Are Students Developed to Lead Change and Promote Innovation Adoption? Evaluating Change Agent Efficacy with Contentious Issues

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Introduction and Theoretical Framework

Faculty are reluctant to address contentious issues due to fears of conflict and cancel culture (Duque et al., 2021). Climate change and food security are controversial issues as large individual numbers debating each other without agreement and differences arise from norms or misinterpretations (Strong et al., 2022. Baker et al. (2022) identified climate change, evolution, genetically modified organisms, vaccinations, animal welfare, and immigration as current examples of contentious topics. Social systems, politics, religion, culture, social systems, and morality often govern individual differences (Yeager et al., 2019).

Change takes time (Dweck & Yeager, 2019) and can be difficult, requiring a laser focus on the issue and routine evaluation to understand if change is occurring.

recommended adequately informing an audience of the unacceptable current circumstance is the first step in leading a change effort. Faculty need to develop students to lead change in stakeholder groups where contentious topics exist (Lee e al., 2021).

Self-efficacy and diffusion of innovations were the theories scaffolding the study. Bandura (1977) postulated self-efficacy is a person's perceptions about their abilities to execute a particular action juxtaposed to their actual ability. Rogers (2003) found change agents work to promote innovations and ideas to members in a social system hoping to produce diffusion that advances individuals, communities, and organizations. Leading change begins with a sense of urgency toward a crisis need to get an audience focused on the issue (Klerkx & Begemann, 2020; Seitz et al., 2022).

Purpose and Objectives

The purpose of this study was to explore student's capacity for change agentry in contentious issues. More Specifically:

1. Describe students' efficacy towards change agentry on the contentious issue of food security.

2. Describe students' efficacy towards change agentry leading on the contentious issue of climate change.

3. Investigate the effect of students' characteristics and efficacy in change agentry of contentious issues.

Methods and Data Sources

Quantitative research was implemented to address the research objectives. The population was students enrolled in upper-level leading change courses at three institutions ($N = 516$) over a period of three years. An instrument was developed to examine students' perceptions of leading change in the context of the contentious issues of climate change and food security. The instrument was assessed for content validity by researchers at Texas A&M University, Taoyuan

District Agricultural Research and Extension Station, and Mountbellew Agricultural College and the instrument was assessed to be valid given this study's objectives. The survey instrument included three sections: personal characteristics questions, students' knowledge of food security as a contentious issue, and students' knowledge of climate change as a contentious issue. The anchors in the instrument for climate change and food security were represented by 4 = *strongly agree*, 3 = *agree*, 2 = *disagree*, and 1 = *strongly disagree*.

Students were provided the instrument's Qualtrics QR code and data was collected using the tailored design method (Dillman et al., 2014). The instrument yielded an 59% response rate with three hundred three students (n = 303, 59%) students responding. A reliability coefficient of .91 indicated the data was reliable (Likert, 1932). Descriptive and inferential statistics were utilized to analyze the data.

Results, Products, and Conclusions

The first objective was to describe students' efficacy towards leading change on the contentious issue of food security. Of the five items, the item "To what extent can you provide an explanation of food security?" produced the highest score (M = 3.51, SD = .55). "How much can you gauge client comprehension of your ability to lead change in food security solutions?" was the lowest scoring item (M = 2.82, SD = .66). The grand mean was (M = 3.15, SD = .59).

"To what extent can you provide an explanation of climate change?" earned the highest score (M = 2.86, SD = .52) for objective two to describe students' efficacy towards leading change on the contentious issue of climate change. "How much can you gauge client comprehension of your ability to lead change in climate change solutions?" produced the lowest score (M = 1.86, SD = .59) for objective three. The grand mean for objective three was (M = 2.13, SD = .55).

The third objective was to investigate the effect of students' personal characteristics and efficacy of leading change on contentious issues. There was a significant difference between student's grade point average ($F(3, 104) = .88$, $p < .01$, $\eta p^2 = .84$) on their efficacy of change agentry with contentious issues. Also, there was a significant difference between females and males ($F(2, 109) = 1.01$, $p < .01$, $\eta p^2 = .59$) on their efficacy of change agentry with contentious issues. Tukey's post hoc analysis indicated the effect size of .84 for grade point average was large and the effect size of .59 for gender was medium.

This novel examination of change agentry and societal contentious issues provides Extension educators, industry representatives, academia, and government liasons with an additional framework for developing the next generation of change agents. The findings indicate that a large portion of students do not feel efficacious in change agentry and contentious issues intersection.

Recommendations/Educational Importance/Implications, and Application

Faculty should understand what constitutes a contentious issue and include examples that align with course objectives. Integrating contentious issues in the classroom provides great opportunities for rich discussion, which can be conducive for developing leadership skills like

problem solving skills and understanding the perspectives of others (Yeager et al., 2019). Ultimately, students will end up working with people with beliefs different than their own.

Research would benefit from also capturing the student's attitudes, beliefs, and subjective norms towards these contentious issues using the theory of planned behavior. If the student doesn't feel efficacious in leading on climate change may be because they do not believe in it or are already a denier. Higher education can be a great time to learn how to interact with all kinds of people and contentious issues can provide a classroom platform for this development to produce post-graduate success (Olsovsky et al., 2021; Phuong et al., 2017).

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