

An Examination of a Graduate Learning Community in a College of Agriculture

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Abstract

Graduate learning communities have the potential to assist graduate students in integrating both academically and socially into their graduate programs through curricular and extracurricular activities. At Texas A&M University, a graduate learning community was created in the College of Agriculture and Life Sciences to help diverse graduate students integrate into their graduate program. This study sought to describe experiences of this first-year graduate learning community in a college of agriculture focused on retention of graduate students, successful integration into graduate school and leadership and research skills. Interviews were conducted with eight graduate students who completed one year of a graduate learning community to gain an understanding of what students gained from their experience. Graduate students described the learning community through two themes: most meaningful experiences and least meaningful experiences. Regarding suggestions for enhancement for future students, themes of structure/content and social interaction were found. Students reported social interactions were one of the most meaningful components of the learning community, but more social interaction was a recommendation for future learning communities.

Introduction

An average of less than 60% of students who start a PhD complete their program across disciplines, however, life science students tend to have a slightly higher completion rate than other fields of study (Sowell, 2008; Sowell et al., 2015). Six institutional and program characteristics emerge, however, as key factors influencing student outcomes that can ultimately affect the likelihood that a particular student will complete a PhD program: Selection, Mentoring, Financial Support, Program Environment, Research Mode of the Field and Processes and Procedures (Sowell, 2008).

Master's student completion rates were higher as 66% of STEM master's students completed their program

of study at the end of four years (Council of Graduate Schools, 2016). Women master's student completion rates for STEM programs were higher than those of men (Council of Graduate Schools, 2016). Interestingly, this seems to contrast the findings from a study Berg and Ferber (1983) conducted that found women's graduate school attrition rates were higher than men. For master's students, the two most important contributing factors to completing their programs were motivation and non-financial family support. Subsequently, interference from employment was the number one factor to master's student non-completion of their programs (Council of Graduate Schools, 2016).

Tinto's persistence model posits that academic and social integration are key to graduate student success or failure (Tinto, 1993). According to this model, academic and social integration influence the commitment that students have to their goals while in graduate school. Academic integration involves both technical understanding of students' content areas as well as general writing and communication skills. Social integration involves graduate students finding acceptance within their department, college and university (Tinto, 1993). Social integration involves students making friends with other students on campus, experiencing the college campus by spending time on it and having an overall satisfaction with their social experiences (Smith and Bath, 2006; Li et al., 1998). Graduate learning communities have the potential to address both academic and social integration through their curricular and extracurricular activities.

Learning communities have been described as intentional environments where each program, activity and interaction within the community is orchestrated to build upon the primary learning goals of the group (Brower and Dettinger, 1998). At its very basic state, a learning community is a group of people coming together who share and are pursuing specific learning goals (Brower and Dettinger, 1998). Zhao and Kuh (2004) listed several benefits that undergraduate stu-

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dents experienced while participating in learning communities. They conducted an empirical study, which found that *“learning communities are associated with enhanced academic performance, integration of academic and social experiences, gains in multiple areas of skills, competence and knowledge and overall satisfaction with the college experience”* (Zhao and Kuh, 2004, pp.130-131). However, while learning communities have been researched and examined intently at the undergraduate level, the literature on graduate level learning communities is scant. Romsdahl and Hill (2012) transferred successful practices and principles from undergraduate learning communities to their graduate learning communities in the ESSP program. Additionally, the students who participated in the ESSP learning community noted a variety of benefits including improved teamwork and research skills, reinforcement and linkage of course concepts and creative and academic value in the tangible products (Romsdahl and Hill, 2012). Research on graduate learning communities is addressed in the next paragraphs. Kraska (2008) investigated graduate learning communities to understand their benefits, limitations and components.

Based on a review of previous literature, Brower et al. (2007) identified four key elements of a learning community—shared discovery and learning, functional relationships, inclusive learning environments and connections to broader learning experiences across campus with two outcomes of changed identity and sense of ownership over the community. Brower et al. (2007) described a graduate learning community (called the Delta learning community) used to address the challenge of the conflict between learning to teach and learning to conduct research and helping graduate students connect their research and teaching interests. The Delta learning community integrated the four key learning community elements, but Brower et al. (2007) concluded that more evaluation was needed to track broader impacts for this learning community.

Kraska (2008) outlined several models of learning communities that impact retention of undergraduate and graduate students: freshman interest groups, graduate interest groups, skill and content linking group and coordinated studies graduate learning model. Each of the models bring students together, who share a set of common interests, challenges and opportunities to form a community that promotes success in their respective fields of study. Kraska (2008) relied on previous research and literature, which suggested that integrating students with other peers and instructors may increase their retention rates. Kraska (2008) also referenced studies that indicated higher grades and satisfaction levels (with their educational experience) for those students who participate in learning communities. Kraska posited that for models of learning communities to be considered effective they must *“promote shared learning and discovery, involve inclusive learning environments and form connections that extend learning across the campus”* (Kraska, 2008, p. 65). Kraska (2008) noted

learning communities appear to be overall effective based on literature and research, but more research is needed to fully assess the value and potential of learning communities at various educational levels and academic disciplines.

Romsdahl and Hill (2012) applied principles from undergraduate learning community models to a graduate learning community setting. Using a coordinated studies learning community model, their study involved several cohorts (communities) of graduate students in an Earth System Science and Policy (ESSP) graduate program. They followed the learning community model outlined by Kraska (2008) that encompasses five core practices: community, diversity, integration, active learning and reflective assessment. Each cohort of students took part in the same blocks of classes and activities for one year to build a solid foundational understanding of their field of study. Along with building their knowledge base, the students fostered community and collaborated on purposeful, team-building projects that aided in their understanding of the material they studied. Because scant research exists on graduate learning communities, an evaluation of graduate learning communities is needed (Brower et al., 2007; Kraska, 2008), this study sought to evaluate a graduate learning community.

At Texas A&M University, a graduate learning community was developed to support the transition of graduate students entering the College of Agriculture and Life Sciences. This two-year learning community was targeted at diverse populations with a focus on retention, success, timely progress towards degree and developing leadership and mentor/mentee skills. This study sought to determine the perspectives of students who completed their first year of the graduate learning community. The researchers wanted to understand what graduate students benefitted the most and least from during their experience, how the learning community contributed to their transition to graduate school and identify recommendations for changes to the learning community in future years.

Purpose and Research Questions

The purpose of this study was to describe the experiences of a first-year graduate learning community focused on retention of graduate students, successful integration into graduate school and leadership and research skills. The specific questions which guided this study included:

- 1) How do members of the graduate learning community describe their experiences in the learning community?
- 2) How can the graduate learning community experience be enhanced in future years?

Methods

The Institutional Review Board at Texas A&M University approved the study protocol. A basic qualitative method was used because this study focused on gaining the personal perceptions of individuals (Merriam, 2009).

An Examination of a Graduate

The population for this study was graduate students who participated in a graduate learning community in the College of Agriculture and Life Sciences at Texas A&M University. A purposive sample with a criterion base of graduate students who were members of the graduate learning community during the 2013-2014 academic year were participants in this study. There were eight graduate students who consented and participated in this study.

Context for the Study

For purposes of this learning community, diversity was a broad term defined as students who self-identified as African-American, Hispanic, or American Indian/Alaska Native. Additionally, it included students from the following areas: minority groups that have been historically under-represented at Texas A&M University or certain professions, first generation college students, persons with disabilities and veterans. There were eight participants in this study, six doctoral students and two Master of Science students. Three of the participants were male and five were female. Participants volunteered to participate, but were not required as part of the learning community agenda. There were several disciplinary focuses among the participants including agricultural economics; plant pathology; animal science; bio-agricultural engineering; and agricultural leadership, education and communications. All eight of the participants exhibited at least one of the characteristics of diversity previously mentioned. The learning community was led by a graduate administrator in the college and an assistant professor of leadership in the college. Graduate students in the learning community were selected at the college level based on recommendations by their department. There were 15 participants in the first year of the program. Graduate students were asked to join the learning community and as a benefit of joining and participating in the learning community, they were offered a small grant to cover a professional development event of their choice. Examples of professional development opportunities included but were not limited to: scientific society meetings, research conferences and symposiums. Students had to apply to receive the professional development grant and had to attend learning community events on a regular basis to be eligible to receive the funding.

Programming for the learning community consisted of meetings once a month where students and leaders met for food and to discuss a topic related to graduate school transition or leadership development. Specific topics of discussion included: work ethic and culture of graduate school, considerations for success, the written and unwritten expectations of graduate students, how culture and expectations differ by fields of study and type of research, appreciation of different research approaches (quantitative vs. qualitative, wet bench vs. field, biological vs. social science, etc.) and leadership assessment of self (SWOT personal career analysis, StrengthsFinder and personality). Graduate students

also were required to attend a personal development event that enhanced their graduate education. Examples consisted of grant and research writing workshops, research presentations and teaching workshops.

Data Collection and Analysis

Data was collected by semi-structured interviews with each student that lasted 30 to 45 minutes. Follow-up interviews were also conducted to obtain further perspectives from some individuals. Each student interview was assigned a code to maintain the confidentiality of their statements. The constant comparative method was used for data analysis (Glaser and Strauss, 1967). Interviews were coded as LC1 through LC8. The researcher studied the field notes and categorized trends from the data to arrive at themes.

Member checks were conducted to address credibility. Each person participating in the study was emailed a copy of the field notes from their interview (Merriam, 1998) and asked to ensure the researcher captured their experiences accurately and robustly. A peer debriefing was also conducted with another researcher to ensure the information collected captured the essence and purpose of the study (Merriam, 1998). After peer debriefing, follow-up interviews with some of the participants were conducted. Dependability and confirmability of results were established by the researcher developing an audit trail and keeping detailed records of the data collected and analysis procedures in a reflexive journal (Merriam, 1998).

Findings

When asked to describe the learning community, one student said *"it is a support system that helps us get through grad school [by] equipping and supporting us to complete grad school as effectively and enjoyably as possible"* (LC6). Another student said that the learning community offered a way for students to connect, share experiences and have support from each other and from professors (LC3). Students listed ways the learning community was helpful to them as part of the various exercises and discussions they participated in throughout the year. One student said the biggest thing she learned from the formal meetings was managing time and commitment. *"We did a lot of talking about how to balance time and commitment"* (LC6). LC2 said the learning community generally *"could help me be a successful graduate student by being able to communicate with my advisor and fellow colleagues better"* (LC2). Two themes primarily emerged when students were asked to describe the experience they had in the learning community: most meaningful experiences and least meaningful experiences.

Most Meaningful Experiences

Students in the learning community shared some of the experiences they had that were most meaningful to them during their time as a participant. The experiences that were most meaningful to students were conversing

about the positives and negatives of graduate school; interacting with other graduate students in an informal and formal setting; and learning about their personality types during formal meeting activities. Students in the learning community appreciated the ability they had to share their struggles, accomplishments and questions about graduate school with each other (LC2, LC4, LC6). One student said the learning community offered necessary information and experiences that allowed for self-reflection, which helps him navigate through graduate school. He also said that the learning community was a way for students to integrate into graduate school (LC4). Another student said, *“Having the learning community is helpful because it gives you people that are going through the same fears/worries as me, which made it helpful to get through my first year”* (LC2). Another student added that it is *“...nice to hear people talk about and ask questions related to their grad school experience. I am not usually a person to ask questions, but it is also interesting and broadening to hear about what other people are dealing with in grad school”* (LC4). Another student said the learning community helped her survive her first year of graduate school. Part of that was knowing other students were going through the same thing she was. She also said the learning community was equipping her to complete graduate school as effectively and enjoyably as possible (LC6). LC7 stated, *“It’s [the learning community] a good community of people bringing problems together in order to walk their way through a brand new process that everyone is a part of.”*

One of the pieces learning community members appreciated most about the learning community was the social interaction between students. A student said the learning community helped her appreciate things about herself she thought were weird like the fact that she was loud, open and extroverted. The learning community helped her realize these parts of her personality she thought were weird benefited her in situations where she could lead others in the learning community (LC8). Another student said the learning community exercises helped her establish a relationship with her graduate advisor so she could get more “stuff” done in her lab. Once she connected with her advisor, she could progress in her research. The exercises that taught her how to communicate with her advisor were some of the most helpful things she experienced through the learning community (LC2). Another student said:

“Getting to hear the perspective of my fellow grad students in different departments allowed me to go back to my department and make sure that I was completing the things I needed to and ensuring that I am on track to graduate in a timely manner. Basically, I was able to go back to my advisor and ask questions that I might not had otherwise asked if it weren’t mentioned in our learning community.” (LC1)

Both LC1 and LC2 stated the learning community helped them progress in their graduate programs. LC2 further stated she appreciated *“getting to hear and*

learn about the other graduate students struggles and accomplishments” (LC2). A third student said:

“I really liked the 2nd year mentoring activities, especially interacting with and getting to know my mentee. It was also nice to get to know the two cohorts from other departments. I also found the second year personal development activities that [leader] sent us to be useful, since they were things that I could directly apply to my career.” (LC3)

Students appreciated the opportunities and activities they participated in during the time they were members in the learning community. A primary suggestion was the community become more structured and allow for more informal interactions among members to build a stronger sense of unity (LC4, LC6).

One student enjoyed the informal social interactions she experienced with the learning community at a restaurant that she was unable to have during the formal meetings (LC8). At the formal meeting, which occurred monthly, students learned more about themselves: their strengths and personality types (LC1, LC4). They also appreciated the life planning sessions as LC7 stated, *“For me, the most meaningful part of the learning community was the life-planning session. I constantly struggle with making decisions and that gave me a good lens to begin making big life choices.”* LC7 also said the life-planning exercise was very helpful with helping him decide on a career path.

Least Meaningful Experiences

Participants of the learning community said there were several things that were least meaningful to their experience as part of the learning community (LC1, LC2, LC3, LC7 and LC8). LC1 stated, *“I guess if I had to pick something it would be the personality tests. Though meaningful it just reaffirmed things I knew about myself...”* This opinion was echoed by LC3 who said, *“Some of the activities during the first year were not very useful for me, such as the personality type tests, which I think most students have taken in the past and did not give me new information”* (LC3). Another student had different expectations for what the learning community would offer as he stated:

“Most of the stuff we discussed (in the meetings) was useful. However, whenever we had the faculty members come in to discuss expectations of a mentoring relationship with us I was a bit left out. This is mostly due to the fact that I am not a ‘science-based’ major and therefore have no labs. [Department] is just a different animal and so that specific session did not help me as much as it helped the other students.” (LC7)

Similarly, LC8 had differing expectations for her experience in the learning community. She wanted to be able to confide in her peers in a more personal way and talk more openly about the issues she was having in graduate school. She said that she would feel judged at times if she was too open with her peers (LC8).

Suggestions for Learning Community Enhancement

Students in the learning community offered some helpful feedback regarding the structure and activities currently taking place as part of this program. Students addressed concerns of structure, more social interaction and discussion of struggles and accomplishments. The participants offered their perspectives on changes or recommendations they would make to the learning community that resulted in two primary themes: structure/content and social interaction.

Structure and Content

The structure of the formal meetings was something that several students addressed (LC4, LC6, LC7). Student LC7 offered a helpful suggestion for how the formal meetings could be structured when he said:

“Most of the material was helpful, but some of the timing of it could probably be rearranged. For instance, the first meeting could be discussing deadlines and expectations, the second meeting being establishing the life-plan to help us get on track early and the third meeting be the ‘mentor expectations meeting,’ as I believe that time around November/December is when most MS students really begin to work with their chairs.” (LC7)

Another student, LC6, offered a suggestion for the instructors to incorporate into formal meetings. When referring to the learning community members, LC6 thought there was an inherent understanding that their graduate advisors will suggest where to present and be a part of conferences (professional development). She suggested [faculty] in the program should discuss more opportunities for LC members to professionally develop as graduate students. She said there is an assumption that the LC members are involved in professional development, when that is not always the case. She would have liked more guidance with the mentoring process and she said there should be more “loose accountability” for professional development and mentoring. There was no feedback loop to check on their progress throughout the semester/year. She wished the learning community members also had more interaction with the new cohort as a group (informal meeting). Lastly, she said there should be more interaction within structured activities (LC6).

Student LC4 built upon what LC6 and LC7 said when he stated, *“I feel like the second year could benefit from more structure, because the community portion from the first year seems to be lacking when we only meet sporadically. Being able to interact and learn from others in our same situations is a bit harder in this year”* (LC4).

The content of formal meetings was another topic that students discussed (LC1, LC4). LC1 stated, *“The cohort that I am apart of is tasked with finding a personal development activity to participate in. I think this should be encouraged more...Especially for things like technical writing and the submission process for graduate school.”* In addition, LC4 offered the suggestion *“A meeting dedicated to learning how to write grants, make*

a better poster, design a better PowerPoint presentation, etc. would all be things that are topical and may give a graduate student a leg up both during their time here and after.”

Social Interaction

Another theme that emerged was social interaction among students. The students showed they desired more social interaction, especially in an informal manner (LC6, LC8). One student said she felt like more outside, social interaction would help facilitate a more personal touch to the group (LC8). The students discussed wanting more informal interactions to build a stronger sense of unity among learning community members (LC6, LC8). One informal interaction a student enjoyed was the ropes course activity where she could engage with the new group in a less formal environment (LC6). This same student stated she wanted more opportunities to just “dish” out with other students and discuss the difficult situations they were in so they could help each other navigate those issues. She wanted it to be a more open community. There was still a sense of “best-face-forward” in the learning community. She missed not meeting with the group as a whole (with both cohorts) (LC6).

Conclusions

The results of this study indicate the graduate learning community did allow students to have meaningful experiences, which helped them to integrate socially into their graduate program. Students reported social interactions were one of the most meaningful components of the learning community, but more social interaction was a recommendation for future learning communities. Being able to integrate academically and socially is key to graduate student success and influences the commitment students have on their personal goals during their time in graduate school (Tinto, 1993). Graduate students in this study did not specifically discuss how the learning community helped them integrate academically into their graduate program; therefore, future research is recommended to assess this aspect of graduate learning communities. Also, because this study examined graduate student perspectives after one year in the learning community, there was not yet data on the retention of these graduate students. Further research is needed to longitudinally examine how a graduate learning community affects the retention of graduate students due to the low attrition rates and low completion rates of graduate students (Bowen and Rudenstein, 1992; Golde, 2000; Smallwood, 2004; Sowell, 2008; Sowell et al., 2015).

The five core practices of the learning community model that Kraska (2008) outlined are the following: community, diversity, integration, active learning and reflective assessment. The learning community used in this study displayed these five core practices as displayed in the findings. Students experienced community during the regular, monthly meetings throughout the year. Diversity was an integral piece woven throughout

the learning community as most participants came from minority backgrounds. Integration occurred through the sharing of knowledge and academic conversations that participants had with each other and the administrators of the learning community. Participants engaged in active learning through the interactive assignments that helped them understand their personality types and personal strengths. Lastly, reflective assessment occurred during the meetings when students were encouraged to discuss their academic programs and the successes and challenges associated with them.

Graduate students described the most meaningful activities as those activities that provided social interaction among the members and discussed more social interaction as a recommendation for future students. Social interaction appears to be an important benefit of being in the graduate learning community. It is recommended that future learning communities implement more activities designed to facilitate social interactions among the learning community members. A recommendation for informal meetings would be to offer a semi-structured environment where the instructors would give the learning community a framework that incorporated conversation starters so the students would feel comfortable opening up and getting to know each other. One example would be speed conversations (like speed dating). In this activity, students would have the opportunity to share their research topic, how graduate school is going for them, what they are most looking forward to, what they are dreading, struggles, accomplishments, etc. Whatever activity or structure chosen, the goal should be building community through informal conversations among the members of the graduate learning community.

The findings from this study indicate students found the personality assessments to be meaningful activities and ones they appreciated. However, the results of this study also suggest some learning community members did not find the personality assessments beneficial because they were repetitive. Future graduate learning communities should examine how to best approach the implementation of a personality assessment. A needs assessment could be conducted to determine who has already completed the personality assessment prior to participating in the learning community so the learning community organizers can examine how to best approach the group.

Brower et al. (2007) posited that a sense of ownership over the community should be an outcome of a learning community. While it may appear that a loosely structured learning community allows students to take ownership of their group, the members of this learning community felt that structure was still needed to help them build community. Based on the recommendations discussed by the participants, learning community members would appreciate more structure within the formal meetings along with more accountability and follow-up to the activities they are required to complete. Learning community facilitators should implement

more structure to aid in forming functional relationships and shared discovery and learning within the graduate learning community. Lastly, graduate students were not always aware of professional development opportunities such as professional meetings and conferences that they should attend. Learning community facilitators should gather more information about the graduate student's faculty mentor and assist when needed to recommend activities for participation.

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