

## Submissions Abstract Book - All Papers (All Submissions)

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What Triggers Students' Interest During Lectures?

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**Research Domain:** Learning, teaching and assessment (LTA)

**Abstract:** Lecturing is often touted as a means to inspire students' interest, yet many lectures fail to do so (Bligh, 1998). Stimulating interest, such as through good teaching, is vital to education, as a person's interest influences their attention, goals, ability to self-regulate, study strategies, and levels of learning (Renninger & Hidi, 2016; Rotgans & Schmidt, 2011a). This study examined what triggers students' situational interest during lectures. Students ( $N=706$ ) in 12 different one-hour first year lectures were surveyed at the end of the lecture. They described the moment they were most interested and rated their situational and individual interest, and features of the content, presentation, and teachers' behaviour during that moment. Regression analyses showed that novelty, cognitive activation, cognitive incongruity, and relevance all positively predicted situational interest, as did students' perceptions of their teachers' enthusiasm, approachability and knowledge. Overchallenge was negatively associated with situational interest. The results suggest that lecturers need to attend to their relationship with students by demonstrating enthusiasm and friendliness. However, they need not entertain; stimulating thinking is more important to engaging students' interest. Teachers also need to help students see the real-life implications of content.

**Paper:**

### Introduction

Lecturing is a primary instructional mode in higher education, and is often believed to inspire interest in students, despite a lack of evidence of that effect (Bligh, 1998). Stimulating interest, such as through good teaching, is vital to education, as a person's interest influences their attention, goals, ability to self-regulate, study strategies, and levels of learning (Renninger & Hidi, 2016; Rotgans & Schmidt, 2011a). The aim of this study is to investigate the variables associated with students' situational interest during lectures.

As conceptualized by Renninger and Hidi (2011, 2015), interest is focused on some content or object, involves interaction between a person and the environment, consists of both cognitive and affective dimensions, and has a physiological/neurological basis connected to reward circuitry. Situational

interest, a state of heightened interest in a particular situation, can be distinguished from individual interest, which endures over time. Situational interest may be triggered by instructional features (Linnenbrink-Garcia et al., 2010) then requires continued interaction with a stimulating environment to be maintained (Hidi & Renninger, 2006; Linnenbrink-Garcia et al., 2010).

Attention to the situational variables that trigger interest in real-world classes is scarce in higher education. Making students think through posing problems can stimulate interest (Dohn et al., 2009; Rotgans & Schmidt, 2011a). Relevance interventions have prompted situational interest (Hulleman, Godes, Hendricks, & Harackiewicz, 2010). Students' perceptions of teachers' concern for students and subject-matter expertise, and ability to explain things in accessible ways have been associated with students' situational interest (Marjoribanks & Mboya, 2004; Rotgans & Schmidt, 2011b). Humour and fun hands-on activities may also trigger interest (Dohn et al., 2009).

We investigated student characteristics and instructional variables that predict situational interest during first year lectures. I hypothesised that students' demographic characteristics would affect both their level of individual and situational interest but that situational variables would have a stronger impact on situational interest. Specifically, we hypothesized that the moments in lectures that trigger students' situational interest would be those that offer new information (novelty), prompt students to think (cognitive activation and cognitive incongruity) without over-challenging, are relevant and useful to their lives, offer strong narrative elements (examples/stories) and entertain. We also predicted that positive perceptions of teachers would contribute to students' situational interest.

## Methods

### Sample and procedure

The sample included  $N=706$  (460 female; mean age=19 years,  $SD=3.10$ ) first year students in a UK university who were socioeconomically and racially diverse (41% first generation university students; 35% BME). Each participant attended one of 12 different individual first year lectures as part of their degree course in a range of subjects. At the end of the lecture, they completed a 3-page survey starting with two open-ended questions: 1) 'Briefly describe the moment you felt most interested in *this* lecture.' 2) 'Why? What made this moment/episode particularly interesting?' Then they answered 5-point Likert scale items (1=*strongly disagree* to 5=*strongly agree*) assessing their situational interest and individual interest, features of the lecture (*novelty, cognitive activation, cognitive incongruity, overchallenge, relevance, examples/stories, entertaining, and teacher enthusiasm, approachability and knowledge*). Situational interest (9 items) and individual interest (11 items) were based on Renninger and Hidi's (2015) definitions. All measures had good reliability. Students also indicated their gender, age, race, whether they were UK/European Union or overseas students, and first-generation status.

## Results

On individual interest, women and men did not differ significantly, nor did students who were first generation HE students and those who were not. Scores were significantly lower for UK/EU black and minority ethnic (BME) students than for White UK/EU students. Students who were younger than 20 years old had significantly lower individual interest than older students. The same

patterns were found for situational interest.

Hierarchical regression analysis (Table 3) was used to separate personal characteristics (demographic variables, then individual interest) from the eight situational variables. The third level model explained 38% of the variance in situational interest.

The only demographic variable associated with situational interest was age, but this effect was no longer significant when controlling for individual interest. Individual interest continued to be a strong predictor even as situational variables were added. As hypothesised, novelty, cognitive activation, cognitive incongruity, relevance and students' positive perceptions of teachers all were associated with situational interest. Overchallenge was negatively associated with situational interest. Contrary to expectation, examples/stories and entertainment were not significantly related to situational interest.

### **Discussion**

Demographic characteristics were not significant predictors of situational interest after taking account of the features of the lecture. Individual interest, though, played a significant role and it, in turn, was affected by age. The most important situational factor in this study was how enthusiastic, friendly, approachable and knowledgeable students perceived their teacher (Marjoribanks & Mboya, 2004; Rotgans & Schmidt, 2011b).

Being entertaining or funny, though, was not a significant predictor of situational interest when controlling for other features of the lecture. Instead, cognitive activation and relevance were two of the most important features of the lectures (Hulleman et al., 2010; Rotgans & Schmidt, 2011a). Information that is new, controversial or contradicts something students already know also seemed to trigger interest, though less strongly. However, teachers need to be careful not to over-challenge students, as that was negatively related to situational interest.

As teachers often use examples and stories to convey the applications of the subject matter, it was surprising that this variable was not a significant predictor. However, examples/stories were more highly correlated with entertainment and the way the teacher was perceived than with relevance. It may be that particular teaching strategies (e.g. examples/stories) trigger interest only insofar as they build rapport between students and teachers, prompt students to think, or help students see the importance and usefulness of what they are learning.

In sum, lecturers need to attend to their relationship with students by demonstrating enthusiasm and friendliness. However, they need not entertain; stimulating thinking is more important to engaging students' interest. Teachers also need to help students see the real-life implications of content. Further research should illuminate what teachers are actually doing that students interpret as friendly, approachable, enthusiastic and knowledgeable.

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