Author: Yufan Yin   International students' approaches to learning: as mediators between perceptions of the teaching-learning environment and study-related burnout

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Title of paper: International students' approaches to learning: as mediators between perceptions of the teaching-learning environment and study-related burnout

Abstract (300 words)

International students come to study in the new teaching-learning environment that they are not familiar with. They enact their approaches to learning and try to accommodate to the requirements and characteristics of the teaching-learning environment. International students may experience workload, stress and even burnout in their studies. Nevertheless, few studies regarding burnout combine with perceptions of teaching-learning environment and approaches to learning and cover international student group. The purposes of this study are to investigate the relationship between students' perceptions of the teaching-learning environment, approaches to learning and study-related burnout, and to test how approaches to learning act as mediators. The data were collected from 218 international students at a research-intensive Finnish university using the HowULearn Questionnaire. Data analysis included confirmatory factor analysis and structural equation modelling. The results showed that students' perceptions of the teaching-learning environment and approaches to learning were significantly correlated with study-related burnout. Structural equation modelling showed that unreflective approach to learning mediated the relationship between perceptions of the teaching-learning environment and study-related burnout. The findings also indicate that students' perceptions of the teaching-learning environment are important sources of approaches to learning. The study provides information to help international students adapt to the teaching-learning environment and reduce their study-related burnout.

Extended summary (1000 words, excluding reference list)

Introduction

International students come to study in the new teaching-learning environment that they are not familiar with (Jin & Schneider, 2019). International students, especially those who are less proficient in the academic and administrative languages, perceive the TLE worse than domestic students (Stratulat, Candel, Tăbîrţă, Checheriţă, & Costan, 2020) and generally need greater support from teachers and staffs (Mikkonen, Elo, Miettunen, Saarikoski, & Kääriäinen, 2017). They have to learn how to start their learning in the new teaching-learning environment (Nachatar Singh, Nagpal, Inglis, & Jacob-John, 2019). In the host institutions, international students enact their approaches to learning and try to accommodate to the requirements and characteristics of the learning environment (Nachatar Singh et al., 2019). They may experience workload, stress and even burnout in their studies (Jin, Yang, & Zamudio, 2021). To achieve their academic goal within a given time period, international students undergo the stress due to acculturation and heavy workload (Mitchell, Del Fabbro, & Shaw, 2017). The stress of acculturation put them at a greater risk for experiencing burnout (Jin et al, 2021).

Studies have found that the decrease in university students' assessment of the learning environment is associated with the increased risk of study-related burnout (Meriläinen & Kuittinen, 2014) and perceptions of the teaching-learning environment (TLE) can predict their approaches to learning (Postareff, Mattsson, & Parpala, 2018). Researchers have also established that approaches to learning are related to study-related burnout (Asikainen, Salmela-Aro, Parpala, & Katajavuori, 2019). Nevertheless, there are rather few researches on approaches to learning acting as mediators between perceptions of the TLE and academic outcomes such as academic achievement (Diseth, Pallesen, Brunborg, & Larsen, 2010) and study-related burnout. Hence, the main objective of the present study is to investigate how international students perceive the TLE, how they start their learning in this TLE, and what effects of their perceptions of the TLE and approaches to learning has on their study-related burnout.

Theoretical background

Research in seven different contexts detected four constructs related to perceptions of the teaching-learning environment (TLE): alignment, relevance and evoking interest, constructive feedback and peer support (Postareff et al., 2018). Adopting different approaches to learning is affected by the perceptions of the context and the demands of their courses (Entwistle, 1987; Biggs, 2001).

Researches have differentiated three approaches to learning among students in the university context: unreflective approach to learning (prev. the surface approach), deep approach to learning and organised studying (Entwistle, 2009; Lindblom-Ylänne, Parpala, & Postareff, 2018). The same kinds of approaches to learning emerge in the studies among international students in Germany and Finland (Lietz & Matthews, 2010; Sakurai, Parpala, Pyhältö, & Lindblom-Ylänne, 2016; Yin, Parpala & Toom, submitted). Unreflective approach to learning refers to a lack of reflection, resulting in a fragmented knowledge base (Entwistle & Ramsden, 1983; Lindblom-Ylänne et al., 2018). Deep approach to learning refers to comprehending the intentional content, using evidence, and integrating the information with previous knowledge (Entwistle, 2009). Organised studying (previously strategic approach), describes how students manage time and effort (Entwistle, 2009).

Study-related burnout is a psychological syndrome consisting of study-related exhaustion, feelings of study-related cynicism and sense of inadequacy (Salmela-Aro, Kiuru, Leskinen, & Nurmi, 2009). Study-related burnout leads to the decrease of educational aspirations (Salmela-Aro & Upadyaya, 2017) and weakens study engagement (Salmela-Aro & Read, 2017).

Research questions

1. Are perceptions of the TLE predictors of study-related burnout among international students?

2. Are approaches to learning (deep, unreflective, and organised) predictors of study-related burnout among international students?

3. Are approaches to learning the mediators between perceptions of the TLE and study-related burnout?

The following hypotheses were tested (see Figure 1):

HY1: Perceptions of the TLE will predict study-related burnout (Dyrbye et al., 2009; Meriläinen & Kuittinen, 2014; Tackett, Wright, Lubin, Li, & Pan, 2017)

HY2: Approaches to learning will predict study-related burnout (Asikainen et al., 2019; Heikkilä et al., 2012; McManus, Keeling, & Paice, 2004).

HY3: Approaches to learning will have a mediating effect on the relationship between perceptions of the TLE and study-related burnout (Diseth, 2013; Diseth et al., 2010).
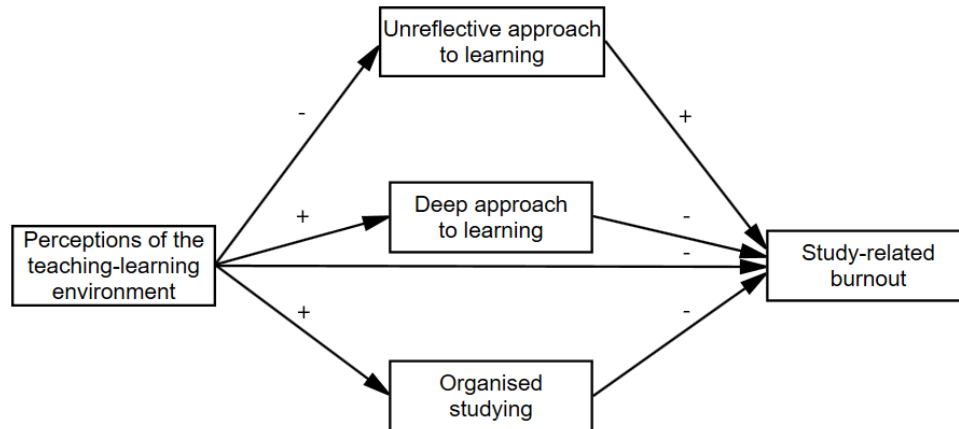

Figure 1. Hypothetical model of the interrelations between perceptions of the TLE, approaches to learning and perceived study-related burnout

Methods

Participants. Altogether 218 international students from all 11 faculties (from social sciences, arts, biological and environmental sciences, science, agriculture and forestry, etc.) participated in the study in 2018 and 2019 (response rate = 19.0%). The majority of the participants were female (71.6%) and the mean age was 26 (SD = 5.2; Min-Max: 19-47 years). The participants came from 47 different countries and thus represented diverse cultural and educational backgrounds (dual nationality: 3.3%; unknown: 4.2%). Finnish students (24.2%) enrolling in the same programme with their international counterparts were also included. Students from other European countries accounted for the largest group (40.9%). Other regions included Asia (14.0%), North America (7.0%), South America (2.8%), Africa (2.3%), and Oceania (1.4%).

Measures. The data were collected with the HowULearn Questionnaire with background information. The HowULearn questionnaire (Parpala & Lindblom-Ylänne, 2012; Hailikari & Parpala, 2014) has been previously validated in Finnish and other cultural contexts (Cheung, Yip, Wan, Tsang, Zhang, & Parpala, 2020; Herrmann, Bager-Elsborg & Parpala, 2017; Postareff et al., 2018; Ruohoniemi, Forni, Mikkonen, & Parpala, 2017; Rytkönen, Parpala, Lindblom-Ylänne, Virtanen, & Postareff, 2012). Students responded to all items on a five‑point scale from 1 (completely disagree) to 5 (fully agree). Background information included gender, age, faculty, student status and length of study.

Data analyses. Nine cases were removed because of missing value and the final number of usable submissions was 209. Preliminary analyses (descriptive statistics, factor analyses, and bivariate correlation analyses) were performed using SPSS 27. The mediating effects of approaches to learning was examined using Structural Equation Modelling (SEM) via AMOS 27. The goodness-of-fit of the model was evaluated with Comparative Fit Index (CFI; < .90), Tucker-Lewis-Index (TLI; > .90), Root Mean Square Error of Approximation (RMSEA; < .06: good fit, < .08: reasonable fit), and Standardized Root-Mean-square Residual (SRMR; < .08) (Hu & Bentler, 1999; Schumacker & Lomax, 2004). In addition, χ^2/df below 2 is considered as the appropriate cut‑off criterion (Byrne, 2016).

Preliminary findings

Most of the predictor variables were significantly correlated with study-related burnout (see Table 1).

Table 1. Descriptive statistics and correlations with study-related burnout

	M	SD	Cronbach's α	Correlation with study-related burnout
Perceptions of the TLE	3.62	.64	.89	-.51**
1) Alignment	3.48	.78	.81	-.43**
2) Interest and relevance	3.85	.77	.73	-.42**
3) Constructive feedback	3.35	.86	.83	-.45**
4) Support from other students	3.91	.81	.72	-.30**
Approaches to learning	3.34	.38	.54	
1) Unreflective approach to learning	2.55	.70	.68	.52**
2) Deep approach to learning	3.99	.63	.77	-.28**
3) Organised studying	3.49	.85	.81	-.28**
Study-related burnout	2.56	.87	.86	
1) Exhaustion	2.53	1.03	.73	
2) Cynicism	2.46	1.09	.87	
3) Sense of inadequacy	2.82	1.01	.71	

**: $p < .01$

A structural equation model (SEM) was produced in order to test the overall structure and relationships between perceptions of the TLE, approaches to learning, and study-related burnout. This model (Figure 2) produced acceptable fit indexes (df = 550, χ^2 = 1356.03, p < .001, χ^2/df = 2.47, CFI = .76, TLI = .74, RMSEA = .08, SRMR = .08) and it showed that:

Perceptions of the TLE predicted unreflective approach (-.43), deep approach (.45), and organised studying (.35).

Perceptions of the TLE predicted study-related burnout (-.43) (HY1).

Unreflective approach to learning predicted study-related burnout (.50) (HY2).

Perceptions of the TLE had an indirect effect on study-related burnout via unreflective approach to learning (HY3). In other words, unreflective approach to learning mediated the relationship between perceptions of the TLE and study-related burnout, but deep to learning and organised studying did not.
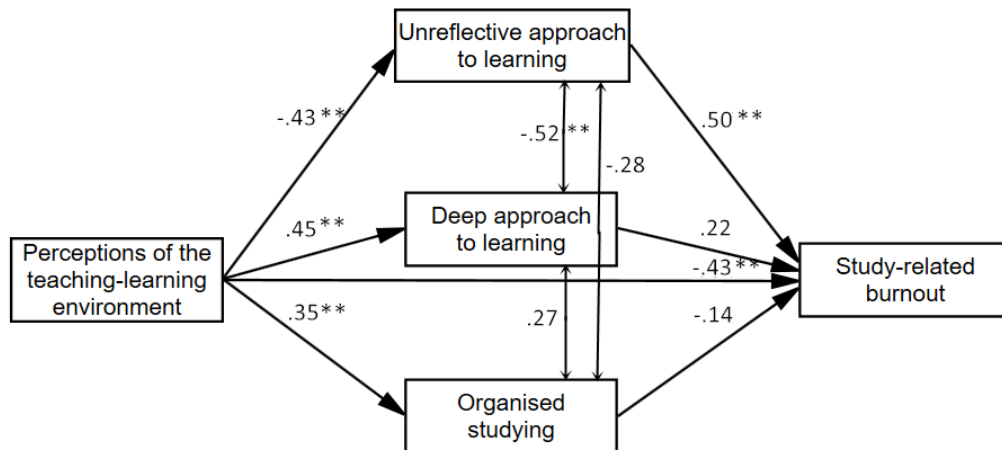
Figure 2. Structural model of perceptions of the TLE, approaches to learning, and study-related burnout

**: p< .001.

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