Patterns of boredom and its relationship with perceived autonomy support and engagement

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ABSTRACT

The impact of academic boredom on learning and achievement has received increasing attention in the literature; however, the questions of how academic boredom changes over time and how the change relates to antecedents of boredom and student engagement during a course of study remain unexplored. Therefore, the purposes of this study were to: (a) examine the patterns of change in two types of academic boredom (i.e., learning-related and class-related) and in four types of student engagement (i.e., vigor, absorption, dedication, and effort regulation); (b) to examine how the trajectories of boredom and student engagement relate to one another; and (c) to investigate the relationship between perceived autonomy support and the pattern of change in boredom, in a sample of 144 university students. Results of latent growth curve analysis showed that learning-related boredom, vigor, and absorption remained relatively stable over time, whereas both class-related boredom and effort regulation showed a linear change, a pattern of increase and a trend of decrease, respectively. Interestingly, students' dedication decreased at the beginning and increased when approaching the end of the course. Our results also revealed the fact that changes in boredom in class were linked with changes in both effort regulation and dedication, and the inverse association between perceived autonomy support and class-related boredom experience.

1. Introduction

Students' learning motivation and emotions have long been a major focus in educational research. Specifically, a negative emotion—boredom—has been shown to be commonly experienced by students in school settings. For instance, Mann and Robinson (2009) have found that almost 60% of university students reported being bored more than half of the time in lectures. In Larson and Richards's study (1991), middle-school students experienced boredom during about 30–40% of class time in most of their subject areas. In addition, researchers have shown that boredom is a negative and deactivating emotion which occurs when students perceive a lack of control over academic activities that are either far beyond or below their capabilities, and/or when they perceive that there is no value in their learning tasks (e.g., Goetz, Pekrun, Hall, & Haag, 2006). Not only can boredom be understood from the control-value theory of emotions (Pekrun, 2006) that will be described in the subsequent section, but it is also conceptually aligned with a lack of flow during an activity (Nakamura & Csikszentmihalyi, 2005) due to “overmatching [or] underutilizing” (p. 90) an individual's ability. Furthermore, boredom is consistent with lack of autonomous regulation because of an inability to identify and internalize the value of an activity (Niemiec & Ryan, 2009). Although students who experience boredom during class or while studying may not be disruptive (Pekrun, Goetz, Daniels, Stupnisky, & Perry, 2010), the negative impacts, such as reduced motivation and use of learning strategies, and lower academic attainment, cannot be ignored (e.g., Daniels et al., 2008; Pekrun, Goetz, Titz, & Perry, 2002).

In the literature, researchers have investigated the negative relationships between boredom and various learning outcomes (e.g., self-regulation and achievement) and other academic emotions (e.g., enjoyment) (Pekrun, Goetz, Frenzel, Barchfeld, & Perry, 2011). In particular, Pekrun and his colleagues (2010) conducted a series of studies on academic boredom among university students using both cross-sectional and longitudinal designs. The authors found negative correlations between boredom and intrinsic motivation, rs = –.26 to –.61, and effort regulation, rs = –.45 to –.51. The authors then followed up with another group of university students and found that boredom, assessed at the mid-point of
a full-year course, significantly predicted their course performance. Other researchers examined the impact of boredom using a qualitative perspective. Kanevsky and Keighley (2003) interviewed three underachieving gifted high school students. The authors found that being bored in school led to those gifted students being suspended and/or dropping out of school. Although a modest number of studies have examined boredom, most have concentrated on measuring students’ levels of boredom during one class or while studying.

Recently, in response to this research gap, Ahmed, van der Werf, Kuyper, and Minnaert (2013) followed a group of Grade 7 students and found that students’ levels of trait academic boredom increased over time. In addition, the authors found that the increasing level of boredom was associated with students’ reducing use of self-regulated learning strategies and their declining achievement in mathematics. Although Ahmed et al.’s study advanced our understanding of how trait academic boredom changes over a school year, little is known about the development of state boredom among university students, and the extent to which this commonly experienced emotion relates to antecedents and consequences, specified in Pekrun’s (2006) framework of academic emotions. As Vogel-Walcutt, Fiorella, Carper, and Schatz (2012) argue, it is important to examine state boredom because this “can be effectively assessed and mitigated within educational settings” (p. 90). Hence, in this study, we first explore the trajectories of state boredom and engagement for university students over an academic semester. We then examine how changes in boredom relate to changes in engagement. Lastly, we evaluate how perceived autonomy support—an important situational factor for learning (e.g., Tsai, Kunter, Lüdtke, Trautwein, & Ryan, 2006)—is associated with the pattern of change in boredom.

1.1. Theoretical framework and empirical evidence of academic boredom

As Vogel-Walcutt et al. (2012) note, boredom experienced in academic settings is commonly conceptualized as a negative and deactivating emotion. To investigate this emotion, the present study was therefore based on the control-value theory of emotion developed by Pekrun (2006) which focuses not only on antecedents, emotions, and effects but also on their concurrent relationships over time, and we also discussed how the psychological need of competence specified in self-determination theory (Deci & Ryan, 2012) is consistent with the current understanding of academic boredom. Specifically, in Pekrun’s framework, the cognitive appraisal of control and values of academic-related situations and personality factors are considered antecedents to boredom. The control-value theory further depicts how the experience of boredom subsequently affects students’ engagement and performance.

1.2. Antecedents of boredom

1.2.1. Cognitive appraisals

In Pekrun’s (2006) framework, the cognitive appraisal of learning activities and situations is a proximal factor contributing to academic boredom. Specifically, if students perceive that they lack control over their learning, which they view as being either beyond or above their capability, boredom may be induced. In addition, the attribution of boredom to over-challenged learning is also considered a threat to the basic psychological need of competence in self-determination theory (Niemiec & Ryan, 2009). If students place a low value on learning-related tasks or on academic situations, they may also experience boredom. As Pekrun states, these two dimensions—control and value—have a direct influence on students’ academic boredom. This theoretical perceptive has been supported by empirical evidence (e.g., Goetz et al., 2006; Pekrun et al., 2010, 2011). Goetz and his colleagues conducted a correlational analysis regarding middle-school students’ cognitive appraisals and boredom experience in the context of Latin instruction. The authors found that boredom significantly associated with self-reported control, \( r = -0.25 \), and intrinsic value, \( r = -0.50 \). Similarly, Pekrun and his colleagues found a similar pattern of results among university students in Canada and Germany. Although these findings provide some support to the relationships between boredom and appraisals of low control over and low value of learning, in order to unfold the causal relationship, Pekrun and his colleagues assessed university students’ perception of their academic control and value at the beginning of a course and levels of boredom in the middle of the course, thereby accounting for temporal difference. The authors found that the levels of both control and value reported earlier negatively predicted boredom reported later in the course, providing evidence for the influence of control-value appraisals on the experience of boredom.

1.2.2. Learning environment

While low control and value appraisals are proximal factors for the experience of boredom, learning environment can be considered a distal factor that triggers different cognitive appraisals. It is of particular importance to consider this distal factor because it indicates potential avenues to help ameliorate boredom on the teachers’ side. Although a multitude of factors, such as the structure and clarity of instruction in a learning environment may influence students’ experience of boredom, a lack of support for students’ autonomy is expected to influence cognitive appraisals (Pekrun, 2006). In other words, in a learning environment where there are minimal options or choices provided, students may be likely to interpret that they do not have control over their learning. Similarly, if students are taught to focus only on memorization without being provided with learning implications, they may perceive that the learning has low value. The importance of perceived autonomy support was supported by Sierens, Vansteenkiste, Goossens, Soenens, and Dochy’s (2009) findings, in which the authors found that without a provision of substantial autonomy support, university students did not engage in high levels of self-regulation even though instruction was structured and expectations were clear. Moreover, Daschmann, Goetz, and Stupnisky (2011) found that aspects of quality instruction, such as providing autonomy and reinforcement, were negatively associated with varying causes of boredom (e.g., being bored due to a lack of meaning and being over-challenged) among grade school students, providing some support to the theoretical claims. Furthermore, in the literature, researchers have found positive impact of autonomy support on students’ learning (e.g., Jang, Reeve, & Deci, 2010; Reeve, Jang, Carrell, Jeon, & Barch, 2004). Tsai et al. (2008) examined Grade 7 students’ perceived autonomy support and their levels of interests in learning. The authors found that students’ perceived autonomy support positively predicted their levels of interests in learning mathematics, German, and a foreign language. Similarly, Kaplan and Assor (2012) found that the more the junior high students perceived having autonomy supportive conversations with their teachers, the lower their experience of negative emotions. These findings, when taken together, indicate the importance to systematically examine how perceived autonomy support is related to students’ experience of boredom, a negative unsettling emotion, over a course of study.

1.3. Different types of academic boredom

1.3.1. Boredom during study versus in class

In both Mann and Robinson’s (2009) and Larson and Richard’s (1991) studies, students commonly reported being bored in class. In addition, students also feel bored while studying (e.g., Tze,