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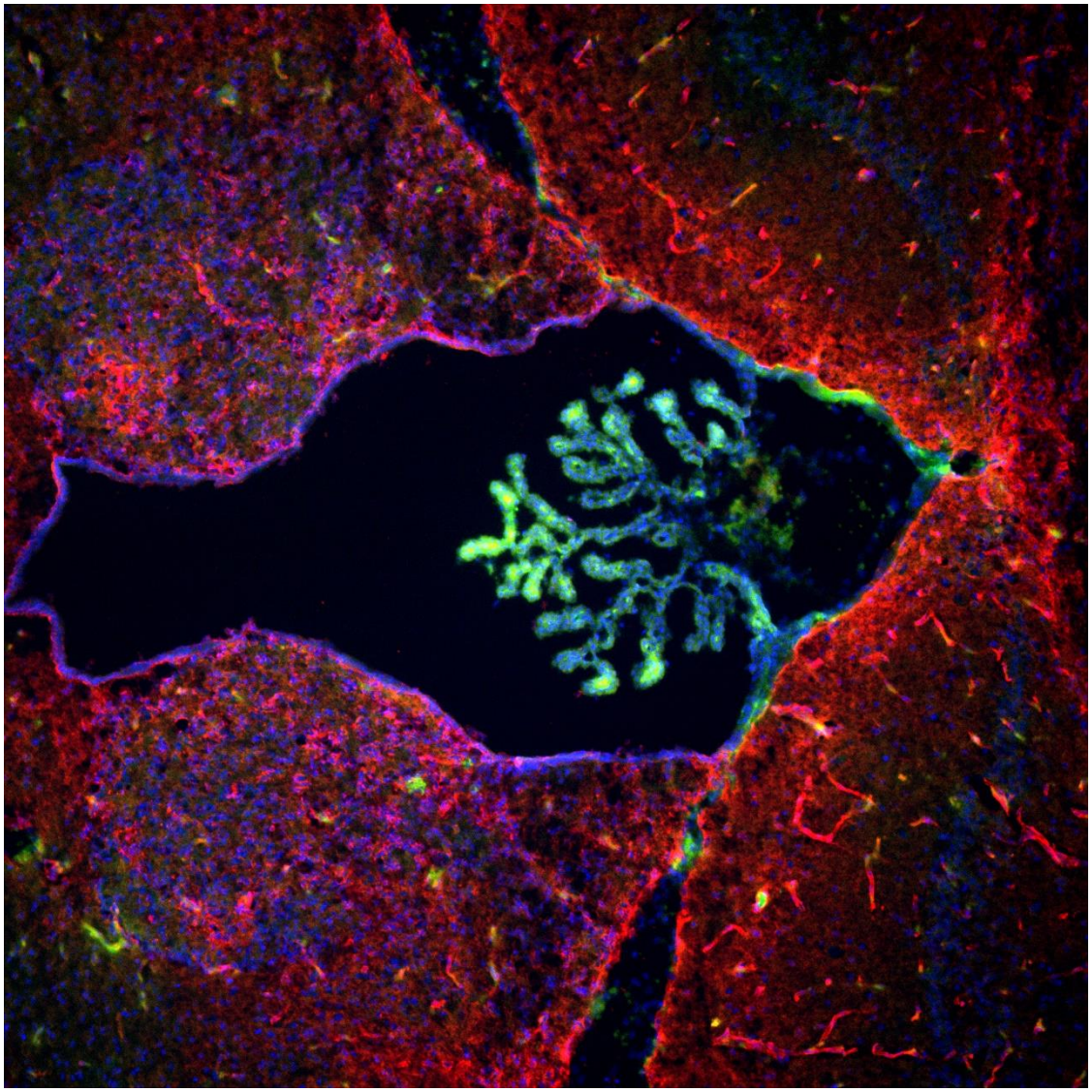

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Articles

Mitigating Student Resistance to Active Learning by Constructing Resilient Classrooms

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Abstract: Shorter lectures punctuated with activities to engage students in the learning process can increase student understanding, critical thinking, and overall learning. However, some students have negative responses to active teaching strategies. Here we explore the topic of student resistance to active learning, including reasons for this opposition and strategies to prevent or respond to it. Recognizing factors that lead to students' resistance to active learning is important to mitigating these barriers to learning. Equally critical to mitigating student resistance is the promotion of student resilience. Structuring classrooms to promote resilience includes community building, structured activities, and policies that recognize student diversity, and the complexity of learning processes.

Keywords: faculty learning community; independent learners; student anxiety; intellectual development; instructional design; student support; marginalized students

Introduction

In Fall 2018 and Winter 2019, our Centre for Teaching and Learning hosted a Faculty Learning Community, or FLC (Cox, 2004), to explore student resistance to the active learning techniques our participants had implemented in their courses. Through our discussions and review of the literature, we learned some of the reasons for student resistance and considered strategies to mitigate their response to our active teaching approaches. We learned that implementing active learning requires that our classrooms be designed for resilience and that how instructors facilitate active learning is key to ensuring students are open to what can initially seem counterintuitive to their lived learning culture.

What is an FLC?

A Faculty Learning Community is a small group of instructors engaged in a collaborative, yearlong program that builds a sense of community and includes activities that enhance the members' understanding of and scholarly approach to teaching and learning (Cox, 2004). An FLC achieves these outcomes by providing a structured and goal-oriented program that promotes the learning, development, and scholarship of the members. Our FLC was composed of a small group of instructors from several departments and disciplines across the University of Alberta who were at different stages of their teaching careers. Our common ground was that we all practice, to a greater or lesser extent, some form of active learning with our students. We developed our community by sharing our strategies and experiences about a variety of active learning practices.

A surprising outcome of this sharing among our FLC members was the realization that our assumptions about the uniqueness of our experience with students' resistance to active learning were unfounded. All FLC members, regardless of discipline, had experienced similar instances of student resistance to active learning. This paper is a result of that common realization, resulting in suggestions for mitigating students' resistance that transcend disciplines.

Resistance to Active Learning

Research has shown that shifting from a teacher-centered emphasis to a learner-centered classroom environment that includes peer collaboration and application can result in improved learning outcomes for students (Freeman et al., 2014; Haak et al., 2011; Prince, 2004; Umbach & Wawrzynski, 2005), such as increasing student understanding and critical thinking (Lumpkin et al., 2015). Our FLC's working definition of active learning included activities that encourage students to participate and engage with the course material and each other in a more meaningful way (Lumpkin et al., 2015). Even though the evidence demonstrates that active learning improves student learning outcomes, students often resist active learning. Instructors intuit this resistance from students' attitudes, body language, and direct or indirect comments heard in the classroom or read on student ratings of instruction (Smith & Cardaciotto, 2011; Van Sickle, 2016). Sharing these experiences in our FLC initiated a critical analysis of resistance to active learning and a scholarly exploration of the literature to identify research that may help us to overcome student, instructor, and institutional resistance to active learning.

A key objective of our FLC was to tackle the issue of resistance to active learning. Resistance can be defined as those attitudes and behaviors that are in opposition to the desired outcome (Richmond & McCroskey, 2012), or as "any observable behavior that makes an instructor less likely to use an instructional strategy" (Prince & Weimer, 2017). We largely focused on resistance from the student's perspective but also realized that similar challenges exist from the instructor and institutional perspectives. Student resistance can present itself in four forms: passive, non-verbal, partial compliance, and open (active complaints or refusing to do a task or project) (Shekhar et al., 2015). Our FLC members all experienced one or more forms of resistance in our classrooms when undertaking active learning strategies. Although we perceived student resistance as "prevalent," research suggests that the majority of students appreciate active learning strategies and understand their educational value (Finelli et al., 2018; Prince & Weimer, 2017).

(Ungar, 2019). Because creativity is central to learning, we argue there exists a sweet spot for providing sufficient structure to nurture resilience but not so much structure that students are unable to make choices that promote their learning. Knowing how much structure is appropriate will depend upon instructors knowing their students, which may be different for each course and student cohort. For example, is this students' first interaction with the course material or is the course at an advanced level? If it is an introductory course, students may need more guidance (lecturing) from the instructor. In contrast, if it is an advanced course, it may be more appropriate to provide more application activities that enable students to explore the course material on their own. Ultimately, the key is tuning the course to find the correct balance of lecturing and active learning, which is dependent upon the discipline, year level, and student cohort, among other factors (Haave, 2019).

Implications

When creating a resilient classroom to mitigate student resistance to active learning, instructors need to 1) be mindful of fostering learning communities within safe and inclusive learning environments and 2) prepare and design courses such that the rationale and expectations for active learning are made clear to students and actively promoted by instructors. Active learning is best implemented when instructors are actively engaged with their students during the learning activity.

Learning Communities

To promote students' resilience for learning, classrooms need to develop into learning communities, one of the high-impact practices proposed by the Association of American Colleges and Universities (Kuh et al., 2017). Learning communities can be fostered by structuring classroom environments with course policies that make it safe for students to risk failure. Instructors create a safe space for learning from one's mistakes by creating and sustaining a learning community where students experience a sense of belonging. The creation of learning communities and safe learning spaces reinforce each other. For example, Chávez (2007) offered findings from a semester-long qualitative study of classroom environments facilitated by instructors identified as "multiculturally empowering." These teachers "worked with all students to create collective, empowering learning experiences that utilized and honored multicultural realities within a shared and rigorous academic experience." Six elemental dynamics aimed at empowering or liberating individuals in learning communities were identified and are summarized in Table 1 These dynamics are associated with classroom management policies that created spaces in which a diversity of students felt valued and able to contribute and grow.

Course Preparation and Design

Course preparation and design are critical to the successful implementation of active learning. By focusing on preparation strategies that set the stage for successful active learning, we engage our students and mitigate resistance. A review of select literature led to several tips for preparing resilient classrooms (Brookfield, 2015; Mohamed, 2008;

Table 1: Elements of an empowering multicultural learning environment and associated classroom management policies (summarized from Chávez, 2007).

. Dynamic	Example Classroom Management Policies
Climate of Safety	● Develop guidelines for respectful interaction and hold students to them ● Encourage students to take responsibility for the safety of themselves and others ● Invite students into discussions ● Acknowledge that each person is in a different place with the subject ● Encourage students to challenge ideas and assumptions
Spirit of Risk-Taking	● Acknowledge that an appropriate level of discomfort indicates that risk-taking and safety are well balanced ● Remind students that discomfort and uncomfortable situations do not necessarily translate into harm ● Facilitate and reward an atmosphere of risk-taking at the outset
Congruence	● Maintain congruence in behavior to be trusted and effective ● Create inclusive environments that allow students to see themselves represented in readings, case studies and assignments ● Demonstrate, by example, the ability to sincerely listen to others
Proactivity	● Take action as a community of learners together by taking risks, facilitating respectful conflict, acting as allies for each other, and showing personal vulnerability ● Take a diversity of ideas and turn them into practice
Multiplicity	● Challenge one-dimensional perception and introduce contrasting ideas, knowledge, and experiences ● Utilize a diversity of knowledge, methods, styles, and relationships in various processes and activities
Reciprocity	● Create an environment in which the diverse strengths of students are incorporated and valued ● Create parity among groups of people by power, idea sharing, and reciprocal validation of each other's ideas

Owens et al., 2020; Tharayil et al., 2018; Toven-Lindsey, 2018). Resilience-promoting strategies for mitigating students' resistance to active learning may be divided into three broad categories: preparation, explanation, and facilitation [See figure 2].

Preparation

As instructors, we need to create a positive and inclusive environment that allows students to take ownership of their education. Course policies must empower students to be active agents in their learning. When students have a perceived sense of control and develop their identities as independent learners, they are more likely to be resilient learners. For instance, classroom policies need to make clear what students can expect from each other and their instructor. Instructors might frame students' post-secondary education as being a journey or a process of becoming life-long learners (Grow, 1991). Moreover, if instructors ensure students know what learning resources are available to them, students can choose to engage in learning as circumscribed by their lived context. Enabling students to have control over how they will learn and be assessed can strengthen their academic resilience. However, there are important limits imposed by the structure of the course. Course syllabi need to indicate the curriculum to be learned and the activities that will promote its mastery. Instructors should use a variety of teaching methods and assessment strategies. We suggest starting small and creating situations in which students can succeed. In general, gradually moving toward a learner-centered emphasis is more effective for both teachers and students (Felder & Brent, 1996), as is the continuing use of at least some class time (20-60% seems to be the best balance) for lectures (Henderson et al., 2018). Additionally, thinking ahead about the physical space and room set up may facilitate active and collaborative learning. A room with moveable desks and chairs will allow for better small group work than a small lecture hall and will encourage active participation (Tharayil et al., 2018).

Instructors need to be reflective and purposeful in their selection of activities and be open to student feedback with a willingness to make changes to assignments that improve the learning activity (Tharayil et al., 2018; Weimer, 2013). Because active learning can be more challenging for instructors and some activities do not work out as well as expected, instructors are encouraged to regularly solicit student feedback on the learning activities used. The Critical Incident Questionnaire is one method of gathering anonymous student feedback on learning activities using structured and specific questions (Brookfield, 2017). Comments are summarized and issues requiring clarification are addressed during the next class. Any changes made to teaching as a result of student feedback need to be highlighted so it is clear to students that their voices are being heard. Additionally, learning should be assessed incrementally to help students know if their learning strategies are working or not before it is too late.

Explanation

Our teaching strategies must be well explained to students, a facilitation strategy that is widely supported in the literature with many specific explanation strategies available (Cooper et al., 2017; Tharayil et al., 2018; Toven-Lindsey, 2018; Weimer, 2013). Explaining course expectations for student participation, engagement, and peer interactions should be done early. It is critical that instructors further communicate their rationale for using active learning and do so explicitly and frequently. By describing the purpose of each activity and providing a rationale for how each activity relates to learning, instructors can help increase students' perception of the value of active learning. Because students are more likely to participate if they perceive a low cost and a high-value return from active learning, instructors need to connect each activity to learning objectives and describe the relevance to industry or clinical practice expectations. Each learning activity requires explicit instructions, including explanations of what

Figure 2: Strategies for mitigating student resistance to active learning and building academic resilience.

preparation is required and how each activity will be assessed. Finally, instructors need to ensure students have a clear understanding of the task at hand, which will allow students to complete the activity on their own. Although these suggestions may seem obvious, each of us in our FLC noted how often we did not articulate to students the reasons we were implementing an active learning strategy. We tended to assume the reasons were self-evident to students, but this is not the case.

Facilitation

To ensure that students value active learning, instructors must meaningfully facilitate in-class learning activities (Mohamed, 2008; Tharayil et al., 2018; Weimer, 2013). There are a wide variety of facilitation strategies. If active learning is a regular part of the course, students will come to expect it, so it is important to develop a routine early. During learning activities, instructors need to walk around the classroom with a smile, being and appearing approachable. However, in addition to walking around their classroom, instructors need to encourage and engage with their students, asking and answering questions, and guiding students if they get stuck or start down a wrong path. As instructors, we need to approach and engage with non-participating students. Rather than confront students not participating, we can instead ask if they are stuck, whether they have any questions, or if they need more time to work through a problem. Instructors need to invite questions and look for creative ways to encourage students to ask questions. Calling on students to answer questions can heighten anxiety. Instead of cold-calling on individuals, teachers can assign students to teams at the beginning of the class or the semester and have teams of students respond to questions, or allow students to confer with their classmates before asking for volunteers. Additionally, active learning can be facilitated by grading for participation, assigning marks for completing activities in groups, and using group exams to encourage collaborative learning.

Scaffolding is also a good strategy to employ. This can be done by starting with smaller activities and building up to larger, more complex projects. Another method is giving a short lecture followed by a simple activity and then progressing to providing material ahead of the class and dedicating the whole class to active learning activities. Above all, to facilitate active learning, instructors must create an environment in which it is okay to make mistakes. This means creating a safe environment and learning community where students feel respected and valued for their unique lived experiences and contributions.

These strategies are not prescriptive nor are they exclusive. Instructors have implemented these strategies in a variety of ways in their classes (Tharayil et al., 2018). For example, some instructors might explicitly explain the purpose of an assignment or exercise while others use reflection and discussion of the assignment or activity to help students understand its purpose. The strategies presented herein are also connected and interrelated. Walking around the room has been suggested as a way to invite students' questions of the instructor and engage in discussion about the topic, allowing instructors to interact with non-participating students (Tharayil et al., 2018). This is a different instructor presence than many of us in our FLC experienced as students when our instructors would assign an in-class or lab task and then simply wait at the front of the room to receive completed assignments. The literature advocates for instructors to be active in the classroom in addition to students.

Conclusion

The design of our classes can promote students' resilience by explicitly building in community and policies that acknowledge students as whole and complex human beings with diverse lived experiences. By designing courses in which structured activities promote student interaction with ample scope for formative evaluation, as well as incorporating policies that enable students to have some control within that structure over how they will learn and be assessed, we create classroom environments that take into account that learning is a human developmental process. In this context, initial failures should be expected and accepted, if not encouraged. By structuring classrooms to promote students' resilience, instructors can mitigate students' resistance to learning. Many of the strategies used to ameliorate student resistance to active learning also build academic resilience. We think that active learning experiences embedded in a resilient learning environment will produce an orientation toward lifelong learning that will reward students beyond their post-secondary academic years.

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