Is boredom contagious? Examining transmission from instructor to student

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Abstract: It is not uncommon to hear university students complain about boring classes. The negative effects of boredom, which are at times larger than that of anxiety, have resulted in a concerted effort from researchers to identify causes of learners' boredom and recommend strategies to mitigate this emotion. However, the research has overlooked the possibility that emotions may be transmitted from instructors to their students. In other words, students may "catch" boredom if their instructors are themselves bored. For instructors boredom may be present in the planning, delivery, or even grading of a course. The purposes of our study are (1) to measure instructors' causes of boredom, (2) to examine the extent boredom is transmitted from instructors to students, and (3) to develop a pamphlet offering strategies to instructors to mitigate their own boredom in hopes of reducing student boredom.

Project/Research Description

Given an emphasis on skilled labour in Canadian job market, more people seek post-secondary education than ever before. The University of Alberta is not exempt from this trend. Currently there are 35,102 full time students enrolled at U of A compared to 27,961 in the fall of 2001. Although the University of Alberta reports some of the smallest class sizes among major Canadian Universities, this increase in student number and diversity still has an impact on instructors and their teaching. As one solution to this, the Centre for Teaching and Learning provides tips, resources, and presentations designed to help instructors enhance student engagement. However, one key aspect that is often overlooked in this equation is instructor emotionality and, particularly, how an emotion is transmitted from instructors to their students.

Evidence is accumulating that emotions are contagious in class. For instance secondary teachers' enjoyment influenced their students' perception of enthusiasm in teaching and their own experience of enjoyment (Frenzel et al., 2009). The transmission of a given emotion is based not only on facial expression (e.g., smile) but also on demeanour shown and paralanguage displayed during instruction. Students may pair these subtle instructor cues with other pieces of "emotional evidence" such as whether or not time and care has been taken in preparing slides, lectures, and assignments, punctuality, and interest in students to figure out their instructors' feelings about the course. In other words, students quickly pick up both obvious and subtle cues about their teacher's emotion, which in turn influence their own emotionality and attitude toward the class. To our knowledge, only positive emotions have been shown to transmit from teachers to students (Frenzel et al., 2009), whereas, exploration into the transmission of negative emotions, such as boredom, has been overlooked.

Boredom. One negative emotion that seems to plague large classes is boredom. Boredom is described as an unpleasant emotion that makes it seem as if time is standing still and it is accompanied by a desire to escape the situation (Pekrun et al., 2010). This negative emotion, usually extending from appraisals of low control and value, causes a downward spiral effect on university students' engagement and achievement (Daniels et al., 2009). Unfortunately, some of our previous research with undergraduate students at U of A suggests that at least 32% of students report feeling bored during class (Tze et al., 2014). However, students do not get bored in a vacuum: One has to question if they are "catching" this boredom from their instructors. Although Stupnisky and his colleagues (2014) found that levels of boredom for teaching among untenured faculty members were quite low this was for teaching in general and not a specific course. It is possible that more senior faculty members or contract sessional instructors may report higher levels of boredom. And, as do students, instructors may feel more bored when teaching large introductory-level courses than when teaching specialized advanced courses that they perceive as a better fit to their expertise (Jaschik, 2013; Massy, Wilger, & Colbeck, 1994).

Daschmann et al. (2011) proposed eight precursors to boredom: monotony, lack of meaning, opportunity costs, being over-challenged, being under-challenged, lack of involvement, teacher dislike, and generalized boredom. Students' appraisals of these precursors are likely based on instructional practices. For example, monotony would be due to instructors delivering repetitive learning materials or giving lectures with slides packed with text. Working backwards, the instructor would be responsible for the instructional practices that are assessed by students as a possible source of boredom. Thus, from the instructor perspective boredom regarding a particular class may begin during course design and preparation, show up during actual instruction, and even persist in the final grading stages. This gives students ample opportunities to notice their instructor's boredom and to "catch" this boredom themselves. It also provides

ample opportunities to intervene with instructors and transmissible elements, which can stop the ripple effect of boredom.

The Proposed Project: Is Boredom Contagious?

We have three main objectives in this proposed research. First, we will adapt the precursors to boredom scale for use with faculty members rather than students keeping in mind that boredom can be experienced in the planning, delivery, and grading phases of instruction. Second, we will examine the extent to which boredom is transmitted from instructors to students. Third, we will develop a pamphlet highlighting that emotions can be transmitted and offering instructors strategies to mitigate their own boredom in hopes of reducing student boredom. Below we articulate the research method, procedure, participants, and analyses associated with each objective.

Instructors' Causes of Boredom: Scale Revision

According to Daschmann et al. (2011), there are eight main causes of boredom, seven of which are directly related to instructors. We will adapt this measurement tool from the student perspective to the instructor perspective. Specifically, we will shift the focus from learning in class to teaching (see table below for examples). To assess the appropriateness of the revised scales we will use a think-aloud research design with 3-5 faculty members about the adapted questionnaire. According to Charters (2003), a think-aloud method provides trustworthy information about the thinking processes of participants and can confirm the integrity of the new items. It will also potentially identify additional causes not captured by the student scale. Think-aloud sessions will be audio-recorded, transcribed verbatim, and thematically analyzed so that participants' perspectives can be formally linked to the revised questionnaire items.

Cause of Boredom	Existing Student Perspective	Revised Instructor Perspective
1. Monotony	We do so many similar types of exercises.	I include many similar types of exercises in my class.
2. Lack of meaning	I don't know why we learn all these things.	I don't know why I have to teach these topics.
3. Opportunity costs	There are much better things to do than sit in class.	There are much better things to do than teach in class.
4. Being over-challenged	The subject matter is too difficult for me.	The subject matter is too difficult for me to teach.
5. Being under-challenged	The subject matter in class is not challenging for me.	The subject matter taught in class is not challenging.
6. Lack of involvement	The instructor doesn't take an interest in the students	I don't take an interest in the students.
7. Teacher dislike	The instructor isn't likable.	The students aren't likable.

Transmission of Boredom: An Evaluation of Influence

To examine the extent to which boredom is transmitted from instructors to students we will use a correlational nested design. We will collect self-report data from at least n=80 instructors (based on a power analysis set at an 80% chance of detecting effects) of large introductory level classes (≥ 100 students; Stanley, 2012) and from their students nested within that specific class (potential n > 8,000). For ease of distribution, familiarity, and cost-savings all

questionnaires will be distributed via eClass using Google Forms. Instructors (i.e., sessionals, pre-tenure, tenured) will answer 30 questions measuring causes of their boredom, class-related, and teaching-related boredom, as well as demographic and teaching experience questions. Their students will answer 34 questions measuring causes of boredom (Dashmann et al. 2011), class-related boredom (Pekrun et al., 2002), learning-related boredom, and enthusiastic teaching (adapted from Frenzel et al. 2009). The questionnaire will be administered before the Fall/Winter break respectively. We will test for the transmission of emotion by using multilevel structural equation modeling (Mehta & Neale, 2005). These analyses will reveal: (1) whether instructors' boredom is transmitted to students as either an increase in their own boredom or a perception of lack of enthusiastic teaching; (2) which cause(s) of instructors' boredom is/are mostly predictive of students' experiences of boredom. This work will be disseminated at an academic conference and in the *Journal of Contemporary Educational Psychology.* We will also be able to examine for differences in instructors' boredom based on their area of study, years of experience, and other demographic variables which may be of particular interest to the faculties at UofA.

Measurement tool/scale	**Sample Item**
Instructor Questionnaire	
Causes of Boredom – Instructor (22 items)	How often in class do you do many similar types of exercises?
Class-related boredom (5 items)	I think about what else I might be doing rather than teaching in this boring class.
Teaching-related boredom (3 items)	Thinking about all the things you do at the university, how bored are you when you prepare for this course?
Demographics	What is your position? How many times have you taught this course? How well does this course match your expertise?
Student Questionnaire	
Causes of Boredom – Student (22 items)	When I am bored in class it is because we always do the same thing in class.
Class-related boredom (5 items)	I find this class fairly dull.
Learning-related boredom (3 items)	Thinking about all the classes you take at the university, how bored are you when you prepare for this class?
Enthusiastic teaching (4 items)	Our professor tries to get students excited about the subject.
Demographics & outcomes	What year are you in? How important is this course to your future academic/career plans? What is your GPA?

Recommendations to Stop the Ripple Effect

As important as it is to know that enjoyment can be transferred from teachers to students (Frenzel et al., 2009) so too it is necessary to understand if negative emotions, such as boredom can also be transferred. We chose to focus on boredom because it is a silent and yet debilitating emotion for students (Pekrun et al., 2010) and one that we believe they can "infer" from very subtle instructor cues. Thus, it becomes imperative for instructors to reign in these cues. By understanding instructors' causes of boredom and how these specific sources are linked to their students' experiences of boredom, we can tailor recommendations for instructors who find themselves struggling with boredom for different reasons. Towards this end, we will develop a

pamphlet which lists a set of strategies for them to successfully deal with boredom in those areas, in hope to reduce both instructor and student boredom.

Meeting TLEF Mandates

Innovation: An evaluation of causes of instructors' boredom in teaching as well as of the extent to which boredom is transmitted is innovative in both research and practical domains. Boredom among post-secondary instructors appears to be essentially missing from the empirical research even though evidence has rapidly accumulated that university students experience high levels of boredom and that this boredom can be debilitating (e.g., Pekrun et al., 2010). This work will be well received by scholarly audiences and is a timely advancement of theory. From a practical perspective, although the university focuses on ways to enhance teaching through blended delivery course revision, teaching workshops, etc. there is essentially no venue focusing on instructors' emotionality even though emotions are repeatedly demonstrated as central to teaching (Sutton & Wheatley, 2003). Thus, the revised questionnaire may be used as a diagnostic tool for instructors to examine and pinpoint sources of their own boredom. Coupled with strategies developed targeting each cause of boredom, the outcomes of this research will offer instructors an additional resource in their arsenal to be effective teachers.

Collaboration: For this project to be successful we recruit instructors from across the University of Alberta. Thus, although the principal investigator is in the Faculty of Education, it has the potential to unite instructors (and students) in a shared endeavour to reduce boredom.

Evaluation: This project does not involve an educational or pedagogical intervention and thus does not have a formal evaluation of effectiveness protocol. Instead, this project is based on the control-value theory of emotions (Pekrun, 2002) and a substantial body of research on student boredom (e.g., Daniels, Tze, & Goetz, 2015; Tze, Daniels, & Klassen, in press). As such, both the theoretical predictions and the measurement tools have been subjected to extensive empirical testing and verification giving us full confidence in our ability to detect the relationships of interest. Moreover, our methodology, questionnaires, and analyses are modeled after Frenzel et al. (2009) who successfully detected the transmission of enjoyment from grade-school teachers to students. Finally, although beyond the scope of this study, our results pertaining to instructors' causes of boredom and the transmission of boredom from instructors to students is a necessary first step in establishing a boredom intervention that could be evaluated in future research.

Sustainability / Impact on Students: This project is extending our past successes in identifying causes of boredom and coping strategies among students (e.g., Daniels et al., 2015; Tze et al., in press) to instructors. The scope of this project is reasonable and participation requirements are minimal to ensure that it is not a burden for instructors or students to participate. Given that from a single administration of questionnaires we can better understand the transmission of boredom, the costs associated with this project are minimal in comparison to the sustainable benefits for instructors and students.

Dissemination: A tangible outcome from this project is the adaptation of the causes of boredom scale from students to teachers. This new measurement tool will be of interest to scholars in the area of emotions and to instructors interested in better understanding the role of emotions in teaching. The second outcome is the results of the correlational study on the extent to which boredom can be transmitted. Again, these results will be of interest to scholars in the area of emotions, instructors, and in addition administrators. Thus we will disseminate our results to each of these three audiences as appropriate. To reach academic audiences we will present our results at an academic conference and publish it in a top educational psychology journal. To reach instructors, we will liaise with the Centre for Teaching and Learning to circulate our pamphlet

and offer instructional sessions. To reach administrators we will showcase our work at the Festival of Teaching.

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