Research Poster

Creativity in the Classroom: Exploring Creativity in College of Agriculture Courses

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Introduction

In a 2018 Forbes article, Powers (2018) stated "creativity is the skill of the future." Creativity and innovation are seen as crucial skills to be successful in the current global economy (O'Bryan, 2018), and creativity continues to be a necessary individual and social component to maintain a competitive advantage (Sternberg & Lubart, 1999). The need for creativity in the agricultural industry is especially imperative with the growing challenges on the industry to feed and clothe the world in the 21st century as identified in Priority Area 3 of the AAAE National Research Agenda (Stripling & Ricketts, 2016). Intarachaimas (2012) suggested a need for promoting creativity in agricultural students to stimulate future creative problem solving in the agricultural industry and the development of new approaches to the future problems these students may encounter in the workplace. According to Gibson, Hancock, Meyers, and Irlbeck (2016), further research is needed to better understand the overall cohesive outlook on creativity, especially within higher education. A great place to start is in an industry important to our basic human needs: agriculture (Intarachaimas, 2012). The purpose of this study was to define what creativity looks like within agricultural fields of study while assessing and exploring interventions and measures of creativity in courses in the College of Agricultural Sciences and Natural Resources (CASNR) at Texas Tech University.

Theoretical Framework

Tied to much of the research on creativity in higher education, the social constructivist theory suggests the experiences of being engaged in learning are better implemented through the shared social interactions within a classroom (Kim, 2001). The Zone of Proximal Development (ZPD) connects these social contexts and the cognitive processes of students and allows for an integrated learning environment where meaningful knowledge is attained (Vygotsky, 1978). The ZPD has been shown to link students' current level of creative development to their potential creative growth through various pedagogical strategies (Shabani, Khatib, & Ebadi, 2010).

Methodology

A qualitative, phenomenological research design was used to investigate courses within CASNR at Texas Tech University. A purposeful sample of courses offered in the college were selected due to their incorporation of creative components and the capability of providing rich data. Of the courses identified, seven instructors representing each department within the college were recruited via email to participate in one-on-one, semi-structured interviews. An interview guide adapted from Gibson et al. (2016) was used to provide consistency to each interview. Interviews were audio recorded to ensure authenticity and transcribed verbatim using the transcription software Temi with field notes taken during each interview. Data were analyzed in NVivo using open and axial coding via the constant comparative method as suggested by Creswell (2013) with credibility established through member checking and persistent observation from seasoned educators and researchers (Guba & Lincoln, 1989). Each participant was given a pseudonym to ensure the confidentiality of their responses.

Results

This study sought to define what creativity looks like and to assess and evaluate interventions and measures of creativity in an agricultural higher education program. When participants were asked about defining creativity, two themes emerged: *creativity in doing* and *creativity is all encompassing*. Many of the descriptions provided about creativity involved it being an action.

Dr. Frank defined creativity as "the ability or the desire to create." Similarly, Professor Kent stated, "I would probably define it is that need, that kind of visceral feeling, that you have to do something." Additionally, some participants stated creativity seemed to have an existence in everything. Professor Doug explained, "Creativity is all around us. It's in everything that we see, in everything that we do."

Of the interventions and teaching styles participants used to enhance creative thinking, four themes emerged: *individual learning, group learning, discussion,* and *experiential learning*. The *individual learner* was an emphasis for most participants. Dr. Jack expressed the first component to facilitating creative learning is "a desire of the learner to actually learn…they're not going to be creative if they don't want to do anything." Many of the courses also included a *group learning* component. Dr. Grant referenced the stimulation evoked from group work, "They might think about it more creatively in a sense, [be]cause they're going to think about the problem." *Discussions* provided an additional opportunity for creative learning for many participants. Dr. Frank expressed, "As an instructor, you will encourage creativity because that questioning and response is gonna keep people engaged and thinking and creating." Participants also discussed the influence of *experiential learning* on creative learning. Professor Kent stated, "Creativity happens through trial and error. Creativity is iterative. Creativity is going to be based on you succeed by failing."

The assessments and measurements used by participants to evaluate creativity fell within two main themes: *formal vs. self-assessment of creativity* and *student comfort level*. Many participants expressed the difficulty of *formally assessing* creativity. Dr. Frank stated, "Creativity is hard to assess on a grade value, you know there's an inherent difficulty there." These difficulties led to many participants seeking opportunities for students' *self-assessment* of their creativity. Professor Doug stated, "As long as you do the work, you don't get judged on the creativity. You judge yourself on the creativity." Another factor shaping students' creative growth was *student comfort level*. Dr. Grant explained, "The way I think about creativity is basically trying to pull together different things and being outside of your comfort zone."

Conclusions/ Implications/Recommendations

Many of the participants' views on creativity supported the social constructivist theory and the need for social learning to promote creativity (Kim, 2001). All participants agreed that creativity is important for learning and in each of their respective industries in order to be successful, although it may look a bit different in each field. Real-world applications help promote the creative mind and open the door for applicable creative thinking. As a cohesive definition of creativity continues to develop, the development of creative thinking skills will remain an important topic of interest for educators and employers.

As university classes increase in size, the ability to encourage individual learners directly will become more challenging; therefore, it is important to implement group learning and discussion as a means to develop the creative thinker in new ways. Further research is needed to explore how creativity is implemented and encouraged in other colleges throughout Texas Tech University and in other colleges of agriculture across the country to develop a better understanding of creativity and its impact throughout higher education. Instructors should continue to explore ways to influence and encourage their students' creative growth.

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