

Academic Challenges and strategies:
An SRL comparison of Canadian-domestic and Chinese-international students' transition
to university

by

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A Thesis Submitted in Partial Fulfillment
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Abstract

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The purpose of this study was to examine challenges encountered by *Chinese-international* students' self-regulated learning (SRL) in university courses in Canada and compare them to challenges experienced by domestic students. Participants included 38 *Chinese-international* students and 106 *Canadian-domestic* students studied in a self-regulated learning (SRL) strategies learning course. Weekly over 10 weeks, participants (a) rated their experiences with a list of possible challenges, (b) identified their dominant challenges from a list, (c) identified one possible strategy for addressing the dominant challenge, and (d) rated how successful the strategy selected was. Findings indicated that domestic students reported higher proportional frequency of motivation challenges, compared to the other group. From the perspective of strategy use, domestic participants reported persisting strategies more often, but *Chinese-international* students more frequently reported social-regulation strategies. The most dominant challenge reported by both *Canadian-domestic* students and *Chinese-international* students is motivation challenge. For addressing the motivation challenge, domestic students most frequently reported an Adjust or change strategy, but *Chinese-international* students reported a Social-oriented strategy. Both groups identified that their strategies use was a moderate

success. Findings from this study will inform policy and practice in the area of intercultural learning by identifying specific challenges to be addressed in supporting *Chinese-international* students and *Canadian-domestic* students.

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Chapter 1 Introduction

In 2014, Canada welcomed about 336,000 international students at all levels of study (kindergarten to post secondary) as reported in A World of Learning report published by the Canadian Bureau for International Education (CBIE, 2015). The number has increased by 83% from 2008 to 2014. CBIE points out that students from China make up one-third of all the international students who study in Canada. With over 110,000, Chinese-international students represent the largest group of foreign students in this country. In the report, there are three main advantages of studying in Canada: (a) “the high quality of the Canadian education system; (b) the Canadian reputation as a tolerant and non-discriminatory society; and (c) Canada’s reputation as a safe country” (p. 32-33). Studying abroad is a huge decision to make, especially when students come from dissimilar cultural backgrounds compared to the host country. Students have to adapt to completely different lifestyles, particularly for students coming from Chinese cultures and communities where collectivistic values (e.g., focusing on close relationships among group memberships) and Confucian teaching (e.g., teacher-directed class and student’s rote learning) play a central role in learning (Biggs, 1996; Salili, Chiu, & Lai, 2001). Asian cultures emphasize that knowledge should be reproduced, in contrast to Western systems, which support more speculative, questioning approaches (Kirby, Woodhouse, & Ma, 1996). Understanding the academic challenges Chinese-international students face as they transition to Western University systems, as well as how they strategically adapt to those challenges is an important goal for research.

International undergraduate students leave home to gain a better education. Ramsay et al. (1999) found first-year international students at an Australian university

had language issues like vocabulary and communication problems. Moreover, they exhibited more stress, homesickness and anxiety compared to domestic students. Mendelsohn (2002) found international students in a Canadian university who were non-native English speakers felt more insecure and discouraged. Findings are consistent with my own experiences as a Chinese-international graduate student where I have encountered challenges including (a) increased reading load, (b) faster class pace, and (c) time management of study and life. Research to date indicates international first year students also face both cultural and learning challenges.

Successful undergraduate students, whether domestic or international, self-regulate their life and study (Drew & Watkins, 1998; Nandagopal & Ericsson, 2012; Plant, Ericsson, Hill, & Asberg, 2005). Researchers propose that productive self-regulated learning can determine the quality of learning (Hadwin & Winne, 2012). Self-regulated learning (SRL) emphasizes monitoring, directing and regulating actions to optimize goal attainment (Winne & Hadwin, 1998). It is important for undergraduate students, particularly international students, to learn how to use strategies to self-regulate.

Asian students are proposed to have weaker SRL skills compared to Western students (McInerney & Schunk, 2008). This may be due to the fact that Confucian heritage-based education relies heavily on rote-learning and repetitive practice necessary for learning a complex set of characters. As a result, metacognition, autonomy and decision making in learning (fundamentals for SRL) are under-emphasized in the Asian culture of education.

This study compares academic challenges and self-regulated strategies used by Chinese-international undergraduates versus Canadian-domestic undergraduates.

Examining differences in study challenges experienced by domestic students and international students has potential to inform directions for developing and researching “tailored” strategies that will help these students make a smoother transition to universities and allow them to gain the greatest benefit from the study experience.

Therefore, the purpose of this study is to examine and compare academic challenges and SRL strategy use between Chinese-international students and Canadian-domestic students.

Chapter 2 Literature Review

The Models of Self-regulated Learning

Self-regulated Learning (SRL) has become prominent in educational and developmental psychology over the last 30 years (Zimmerman, 2006). In order to reach academic goals, self-regulated learners proactively take control of their learning and learning situations, monitoring their success, and making changes as necessary (Winne, 2001; Winne & Hadwin, 1998; Zimmerman, 1989). Many studies indicate that high- and low-achieving students evidence different specific academic strategy use, especially in terms of metacognitive approaches (such as self-monitoring and regulation of thinking on problem-solving) (Zimmerman & Martinez-Pons, 1990). Research also shows that the higher achieving students report higher frequencies of time management and goal setting strategies (Plant, Ericsson, Hill, & Asberg, 2005).

Multiple models of SRL have been used to explain students' studying. Socio-cognitive theory (e.g., Bandura, 1991) emphasizes self-evaluation. That is, people have an internal standard of their behavior that no one else will detect. They do not just rely on external rewards and punishments. The theory emphasizes the interaction of personal, behavioral and environmental factors. Building on Bandura's social cognitive theory, Zimmerman proposed a tri-phasic model of self-regulation (2011, 1989). In his model, academic regulation occurs cyclically before, during and after the task. The basic processes in Zimmerman's SRL cycle include (a) forethought, which means the initial goal setting, task analysis, and learning goal orientation, (b) performance, which refers to how learners engage strategies to self-control and actively monitor their study, (c) self-

reflection, which means students' self-evaluations and self-reactions for the learning outcomes.

Winne and Hadwin's (1998) model of SRL details cognitive studying across a recursive, four-phase learning cycle. The four-phase model is a recursive system. The products of early study cycles update cognitive perceptions and conditions on the next cycle of activity. At the beginning of every study cycle, students develop and refine perceptions about task features (phase 1), followed by setting high-quality learning goals that serve as standards for evaluating progress (phase 2). This leads to enacting the task by choosing and applying relevant study tactics and strategies (phase 3). Finally, students continually adapt and refine studying based on metacognitive monitoring and evaluation (phase 4). Each of the 4 phases is essential for productive self-regulated learning. Therefore, when students encounter difficulties and attempt to resolve them with one or more strategies, that experience becomes critical information (conditions) for future studying episodes.

SRL is the purposeful and flexible use of strategies to achieve particular goals and alleviate academic challenges as they are encountered (Hadwin & Winne, 2012). *Canadian-domestic* students and *Chinese-international* students may face different kinds of challenges when they study at university. From an SRL perspective, academic challenges are important because they create opportunities for students to respond adaptively by choosing and using strategies for their study. Understanding challenges, tells us about the types of situations that warrant SRL. Understanding SRL involves exploring the strategies students select and reflect on in response to those challenges.

Therefore, this study investigated the difference between *Canadian-domestic* students and *Chinese-international* students in the challenges they report over 10 weeks of studying and the strategies they report using to address those challenges. Together these strategic responses to challenge studied over time will contribute to understanding (a) students' SRL cycles and processes, and (b) factors contributing to successful study life in university in the future.

Academic Challenges and SRL

Undergraduate students face new challenges when they go to university. The transition to postsecondary is marked by complicated challenges in emotional, social, and academic adjustment (Gerdes & Mallinckrodt, 1994). Although some undergraduate students adapt effectively to postsecondary courses, others feel overwhelmed and unable to overcome the challenges. Hirsch (2013) stated that at university personal and academic challenges are quite difficult, and even high-functioning students do not always automatically make their transition smoothly. Undergraduates often feel more helpless (Peterson & Barrett, 1987) and stressed (Carver, Scheier, & Weintraub, 1989) especially when they experience study setbacks.

This study explores differences in academic challenges experienced by *Chinese-international* students, compared to domestic students during their undergraduate studies in Canada. Findings will illuminate differences related to the academic challenges students experience over one semester of studying. From a self-regulatory perspective, understanding the specific academic challenges of domestic and international students is critical for educators to generate interventions and support materials with potential to help students strategically adapt to new situations and challenges.

In this study, Winne & Hadwin's (1998) four-phase model of SRL was used to categorize academic challenges into four broad categories: *Planning* challenges, *Enactment* challenges, *Social-cultural* challenges, and *Motivation* challenges. Planning challenges category, include *Goal and time management*, *Self and life management*, and *Finding the right place to study*, comprising challenges connected to Winne & Hadwin's Phase 1 task perceptions, and Phase 2 goal setting/planning. Theoretically, students who have Planning challenges do not construct accurate perceptions of the task, identify goals, or plan strategies. Enactment challenges, include actions and behaviors that contribute to task processes, such as: *Using strategy* challenges and *Attention learning and remembering* challenges. Additionally, Social-cultural challenges, include difficulties with *Language and communication* challenge, and *Adjusting to new culture challenges*, comprising challenges generated from social interaction or communication problems when students do their academic study. Finally, Motivation challenges, include students' internal feelings or beliefs related to academic study such as: *Motivation*, *Emotion* and *Confidence*. Based on the categorization, *Western* (domestic) students and international (especially for *Chinese-international*) students might have similar or different academic challenges at university. Therefore, this study tested the difference between *Canadian-domestic* students and *Chinese-international* students in 4 challenge categories and the strategy they use (see Table 1).

Table 1
Four Challenge categories

(1) Motivation	(2) Planning	(3) Enactment	(4) Social-cultural
Motivation & Procrastination	Goal & Time Management	Choosing or Using Strategies	Language & Communication

Confidence	Life & Self-Management	Attention Learning & Remembering	Adjusting to a New Culture
Emotion	Finding the Right Place & Situation to Study		

Motivation Challenges.

Motivation & Procrastination challenges. Motivation in this study refers to the will or desire to be successful in academic work. Motivation is consistently considered a crucial part of students' learning and academic achievement (Hirsch, 2013; Zusho, Pintrich, & Coppola, 2003). Martin (2009) found university or college students were more motivated and engaged than high school students. However, the level of motivation decreased after they entered university. Researchers investigated how undergraduate students' level of motivation changed over time in chemistry class (Zusho, Printch, & Coppola, 2003). Findings revealed an overall decline in students' motivation, and motivational components of task value were found to be one of main predictors of academic achievement. Therefore, motivation problems might still be a critical challenge for many undergraduates.

For international students, motivation is a significant challenge as well. Woodrow (2013) found that *Chinese-international* students reported experiencing significant intrinsic academic motivation challenges by the end of the first year at *Western*, English-speaking universities. For *Asian* students, parental pressures have been found to serve as an important factor contributing to students' high level of external motivational behaviors (Eaton & Dembo, 1997). Eaton and Dembo propose that *Asian* students' higher academic achievement might not involve a difference in motivational behavior but rather the willingness to comply to adult authority because of the authoritarian parenting of *Asian*

parents. First generation *Asian-American* students reported higher levels of self-criticism, but their higher academic achievements explain why they have increased achievement motivation. *Asian* students might have high levels of motivation before university; however, their motivational behaviors are unknown after they enter university perhaps leaving family and direct parental control.

There is limited research comparing academic motivation challenges between *Western* and *Asian* undergraduates.

Overall, differences in academic motivation challenges between domestic (*Western*) undergraduates and international (especially *Chinese-international*) undergraduates have been under examined. This research extended existing research on motivation difficulties/challenges by examining both the prevalence of these challenge and the ways students strategically respond to those challenges.

Confidence challenges. Different from academic motivation, which focuses on the internal and external desire for study, confidence is the self-belief about the capabilities for tasks. Academic confidence, or the belief held by students about their academic competence, is highly related to student learning and achievement (Nicholson, Putwain, Connors, & Hornby-Atkinson, 2013). Research findings indicate that undergraduates who report higher academic behavioral confidence (especially regarding grades, studying and attendance), achieved higher marks at the end-of-semester (Chemers, Hu, & Garcia, 2001; Lane, Lane, & Kyprianou, 2004). Nicholson et al. (2013) proposed that boosting undergraduates' confidence may leverage students' academic behaviors at university.

However, for international students, confidence may be a problem related to language abilities (Lewthwaite, 1996; Robertson et al., 2000; Tompson & Tompson, 1996). *Asian-international* students reported feeling frustrated and lacking confidence in their English language abilities, despite having a high motivation to contribute in lectures or seminars (Lewthwaite, 1996). Many international students reported that they lacked confidence in verbal skills (Robertson et al., 2000).

Confidence is importantly related to academic achievement. Given that international students have previously reported confidence challenges due to language barriers, this study compares the frequency with which *Chinese international* and *Canadian-domestic* students report confidence challenges over an academic semester, as well as the strategies they use to regulate in the face of those challenges.

Emotion challenges. University life is filled with different tasks, like attending lectures, finishing assignments, and managing daily life, so the emotional stress might influence undergraduates negatively. For instance, academically unsuccessful undergraduates showed less ability to manage stress than successful students (Parker, Duffy, Wood, Bond, & Hogan, 2005). Besides that, compared to high-school life, most undergraduates leave familiar supports such as family and close friends behind. Martin (2009) found that university/college students feel more anxiety than high school students. Therefore, emotion is a general challenge for undergraduates.

Additionally, many international students also face emotion challenges. Researchers showed that international students exhibited more stress, homesickness and anxiety compared to domestic students (Rajapaksa & Dundes, 2002; Ramsay et al., 1999). Rajapaksa and Dundes (2002) described that the students who feel homesick

looked like they left part of themselves at home. This study will test the difference between *Canadian-domestic* students and *Chinese-international* students in emotion challenge. It will also examine the strategy they use to address this challenge.

Planning Challenges.

Goal & Time management challenges. Time and goal management is a crucial part of self-regulation (Pintrich, 2000, 2004). From an SRL perspective, goal management and time management are tightly connected, because goal-setting constitutes planning, time estimation, time monitoring and regulation. (Hadwin & Winne, 2012; McCardle, Webster, Haffey, & Hadwin, 2016). Planning study time and tasks reasonably helps students follow through on study schedules in a timely fashion. When students construct academic plans, they need to assess study time and goals for using that time.

Despite limited research about goal setting challenges experienced during studying, research indicates undergraduate students usually struggle with time management. Panek (2014) posited that adolescents have an unprecedented number of options as what to do with their leisure time using multiple kinds of new media (e.g. cell phones, Internet, and TV). Without external constraints by parents and teachers, many students are unable to maintain a balance between schoolwork and leisure pursuits, and may neglect school work. Macan and other researchers (1990) found that students who could control their time reported better academic performance, greater work and life satisfaction, less role ambiguity, and less role overload. Research also indicates that older mature undergraduates over 25 years old have better time management skills than traditional-entry students who are less than 21 years old (Trueman & Hartley, 1996).

Despite the apparent role of time management challenges in undergraduate studies, particularly for young students, limited research has examined international undergraduates' time management behaviors, especially for *Chinese-international* students. One study discussed the relationship between Chinese students' time-management and their study engagement (Liu, Liu, & Yang, 2014). They found that time management disposition had a partially mediating effect on the relation between students' learning adaptability and study engagement. Another study found that *Chinese-international* students have lower scores on setting goals compared to *Canadian-domestic* students (Salili et al., 2001). Some researchers suggest that time management might be affected by cultural differences in perception of time: monochronic and polychronic time orientation (Nonis, Teng, & Ford, 2005; Xu, Du, & Fan, 2016). In polychronic countries (e.g., United States, Canada), time is viewed as linear and dividable. People often engage in multiple tasks or activities at the same time. Conversely, people in monochronic countries (e.g., China) prefer doing one thing at a time rather. Therefore, when facing multiple academic tasks at the same time at university, domestic students might better manage their time compared to *Chinese-international* students.

This study will examine time management and goal setting as potential areas of challenges for *Canadian-domestic* and *Chinese-international* undergraduate students. Furthermore, the study will examine students' strategy use to this challenge.

Life & Self-Management Challenges. Life and self management challenges include such things such as sleep, relationships, and health issues. Research indicates that undergraduate students face a number of life stressors when they go to university such as: modifying existing relationships (e.g., living apart from family), learning to live

independently (e.g., managing time and money), and building new relationships (Parker, Summerfeldt, Hogan, & Majeski, 2004; Parker, Duffy, Wood, Bond, & Hogan, 2005).

Furthermore, college students frequently engage in redundant behaviors that are physically unhealthy (Musselman & Rutledge, 2010; Rogowska, Wojciechowska-Maszkowska, & Borzucka, 2016). For instance, many university students do not obtain efficient physical activity and sleep, and frequently engage in drug use (including tobacco and nicotine) and problematic alcohol consumption (Johnston et al., 2006; Von et al., 2004). Unhealthy lifestyles can negatively influence academic studies. Lopes and his colleagues (2013) found that nearly 65% of students in their research reported poor sleep quality, and that sleep quality is also associated with lower level of academic success and satisfaction, learning problems, and poorer relationships with peers and intimate relationships. Another study reported that higher academic achievement was associated with adolescents' regular consumption of breakfast and lunch (Stea & Torstveit, 2014).

Thus, students' healthy life management is quite important not only for their daily lives but also academic study. Students who are good at self management can better control their life events such as sleep, relationships or health. Although most research focuses on *Western* students, it is also important to investigate whether *Chinese-international* students also experience life management problems that interfere with their academic work.

Therefore, this study tested the difference in life and self management challenges and strategy use between *Chinese-international* students and *Canadian-domestic* students.

Finding the right place & situation to study. For this study, finding the “right place to study” refers not only as being able to find a physically appropriate place to do work, but also finding a sense of belonging (e.g., one’s place in a community) to engage in scholarly work. One study found that, for both international students and American students, the library is usually an appropriate place for studying (Macdonald & Sarkodie-Mensah, 1988). Another study found that many international students prefer to do their academic work with those from their own culture (Sarkodie-Mensah, 1998; Treisman, 1992). Treisman (1992) found that Chinese students and black students at UC Berkley studied calculus in different ways. Chinese students would like to put in 8-10 hours working alone at first, then they prefer to get together at night, and check each other's’ answers. Conversely, black students had little idea about what the other students in the class were doing, because they usually did assignments alone. Findings also indicated that Chinese students gained higher achievement in the course from their group studying suggesting that finding the right place to study potentially could be a peer group to study with.

On one hand, the small amount of research related to finding the right place to study might mean that students, including domestic students and *Chinese-international* students, do not struggle with finding study space. On the other hand, it might also be a critical problem which has been largely ignored. Therefore, this study will investigate the difference in finding the right place and situation to study challenges between *Canadian-domestic* and *Chinese-international* students. Furthermore, the study will explore the strategies students use to those challenges.

Enactment Challenges.

Choosing or using strategies challenges. Choosing or using strategies is central to self-regulated learning. Successful academic task performance requires students to select and apply appropriate strategies to complete academic work (Hadwin & Winne, 2012). For example, students might substitute highlighting with note taking in their own words as a means for making deeper connections between ideas during reading. However, there could be multiple challenges associated with strategies including: (a) knowing a range of strategies, (b) choosing an appropriate strategy and (c) applying that strategy successfully. Therefore, learning how to use strategies to self-regulate is meaningful for many undergraduates.

For many international students, flexibly applying strategies is also crucial, because research indicates that *Asian* students have weaker SRL skills compared to *Western* students (McInerney & Schunk, 2008). *Chinese-international* students score lower on measures of cognitive strategies use than the Canadian group (Salili et al., 2001). Some researchers stated that *Asian* students study because of external influences, and less so driven by internal metacognitive monitoring and evaluating (Stevenson et al., 1990). One external factor is the influence of Confucian philosophy (e.g., filial piety, which is a virtue of respect for one's parents and ancestors). East Asian society places importance on piety, hard work and education. For instance, findings indicate that parents of Chinese students have high academic expectations and standards of their children (Stevenson et al., 1990). In particular, Chinese mothers care more about their children's academic performance and spend even more time in supervising their children's schoolwork than American parents. From a self-regulatory perspective, it is possible that

highly supervised studying combined with high expectations for academic success, limits opportunities for Chinese learners to learn to self-regulate by choosing, using and adapting strategies as necessary. In contrast, McInerney and Schunk (2008) propose that *Western* contexts for learning might be less concerned with academic excellence and testing than *Asian* cultures, but more concerned with self-evaluation. Self-evaluation is important for learning to select and apply strategies that are well suited for the task-at-hand. Chiu et al., (2007) found a relationship between academic achievement (in math and reading domains) and use of SRL strategies (e.g., evaluation and reflection) for 15-year-old students across 34 countries in the Program for International Student Assessment (PISA) data. The authors found that the relationship varied by different cultures. In more individualistic cultures, the relationship is the strongest, because the students in these cultures rely more on individual learning strategies.

Therefore, compared to *Asian* students, Canadian students could be more familiar with self-oriented strategies, because they are more used to evaluating and reflecting on their academic study in *Western* educational systems. This study examined differences between *Canadian-domestic* students and *Chinese-international* students in the frequency with which they report using strategy challenges, and the approaches they address the challenges.

Attention Learning & Remembering Challenges. When students get into university, they are tasked with learning and remembering a large amount of information in a limited time (e.g, the period before final). Learning how to focus on the concepts and remember information is essential for academic success.

In this study, attention learning and remembering challenges refer specifically to difficulties remaining focused on learning and remembering key information. What are the cultural differences in remembering? *Asian* students are viewed as highly dependent on rote learning (Purdie, Hattie, & Douglas, 1996). They usually think that knowledge as something handed down by the authority and stored in their memory. They expect teachers to tell them the “right” answer even though there may be no answer. The reason for this learning process partially owes to *Asian* parenting styles. For instance, Japanese parents frequently mention the compliance with authority to their children, like children need to come or answer when are called by their parents (Hess, Kashiwagi, Azuma, Price, & Dickson, 1980). In contrast, the Australian students are more independent in their learning. They have willingness to ask questions and explore alternative ways of thinking (Purdie, Hattie, & Douglas, 1996).

Although the two groups of students (*Canadian-domestic* and *Chinese-international*) might use different approaches to remember knowledge, the distinction is helpful, because it illuminates students’ cultural difference related to this challenge. The results of Purdie, Hattie, and Douglas’ (1996) research also showed that Japanese students scored significantly higher on “rehearsing and memorizing” and “reviewing textbooks” than Australian students. Some researchers also found that Chinese-international students scored higher on memorization than the Canadian group (Salili et al., 2001).

Given that there might be cultural difference in remembering challenges, this study examined the differences in attention learning and remembering challenges

between *Canadian-domestic* students and *Chinese-international* students, and their strategy use to these challenges.

Social-cultural Challenges.

Language & Communication challenges. Students who face this challenge are not able to communicate with others smoothly, and the language they use for communication is also a difficulty for them. A majority of international students (who arrive from countries where English is not their first language) might face these challenges. Because of lack proficiency in English, many international students experience difficulties in understanding lectures, writing reports, and expressing ideas (Selvadurai, 1992). Ramsay et al., (1999) found that many first-year international students at an Australian university had language issues, such as vocabulary, speed, and communication problems when listening to courses. Compared to international students, Australian students had issues in courses just because of instructors' policies. As a result of the communication problem, Hellstén (2002) found that international students prefer to listen rather than talk in courses. Cultural barriers and language proficiency may pose unique challenges for international students.

It is important to understand whether language is still an academic challenge to *Chinese-international* students. Although there has limited research reporting the language challenge of domestic students, it is still helpful to know whether the language used in universities is also difficult for them (e.g., communicating using terminology). Therefore, this study examined the difference between *Canadian-domestic* students and *Chinese-international* students in this challenge, and the strategies they use to settle this challenge.

Adjusting to a new culture. Adjusting to a new culture means learning to adapt to new academic contexts. Compared to domestic students, international students might face more on this challenge when they first came to a different country for studying.

International students who participated in an exchange program in the United States indicated they need to adjust to American culture and wish to be more involved in the university community (Jacob & Greggo, 2001).

Acculturation could be viewed as a process, based on environmental and individual effects over time (Wang & Mallinckrodt, 2006). A study stated that social support and language proficiency were both negatively correlated with acculturative stress (Poyrazli, Kavanaugh, Baker, & Al-Timimi, 2004). In the study of Gu et al., (2010), 54% of the International undergraduates who studied in the UK reported that their understanding of the host culture had improved after arriving, which helped them adapt to their new surroundings. A study also reported that learning English helps international students understand more about Western culture and adjust to this culture more easily (Sawir, 2005). Therefore, in this study, determining whether acculturation is also a challenge for international undergraduates is important.

Additionally, domestic students might also have this problem. In some studies, the high proportion of students' withdrawal is because of adjustment or environmental factor, rather than intellectual difficulties, and the factors could be the mismatch between the student and the course or university culture, or feelings of isolation (as cited in Pitkethly & Prosser, 2001). Therefore, this study compared the different self-evaluations regarding this challenge between *Canadian-domestic* students and *Chinese-international* students and the way that students address these challenges.

SRL Strategies for Undergraduates

Winne and Hadwin (2012) propose that productive self-regulated learning can determine the quality of academic learning. Facing different challenges at university, it is crucial for students to build up active self-regulated learning strategies to adapt to their “brand-new” academic study. From a self-regulatory perspective, when students are faced with academic challenges, they may strategically respond in one of three ways: (a) do nothing or abandon the task, (b) persist with the task and approaches they were already using, (c) try a new strategy or approach, or adapt something they did before.

According to Winne and Hadwin’s four-phase learning process theory, students might be expected to respond to challenges differently in every phase. Therefore, in the task understanding phase, when students have difficulty on their perceptions of tasks, they might choose to (a) do nothing or avoid the task, (b) persist, (c) adjust their perception of the task. Similarly, when students have problems on in their second phase (setting goals), they might choose to (a) do nothing or abandon, (b) persist with the former goals, (c) set different goals, adjust their goals, or reprioritize their goals. In addition, when students have difficulties in phases three and four, they might adapt, continue, or abandon the first two phases. In this study, strategy options, and categories of strategy options were organized according to Winne and Hadwin’s 4-phase self-regulated learning model (see Table 2). Acknowledging that strategic responses to challenges can target any phase of studying as SRL, and extend beyond identifying and applying a new strategy or tactic. Consistent with Winne & Hadwin (1998), I acknowledge that a strategy is more than a skill or tactic applied to a situation. Rather, it is a purposeful response to a situation following an IF-THEN-ELSE sequence: IF I

encounter this problem, THEN I will try [a tactic or approach], but if that doesn't work as expected, I will [find something new, keep trying, adjust what I am doing, give up] (ELSE).

Table 2
Strategy Categories on the Four-phase Model

	Do nothing or Avoid	Persist	Adjust or Change	Social-Oriented Strategy
Phase 1: Task Understanding		Persist	Adjust the task	Ask for help Work with a friend/s
Phase 2: Goal Setting		Persist	Set different goals Adjust goals Reprioritize their goals	Ask for help Work with a friend/s
Phase 3: Strategy Engagement	Do nothing Avoid the task	Persist	Adjust the strategy Switch different strategy	Ask for help Work with a friend/s
Phase 4: Large Scale Adaption		Persist	Re-evaluate learning process Change effort	Ask for help Work with a friend/s
Motivation			Change the way I am feeling about it	
Emotion				

In addition to strategies aligned specifically with each of the phases of regulation, this study also acknowledged strategic responses can involve changing efforts or feelings as well as reaching out to others for support. Therefore, four strategy categories were *Doing nothing or avoiding, Persisting, Adjusting or changing, and Social oriented* strategies.

Limited research to date examines differences in strategic responses of *Chinese-International* and *Canadian-domestic* students. Eaton and Dembo (1997) found *Asian* students might choose to exert more effort in their studying compared to domestic students. Students might regulate and improve their learning by working with others, so they might ask for help (e.g., professors or TAs) or choose to work with friends when they have academic problems. Research to date suggests Chinese students might choose to work with friends (e.g, friends from same culture) more readily compared to Western students (Sarkodie-Mensah, 1998; Treisman, 1992). This study compared the strategic approaches reported by *Chinese-International* and *Canadian-domestic* students. Drawing from theory and open-ended responses during pilot work, students will be asked to identify strategies they tried by selecting from 14 possible strategy options targeting key phases and facets of SRL where appropriate.

Purpose Statement and Research Questions

The purpose of this study was to examine and compare academic challenges and self-regulated learning strategy use of *Chinese-international* students and *Canadian-domestic* students.

Four research questions guided the inquiry:

(RQ 1) Do *Chinese-international* students and *Canadian-domestic* students report similar levels of academic challenge across four categorizations? I hypothesize difference between *Canadian-domestic* students and *Chinese-international* students in terms of average proportional ratings on Social-cultural challenges and Planning challenges.

(RQ 2) Do *Chinese-international* students and *Canadian-domestic* students report experiencing similar dominant academic challenges? I hypothesize (a) a significant interaction between challenge categorizations and countries, followed by (b) differences between *Canadian-domestic* students and *Chinese-international* students in terms of the proportional frequency of choosing Social-cultural challenges as the dominant challenge.

(RQ 3) Do *Chinese-international* and *Canadian-domestic* students report similar strategies for addressing their dominant academic challenges? I hypothesize (a) significant interaction of strategy categorization and country difference, followed by (b) difference between *Canadian-domestic* students and *Chinese-international* students in terms of the proportional frequency of choosing Social-oriented strategies among 10 weeks.

(RQ 4) Do *Chinese-international* and *Canadian-domestic* students report similar probabilistic decision paths for addressing their dominant academic challenge? I hypothesize that they report differently on the most dominant challenges and use different strategies to address the challenge.

Chapter 3 Methods

Research Design

This study utilized a comparative and descriptive design to investigate the difference between *Canadian-domestic* students and *Chinese-international* students in their evaluations of challenges faced and strategies attempted to ameliorate those challenges. Specifically, the research questions were investigated by using descriptive analysis, two-way analysis of variance (two-way ANOVA), and probabilistic decision paths. Students' decision paths were followed along three main branches: (a) the dominant challenge identified, (b) the strategy used to address that challenge, (c) the degree of effectiveness in enacting the strategy. These decision steps were graphically represented as maps to identify dominant patterns across *Canadian-domestic* and *Chinese-international* students. Comparison conditions were student citizenship: *Canadian-domestic* versus *Chinese-International*.

Comparison Groups. *Chinese-international* students were defined as students holding People's Republic of China citizenship as recorded in the institutional data records. *Canadian-domestic* students were defined as students holding Canadian citizenship as recorded in their official institutional record.

Groups were compared on four main variables: (a) ratings of the level of challenge experienced for each challenge category, (b) within person proportional frequency of reported challenges (Motivation challenges, Planning challenges, Enactment challenges, and Social-cultural challenges) over 10 weeks, (c) within person proportional frequency of reported strategies over 10 weeks (Persist, Do nothing or avoid strategy,

Adjust or change strategy, Social-oriented strategy), and (d) ratings of success or effectiveness of strategies. Details are presented under *Measures*.

Participants

Participants included a non-probability sample of 144 university students enrolled in a first-year study strategies course in 2016 (ED-D 101: Learning Strategies for University Success) at the University of Victoria (UVic), Victoria, British Columbia, Canada. Six domestic students were removed from the analysis because they had completed fewer than three weeks of SRL diary tool (MyPlanner) over the 10 weeks.

Participants included 38 *Chinese-international* students (14 males and 24 females) and 106 Canadian students (62 males and 44 females). Chinese-international participants included: (a) 13 participants who attended Canadian high school or college before they studied at University of Victoria; (b) one student who was in an international exchange program; (c) 18 students who attended high school, college or university in China; (d) one student who finished high school in United Arab Emirates; and (e) 5 students for whom previous studies were not recorded in the institutional records. *Canadian-domestic* participants included: (a) 101 participants who attended Canadian high school or college before they studied at University of Victoria; (b) one student who attended a Canadian university; and (c) four students for whom previous studies were not recorded in the institutional records.

Context

Data were collected in a 10-week academic course called Learning Strategies for University Success (ED-D101) in the spring semester in 2016. The course introduces students to SRL theory and teaches them how to apply SRL strategies. Students attended

a weekly lecture and a lab component for a total of three hours a week. Lectures focused on teaching the four-phase cycle of SRL (Winne & Hadwin, 1998) and introducing cognitive, metacognitive, motivational, and behavioral strategies. Labs gave students the opportunity to reflect on the past week's studying and apply a range of strategies to their academic studying.

MyPlanner Data Collection Tool. Data for this study were drawn from an SRL diary tool (MyPlanner) completed by all students on a weekly basis as part of the requirements for the course. The purpose of the MyPlanner activity was to encourage students to commit to one study session per week and practice engaging in a self-regulatory cycle to plan for, reflect on, and learn from each study session. The MyPlanner was completed weekly by students over 10-weeks. During the lab, students were prompted to choose a study session and set a specific goal for that study session (around 10 min) (see Appendix A, Part 1). Sometime during the week, after completing the study session, they were guided to reflect on that study session (around 10-15 min) (see Appendix A, Part 2). Data for this study were drawn from Question 5 and Question 6 in Part 2 of the MyPlanner.

On the average, students completed the MyPlanners on a regular basis over 10 weeks ($M= 8.82$, $SD=1.62$) with *Canadian-domestic* students completing slightly fewer ($M= 8.58$, $SD= 1.7$) and *Chinese-international* students completing slight more ($M=9.47$, $SD=1.16$).

Measures

Ratings of Challenges. Question 5 of the MyPlanner required students to reflect on their study experience and rate challenges encountered during that week, partially

shown in Figure 1. Additionally, students were given a list of examples that fall under every challenge category. Ten challenges were rated in this question: Motivation and

How much of a challenge or success were each of these during the last week?

CHALLENGES	MY RATING	EXAMPLES
Motivation & Procrastination <i>The will or desire to do my work</i>	<input type="text"/>	<i>Challenge</i> Didn't feel like doing it Kept putting it off <i>Success</i> Got started early Was excited to do it
Confidence <i>Confidence in attaining my goal.</i>	<input type="text"/>	<i>Challenge</i> I didn't think I could do it Didn't think I could do a good job <i>Success</i> I knew I could do it I knew the product would be good
Goal & Time Management <i>Setting helpful/unhelpful goals and time management.</i>	<input type="text"/>	<i>Challenge</i> Goal was too big Didn't prioritize <i>Success</i> Finished ahead of time Was guided by my goal
Choosing or Using Strategies <i>Knowing which strategies to use.</i>	<input type="text"/>	<i>Challenge</i> Didn't know a strategy to use Chose the wrong strategy <i>Success</i> Chose a good strategy Adapted my strategy along the way

Rating on Challenge

- 1 Major Challenge
- 2
- 3
- 4
- 5
- 6
- 7 Major Success

Figure 1. Partial Question 5 in MyPlanner

procrastination, Confidence, Goal and time management, Choosing or using strategies, Attention learning and remembering, Life and self-management, Finding the right place and situation to study, Language and communication, Adjustment to a new culture, and Emotion. The rating scale was from -3(*major challenge*) to +3(*major success*) of each of a series of 10 potential academic challenges (see Appendix B part 1 for Question 5). Students were asked to rate 10 challenges across 10 weeks. The Likert rating scale was transformed with the range from 1 (*major challenge*) to 7 (*major success*) for analysis.

Based on the categorization represented in Table 1, students' ratings of 10 challenges were grouped into 4 challenge categories including (a) Motivation (Motivation, Confidence, and Emotion challenges), (b) Planning (Goal and time

management, life and self management, and Finding the right place and situation to study challenges), (c) Enactment (Choosing or using strategies and Attention learning and remembering challenges), and (d) Social-cultural challenges (Language and communication and Adjustment to a new culture challenges). Second, proportional mean ratings were calculated per student (over the weeks they attended the labs up to 10 weeks). In other words a mean score per week was calculated per student for each challenge category. For example, to get the proportional mean ratings on Motivation challenges for one student, a student completed 10 weeks of MyPlanner, and this student's proportional mean rating of Motivation challenges is the sum of the student's ratings on Motivation challenges for those 10 weeks, divided by 10. Third, the averages of proportional rating of each 4 challenge categorizations was calculated across *Canadian-domestic* students and *Chinese-international* students.

Narrative Response Constructor

Description of the Main Challenge
•Open text field to construct response

List of Challenges

- Goal & Time Management
- Self & Life Management
- Finding the Right Place to Study
- Strategy use
- Attention Learning & Remembering
- Language & Communication
- Adjusting to new Culture
- Motivation
- Confidence
- Emotion
- Something else

The main challenge I encountered in attaining my goal was
LANGUAGE & COMMUNICATION . Describe the challenge:

When memorizing terms I couldn't communicate them to anyone else to

So I adjusted my approach/strategy and it was completely successful.

Maybe next time, I should switch to a different approach/strategy .

Strategy they will try next week

- Adjust the task
- Set different goals
- Adjust goals
- Reprioritize their goals
- Adjust the strategy
- Switch different strategy
- Re-evaluate learning process
- Change effort
- Change the way I am feeling about it
- Do nothing
- Avoid the task
- Persisting
- Ask for help
- Work with a friend/s
- Try something else

List of Strategies They tried

- Adjust the task
- Set different goals
- Adjust goals
- Reprioritize their goals
- Adjust the strategy
- Switch to different strategy
- Re-evaluate learning process
- Change effort
- Change the way I am feeling about it
- Do nothing
- Avoid the task
- Persisting
- Ask for help
- Work with a friend/s
- Try something else

Evaluation of strategy use

- Not at all
- Minimally
- Moderately
- Completely

Figure 2. Narrative Response Constructor.

Narrative Response Constructor. Question 6 of the MyPlanner prompted students to complete a paragraph describing themselves during that study session by using a combination of sentence starters, drop down list options, and open-ended text fields (see Figure 2).

Specifically, students (a) identified the dominant challenge encountered from a list of 11 options, (b) described the dominant challenge, (c) selected the strategy they used to address the dominant challenge from a list of 15 options, (d) evaluated the success of the strategy as not at all, minimally, moderately, or completely success, and (e) identified the strategy they would try next time from a drop-down list of 15 options.

Data from the narrative response constructor was used for the remaining measures including:

(a) *Proportional frequency of reported challenges.* Four categories of reported dominant challenges included: Planning challenges, Enactment challenges, Social-

cultural challenges, and Motivation challenges. Refer to Table 1, 10 challenge were grouped into 4 categories (Motivation, Planning, Enactment, and Social-cultural challenges). There is one more option called *Other* challenges (challenges were not included in the first question). When students selected Other challenges, the text description was reviewed to and recoded as either: (a) one of the 4 challenge categories where appropriate (which were described 55 times through the dataset), or (b) no challenge in that week (which were described 12 times in total). Students rarely reported Other challenges after recoding, so this category was not included in the analysis. A within person proportional frequency of each challenge category was calculated for each student based on the number of weeks they reported challenges.

First, given that students' answers to the first sub-question of Question 6 in MyPlanner, within person proportional frequency was calculated by summing the total number of dominant challenges identifies over weeks and dividing by the total number of weeks in which dominant challenges were identified. Second, the mean proportion of each challenge per student across students for *Chinese-international* and *Canadian-domestic* students was calculated separately. Finally, mean proportions of each dominant challenge were summed up by categorizing challenges.

(b) Proportional frequency of reported strategies. Four categories of strategies include: Doing nothing or avoid, Persist, Adjust or change, and Social-oriented strategy (refer to Table 2, 14 strategy options were grouped into 4 categories). *Tried something else* was included as the fifth category. Therefore, 5 categories of strategies (Doing nothing or avoid, Persist, Adjust or change, Social-oriented, and Try something else strategies) were compared across comparison groups. A within person proportional

frequency of each strategy was calculated for each student based on the number of weeks they reported challenges.

After collecting students' responses to the third sub-question of Question 6 in MyPlanner, within person proportional frequency was calculated by summing the total number of specific strategies identified over weeks and dividing by the total number of weeks in which strategies were identified. The mean proportion frequency of each reported strategy across weeks was calculated within and across *Chinese-international* and *Canadian-domestic* students separately.

(c) **Strategy effectiveness.** Based on students' responses to the fourth sub-question in MyPlanner about success ratings, students' ratings were converted to scores of 1 to 4 (1=not at all, 2=minimally, 3=moderately, and 4=completely).

(d) **Probabilistic decision paths.** Based on students' responses to the first four sub-questions of the MyPlanner, probabilistic decision paths were created across comparison groups (from the choosing of dominant challenges, followed by the decision of strategy use, and the rating of strategy effectiveness). Details are presented under *Results (RQ4)*.

Data Analysis

SPSS for Windows (Version 24.0) was used to perform descriptive statistics and two-way analysis of variance (ANOVA) of the data. Microsoft Excel 365 was used to perform probabilistic decision paths, and details are presented in Results.

Ethical Approval. Ethical approval was obtained as part of larger SSHRC funded project for the study called "PAR-21: Promoting Adaptive Regulation for the 21st Century" at the University of Victoria. The study was not expected to pose any significant risk to participants. When the data was collected, students' names were

removed prior to ensure confidentiality. All the electronic data was archived and stored on a password protected server only accessible to the researchers. All the students who took the course were automatically included in the research; however, they were informed at the beginning of the course (in the first lecture and syllabus), and they could withdraw anytime during the whole semester, by easily clicking “decline to participate” in CourseSpaces (an online tool used frequently in the course). Furthermore, course instructors did not know the students who had withdrawn consent until after course completion and grade submission (see Appendix C for Ethics Certificate).

Chapter 4 Results

The purpose of this study was to examine and compare academic challenges and self-regulated learning strategy use of *Chinese-international* students and *Canadian-domestic* students. Analysis results are presented separately for each of the four research questions.

Do *Chinese-international* Students and *Canadian-domestic* Students Report Similar Levels of Academic Challenge across 4 Categorizations (RQ1)?

Descriptive statistics of within person mean ratings for each challenge category for *Canadian-domestic* and *Chinese-international* students are presented (see Table 3). Assumptions of homogeneity of variances, independent observations, and normal distributions were met. Two-way ANOVA was used to examine differences between comparison groups in within person mean ratings of each dominant challenge category over 10 weeks.

Table 3

Proportional Means, Standard Deviations, and n for Canadian-domestic and Chinese-international Students in 4 Challenge Categorizations

	Canadian			Chinese		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Motivation	106	5.23 ¹	.76	38	5.36	0.65
Planning	106	5.36	.77	38	5.46	0.63
Enactment	106	5.54	.69	38	5.50	0.63
Social-Cultural	106	5.59	.86	38	5.34	0.73

¹ The range of the rating was recoded from 1 to 7, 1 means major challenge, and 7 means major success.

Findings indicated no statistically significant difference between *Canadian-domestic* students and *Chinese-international* students on their ratings of challenges (see Table 4).

Table 4

Two-Way Analysis of Variance for Comparison Groups and Challenge Categorizations

Variable and source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Country	1	.032	.058	.810	.002
Challenge categorizations	3	.998	1.795	.147	.006
Country * challenge categorizations	3	.839	1.509	.211	.004
Error	568	.556			

Do Chinese-international Students and Canadian-domestic Students Report

Experiencing Similar Dominant Academic Challenges (RQ2)?

Means, and standard deviations of within person proportional frequency of reporting each challenge category for each comparison were reported in Table 5. The assumption of homogeneity of variances, independent observations, and normal distributions were met.

Table 5
Means, Standard Deviations, and n for Canadian-domestic and Chinese-international students' Proportional Frequencies in 4 Challenge Categorizations

	Canadian			Chinese		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Motivation	106	0.43	0.26	38	0.34	0.20
Planning	106	0.34	0.19	38	0.32	0.16
Enactment	106	0.17	0.16	38	0.22	0.17
Social-Cultural	105	0.04	0.08	38	0.11	0.13

Findings indicated statistically significant main effects for challenge categories, $F(3,568) = 78.822, p = .000$, partial $\eta^2 = .393$. Importantly, the interaction between comparison group and challenge categories, $F(3,568) = 5.093, p = .002$ (see Table 6).

Table 6
Two-Way Analysis of Variance for Comparison groups and challenge categorizations

Variable and source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Country	1	.00	.04	.843	.000
Challenge categorizations	3	2.20	78.82	.000	.393
Country * challenge categorizations	3	.14	5.09	.002	
Error	568	.03			

Because the interaction between country and challenge categories was significant, consistent with the hypothesis, the simple main effects were explored to uncover the differences between *Canadian-domestic* students and *Chinese-international* students for each of challenge category (see Figure 3). A Bonferroni simple effect was applied to minimize Type I error rate across the five simple effects and was reduced. the alpha level for each to $.01 (\alpha/5 = .05/5)$ (Bohrer, Chow, Faith, Joshi, & Wu, 1981). Findings indicated that *Canadian-domestic* students had higher proportional frequency of Motivation challenges than *Chinese-international* students, $F(1, 568) = 7.851, p = .005$.

However, there is no significant difference across comparison groups for other challenge categories.

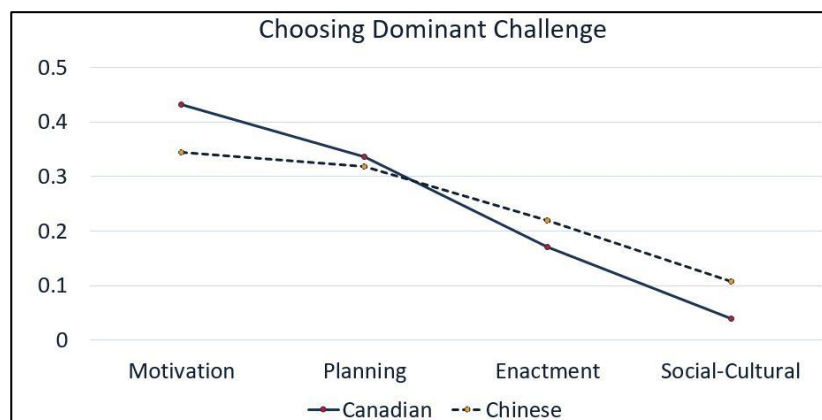


Figure 3. Results of Comparison Groups and Challenge Categorizations

Do Chinese-international and Canadian-domestic Students Report Similar Strategies for Addressing Their Dominant Academic Challenges (RQ3)?

Means, and standard deviations of within person proportional frequency of reporting each strategy category for each comparison were reported in Table 7. The assumption of homogeneity of variances, independent observations, and normal distributions were met.

Table 7
Means, Standard Deviations, and n for Canadian-domestic and Chinese-international students' Proportional Frequencies in 4 Strategy Categorizations

	Canadian			Chinese		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Do nothing/Avoiding	106	0.13	0.18	38	0.09	0.13
Persisting	106	0.25	0.24	38	0.11	0.16
Adjustment or Changing	106	0.39	0.21	38	0.34	0.20
Social-oriented	106	0.14	0.14	38	0.33	0.21
Try Something Else	106	0.08	0.12	38	0.13	0.17

Results showed statistically significant main effects for strategy categories, $F(4,710) = 38.242$, $p = .000$, partial $\eta^2 = .217$ and a significant interaction between country and strategy categories, $F(4,710) = 13.905$, $p = .000$, partial $\eta^2 = .065$ (see Table 8).

Table 8
Two-Way Analysis of Variance for Comparison Groups and Strategy Categorizations

Variable and source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>	η^2
Country	1	.00	.015	.904	.000
Strategy categorizations	4	1.26	38.24	.000	.217
Country * strategy categorizations	4	.46	13.91	.000	.065
Error	710	.03			

The interaction between country and strategy categories was significant, so simple main effects were examined to uncover the differences between *Canadian-domestic* students and *Chinese-international* students (see Figure 4). A Bonferroni simple effect alpha level of .01 ($\alpha/5 = .05/5$) was applied to minimize type I error. Findings indicated that *Canadian-domestic* students had higher proportional frequency of using Persist strategies than *Chinese-international* students, $F(1, 710) = 18.248$, $p = .000$, partial $\eta^2 = .022$. *Chinese-international* students had higher proportional frequency of using Social-oriented strategies than *Canadian-domestic* students, $F(1, 710) = 31.825$, $p = .000$, partial $\eta^2 = .037$.

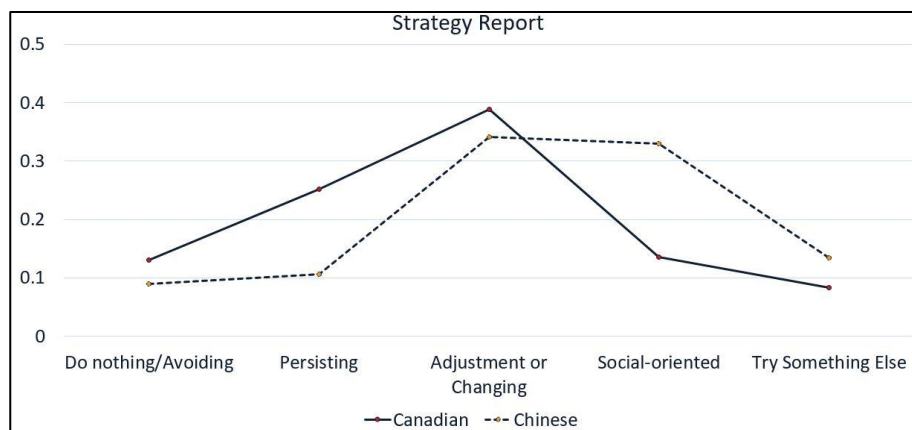


Figure 4. Results of Comparison Groups and Strategy Categorizations

Do Chinese-international and Canadian-domestic Students Report Similar Probabilistic Decision Paths for Addressing Their Dominant Academic Challenges (RQ4)?

The fourth question was whether the two groups of students identify similar regulation path (from the choosing of dominant challenges, followed by the decision of strategy use, and the rating of how successful the strategy used). All decision steps were graphically represented for each comparison group in probabilistic decision paths (Appendix D) with source data reported in Tables 9 and 10.

In the probabilistic decision path, there were in total 25 possible paths (five categories of dominant challenges * five categories of strategies). Given that students rarely reported Other challenges, 20 decision paths were chosen without Other challenges, so the whole map included four dominant challenges (Motivation, Planning, Enactment, and Social-cultural challenges) * 5 categories of strategies (Do nothing or avoid, Persist, Adjust or change, Social-oriented, and Try something else strategies). The mean proportion frequency of each probabilistic decision path per student across *Chinese-international* and *Canadian-domestic* students was calculated separately.

Therefore, the average proportional frequency and the standard deviation (across students in the same group) of each probabilistic decision path were calculated.

Furthermore, students' evaluations of strategy effectiveness were added for every probabilistic decision path. Based on the students' responses on a 4-point Likert scale from 1 to 4, average ratings across time per decision path for every student were calculated, and then the averages of proportional rating of each decision path was calculated across *Canadian-domestic* students and *Chinese-international* students separately.

Therefore, the probabilistic decision map included three steps with means and standard deviations: (a) dominant challenges students confronted, (b) strategies they reported using to address those challenges, and (c) self-evaluations about the success of those strategies.

The average and standard deviation of proportional frequency of each probabilistic decision path across two groups were shown. For example, row 1 in Table 9 shows that, *Canadian-domestic* student reported Motivation challenges as dominant challenges over their 10-week course 43% of the time on average ($SD=.22$). The most common response to that challenge was to Adjust or change strategies reported 38% of the time on average ($SD=.33$). *Canadian-domestic* student reported this strategy as being moderately successful ($M=3.26$) on a 4-point Likert scale from 1 to 4. However, the SD of .54 indicates a fair bit of variability in ratings of success with this strategy.

In contrast, as shown in Row 1 of Table 10, *Chinese-international* students also reported Motivation challenges as dominant challenges over their 10-week course 34% of the time on average ($SD=.20$). However, the most common response to that challenge

was to adopt Social-oriented strategies reported 32% of the time on average (SD=.35).

Chinese-international students reported Social-oriented strategies as being a little less successful with a mean rating 2.99 on a 4-point Likert scale from 1 to 4. However, there was also a large degree of variability (SD=.68) in rating of the effectiveness of this strategy.

Table 9
Probabilistic Decision Pathways for Regulating Dominant Challenges for Canadian-domestic Students

Dominant Challenge	Strategy Use	Mean Percentage of Time (SD)	Rating of Success
Motivation Challenge M=0.43(SD=0.22)	Do nothing	0.13(0.24) N=31	2.06(1.04)
	Persist	0.28(0.32) N=55	3.17(0.57)
	Adjust or change	0.38(0.33) N=75	3.26(0.54)
	Social-oriented strategy	0.15(0.25) N=37	3.27(0.62)
	Try something else strategy	0.06(0.18) N=18	3.17(0.71)
Planning Challenge M=0.34(SD=0.19)	Do nothing	0.14(0.25) N=29	2.30(0.95)
	Persist	0.29(0.35) N=51	3.32(0.48)
	Adjust or change	0.37(0.35) N=65	3.16(0.61)
	Social-oriented strategy	0.08(0.21) N=18	3.25(0.49)
	Try something else strategy	0.12(0.22) N=29	3.25(0.69)
Enactment Challenge M=0.17(SD=0.16)	Do nothing	0.06(0.20) N=8	1.88(0.99)
	Persist	0.16(0.29) N=21	3.40(0.49)
	Adjust or change	0.52(0.42) N=50	3.13(0.59)
	Social-oriented strategy	0.20(0.33) N=23	3.21(0.56)
	Try something else strategy	0.05(0.18) N=7	3.18(0.66)
Social-culture Challenge M=0.04(SD=0.08)	Do nothing	0.12(0.32) N=4	1.5(0.58)
	Persist	0.30(0.46) N=9	3.33(0.71)
	Adjust or change	0.21(0.37) N=8	3.31(0.70)
	Social-oriented strategy	0.26(0.42) N=9	3.56(0.53)
	Try something else strategy	0.10(0.28) N=4	3.13(1.44)

Table 10
Probabilistic Decision Pathways for Regulating Dominant Challenges for Chinese-international Students

Dominant challenge	Strategy Use	Mean Percentage of Time (SD)	Rating of Success
Motivation Challenge M=0.34(SD=0.20)	Do nothing	0.04(0.11) N=6	2.17(0.98)
	Persist	0.14(0.27) N=11	2.96(0.56)
	Adjust or change	0.30(0.35) N=21	2.86(0.73)
	Social-oriented strategy	0.32(0.35) N=22	2.99(0.68)
	Try something else strategy	0.20(0.35) N=11	2.45(0.85)
Planning Challenge M=0.32(SD=0.16)	Do nothing	0.15(0.28) N=11	1.95(1.01)
	Persist	0.09(0.18) N=9	3.06(0.53)
	Adjust or change	0.42(0.33) N=26	2.77(0.59)
	Social-oriented strategy	0.19(0.22) N=19	2.89(0.66)
	Try something else strategy	0.16(0.21) N=15	3.07(0.50)
Enactment Challenge M=0.22(SD=0.17)	Do nothing	0.08(0.23) N=4	2.5(0.58)
	Persist	0.08(0.24) N=4	3.38(0.48)
	Adjust or change	0.39(0.40) N=16	3.08(0.56)
	Social-oriented strategy	0.34(0.37) N=17	3.13(0.49)
	Try something else strategy	0.10(0.20) N=7	3.02(0.85)
Social-culture Challenge M=0.11(SD=0.13)	Do nothing	0.10(0.26) N=3	2.22(1.07)
	Persist	0.16(0.36) N=4	2.75(0.5)
	Adjust or change	0.11(0.25) N=5	3(0.71)
	Social-oriented strategy	0.56(0.43) N=15	3.07(0.59)
	Try something else strategy	0.07(0.17) N=4	3(0)

Overall, when asked to identify the most salient challenge, both *Chinese-international* students and *Canadian-domestic* students reported Motivation as their dominant weekly challenges. However, they used a different dominant strategy in higher proportions to address Motivation challenges, and reported being quite successful with those different strategies.

Importantly, Chinese-international students also reported dominant Planning challenges 32% of the time on average ($SD=0.16$). Since this was almost as frequent as reporting Motivation challenges, the decision pathway in Figure 3 also maps responses to Planning challenges for these students. In response to Planning challenges, Chinese-international students also frequently reported using the Adjust and change strategies 42% of the time on average ($SD=0.33$), and Adjust and change strategies were also met with almost moderate success ($M=2.77$) on average.

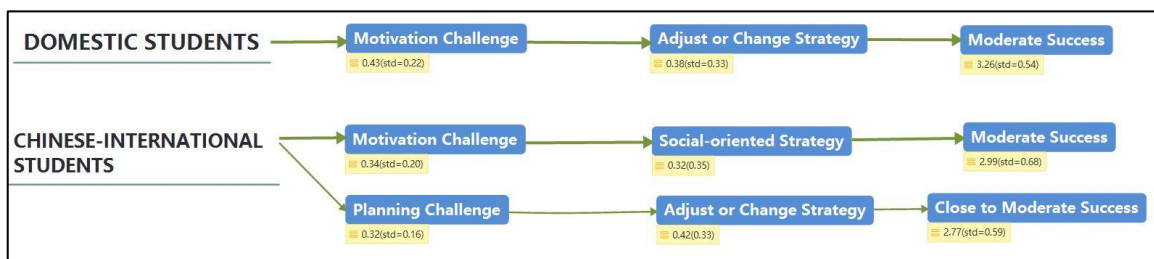


Figure 5. *Decision Pathways for Regulating the Dominant Challenges for Two Groups.*

Chapter 5 Discussions

The purpose of this study was to examine the difference between *Canadian-domestic* students and *Chinese-international* students on the challenges students face and the ways they self-regulate to address those challenges. Four main questions were examined: (a) Do *Canadian-domestic* students and *Chinese-international* students report similar ratings of challenge across different categories of challenge? (b) Do *Canadian-domestic* students and *Chinese-international* students report similar dominant challenges? (c) Do *Canadian-domestic* students and *Chinese-international* students report drawing on similar types of strategies to address those challenges? And (d) Do *Chinese-international* and *Canadian-domestic* students report similar patterns for addressing their dominant academic challenge?

This chapter presents discussion of findings, recommendations for future research and practice, and cautions due to limitations in the study.

RQ1. Do *Canadian-domestic* Students and *Chinese-international* Students Report Similar Ratings of Challenges across Four Categories?

Findings revealed no difference between *Canadian-domestic* and *Chinese-international* students' overall ratings of four types of challenge categories. Both *Canadian-domestic* students and *Chinese-international* students reported being somewhat successful in terms of all challenge categories. (Average rating across four challenge categories in Canadian-domestic group is 5.43, and in Chinese-international group is 5.41). The middle of the scale is 4 (means neither a challenge nor a success), therefore, 5.4 means a success for both groups.

Although past research has indicated that international students usually confront language issues like vocabulary and communication problems (Ramsay et al., 1999; Selvadurai, 1992), we found there was no significant difference across comparison groups on reports of Social-culture challenges. We posit three possible explanations for the lack of difference between comparison groups.

The first reason that no differences were reported on ratings of social-cultural challenges may be related to the fact that all students enrolled in this study were also taking ED-101. The course was designed to support students on achieving study goals and addressing academic challenges and help them on the transition to university. Therefore, it is possible that the similarities between Chinese-international and Canadian-domestic students are due to the effect of the course on their university adjustment. Future research should extend this research to international students who are not participating in such a course.

A second possible reason may relate to a limitation in comparison group sampling. Many *Chinese-international* students (in total 13 students in this study) finished their high school in Canada and may have adjusted to Canadian culture (more individualistic) already. Their previous educational experiences in Canada may have mitigate some of the differences in challenges experiences between comparison groups. In this study, comparison groups (Chinese vs domestic) was a simplistic categorization based on institutionally recorded data about nationality. However, the findings with this specific grouping on *Chinese-international* students shed light on the difference in academic challenges faced by *Canadian-domestic* and *Chinese-international* students in a unique education context. It is likely that there is great variability in the educational

experiences of Chinese-international students enrolled at UVic. Some may have already lived in Victoria for high school or ESL training prior to entering university. In this case they may have already adjusted to Canadian culture. Future research could pay more attention to explore the comparison across different Chinese-international student groups.

A third reason may relate to the presence and effectiveness of specific international services at UVic. The international services provide many programs which could also help *Chinese-international* students decrease Social-cultural challenges, such as conversation partner program, mentorship program, and holiday dinner program. For instance, the conversation partners program provides opportunities for many *Chinese-international* students to practice their language skills with other UVic students, faculty or staff who are native English speakers. Therefore, *Chinese-international* students in this sample may have participated in such programs to improve communication skills and address Social-cultural challenges. The future research should examine the types and extent to which students participate in these programs as a factor that might contribute to challenges experienced (and not experienced).

Another surprising finding was that there were no statistical difference between the two groups on the frequency of Planning challenges. Findings indicated that Planning challenge is neither perceived as a major challenge by *Chinese-international* students ($M=4.46$) nor *Canadian-domestic* students ($M=4.25$). Previous research indicated that *Chinese-international* students have more problems with goal and time management, compared to *Canadian-domestic* students (Salili et al., 2001). The lack of difference may be attributed to that students were learning about how to address the Planning challenge in ED-D 101. This also warrants further examination in future research.

Overall, the comparisons of average ratings on different challenges are not consistent with previous studies, but findings reveal students' self-reports of academic challenges experienced over time and under real learning contexts. Although the self-report data might have social desirability bias, all participants volunteered to join this research, and the results whether positive or negative, did not affect their grades in the course, because course instructors did not know the students who had withdrawn or participated in the study until after course completion and grade submission. Even when the data was collected, students' names were removed prior to ensure confidentiality. Additionally, in the research, MyPlanner was a good opportunity for students to reflect on their real academic experience, and it was used and emphasized as a tool for students to take control of their own learning. Furthermore, the content of each MyPlanner was not directly marked. Students were required to do MyPlanners weekly, but not graded on what they put within the MyPlanner itself.

RQ2. Do *Canadian-domestic* Students and *Chinese-international* Students Report Similar Dominant Challenges?

The interaction between country and challenge categories was significant, so simple main effects were calculated, and there was a significant difference between comparison groups on Motivation challenges. *Canadian-domestic* students and *Chinese-international* students perceived differently on Motivation challenges. Based on findings for the second research question, *Canadian-domestic* students reported statistically significantly higher proportional frequency of Motivation challenges, which means they perceived Motivation was more challenging. However, Motivation challenges were the

biggest challenges for both *Canadian-domestic* students ($M=0.432$) and *Chinese-international* students ($M=0.344$).

Some expected findings emerged from this study.

First, based on the past research (Eaton & Dembo, 1997), *Asian* students exhibit more external motivation behaviours under parental pressures compared to *Western* students. In this study, *Chinese-international* students (belonging to *Asian* culture) who might also be influenced by parental pressures perceived more motivation compared to *Canadian-domestic* students. Therefore, the finding in this study that *Chinese-international* students perceived Motivation challenges as less challenging was consistent with previous studies.

Findings that Chinese international students report Motivation challenges with somewhat high frequency are consistent past research indicating that Chinese-international students experience intrinsic motivation (Woodrow, 2013).

However, unexpected findings also emerged from this study. First, from past research, many first-year international students had language and communication issues (Ramsay et al., 1999). Although Social-cultural challenges were more frequently reported for *Chinese-international* students in this study, there was no statistically significant difference between *Canadian-domestic* students and *Chinese-international* students. One explanation might also be a sampling limitation. Thirteen *Chinese-international* students in this study finished their high school in Canada (have already adjusted to Canadian culture and communication). If more *Chinese-international* students could be enrolled in the further research, there might be a significant difference between two groups on Social-cultural challenges with different cultural contexts.

Second, *Asian* students are proposed to have weak strategy use compared to *Western* students (McInerney & Schunk, 2008). However, there was no statistically significant difference across comparison groups on Enactment challenges (including Choosing or using strategies, Attention learning & Remembering challenges) as well. This finding is opposite from the past research. An explanation might also be the SRL course influence, that the course was designed to help students master solutions to challenges they might face. On the other hand, the finding could indicate that for *Chinese-international* students in the course, learning SRL skills under *Western* contexts could also could help them effectively address academic challenges.

RQ3. Do *Canadian-domestic* Students and *Chinese-international* Students Report Drawing on Similar Types of Strategies to Address Those Challenges?

Findings indicted that there were significant differences across comparison groups on Persist and Social-oriented strategies. Additionally, both *Canadian-domestic* and *Chinese-international* students most frequently reported Adjust or change strategies. The reason could be obviously investigated that this study was collected in a 10-week academic course called Learning Strategies for University Success. The course introduced students to SRL theories and taught them how to apply SRL strategies. Therefore, many students might adjust SRL appropriate strategies for better regulating their learning, because it was a good opportunity to apply those strategies (what they learned in the class).

There were differences across comparison groups on Persist and Social-oriented strategy usage. *Canadian-domestic* students significantly reported more Persist strategies compared to *Chinese-international* students, but *Chinese-international* students

significantly reported more Social-oriented strategies (e.g., Ask for help) to address their academic challenges.

There are two different kinds of culture, individualistic and collectivistic (Heine, 2011; Hofstede, 2001), the researchers supposed that people in *Individualistic* cultures are more likely to elaborate on independent aspects of themselves, and they emphasize the importance of being self-sufficient. People in *Collectivistic* culture tend to emphasize interdependent aspects of the self (e.g., close relationship, group membership). The cultural differences corresponded with the findings in this study. *Chinese-international* students (belonging to a Collectivistic culture) reported higher proportional frequency on the Social-oriented strategy, indicating they prefer to get supports from others to solve academic problems. *Canadian-domestic* students who belong to an Individualistic culture may prefer individual Persisting strategies. Furthermore, the difference of responses to strategy use between comparison groups also indicated that cultural influences might still exist, even in a special sampling of *Chinese-international* students (many students had been studying in Canada since high school). Therefore, the individualistic culture and collectivistic cultures could differently influence students' self-regulation with difference strategy use preferences.

RQ4. Do *Chinese-international* and *Canadian-domestic* Students Report Similar Patterns for Addressing Their Dominant Academic Challenges?

Canadian-domestic students and *Chinese-international* students reported different strategy use for addressing the same most dominant challenges. After reporting Motivation challenges as a dominant challenge, *Canadian-domestic* students reported adjusting or changing strategies such as Adjust goals, Adjust strategy, or Change effort.

In contrast, *Chinese-international* students reported adopting social-oriented strategies, such as Asking for help or Working with a friend/s. The explanation for the difference is also consistent with different culture influences, that *Chinese-international* students who came from Collectivistic culture would like to build a close relationship with others, so they may choose to frequently use Social-oriented strategies to address their challenges, however, *Canadian-domestic* students reported choosing Adjust or change strategies by themselves. Both groups of students felt their strategy choice was moderately successful. Although this finding certainly warrants more research, it may suggest the different strategies are appropriate depending upon cultural experience and background.

However, the high variability between students in terms of strategy use and effectiveness means that caution is warranted. Although some standard deviations are higher than means, the results also represented a specific situation (students' real responses about their daily study at university). In future research, it might be better to enroll more participants especially *Chinese-international* students to increase the group population and decrease the high variability.

Based on previous studies (Chiu et al., 2007; Salili et al., 2001), we know the difference of SRL strategy use across comparison groups, but we know little about how students respond about strategically addressing challenges and how much effective is strategy use. Flowing probabilistic decision paths unfold a broad map about how students regulate their dominant challenges and how much of strategy use is effective between *Canadian-domestic* students and *Chinese-international* students.

Recommendations

In this study, students were enrolled a learning-to-learn course to support students' success and strategic adjustment to university learning tasks and contexts. It is crucial to see if similar patterns of finding emerge for students who do not receive that kind of support. Based on different probabilistic decision paths, in the future, for many academic success services at universities, it is better to introduce to *Chinese-international* students more Social-oriented strategies to help them address their academic challenges more easily, and introduce Adjust or change strategies to Canadian-domestic students. Additionally, Motivation challenges were the biggest challenges for both groups, so it might be better to introduce more strategies for overcoming Motivation challenges as well.

Additionally, there was no statistically significant difference across comparison groups on Enactment challenges. The finding could indicate that for *Chinese-international* students in the course, learning SRL skills under *Western* contexts could also help them effectively address academic challenges. Therefore, teaching *Western* SRL strategies is useful for Chinese-international students. Furthermore, there is a need for follow up research exploring whether *Western* SRL strategies could also be applied to the International students from other cultures. If so, it is an good opportunity to support more International students on their academic learning by learning SRL strategies.

Another recommendation emerging this study could improve students' dominant challenge measurements on their self-reports. When students are asked to rate the level of challenges, they might report successes versus challenges because they perceive that to be socially desirable or an indicator of competence. However, when they were asked to identify a dominant challenge they were forced to acknowledge, something is a

challenge. If students are asked to measure about how much of a challenge that “big challenge” was, it might be a more valid indicator than general rating of challenges.

Possible Limitations

Limitations of the current study include issues with validity, reliability and material validity.

Given that a 112: 38 ratio of domestic students to Chinese-international students, it may limit the generalizability of our findings. Additionally, the number of domestic students and Chinese-international students in our sample was significantly different ($p < .05$). The extreme sample sizes might also partially influence meeting the assumptions of analysis (e.g., homogeneity of variance was not met for two-way ANOVAs).

However, it was consistent with the proportion of Chinese to Domestic students in the population at this university. Therefore, it is meaningful to compare two groups of students with unequal ratio, and the influence of assumption tests could decrease.

Furthermore, the results of the study will contribute universities which also have similar ratio of Chinese-international students and domestic students.

Furthermore, rather than using the trace of students’ data, the proportional frequency was chosen to represent the students’ perception of their dominant challenge and strategy use. Therefore, results of the study might miss some information from the original data set, but the findings in this study still could show us the difference between two groups if there is a strong hint of their proportional frequency.

There is limited research supporting the strategy categorization which will delimit the materials’ validity and reliability. The lists of 14 strategy use and 10 challenges might not include all the possible strategies students tried and challenges they

faced. I think it is acceptable, because besides 14 strategies and 10 challenges in the lists, there are two more options called Tried something else strategies and Other challenges. After students reported the dominant challenge weekly, they were asked to describe their dominant challenge, so the students who had Other challenges were recoded. However, we did not ask student to describe the strategies they tried, so we cannot recode Tried something else strategies option. We could add the descriptive option in further research. If the future research adds one more option to ask students to describe the strategy they used, more Tried something else strategies might be recoded and grouped in the other 4 categories of strategies, and then the variability could decrease.

Additionally, it is difficult to operationally define International-Chinese and Domestic-Canadian just based on institutionally collected data. Therefore, it is important to collect additional demographic information in further research, such as: (a) number of years of schooling completed in a north American high school prior to university, (b) amount of time living in Canada prior to university studies, and (c) types of transition support experiences such as English language training programs and exchanges in Canada.

Chapter 6 Conclusions and Implications

Findings indicate that *Canadian-domestic* students and *Chinese-international* students effectively enact appropriate strategies for ameliorating dominant challenges, and support the theories of regulation: (a) for the most part, both *Canadian-domestic* students and *Chinese-international* students report successes (rather than challenges) in their weekly studying, and there is few difference in the degree to which they experiencing 4 categories of challenges including: Motivation, Enactment, Planning, and Social-cultural challenges; (b) there is a difference across comparison groups in terms of the proportional frequency of choosing Motivation challenges (as the main challenge); (c) there is a difference across comparison groups in terms of the proportional frequency of choosing the Persisting strategies and the Social-oriented strategies; (d) *Canadian-domestic* students and *Chinese-international* students chose different strategies to address their dominant challenges, that *Canadian-domestic* students had more frequency choosing Adjust or change strategies to address Motivation challenges, but *Chinese-international* students frequently reported Social-oriented strategies to address Motivation challenges. However, they both identified their strategies usage were successfully used.

The research also has the potential to contribute to Winne and Hadwin's model of self-regulated learning, regarding possible cultural influence. The *Western* SRL strategies and theories could be applied by both *Canadian-domestic* students and *Chinese-international* students, and support these students for addressing their academic challenges. Furthermore, the study advances knowledge regarding how culture influences students' decisions on their strategic use and academic challenges. Probabilistic decision

paths for answering the fourth research question unfold a broad map about how students regulate their dominant challenges, which might have potential for policy and practice for supporting academic success for *Canadian-domestic* and *Chinese-international* students. For instance, based on this research, international services (e.g., international services at UVic) could introduce more Social-oriented strategies to *Chinese-international* students to help them address their academic challenges easily at university.

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Appendix A

MyPlanner

Part1

201601 ED-D 101 A01 (21014)

QUIZ NAVIGATION

1 2 3 4 5 6 7 8 9

Finish attempt ...

Start a new preview

ADMINISTRATION

- Quiz administration
 - Edit settings
 - Group overrides
 - User overrides
 - Edit quiz
 - Preview
 - Results
 - Locally assigned roles
 - Permissions
 - Check permissions
 - Filters
 - Logs
 - Backup
 - Restore
 - Question bank
- Course administration
- Switch role to...

NAVIGATION

Dashboard

- All courses
- CourseSpaces
- Current course
 - 20160121014
 - Participants
 - Badges
 - General
 - Lecture Synthesis Activities (15%)
 - Lab Grades (25%)
 - ACT: Applied Collaborative Tests (30%)
 - Feb 22 &amp;...
 - Midterm & Final Exam (30%) Feb 15-19 & Mar...
 - Week 1: What is Self-Regulated Learning?
 - Lab Chat Box
 - Getting To Know You
 - My Planner 1**
 - Challenges and Successes Reflection
 - Survey of What You Already Know
 - Week 2: Task Understanding & SRL
 - Week 3: Goal Setting & Self Monitoring in SRL
 - Week 4: Regulating Time & Procrastination + Se...
 - Reading Break ACT planning homework
 - Week 5: Regulating Motivation + Midterm

Information

Flag question

Edit question

Set a goal for your two-hour study session

Question 1

Not yet answered

Marked out of 2

Flag question

Edit question

During my two hour study session, I will be working on in (eg. PSY 100).

Question 2

Not yet answered

Marked out of 1

Flag question

Edit question

My learning goal for this two hour study session is:

Question 3

Not yet answered

Not graded

Flag question

Edit question

This goal is for me. I am I can achieve the goal by the end of the session.

Information

Flag question

Edit question



Click "Next" at the bottom of the page to save your progress so far.

Immediately AETER your study session, return & complete the following questions

Part 2

- Week 6: Collaboration + Motivation Activities
- Week 7: Engaging Memory & Attention: Successful...
- Week 8: Beyond the Facts: Processing for meaning A...
- Week 9: Regulating Reading & Note-taking
- RD-C 131: Strategy Library
- Week 10: Regulating Test Preparation & Taking
- Week 11: Final Lab
- Classical Mechanics
- Other: Staff
- Extra: Quiz Versions
- Topic 20
- Topic 22
- My mail
- My courses

System 4

My study session actually took hours.

I my goal by the end of the session.

What might that mean for your future planning and time scheduling?

System 5

How much of a challenge or success were each of these during the last week?

CHALLENGE	MY RATING	EXAMPLES
Motivation & Prioritization The will or choice to do my work	<input type="text"/>	Challenge Didn't feel like doing it Kept putting it off Success Got started early Was excited to do it
Confidence Confidence in attaining my goal	<input type="text"/>	Challenge I didn't think I could do it Didn't think I could do a good job Success I knew I could do it I knew the product would be good
Goal & Time Management Setting helpful/wise goals and time management.	<input type="text"/>	Challenge Goal was too big Didn't prioritize Success Finished ahead of time Was guided by my goal
Choosing or Using Strategies Knowing which strategies to use.	<input type="text"/>	Challenge Didn't know a strategy to use Chose the wrong strategy Success Chose a good strategy Adapted my strategy along the way
Attention Learning & Remembering Being able to remain focused on learning and remembering key information.	<input type="text"/>	Challenge Couldn't remember things Kept losing focus Success Couldn't figure out what was important Made connections between theories Explained concepts in my own words
Life & Self-Management Life events such as sleep, relationships or health.	<input type="text"/>	Challenge Felt sick Sleepy Hungry Success Self-visited Made good decisions about my eating.
Finding the Right Place & Situation to Study Being able to find an appropriate place to study.	<input type="text"/>	Challenge Too noisy Disturbed by friends Success Worked alone and got a lot done Went to headphones in a coffee shop to stay focused
Language & Communication Being able to communicate ideas.	<input type="text"/>	Challenge Didn't understand words Couldn't express ideas Success Asked a friend when I didn't understand a word Expressed all my ideas and asked questions
Adjusting to a New Culture Adjusting to new learning situations and contexts; making new friends	<input type="text"/>	Challenge Feeling lonely Missing friends/family Success Made friends in my class Adjusting to university life
Emotions The role emotions played in your work this week.	<input type="text"/>	Challenge Anxious Stressed out Bored Success Excited to learn Happy to be in school

System 6

The main challenge I encountered in attaining my goal was . Describe the challenge:

So I and it was successful.

Maybe next time, I should .

System 7

During this study session, I mainly felt . This feeling made it to achieve my session goal.

When I felt this way, I and I am satisfied with the result.

Question 1
Not yet answered
Not graded
Flag question
View question

What is something you succeeded with this week that you plan to do again next week? OR What is something you want to change next week to improve your learning?

[Rich text editor toolbar]

Question 2
Not yet answered
Not graded
Flag question
View question

Comment on anything that is going on for you academically at the moment, or that has happened in the past week. This may be any struggles you have found, worries you have had, or achievements you have made. This is your open space to tell us about your semester.

[Rich text editor toolbar]

Appendix B

Research Questions in MyPlanner

Part 1 (Question 5)



How much of a challenge or success were each of these during the last week?		
CHALLENGES	MY RATING	EXAMPLES
Motivation & Procrastination <i>The will or desire to do my work</i>	<input type="text"/>	Challenge Didn't feel like doing it Kept putting it off Success Got started early Was excited to do it
Confidence <i>Confidence in attaining my goal.</i>	<input type="text"/>	Challenge I didn't think I could do it Didn't think I could do a good job Success I knew I could do it I knew the product would be good
Goal & Time Management <i>Setting helpful/unhelpful goals and time management.</i>	<input type="text"/>	Challenge Goal was too big Didn't prioritize Success Finished ahead of time Was guided by my goal
Choosing or Using Strategies <i>Knowing which strategies to use.</i>	<input type="text"/>	Challenge Didn't know a strategy to use Chose the wrong strategy Success Chose a good strategy Adapted my strategy along the way
Attention Learning & Remembering <i>Being able to remain focused on learning and remembering key information.</i>	<input type="text"/>	Challenge Couldn't remember things Kept losing focus Couldn't figure out what was important Success Made connections between theories Explained concepts in my own words
Life & Self-Management <i>Life events such as sleep, relationships or health.</i>	<input type="text"/>	Challenge Felt sick Sleepy Hungry Success Well-rested Made good decisions about my eating.
Finding the Right Place & Situation to Study <i>Being able to find an appropriate place to study.</i>	<input type="text"/>	Challenge Too noisy Distracted by friends Success Worked alone and got a lot done Wore headphones in a coffee shop to stay focused
Language & Communication <i>Being able to communicate ideas.</i>	<input type="text"/>	Challenge Didn't understand words Couldn't express ideas Success Asked a friend when I didn't understand a word Expressed all my ideas and asked questions
Adjusting to a New Culture <i>Adjusting to new learning situations and contexts; making new friends</i>	<input type="text"/>	Challenge Feeling lonely Missing friends/family Success Made friends in my class Adjusting to university life
Emotions <i>The role emotions played in your work this week.</i>	<input type="text"/>	Challenge Anxious Stressed out Bored Success Excited to learn Happy to be in school

Part 2

Question 6	The main challenge I encountered in attaining my goal was
Not yet answered	<input type="text"/> Describe the challenge:
Not graded	<input type="text"/>
Flag question	So I <input type="text"/> and it was <input type="text"/> successful.
Edit question	Maybe next time, I should <input type="text"/> .

Appendix C

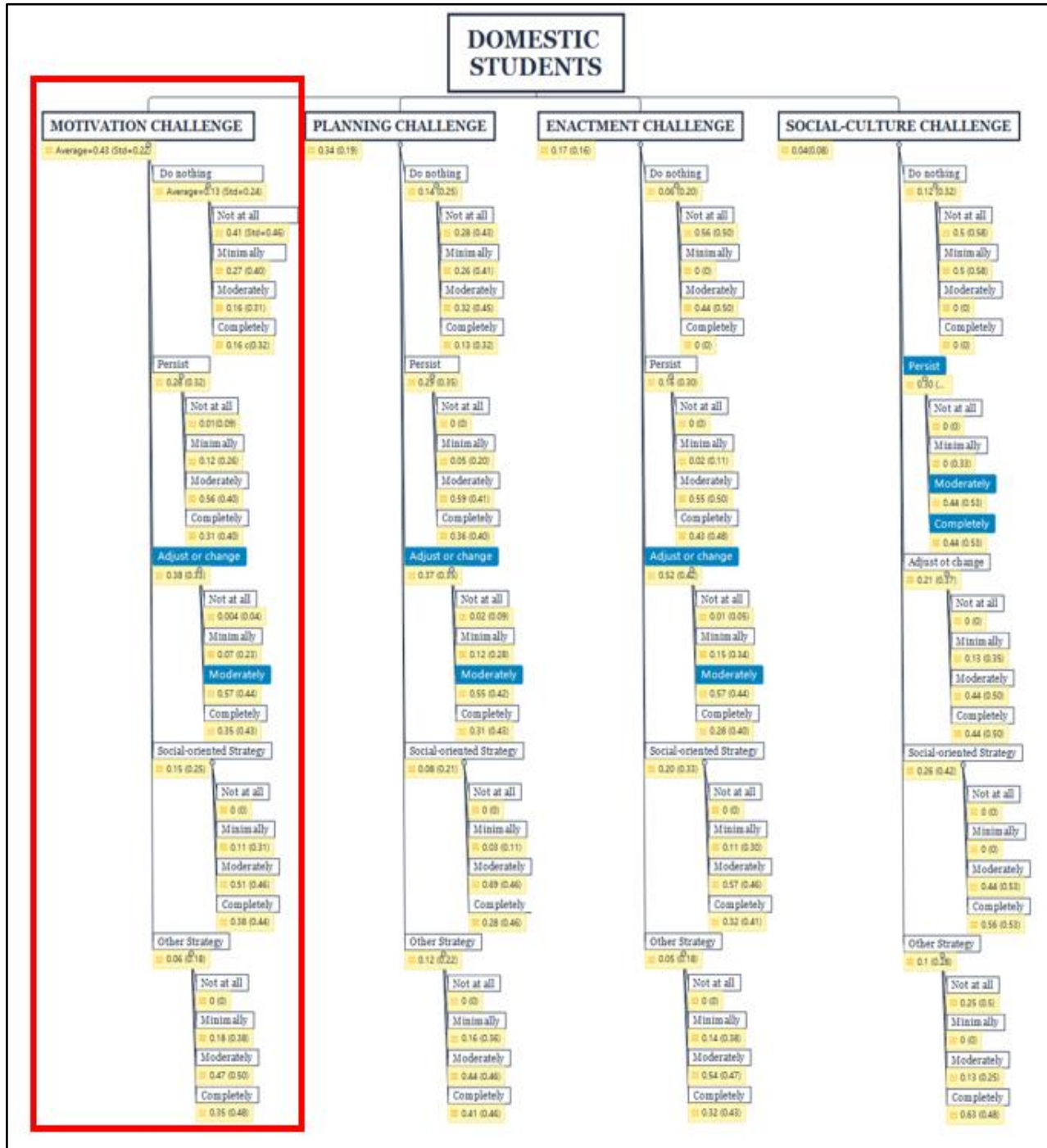
Ethics Certificate

		Office of Research Services Human Research Ethics Board Administrative Services Building Rm B202 PO Box 1700 STN CSC Victoria BC V8W 2Y2 Canada T 250-472-4545 F 250-721-8960 uvic.ca/research ethics@uvic.ca	
Modification of an Approved Protocol			
PRINCIPAL INVESTIGATOR: Allyson Hadwin		ETHICS PROTOCOL NUMBER 08-07-308b	
UVic STATUS: Faculty		ORIGINAL APPROVAL DATE: 20-Jun-08	
UVic DEPARTMENT: EPLS		MODIFIED ON: 29-May-15	
		APPROVAL EXPIRY DATE: 19-Jun-16	
PROJECT TITLE: PAR-21: Promoting Adaptive Regulation for the 21st Century			
RESEARCH TEAM MEMBER Co-principal Investigator: Dr. Phil Winne (SFU) Collaborators: Dr. Sanna Jarvela (U. of Oulu), Dr. Paul Kirschner (Open University of Netherlands), Dr. Margaret (Peggy) Anne-Storey (UVic), Dr. Piter Wild (UVic), Dr. Mariel Miller (UVic), Lindsay McCardle (UVic), Dr. Daniel Dinsmore (UNF), Dr. Meghan Parkinson (UNF) Students/Research Assistants (UVic); Elizabeth Webster, Aishah Bakhtiar, Rebecca Edwards, Shayla Starcheski, Maryi Arciniegas Mendez, Aloysius Anichie, Sarah Davis, Yushu Huang, Jennifer Halbert, Josh Meyer, Natalie Usher (Visiting student)			
DECLARED PROJECT FUNDING: SSHRC Insight Funding (New 2012-2016); SSHRC Insight Funding (2008-2010); CFI-LOF (2009-2013); Learning Without Borders, Learning & Teaching Centre (2013)			
ADDITIONAL COMMENTS: Previous Title: 'Evaluating Student Learning and the ED-D 101 Course'			
CONDITIONS OF APPROVAL			
This Certificate of Approval is valid for the above term provided there is no change in the protocol.			
Modifications To make any changes to the approved research procedures in your study, please submit a "Request for Modification" form. You must receive ethics approval before proceeding with your modified protocol.			
Renewals Your ethics approval must be current for the period during which you are recruiting participants or collecting data. To renew your protocol, please submit a "Request for Renewal" form before the expiry date on your certificate. You will be sent an emailed reminder prompting you to renew your protocol about six weeks before your expiry date.			
Project Closures When you have completed all data collection activities and will have no further contact with participants, please notify the Human Research Ethics Board by submitting a "Notice of Project Completion" form.			
Certification			
This certifies that the UVic Human Research Ethics Board has examined this research protocol and concluded that, in all respects, the proposed research meets the appropriate standards of ethics as outlined by the University of Victoria Research Regulations Involving Human Participants.			
 Dr. Rachael Scarth Associate Vice-President Research Operations			
Certificate Issued On: 16-Mar-16		08-07-308b Hadwin, Allyson	

Appendix D

Part 1

Probabilistic Decision Pathways for Regulating *Dominant* Challenges for Canadian-domestic Students



Part 2

Probabilistic Decision Pathways for Regulating Dominant Challenges for Chinese-international Students

