Modelling the links between students' interest in a domain, the tasks they experience and their interest in a course: Isn't interest what university is all about?

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ABSTRACT

In most formal educational contexts learning occurs through students' interaction with tasks embedded in courses representing learning domains. While current models of interest development describe how interest develops from an in-the-moment triggered state to a relatively enduring well-developed individual interest, this research investigates how interest develops across a set of tasks within a course defined by a specific knowledge domain. The current study examined the development of interest in the context of learning a second language at a Japanese university ($n = 218$) over one academic year. Predictive paths between prior interest in the domain, and competency beliefs at the outset of the course, were modelled in relation to successive course tasks and measures of course and domain interest recorded toward the end of the semester. Modelling included both variable-centred and person-centred perspectives. Accounting for prior interest, the results suggested a series of mediated relationships across task, course and finally domain interest. Self-concept and self-efficacy had different predictive effects on task interest early in the course. Theoretical and practical implications are discussed.

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1. Introduction

The current research builds on the burgeoning literature on interest and interest development to explore relations between students' interest for a domain or study discipline, for a course, and for tasks within university studies, and how self-knowledge in the form of competency beliefs contribute to interest development. While the most commonly cited model of interest development (Hidi & Renninger, 2006) describes how interest develops from a triggered state to a relatively enduring well-developed individual interest, we focus on interest development within the context of a continuing university course. Students embark on a new university course with different levels of interest in the broad content domain, in the course itself, and have different levels of interest in the tasks they encounter. The current research takes novel approach to modelling the development of interest by incorporating all three levels: domain, course, and task. In addition, we examine how competency beliefs measured as self-concept and self-efficacy, contribute to this development. Relations between the three levels of interest,

self-concept, and self-efficacy are modelled across a number of time points over an academic year in the context of a university course for learning English as a foreign language. This research thereby seeks to make a substantive contribution to our understanding of the role of key individual differences within student learning.

1.1. Nature and development of interest

Probably the most widely-cited model of interest and interest development is the Four-Phase Model of Interest Development (Hidi & Renninger, 2006; Renninger & Hidi, 2011) whereby interest is conceptualized as a multidimensional construct consisting of affect, value and knowledge components. Hidi and Renninger propose differences in the relative balance of these components across the four phases of interest development – triggered situational interest, maintained situational interest, emerging individual interest and well-developed individual interest. In the early phases, affective components are strong and across the course of development knowledge and value components become an increasingly important part of the structure of the developing interest.

Across adolescence and even into post-compulsory contexts, educators face a steady decline in the quantity (Frenzel, Goetz, Pekrun, & Watt, 2010; Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002) and quality (Lieberman & Remedios, 2007) of students' motivation to learn. This

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presents a challenge for researchers to identify critical points in interest development as it occurs within students' educational experience. However, while developmentally complex, interest is content specific (Krapp, 2003; Renninger & Hidi, 2011) and a number of researchers (e.g., Frenzel, Pekrun, Dicke, & Goetz, 2012; Hidi & Renninger, 2006; Renninger & Hidi, 2011) have called for more attention to interest development in specific domains.

1.2. Interest development in a university course context

Acknowledging the domain specific nature of interest is essential to enhancing interest in the context of tertiary education. Based on their classroom, tutorial, and independent study experiences, students make choices about further learning. Therefore the network of relations between interest at different levels of content specificity; domain, course, and task, require further investigation. While most contemporary perspectives emphasise that interest relates to a particular object or content, the specificity of content varies. For example, the intrinsic value construct in expectancy-value theory (Wigfield & Eccles, 2002) primarily refers to specific tasks or activities. The intrinsic motivation construct in self-determination theory (Deci & Ryan, 1985) is usually defined in relation to general classes of content. The POI theory distinguishes objects, activities and domains as interest contents (Krapp & Prenzel, 2011) but like Hidi and Renninger (2006), contents are not tied specifically to any one stage/phase of interest development.

We propose that the reciprocal relations between interest in domain, in course and in tasks are pivotal for understanding how tertiary students' learning experiences contribute to development of their interest in particular learning domains. Students come to their university experience with different levels of interest in the study domains available to them. Choice of a particular study domain often represents existing personal interests. In addition, some domains may be mandated for study and courses in these domains confront a wider range of students' initial domain interest as there will be some students with little or no interest in the domain. As students engage in courses within a domain their learning experiences consist of specific tasks and activities. Students attend lectures, tutorials and engage in a range of compulsory and/or self-directed study. We expect that interest generated and supported by the specific content of the activities and tasks that make up a course will impact on interest (or lack of interest) in the target course and in turn interest in the study domain.

The question for this research concerns how the three levels of domain, course, and task contribute to students' developing interest. At the more general level domain interest refers to students' interest in a defined body of knowledge; an interest in English language, for example. When students have a strong interest in a domain this is likely to be analogous to what Hidi and Renninger (2006) refer to as individual interest. However, knowledge of intensity of the interest and of the time over which this interest has persisted are needed to identify whether this might be a maintained situational, an emerging individual, or a well-developed individual interest.

Course interest refers to the interest students have for a defined course within their study program; Semester 1, Introductory English as a Foreign Language, for example. Students will vary in the phase of interest development that course interest represents, in part due to their level of interest in the domain. Where students have little or no interest in the domain, for example, when students are only taking the course because it is mandated, initial course interest is likely to be low. However, course interest is likely to be directly impacted by how students experience specific course tasks and activities and task interest in our model refers to interest triggered and/or maintained while participating in course-related activities such as practicing English language through interviewing a class partner. We expect that there will be cumulative impacts between these three levels across time.

In the current study the predictive effects across the three levels, domain, course, and task, will be modelled over time using successive measures completed by students studying English as a foreign language at a Japanese university. Domain interest assessed one week after the course commenced is expected to predict to interest in specific tasks and to course interest. Interest in specific tasks is expected to predict to interest in further tasks and to both course and domain interest at the end of the academic year. Course interest is more specific than domain interest and less specific than task interest and so is expected to predict to later measures of domain interest.

1.3. The role of competency beliefs in interest development

Renninger (2009) has suggested that understanding the relation between phases of interest development and self-representation is informative for thinking about how to support interest development in achievement domains. In arguing this connection Renninger used Harter's (2006) developmental model of self that includes students' own perceptions of their academic competencies accumulated from the social comparisons inherent in interactions with others. In recent research on relations between interest and competency beliefs, the latter have most commonly been examined as self-efficacy (Bandura, 1997) and self-concept (Marsh & Shavelson, 1985). Hence, in the current study we incorporated both self-efficacy and self-concept to investigate their contribution to the development of interest for tasks, course, and domain across one academic year.

A number of researchers (e.g., Bong, Lee, & Woo, 2015; Durik, Hulleman, & Harackiewicz, 2015) have considered relations between competency beliefs and interest in specific achievement domains, in particular mathematics and science. For example, using data collected from secondary students (Grades 7–10), Bong et al. (2015) reported strong positive associations between self-efficacy and interest in mathematics and science. Associations between competency beliefs and mathematics and science were stronger than associations with language arts. Other researchers investigating on interest in mathematics and science have focused on self-concept. Data from both secondary and post-secondary students highlights the role of differences in individual interest and self-concept for students' responses to instructional features designed to trigger interest in specific classroom tasks (Durik et al., 2015).

However, despite being closely related, self-concept and self-efficacy are not regularly researched together. What research does exist has demonstrated separate construct validity while suggesting that self-efficacy is an "active precursor of self-concept" (see Bong & Skaalvik, 2003). Recent investigations examining outcomes of both self-concept and self-efficacy research suggest they have disparate effects on learning. Jansen, Scherer, and Schroeders (2015) found self-efficacy to be the stronger predictor of current competency, while self-concept was more strongly predictive of career goals. Parker, Marsh, Ciarrochi, Marshall, and Abduljabbar (2014) observed that while self-concept and self-efficacy were consistent predictors of secondary school tertiary entrance ranks, they also had separate predictive effects. Self-efficacy predicted university entry while self-concept predicted undertaking studies in a STEM field. While these studies establish that self-efficacy and self-concept predict to similar and to disparate achievement outcomes, their shared and unique contributions to the development of interest across a specific tertiary course has not been sufficiently tested. This is a gap the current study seeks to address.

Both theory (Hidi & Renninger, 2006; Schiefele, 1991) and recent cross-lagged modelling (Marsh, Trautwein, Ludtke, Koller, & Baumert, 2005) agree that competency beliefs play a significant role in interest development. However, it is not clear which competency beliefs, self-concept or self-efficacy, are integral to the development of interest at the different levels of domain, course and task. The effect of competency beliefs may be directly related to the level of specificity, which is of