

GIFTS: Sharing Stories and Building Belonging in a First-Year Engineering Course

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Abstract

This Great Ideas for Teaching, and Talking with, Students (GIFTS) paper presents a method for fostering a sense of belonging in students through a story sharing assignment in a first-year engineering course. The authors present how story sharing is integrated into an introductory engineering course and provides a reflection of the experience on the successes, challenges, and impact on student connectedness. The story sharing exercise was well received by students and the level of engagement, authenticity, and depth of experiences that have been shared by students was impressive. The paper highlights methods used to promote authentic story sharing, options for students who do not wish to share, types of story types shared, the nature of sharing, and disclosure level. This work suggests that students are forming authentic connections in the context of the assignment that likely extend beyond the course. The assignment has also provided a venue to discuss and reflect on the complexity of the students' values, needs, and circumstances. In addition, the paper includes a faculty and teaching assistant reflection of the impact of the student stories on our own experiences in the classroom.

Motivation

Students' sense of belonging in an academic setting can be impacted by feelings of vulnerability that accompany the transition into higher education. Specifically, it's common for students entering the college or university setting to have anxieties pertaining to being judged by others and/or to experience a wavering sense of self [1]. Story sharing has the potential to create connections between students that foster empathy, build relationships, break down barriers, and promote inclusivity [2]. In addition, story sharing also has the power to change perspectives and challenge biases [3]. When students hear stories from different perspectives, cultures, or experiences, it broadens their understanding of the world [4]. In the classroom setting, presenting diverse perspectives by encouraging students to listen to and consider the stories of their peers can broaden the students' understanding of the myriad of experiences that exist directly around them. This positively impacts the class environment as students who feel more connection and belonging will be more likely to engage in discussions and course assignments in a more meaningful way [4].

Objectives

The overall objective of the story sharing exercise is to foster a sense of belonging and promote inclusivity for first year students. The motivation for the project stems from institutional research that shows that pre-major students, women, and students of color at Western Washington University have a significantly lower level of belonging than major level students, men, and white students respectively. By creating a more connected and authentic student community earlier in their academic career, we aim to increase levels of belongingness among these student groups and encourage continued connection and empathetic engagement throughout the students' college and professional experience.

Assignment Description & Implementation Details

The story sharing assignment is assigned during the second week of a ten-week quarter in a novel introductory engineering course focused on developing a socio-technical mindset [5]. This 2-credit course, ENGR 101: Engineering, Design, & Society, is a graduation requirement for all engineering and design students at Western Washington University and consists primarily of first-year students.

For the story sharing assignment, students were asked to submit a discussion board post on the ENGR 101 Canvas page sharing a story of their choosing with the class. Students were provided with clear guidelines and discussion board protocols that were developed using best practices for online discussions with a focus on appropriateness of responses and being respectful of differences. Examples of stories were provided, including a post from the instructor and TA. Students could share this story in a variety of formats, including written, audio, illustrative, pictorial, video, or any combination of the aforementioned. Students also had the option of sharing a “looking forward” about a personal hope, wish, future opportunity, or dream. Students were provided with inspiration and examples of storytelling via Youtube videos, NPR’s StoryCorp series, and a selection of poems. After sharing their story, students were also asked to respond thoughtfully to three other students’ posts. This encouraged students to read the other posts and to reflect on the experiences of others. The story sharing discussion is assigned during the second week of the quarter. Most of the students enrolled in ENGR 101 are first year students and, being that this is a fall quarter class, are new to the university.

Analysis & Early Findings

We conducted an analysis of 33 student assignment submissions from the Fall 2023 quarter offering of ENGR 101. For each story submission, we determined the tense (past, present, future), format (written, visual, oral), nature (professional, personal), and disclosure level (observations, thoughts, feelings, needs) of the story [6] [7]. Categorization of the submissions are summarized in Table 1: Summary of results of narrative review.

Table 1: Summary of results of narrative review

	Category	Count
Tense	Past	13
	Present	11
	Future	6
Nature	Professional	10
	Personal	21
Disclosure Level	Observations	2
	Thoughts	11
	Feelings	15
	Needs	5

All submitted assignments were in written format which is not surprising considering the students were required to submit the assignment online. However, it is worth noting that in past offerings of the course, students have chosen other formats. Of the 33 stories submitted, the majority were stories of students' past experiences. The nature of most stories was personal, meaning that the shared details related to students' personal lived experiences. The disclosure level varied however, most stories involved sharing of feelings (expressing an emotion) and thoughts (expressing a judgement) which indicates that students felt comfortable sharing personal information. It is worth noting that this assignment occurs early in the quarter during the first year, so students are unlikely to have established relationships with one another. The level to which they disclose personal information at this point in their academic career is noteworthy and suggests that this assignment provides a unique opportunity for students to share a bit about themselves that can create connections, perhaps leading to the development of a sense of belonging.

The stories students shared varied widely. The authors did not see any specific themes emerge with regard to content however, they did notice that students were not afraid to share very personal feelings such as fear of failure, lack of belonging, challenges transitioning to college, struggles with self-confidence, lack of belief in oneself, and impact of traumatic experiences. They also shared personal goals such as having a positive impact on the world, becoming a respectful person, overcoming mental health challenges, and being true to oneself. In addition, many students commented on the importance of belonging and the impact it can have (both positive and negative) and, in most cases, related belonging back to their story. Many students shared stories relating to aspects of their identity including neurodivergence, sexual orientation, and ethnicity.

The course instructor and teaching assistant (TA) reviewed all submissions and expressed feeling personally impacted by the stories students had shared. In discussions regarding the stories, the instructor and TA shared feelings of being proud of the students' submissions, specifically the level of vulnerability reached and the willingness to share meaningful, deep recounts of their experiences. The expressiveness and level of detail included in the stories emotionally impacted the instructor and TA, both in somber and exciting ways. Students relaying struggles they've experienced during their transition to college curated a deeper sense of empathy for ENGR 101 students and how their life experiences might impact their time in the classroom. For example, one student shared about his family's history of abuse and poverty and how his college career is helping him build a better life, which was particularly impactful because it highlighted differences in privilege that can impact a student's needs and sense of identity.

Stories that were based on meaningful lessons the students learned and/or uplifting stories made the instructor and TA feel like students were engaging with the course content of belonging and identity, as these stories outlined students' course-to-world connections and prompted peers to engage in meaningful conversations with each other. One student recounted her feelings transitioning to WWU from a different university and how she felt happier and more connected after her transition, noting that the ENGR 101 classroom conversations about social identity had helped her in the process. The depth and detail students provided in their stories, and the

subsequent responses to the stories from classmates, enhanced instructor and TA empathy and connections to the ENGR 101 students while outlining the importance of the story sharing discussion in the development of the student thought process about individual belonging and identity.

Conclusions & Future Work

The vulnerability that these students have exhibited in their stories suggests that connections are being made between their lived experiences and present-day challenges and goals. Preliminary data shows that the story sharing exercise has successfully provided a venue for students to share their own experiences and has enhanced the student-instructor relationship. It has also provided a venue to discuss and reflect on the complexity of the students' values, needs, and circumstances. This exercise could easily be modified and adapted for use in a variety of settings. Future work will involve completing a more thorough analysis of student stories, specifically with regards to the impact of student sense of belonging and identity development.

References

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