher levels of personal meaning from the SL experience, interpersonal interactions (student-student, teacher-student), daily events, student written assignment, etc.) Brookfield (1995) has suggested that educators and students alike needed to reflect on their actions to make sense of their experiences. Following each class, we immediately analyzed the day's events based on field notes and recollections.

At debriefings, discussions focused on (a) what we expected to happen during a particular class session and (b) selected student reflective writings that focused on their reactions, interpretations, and understandings of class events. This multifaceted approach triangulated the findings and conclusions of the study. Triangulation involves cross-checking data and interpretations by drawing on different data sources, methods, and perspectives. By triangulating findings and conclusions, we sought to assure the rigor, worth, and trustworthiness of the study's findings and conclusions (Borman, LeCompte & Goetz, 1986; Eisner, 1981; Patton, 1990; Woods & Trexler, 2001).

Because students were unaccustomed to reflective thinking (Williams & Driscoll, 1997), step-by-step reflective prompts were provided that queried students about their involvement, feelings, and engagement in the SL project. The writing prompts served to guide the students' reflections as they independently struggled to make sense of what was happening in class. Students handed in their

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responses without signing them. We hoped this anonymity would reduce student apprehension of expressing thoughts and concerns. As these documents were analyzed, patterns and trends emerged that allowed for accommodation of the course and the SL project to the students' learning and group developmental needs. Following each reflective assignment, each student received a verbatim typed copy of the class's reflections. Next, teachers and students jointly analyzed the group's responses to determined patterns and trends within reflective statements.

As a result of this process, the class cooperatively worked to adjust the SL project. For example, by discussing and analyzing individual student reflective writings class members found that groups were not communicating effectively, and as a result, asked for daily class time for group progress updates which served to unify the groups. In addition, this process aided the teachers in reevaluating efforts to scaffold (provide a structure for) student learning and served as a means to check the trustworthiness ("validity") of interpretations. In other words, we externally verified data and checked to see if our interpretations were plausible. Further, this process assisted learners in identifying their progress in traversing group developmental stages.

Additional data like papers and papers, interviews were analyzed by coding the results based on the Tuckman and Jensen (1977) theory. Conclusions and interpretations were checked for confirmability and credibility (Guba & Lincoln, 1989) through peer debriefings in the form of a departmental academic seminar and student member-checks. Member checks were conducted by presenting researcher interpretations of events to students for confirmation. Students anonymously commented on these interpretations through reflective writing.

Based on the SL project's goal of building beautification, the learners placed themselves in small groups ranging in size from three to eight, where they outlined individual responsibilities for their respective groups. These responsibilities were shared with the entire class through small group presentations of action plans.

Students reflected on these activities through writing assignments on topics such as defining leadership, interviewing leaders about their perceptions of power and authority, studying the leadership characteristics and styles of past leaders, reflecting on their personality inventories, and comparing compulsory groups to volunteer groups. The students also participated in oral reflection through in-class small and whole group discussions.

Findings

In this section, using the Tuckman and Jensen



Figure 1
Through writing in reflective essays, students diagnosed a communication gap among their work groups and began daily briefings. Students in this photo report to their peers their landscape plan for beautifying the College of Agriculture's administration building.

(1977) model, the stages of group development are described. Next, the events that unfolded during the course, and how students and teachers reacted to them as the community of practice formed, are described. Interspersed in the chronicling of events are our interpretations as teacher/researchers.

Forming

In this agricultural leadership course, the first days were used to introduce the learners to course goals and to the SL project. After the presentation of the project, students were asked to consider the following:

- How were they going to accomplish the goal?
- Who were the important people to contact?
- Who would do the contacting?
- How would they organize themselves to accomplish the goal?

As a result of this probing, the students "kind of split themselves up pertaining to what they wanted to do and what they were good at" (student interview, Dec. 4). The students divided into groups of four to six students.

Observations made by the researchers of the groups at this time highlighted their immediate and uncoordinated attempt to accomplish their perception of the task.

They sat in their usual small groups and worked independently and hastily towards finding an immediate solution to a very large-scale problem. One group went to the campus administration building information desk to find out where to go. A second group felt they were already connected [to the right people on campus] and headed straight for the phones. A third group went to look at the existing landscaping and came back with an approach to planting and landscaping the assumed area. A fourth group wandered around the building looking for an appropriate planting site... A fifth group stayed in class to find a bulb seller located within the commu-

nity (field notes, Nov. 8).

At this time, not all students reacted positively to these activities; one student stated that what he liked least about the class was: “the way time is wasted and the way the teachers feel the students have all the time in the world to work on this class... instead of teaching a class on leadership, and showing what it is, we are supposed to do it on our own” (student reflective writing, Sept. 24).

Acknowledging this frustration, we were also excited that students realized their responsibility to “do” leadership. Following this initial thrust into the project, the students returned to the classroom and began to share their conceptualization of the project. However, students quickly realized that each group had different interpretations of the tasks at hand. The result of varied interpretations led to the storming stage.

Storming

During this stage, students competed with one another, and their ideas conflicted. They had various ideas of what needed to be done and/or what was happening with the project. These different approaches created a high level of storming among the class members. Part of their frustration concerned the level of participation of their peers. Students suggested that teachers should take responsibility or leadership for involving less active class members. One student said, “for those who are not very involved, you [the teachers] could find out what they are interested in and then delegate a job to them. This would force them to get involved and do something...” (student reflection, Sept. 29).

Instead of taking charge of the student learning experience, we the teacher tried to heed the insight of other students who called for more communication. A comment emblematic of some students' thinking was, “We can make progress by talking to other groups and taking action” (student reflective writing, Oct. 4). Following the advice of students, we provided opportunities for class members to voice their concern. Many expressed anxiety about the scope of the project. “I think this project is too big, it will not get done...” (field notes, Sept. 22). In addition, students were doubtful that university administrators would authorize the project (field notes, Sept. 14). The myriad of concerns and viewpoints created an environment of fear and rebellion among the students, both with each other and with us, the teachers.

Learners' skepticism about the successful completion of the project caused a minor rebellion to occur when the principal instructor was gone and the secondary instructor was in charge. On his return, the following events occurred:

The students [had] changed the vision of thousands of bulbs to hundreds of bulbs. The principal



Figure 2
During the storming phase of the service-learning project, students became frustrated with the instructors and their peers as they expressed their individually and resisted group formation.

instructor told the students they weren't visionary enough. They responded by saying that the project was overwhelming and that it was presumptuous to ask the community for help in getting thousands of bulbs. He shook his head no. The students responded with eye rolling and talk amongst their small groups about how unreasonable and unrealistic the teacher was being (field notes, Sept. 17).

A few days after this confrontation, the university landscape architect visited the class and shared her expertise about landscape design, bulb numbers needed for the scope of the project (which supported the estimate of the primary instructor), and how to get university administration approval. The landscape architect suggested sequential steps to the students to complete the project. A student reported, “I think that things are starting to flow a lot better now.... Before everyone had a negative outlook on the project, now the class's heads are starting to come up” (student reflective writing, Oct. 15).

Another student noted, “I feel that we have made good progress... although we need to take action. We need to get things lined up bulbs, tools, transportation, scheduling, donations, etc.” (student reflective writing, Oct. 4). The groups became more focused and efficient as they directed their efforts. As the students' “heads started to come up,” some of them started to move into the Norming stage.

Norming

The transition from group members' independence to dependence furthered the development of a community of practice. As participants recognized the abilities of others and the benefits of working together, they began to establish rules for the group and requirements of each other. While most students stormed, two women moved into the Norming stage and took the reins of leadership by creating an informational brochure and letter describing the project. To gain approval of the class, the emerging leaders gave each student a brochure and the letter to

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revise. Following the large-group editing process, final copies were printed, and with these materials in hand, the university communications group began to solicit approval and funding. As word of approval came in from deans and university administrators, communication group members shared these with class members. Of note, the efforts of two students sparked the belief that the project was attainable (teacher's reflection, Oct. 6) and pushed many of their peers to set norms for the group.

Seeing the possibility of the project coming to fruition, the students re-formed their groups' identities and responsibilities according to their personal interests and experiences. After the groups re-formed, students developed action plans to meet revised goals. One student commented, "At first I was a little skeptical, because I wasn't sure how everything was going to work or fall into place, but now things are going good. It seems each group is actively getting this [the SL project] under way" (student reflective writing, Oct. 15).



Figure 3
The design group members led the planting of the thousands of herbaceous perennial flowers. Here one of the leaders figures the appropriate spacing for bulb planting.

distributed more.... Some people are getting overloaded with work" (student reflective writing, Oct. 15).

Students also commented on their classmates' lack of responsibility and understanding of the project: "We (as a class) have segmented into two groups I believe. People who are really excited about the idea but aren't facing some of the key issues; instead they are focusing more on the issues such as permission, recognition, brochures, etc. and the other group is more concerned with time frame, logistics, such as are we going to have what we need and how exactly is this going to get done" (student reflective writing, Oct. 15).

To ease these concerns, we allotted daily portions of class time and whole class periods to student discussion and continued to use reflective questioning to solicit information and feedback. Communication between small groups and individual students catalyzed students to "dig in and get things done" (student reflective writing, Oct. 15). These

conversations established norms that organized the groups for the Performing stage.

Performing

Interdependence between members and groups began in the Performing stage. Students adjusted to meet group needs to achieve the shared goal. As selected students assumed responsibilities, progress toward the goal became apparent. A student observed, "The project started moving along because some of the group members started taking responsibility. This is one of the main ways the group has changed. Different members are starting to take responsible roles in achieving the project's end" (student reflective writing, Oct. 15).

The SL project afforded students opportunities to learn in many different situations. For example, students with strong oral communication skills met with campus administrators to convey the purpose of the project and to garner support, while students with a particular interest in crop science were drawn to landscape design and planting. Students continued, however, to voice concern over their classmates' lack of involvement. One learner shared this insight: "I think everyone is involved, some less than others. The result is, some people are pulling more than their share of the weight" (student reflective writing, Oct. 29). Recognizing this, we asked the learners to discuss and reflect on what could be done to overcome this inequality (field notes, Oct. 20). One student responded:

"I feel that everyone is involved. Some people want to do more of the grunt work outside, while



Figure 4
Class members, after gaining approval from the universities administration and landscape department, raised over \$3,500 in a month and planted thousands of bulbs to complete the service aspect of the project. Throughout the experience students reflected on and analyzed the project, thereby connecting practice to theory.

others may want to do the stuff involved within the class. If you [the instructors] feel that someone is not doing their full potential I think you should try to help them out by either finding something for them to do or help them get started and work with them until they can get a grasp on the job or task they are to do. Right now some of [my] classmates aren't doing

much, but maybe they are waiting for more of the grunt or manual labor” (student reflective writing, Oct. 20).

Taking comments like this into account, we began to work specifically with those students who seemed to be not fully participating. Even with this “help,” not all students meaningfully engaged in the project (teacher reflection, Oct. 25). Although this concern lingered, the outcome of the students' efforts was a two-day planting experience. Students led themselves in planting 8,500+ bulbs purchased with \$3,500 donated by university administrators, community businesses, and university employees as a result of their fund-raising campaign.

Planting the bulbs was “a capstone rather than an introductory team building [activity]. It was more effective because students knew each other in a very different light. Yet, they understood and were comfortable, to a certain extent, with each other and their roles. They had a vested interest in the project whether it was for grades, personal satisfaction, or because they had worked so hard to make it come to fruition” (field notes, Nov. 11).

The students were excited about their successful experience and breathed a sigh of relief in accomplishing an enormous task. Following the planting, the adjourning process began.

Adjourning

Groups entered the Adjourning stage as they terminated task behaviors and began to disengage from relationships. The planting day's primary adjournment was a visit by the students to a local bar. By chance, the planting occurred on Thursday and Friday. Thursday was historically the day “ag” majors on campus met at “Hunkies.” Class leaders, seizing on the opportunity, organized their peers and made arrangements for some to arrive early to reserve a group of tables for a celebration. Students reported that they met for “a drink” and that the main topic of discussion was the SL project and what they had learned (student reflection essay, Dec. 1).

Final formal adjournments were made through a thank you/congratulatory letter from the primary teacher to the students and a class party at his house. Thus, following true to the Adjourning stage the students “closed with a little party and a little sadness” (student reflection essay, Dec. 1). At that point, while students were excited about accomplishing their goal, many were somewhat disengaged from the course. After the physical labor was complete, a feeling of “what do we do now?” (student reflection essay, Dec. 1) was felt by many.

In response to the question: “What do we do now?” The final days of the course were spent in analyzing the SL project. Each day students were randomly grouped and then assigned a Tuckman and Jensen (1977) stage of group development. Students

were instructed to analyze what happened in the stage, who the leader was during each event in the stage, and what leadership style was used by the leader in specific situations found in the SL project. A student commented that this “tied everything together” (field notes, Dec. 6).

Through specific guided reflections, students evaluated what they had experienced and then cognitively related personal experience to leadership theories (Merriam & Clark, 1991). Reflection, however, was not a high point for all students. One student leader, a very down-to-earth, practical, aspiring farmer, reported his analysis of being a leader:

“It is natural leaders step up. Some talk more to make a point, and others lead through example... they shine through projects. [And that] this class is 75% analysis of feelings. The project could've been done in half the time if they [the instructors] would have cut through the B...S... and got things done rather than this analysis” (student reflective essay Dec. 6).

Nevertheless, all the literature reviewed on teaching leadership (Brookfield, 1995; Kunitz, 1997; O'Connell, 1990; Williams & Driscoll, 1997) strongly encouraged us to engage students in critical reflections on and analysis of their experiences. We also believed these reflective activities helped the learners link practice to theory. Student essays were increasingly insightful and they were able to link the theory of group development to their own experience.

To share our interpretations and feelings of what happened during the SL project with the class, we created a slide show that chronicled the class's movement through Tuckman and Jensen's (1977) stages of group development. The slide show served as: (1) the final act of adjournment for the class, (2) another way to help students reflect, and (3) a member check on our (the teacher/researcher's) interpretation of course events. Following the presentation, students responded with their impressions. This student's comments represented her classmates:

“I believe that this study or the information presented was accurate. I think it should be emphasized that you can learn basic skills at a job, but something like this project gives you skills that you will remember for a long time. These skills aren't something that you have to struggle to remember; they just stick” (student reflection, Oct. 6).

Learners also reflected on the course and their experiences through two short essays on the impact of and their involvement in the SL project. These final reflections concluded their involvement in the course and “helped to explain why we [the students] did the project and tie [d] things together well” (student reflection, Dec.8).

Conclusions/Implications

Based on the Schon's (1983) theory of an epistemology of practice, we draw four conclusions from our reflection on and analysis of this SL-based agricultural leadership course. First, Tuckman and Jensen's (1977) theory was a viable heuristic to account for the struggles our students faced in the process of group development. We found that it took much time to help students understand that interpersonal conflict typically arises as the individual bows to the will of the group and that well-timed reflective questioning and a process of scaffolding discussions helped them analyze events and understand the process. This process, however, required us to pare back some of the course content. Second, students' fear of not completing the SL was a motivating stressor that both impeded and catalyzed learning.

We now believe SL projects must be large enough to seem almost insurmountable to the students, but manageable enough to be completed. This is critical, because it insures that high levels of learner engagement and participation can be achieved by requiring a variety of tasks to complete the SL project. Third, learner interest and engagement in a SL project was sustained because of the project's focus on contexts and tasks that were familiar. Many of our agricultural leadership students were familiar with planting and growing crops; thus, they worked on bulb layout and organized materials for planting. Others were more comfortable publishing and designing informational literature and involved themselves in that way. Because students contributed based on their strengths and interests, they refined development of those skills, while other students may not have gained as much from the experience. Finally, reflective analysis served as both a catalyst and a learning tool. Although learners voiced much frustration with this process, they were also awakened to learning as they reflected in essays and discussions.

Implications from this study are directly related to the implementation of learning theory and classroom practice. Theorists argue that significant learning occurs when people engage in cooperative activities and communicate about issues that are important to them (Johnson, Johnson & Smith, 1991; Lave & Wegner, 1991). However, the process of learning in groups can be a rocky experience for both learners and teachers, no matter how interested they are in the topic at hand. Nevertheless, understanding that all learning communities struggle through predictable developmental stages can aid teachers and learners as they make sense of interpersonal relationships and their individual roles within the process. Furthermore, recognizing that these stages exist allows educators to facilitate the process through reflection, group sharing, and heightened

communication efforts. Because undergraduate agricultural leadership education is challenged by a new paradigm focused on group process and motivation, service-learning, well-planned reflective practices that focus on critically evaluating the service learning experience, and an understanding of Tuckman and Jensen's (1977) group developmental stages can help educators create and guide communities of practice to meet the ideals of this new paradigm and enhance student learning.

On a personal level, we believe reflective inquiry helped us improve our teaching practice and will enhance student learning in the future. As a result of this process, the next time we teach this course we plan to explain the tenets of experiential learning to our students. By doing so, we hope to make our teaching practices more transparent and help students understand the need for reflection and analysis, and for our heavy reliance on writing and discussion to draw meaning from often confusing events that occur in communities of practice.

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