The Journal of Behavioral Science
2023, Vol. 18, Issue 2, 116-135

ISSN: 1906-4675 (Print), 2651-2246 (Online)

The Journal of Behavioral Science (TJBS)

Original Article

The Nomological Model of Study-Life Balance in Thai University Students

Krisana Chotratanakamol[1*], Duangduen Lekhyananda Bhanthumnavin[2], Duchduen Emma Bhanthumnavin[2], Kosol Meekun[3], Saran Pimthong[4], and Chaiyut Kleebbua[5]

Author Affiliation

[1] Ph.D. Candidate, Graduate School of Social Development and Management Strategy, NIDA, Thailand.
[2] Professor, Graduate School of Social Development and Management Strategy, NIDA, Thailand.
[3] Associate Professor, College of Management, University of Phayao, Bangkok, Thailand.
[4] Associate Professor, BSRI, Srinakharinwirot University, Thailand.
[5] Assistant Professor, Graduate School, Srinakharinwirot University, Thailand.

*Corresponding author e-mail: krisanachot@gmail.com

Article Information

Received: 16.3.23
Revised: 3.5.23
Accepted for initial review: 3.5.23

Keywords

Nomological model, study-life balance, sustainable success, interactionism model, Thai university students

Abstract

The pursuit of study-life balance (SLB) is a vital determinant of university students' overall success and well-being in academic and personal domains. However, there is still limited research currently available to bridge the empirical gap. This study aimed to investigate the direct and indirect effects of psychological characteristics and situational factors on study-life balance and sustainable success among Thai university students. The samples were 597 Thai university students, with an average age of 20 years old. Path analysis approach was used to analyze the data. The adjusted model indicated a good fit ($\chi^2 = 39.086$; $df = 27$; p-value = .06; RMSEA = 0.03; CFI = 1.00; TLI = 1.00; SRMR = .05). The results showed that psychological traits construct and situational construct had both direct and indirect effects on SLB via psychological states construct, which explained 96.8% of the variance in SLB. Moreover, psychological states construct had a direct influence on sustainable success, and an indirect influence via SLB, which together explained 94.80% of the variance in sustainable success. The study identified psychological immunity, perceived opportunities for support from others, and proactive personality as important factors affecting SLB and sustainable success. The study highlights the significance of SLB for the success of Thai students. The findings shed light on the development of education courses or class activities based on the important factors outlined in this study to enhance SLB among Thai university students.

Over the years, achieving work-life balance (WLB) has raised serious concern among individuals, families, companies, and the public sector (Nwachukwu et al., 2022). A person with life balance is widely recognized to be efficient at work (Gurvis & Patterson, 2005), initiative and cooperative with good teamwork (Smith, 2010), satisfied between work and life (Allen et al., 2000), happy and have a good quality of life (Grant-Vallone & Donaldson, 2001), and minimize family conflict (Sadiq, 2022). Until now, research on WLB has been conducted on numerous groups of people, such as unmarried employees, seniors, self-employed workers, and immigrants (Ang, 2008). However, there is a lack of study in the student groups. According to Kreyenbühl (2018), WLB among students can be referred to as study-life balance (SLB).

However, applying the concept of WLB to students may not be suitable (Ang, 2008; Hendriks, 2020). As a result, the SLB concept, which focuses on student success in the university context, should be applied in terms of well-being, life management in learning, working, a private life, stress management, and workload management (Hendriks, 2020; Kreyenbühl, 2018). A student who maintains a good balance between study and life can resolve difficulties and learn how to use the resources available to them in order to profit from and impact their success in life, even in times of high social instability and changes in teaching methods (Daniel, 2020).

Although achieving SLB is crucial for personal growth and behavioral development, research on this topic, especially in Thailand, is still relatively limited. In contrast, other countries such as the United States, European countries, Australia, and Japan have conducted extensive research on this topic (Sánchez-Martí, et al. 2023). This indicates that there is a significant gap in the level of attention and research given to the SLB concept in Thailand. Additionally, a substantial number of first-generation Thai university students come from low-income households (Bualar & Bhanthumnavin, 2021), which often requires them to work while studying (Saenz et al., 2007). The COVID-19 pandemic also has a significant economic impact on society, forcing many students to work throughout the school year (Kropf, 2019). Consequently, many Thai university students are not only learning and living their lives, but also balancing part-time jobs and extracurricular activities, while striving to balance their education with work, social activities, and personal lives. Students need essential skills to help them manage conflicts between their non-study and study lives (Jain & Nair, 2013), allowing them to enhance life balance and achieve sustainable success, especially in terms of academic success, life satisfaction, and good health (Adebayo et al., 2008; Creed et al., 2015; Park & Sprung, 2013).

Therefore, this study aimed to investigate the direct and indirect effects of psychological and situational antecedents on SLB and sustainable success among university students based on the interactionism model concept (Endler & Magnusson, 1976; Bhanthumnavin, 2007). The authors hope that the findings from this study could contribute to the knowledge gaps on SLB, as well as provide insights for promoting sustainable success in the Thai university context.

Literature Review

The nomological network, introduced by Cronbach and Meehl (1955), describes the ability to predict behaviors from the manifestation and interrelationship of constructs. One of the nomological models was the interactionism model, which is a framework that helps researchers understand behaviors by suggesting the antecedents of behaviors, including psychological characteristics and situational factors (Endler & Magnusson, 1977). Previous studies have suggested that combining psychological characteristics and situational factors, known as the holistic perspective, can provide a more comprehensive understanding of the causes of human behaviors (Bergman, 2001). Thus, the interactionism model was used as the main framework in this study to investigate causal variables related to SLB and its output in terms of sustainable success among Thai university students.

Study-Life Balance Construct

According to Byrne (2005), WLB is like juggling five aspects of one's life at once, including work, family, friends, health, and mind which a person is trying hard to ensure that all aspects are stabilized. Lockwood (2003) defined the balance between work and life as the state of equilibrium between personal life and professional life at equal levels. Researchers have explored various aspects of WLB, such as Hayman (2005) who classified work-life balance into three components: work interferes with personal life, personal life interferes with work, and work and personal life enhancement. Other topics that were studied include conflicts between life and work (Colombo & Ghislieri, 2008) and how facilitation and enrichment improve WLB (Balmforth & Gardner, 2006; Wayne et al., 2007).

The achievement of a higher life balance was associated with a person who had low levels of conflict and a high availability of work-life enrichment (Frone, 2003). Landolfi and Presti (2020) conducted a study on personal life balance and evaluated the constructs of WLB in two psychological phenomena: 1) work-family conflicts, which negatively affect other roles in an individual's life, and 2) work-family enrichment, which has a positive influence on maintaining equilibrium between work and life. While WLB is a widely popular concept in many disciplines, it may not be appropriate to be directly applied in the education sector due to different contexts. Hence, the concept of study-life balance (SLB) has emerged as a more appropriate approach to achieving balance in students' lives. Therefore, the current research aims to study SLB by integrating positive and negative experiences using the principles of Frone (2003). The components of SLB are divided into two components. The first component is study-life conflict reduction (SLC), which refers to experiences of resolving problems or conflicts to achieve the state of SLB. The second component, study-life enrichment (SLE), refers to positive experiences that maintain the state of SLB.

The concept of SLC in this study is based on work-family conflict (Adebayo et al. 2008), and evidence shows that working students often experience conflicts between their study and work demands. Study-work conflict is defined as situations where the demands and responsibilities of work affect the ability of individuals to meet the demands and responsibilities of study. Therefore, study-life conflict reduction refers to actions taken by students to manage their family and friend dimensions and reduce or lessen conflict between study and life, which can be divided into two dimensions: reducing conflict in studying that affects their life and reducing conflict in life that affects their study. Previous studies revealed that workplace factors can affect work-study conflict, as students who worked in poorly designed workplaces with high job demands and low job resources showed high levels of work-study conflict (Adebayo et al., 2008). In contrast, students with high levels of job resources in the workplace tended to have low levels of work-study conflict. Additionally, high work-study conflict negatively impacted students' health and wellbeing, leading to poor academic performance and life satisfaction (Cinamon, 2016; Park & Sprung, 2013).

In this study, the concept of work-family enrichment was used to provide the foundation for SLE. Wayne et al. (2007) formally defined work-family enrichment as "the extent to which an individual's engagement in one life domain (i.e., work/family) provides gains (i.e., developmental, affective, capital, or efficiency) that contribute to the enhanced functioning of another life domain (i.e., family/work)". Similarly, Werbel and Walter (2002) suggested that the notion that both domains are interdependent and complementary. Facilitation between work and family can occur in two directions: benefits from the work domain that promote the family domain, or those of the family domain that promote the work domain. Therefore, SLE in the current study refers to behaviors in which students obtain resources from friends and family dimensions and apply them in the study domain and life domain, resulting in higher performance in both domains. To be specific, resources obtained from friends and family can help students enrich their lives, while also facilitating their studies. Previous studies pointed out that work-family enrichment provided many positive effects. Balmforth and Gardner (2006) found that high levels of work-family enrichment were positively associated with job satisfaction and job loyalty. Other studies also indicated a positive relationship between work-family enrichment and work autonomy (Guest, 2016), time adequacy (Grzywacz & Marks, 2000), time flexibility and job satisfaction (Fisher-McAuley et al., 2003).

Influence of Traits on States and SLB

Psychological traits are dispositions that are formed and developed in a person since childhood through experiences and growth environments such as family and school. This type of trait is considered stable because it has been accumulated over a long period of time. This study focuses on three important psychological traits as follows:

Students' ability to control or direct their learning behaviors through the use of plans or strategies is referred as self-regulation (SR). It involves many dispositions such as time management, self-stimulation,

goal setting, and creating a conducive environment for learning. According to Watson and Tharp (2007), the self-regulation learning process consists of three phases: 1) the forethought phase, the phase of goal setting and planning to achieve that goal, 2) the performance phase, the phase of taking action, monitoring the effectiveness of the action, and monitoring motivation in achieving the goal, and 3) the self-reflection phase, the phase of evaluating the performance and taking responsibility for the outcomes (Zimmerman, 2002). In the current study, SR can be defined as the ability of students to control or direct their learning behaviors using plans or strategies. Previous studies found an association between SR and a sense of balance in life. Tak and Choi (2020) reported that SR related to WLB and the life satisfaction of a person. WLB was also discovered to be a mediator variable between SR and satisfaction in one's academic life. Similarly, Mellner et al. (2014) found that a capacity for SR was associated with boundary control on WLB.

Core self-evaluation (CSE) is a psychological characteristic that is commonly used for predicting life success. It consists of four aspects which are self-esteem, generalized self-efficacy, emotional stability, and locus of control (Judge et al. 1998). Previous findings indicated an association between core self-evaluations and life balance. McNall and Michel (2017) found that a person with higher levels of CSE had lower levels of work-study conflict and higher levels of work-study facilitation. Similarly, Karatepe and Demir (2014) found higher work engagement in employees who had higher levels of CSE. The study also found that work engagement was a full mediator between CSE and work-family/family-work facilitation.

Psychological immunity (PI) is defined as the ability of a person to protect and promote their mental health. Bhanthumnavin and Vaninthanondra (2008) suggested four components of psychological immunity as follows: optimism, risk preference, consciousness, and coping strategies. Previous findings suggested that PI was positively related to other desirable behaviors and outcomes, such as higher quality of life (Choochom et al., 2011), saving behavior and supporting others' saving behavior (Radchapattayakom et al., 2012).

In this study, these three psychological traits (SR, CSE, and PI) were grouped together as a psychological traits construct. Previous studies have demonstrated that other similar psychological traits construct played a significant role in influencing various psychological states and behaviors (Bhanthumnavin, 2017; Nonthachot et al., 2023). Therefore, based on these evidences, hypothesis is proposed as follows:

H1: The psychological traits construct directly affects psychological states construct and the SLB.

Influence of Situations on States and SLB

Situational factors are living or non-living things that surround people and influence their actions. The effects caused by these factors can both promote and hinder behavior. Situational factors related to study-life balance are often related to family, study, and activities that students are responsible for. In the present study, three situational factors were investigated.

Perceived support opportunity from others (PSS) is the quantity of the perception of being supported by others, such as friends or family. House (1981) suggested several types of social support, e.g., emotional support, instrumental support, informational support, and appraisal support. Previous research suggested that social support from teachers, friends, and family was associated with positive behaviors Researchers have discovered the relationship between social support and a balanced life in many types of individuals, e.g., employees (e.g., Uddin et al., 2020), and university students (Kumar & Chaturvedi, 2018).

Ragheb and McKinney (1993) explained that academic demands (AD) refer to situations when students face a high amount of work to finish in a limited amount of time, difficulties in completing academic tasks on time, or time management problems with teachers. University students often experience high AD due to the intense curriculum and high outcome expectations, which could lead to poor mental

health (Knoster & Goodboy, 2020). Previous studies indicated a connection between AD and the balance of life, e.g., poor mental health among full-time working students (Onuoha & Idemudia, 2020), stress from studying related to low academic results (Knoster & Goodboy, 2020).

Learning experiences in university are one of the most crucial inculcating institutions in one's life. It can be divided into two types (Gustitus et al., 1986), i.e., direct learning and indirect learning. Direct learning consists of two aspects: 1) knowledge experience, which is experience obtained in class, and 2) activity experience, which is experience obtained from participation in activities. Indirect learning is a learning process that takes place when students notice positive role models, such as senior students or teachers, and then reproduce their behaviors. This type of indirect learning in a university setting is known as university-inculcating experience (UIE). In the current study, UIE can be defined as a student's experience of learning, both formally and informally, about balancing work or study and life from surrounding people, such as instructors or seniors. Previous evidence showed that the UIE related to a student's balance in life. For example, Beisser et al. (2014) found that educators' role modeling positively influenced students' health and wellness, while McConnell et al. (2019) discovered that attending UIE-related programs provided benefits to participants in terms of life balance and self-development. Additionally, Kishino (2015) found that supervisor support and role modeling had a positive effect on their workers' WLB. According to the available evidence, students who have a greater UIE tend to have a better life balance. Moreover, Kleebbua and Lindratanasirikul (2021) revealed that the learning climate has a significant direct and indirect effect on students' innovative behavior through cognitive flexibility.

According to the literature review, these three situational factors (PSS, AD, UIE) were grouped together as a situational factor construct. There was some evidence that these situational constructs influence psychological states construct and student behaviors (Bhanthumnavin, 2017; Nonthachot et al., 2023; Sripa et al., 2021). Therefore, based on evidence, the proposed hypothesis was:

H2: The situational construct directly affects psychological states construct and the SLB.

Influence of States on SLB and Sustainable Success

Psychological states can be defined as psychological dispositions specifically related to a certain situational context. Therefore, psychological states are considered dynamic and easily changed based on the situation and context. In this study, three psychological states are investigated as important predictors of study-life balance.

According to Krech et al. (1962), the concept of attitude comprises of three components: cognitive, affective, and behavioral tendency. The cognitive aspect refers to the beliefs, thoughts, and attributes that a person has toward situations. For example, some people may think conducting research is a good learning process while others think it is time-consuming. The affective aspect is the emotional or mental response that the person has toward situations. Therefore, behavioral tendency is a result of cognitive and affective aspects and can be used as a good predictor. Worchel and Goethals (1989) explained that adjustment is a behavioral process of balancing the needs of the physical body, the mental body, and the environment. It is the ability of a person to adapt to their surrounding environment by making physical or mental changes to themselves. In Martin and Osborn's (1989) study, adjustment is defined as a change of behavior in order to respond to the surrounding environment. Bhanthumnavin (2012) defined innovation adoption as the process of accepting, learning, and applying new knowledge or technologies in order to obtain benefits. Thus, attitudes toward adjustment and innovation (ATT) in the current study can be defined as a positive perception of students toward adjustment and innovation in terms of beliefs, feelings, and behavior. Students with higher levels of favorable attitudes toward adjustment and innovation are assumed to have higher levels of SLB. Boonlom (2020) found that adjustment and innovation adoption correlated with Thai teachers' success at a moderate level.

Creative problem solving (CPS) is a higher-order thinking process. It involves several steps, including analyzing the cause of the problem, understanding the problem, and finding a suitable solution. According to previous research, there were two abilities that were often studied to indicate factors related to CPS. These abilities were divergent thinking and flexibility coping (Peterson et al., 2013). Divergent thinking is defined as the cognitive ability to create multiple ideas or solutions to solve a problem. Flexibility in coping refers to the ability to modify ineffective strategies into ones that are effective for a situation. Thus, CPS in the present study refers to the ability to solve problems in the daily lives of students using creativity, cognitive ability, divergent thinking, and flexibility. Previous findings found associations between CPS and studying. Samson's (2015) study indicated that CPS promoted a dialogical learning atmosphere and peer learning. In terms of promoting life balance, Sorati (2017) discovered that social problem-solving styles had an indirect effect on teachers' work-life quality. Therefore, it is assumed in the current study that CPS skill is a crucial factor in the desired behaviors of students. Students who have higher levels of CPS skills are assumed to have higher levels of SLB.

The concept of proactive personality (PP) was proposed by Bateman and Crant (1993). They explained that a person with high levels of PP tends to have high levels of emotional stability, a good adjustment to the surrounding environment, and a high tolerance for high-pressure situations. Seibert et al. (2001) defined PP as having the characteristics of being active, seeking opportunities, being creative, having high confidence, taking initiative and action, and persevering until meaningful change takes place. Shi (2015) proposed that PP comprises two components: insight and initiative. Insight refers to the ability to seek, perceive, and gain benefits from opportunities, while initiative refers to the ability to judge and take action toward situations without suggestions from other people. In the current study, PP can be defined as the ability of students to understand and manage their emotions in order to make responsible decisions and avoid being restricted by situations. In terms of student behaviors, Kong et al. (2021) found that PP was negatively associated with academic burnout in university students. Chen et al. (2021) showed that PP helped students improve their performance in academic competitions. Results from structural equation modeling analysis indicated a positive relationship between PP and academic engagement. Similarly, Smithikrai (2022) found that proactive work behavior acts as a mediator between these antecedents and work-related outcomes such as WLB and job satisfaction. Therefore, PP can be used to indicate the characteristics of initiative, emotional stability, and creativity in a person. University students who have higher levels of PP are assumed to have higher levels.

In this study, the three psychological states (ATT, CPS, PP) were grouped together as a psychological state construct. Several prior studies have demonstrated the significant impact of these psychological states on human behaviors and outcome construct (Bhanthumnavin, 2015; Bhanthumnavin, 2017; Nonthachot et al., 2023). Thus, the hypothesis was constructed as follows:

H3: The psychological states construct directly affects the SLB and sustainable success construct.

Relationship between SLB and Sustainable Success

The sustainable development goals (SDGs) that are relevant to students are goal 3 (good health and well-being) and goal 4 (quality education). During the student period of life, the achievement of both goals on a personal level should be the first priority. As a result, increasing students' awareness of life balance is one of the keys to assisting them in achieving positive outcomes at both the personal and higher levels. In terms of measuring the success of life, the most recognized method is the Human Development Index (HDI). The HDI is used to determine life success by measuring health, education, and a decent standard of living for the population on a country scale. Therefore, these 3 components can be used to determine the sustainability of success on a personal level. In the present study, the sustainable success construct consisted of three components: academic success (AS) (Markel & Frone, 1998), life satisfaction (LS) (Haar et al., 2014), and health and wellness (HW) (Creed et al., 2015; Park & Sprung, 2013).

Academic success (AS) was defined by Astin and Astin (2015) as positive academic performance. Ang (2007) suggested that factors affecting the academic success of a student include academic achievement, course experience, and their perception of the learning environment. Similarly, Kuh et al. (2006) stated that "student success is defined as academic achievement, engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills and competencies, persistence, attainment of educational objectives, and post-college performance". In the current study, AS can be defined as the ability of students to gain and utilize knowledge and experiences from university settings to improve skills and knowledge, to seek and apply knowledge, and to apply knowledge from the academic domain to solve problems in their lives. Benner and Curl (2018) found that high levels of work-study conflict led to low attention when studying and negative academic results. Other consequences of work-study conflict included a negative attitude towards studying (Cinamon, 2016), lower life satisfaction (Creed et al., 2015), and difficulties in school readiness (Markel & Frone, 1998).

Life satisfaction (LS) is one of the crucial variables in positive psychology research. Pavot and Diener (2008) defined life satisfaction as a cognitive evaluation of one's life about their quality of life and experiences in terms of work, study, family, and well-being. Recent evidence showed that life satisfaction was associated with a balanced life. Lyubomirsky et al. (2005) suggested that life satisfaction can be used as a variable to predict outcomes on a personal level. People with high levels of life satisfaction tended to have positive outcomes in multiple life domains, such as their health, studies, family, and personal lives. Thus, LS in this study refers to a value judgment of students about how satisfied they are with their overall lives and how their personal, family, and social lives meet their expectations. Haar et al. (2014) found that LS was positively associated with WLB, as a person with higher levels of WLB also had higher levels of LS but a lower stress and anxiety level.

According to the Thai Health Promotion Foundation, the definition of health covers four dimensions of well-being: physical wellbeing, mental wellbeing, social wellbeing, and spiritual or wisdom wellbeing (Sukkumnoed et al., 2002). Health and wellness (HW) refer to the results of an assessment of physical and mental health that show students have a healthy body without disease, good exercise, good mental health, and are able to peacefully live in their community. Students with high levels of work-study conflict tended to have poor mental health, stress, fatigue, burnout, and low work performance (Park & Sprung, 2013). On the other hand, students with high levels of work-study facilitation were found to have good mental health and be satisfied with their lives. Moreover, poor health conditions were reported in both males and females who had low levels of WLB (Cinamon, 2016). Similarly, other studies suggested that low levels of WLB led to several health problems, such as high blood pressure, high cholesterol, depression, and heavy alcohol use (Grzywacz et al., 2008). Taken together, a person with high levels of WLB also has good health and wellness. Therefore, it can be assumed that students with a high level of SLB also have good health and wellness.

The "sustainable success" construct in this research consists of three variables: AS, LS, and HW. These variables are outcomes influenced by SLB. Previous research has shown that individuals with balance in their lives tend to have success in all three domains (Benner & Curl, 2018; Cinamon, 2016; Haar et al., 2014; Kirby et al., 2022). Therefore, the hypothesis was proposed as follows:

H4: The SLB construct directly affects the sustainable success construct.

Method

Participants

The participants in the study were sophomore and junior university students studying in the first semester of 2022. The sample size was calculated using the G*Power program, with an effect size of 0.05, a significance level of 0.05, and a power of 0.90. The results indicated a minimum sample size of 420

students. The questionnaires were distributed to students at four universities in Thailand. Out of the distributed questionnaires, 623 students returned them. However, only 597 of them provided complete and usable data, which were employed in the data analysis.

Instruments

Most of the instruments in this study were summated rating scales. Each instrument consisted of 10-14 items; each item was measured on a 6-point Likert scale, with replies ranging from "absolutely true" to "absolutely not true". Most of the instruments were self-reported. All instruments had a Cronbach's alpha coefficient greater than .70 (Nunnally, 1978), item discrimination with critical values of the t-distribution greater than 2.00 (McMillan & Schumacher, 1999), the corrected item total correlation value (CITC) was equal to or above .20 (Streiner & Norman, 2015), and confirmatory factory analysis (CFA) was conducted to test the construct validity (Westen & Rosenthal, 2003). A model fit was determined as follows: 1) the chi-square: *p*-value should be non-significant ($p > .05$) (Jöreskog & Sörbom, 1989), 2) root mean square error of approximation (RMSEA) value should be between .05 and .08, 3) the Comparative Fit Index (CFI) value over .90 was preferred to indicate the model fit (Diamantopoulos et al., 2000), 4) standardized root mean square residual (SRMR) value less than 0.08 (Hu & Bentler, 1999), and 5) the Tucker-Lewis Index (TLI) value should be over .90 (Tucker & Lewis, 1973). The authors introduced eight new measures of variables and adapted six measures from previous research, modifying the questions to suit the Thai context. However, all measurements met the criteria set by the researchers. The details of instrument quality are shown in Table 1.

Table 1

Instrument Quality

Measurement	items	*t*-distribution	CITC	α	CFA						
					x^2	*df*	*p*-value (*p*>.05)	RMSEA (≤.06)	CFI (≥.95)	TLI (≥.95)	SRMR (≤.08)
1. Study-life Conflict Reduction*	14	2.14-7.86	.19-.42	.75	84.38	73	.17	.03	.96	.95	.07
2. Study-life Enrichment*	14	4.16-10.89	.33-.75	.84	87.70	70	.07	.04	.96	.95	.06
3. Attitudes toward Adjustment and Innovation*	14	4.07-9.60	.30-.65	.80	64.97	57	.21	.03	.97	.96	.10
4. Creative Problem Solving*	12	3.33-7.68	.15-.53	.70	51.18	45	.24	.03	.96	.95	.06
5. Proactive personality*	12	3.37-7.69	.26-.53	.73	52.74	45	.19	.03	.97	.96	.05
6. Academic Success*	14	4.30-10.30	.32-.69	.83	83.73	72	.16	.03	.97	.96	.06
7. Life Satisfaction	14	4.61-8.40	.35-.59	.82	70.52	57	.10	.04	.97	.95	.06
8. Health & Wellness	12	3.97-9.79	.33-.66	.84	60.43	47	.09	.04	.96	.95	.05
9. Core self-evaluation	12	2.71-11.39	.16-.64	.80	28.34	23	.20	.04	.98	.96	.07
10. Self-Regulation	14	2.35-7.80	.11-.51	.72	40.83	34	.19	.04	.98	.95	.07
11. Psychological Immunity	12	4.59-9.15	.20-.49	.72	50.83	42	.16	.04	.97	.95	.07
12. Perceived Support Opportunity from Others*	14	4.55-9.44	.32-.61	.86	66.69	51	.06	.05	.97	.96	.06
13. Academic demands	12	3.00-8.71	.25-.61	.77	42.19	35	.18	.04	.97	.95	.09
14. University Inculcating Experience*	10	3.89-6.27	.19-.44	.76	35.67	30	.21	.04	.97	.96	.05

Note. *Researcher constructed this measure.

Ethical Considerations

The researchers protected the rights of the informants based on Standard Operating Procedures for the Ethics Committee in Human Research, National Institute of Development Administration-ECNIDA SOPs 2021. This research project received an institutional review board (IRB) certificate, COA No. 2022/0020 Protocol ID No. ECNIDA 2022/0019 Approval Date: 22 February 2022, from the ethics committee in human research, National Institute of Development Administration.

Results

Descriptive Statistics

The total number of samples was 597 Thai university students, consisting of 283 female students (47.40%) and 174 males (29.20%) with an average age of 20.4 years old. There were 239 students (40.00%) studying humanities and social science, 206 students (34.50%) studying science and technology, and 152 students (25.50%) studying business administration. In Table 2, the analysis results of correlation coefficients revealed that the relationships in the SLB group were .66 (p <.01) and the sustainable success group ranged between .64 (p < .01) to .75 (p < .01). The relationships among independent variables ranged between -.09 (p < .05) to .81 (p < .01). The highest correlation of .83 (p < .01) was found between life satisfaction (LS) and health and wellness (HW). Moreover, the finding found that none of the correlation pairs of the observed variables had a correlation value greater than .85, which would cause multicollinearity (Hair et al., 2010; Kline, 2005)

The Measurement Model

The model in this study includes five constructs, namely, the psychological traits construct, situational factors construct, psychological states construct, SLB construct, and sustainable success construct. The estimated parameter values of observable variables are shown in Table 3.

The Structural Model

The analysis of the structural equation model showed that the model of SLB was related to the antecedents' latent construct and its consequences for sustainable success. The model fit indices were as follows: x^2 = 39.086; df = 27; p-value = .06; RMSEA = .03; CFI = 1.00; TLI = 1.00; SRMR = .05, as shown in Figure 2. Regarding the total effect (TE), direct effect (DE), and indirect effect (IE) of the SLB latent construct (Table 4), it was found that the psychological traits construct had the highest total effect on the SLB latent construct (TE = .96), followed by the situational latent construct (TE = .58) and the psychological states latent construct (TE = .51). In terms of direct and indirect effects on the SLB construct, the highest indirect effect was found in the psychological traits construct (IE = .88), followed by the situational latent construct (IE = .19). The highest direct effect on the SLB latent construct was found in the psychological states latent construct (DE = .51), followed by the situational latent construct (DE = .39) and the psychological traits latent construct (DE = .08). The r-squared (R^2) value of the SLB latent construct was .96.

For sustainable success latent construct, the total effect (TE), direct effect (DE), and indirect effect (IE) of the sustainable success, it was found that the highest total effect was from psychological traits construct (TE = .95), followed by psychological states construct (TE = .75), SLB construct (TE = .47), and situational factor construct (TE = .46). In terms of direct and indirect effects on the sustainable success latent construct, the highest indirect effect was found in psychological traits latent construct (IE = .95), followed by the situational latent construct (IE = .46) and psychological states latent construct (IE = .24). The highest direct effect on sustainable success construct was found in psychological states latent construct (DE = .50), followed by SLB latent construct (DE = .47). The r-squared (R^2) value of sustainable success latent construct was .94.

Table 2

Descriptive Statistic and Intercorrelation Matrix of Variables in Total Sample

Variables	Mean	S.D.	SK	KU	1	2	3	4	5	6	7	8	9	10	11	12	13
SLC	51.68	14.58	-.10	-.81	-												
SLE	51.87	11.80	-.11	-.30	.66**	-											
ATT	50.22	11.83	-.06	-.32	.58**	.69**	-										
CPS	43.67	9.30	-.13	.09	.69**	.67**	.52**	-									
PP	43.81	10.90	-.13	-.50	.73**	.70**	.56**	.71**	-								
AS	51.08	11.40	.10	.15	.71**	.54**	.41**	.71**	.64**	-							
LS	51.35	13.37	-.15	-.22	.81**	.64**	.57**	.72**	.75**	.68**	-						
HW	43.17	9.90	.15	.07	.82**	.62**	.49**	.77**	.72**	.72**	.83**	-					
CSE	43.68	9.97	.06	.02	.73**	.75**	.79**	.67**	.64**	.55**	.68**	.68**	-				
SR	50.15	10.03	.27	.43	.69**	.52**	.54**	.55**	.56**	.58**	.67**	.64**	.64**	-			
PI	44.22	11.71	-.09	-.85	.69**	.59**	.42**	.75**	.65**	.69**	.69**	.81**	.59**	.57**	-		
PSS	52.83	16.17	-.12	-.76	.72**	.75**	.58**	.77**	.78**	.70**	.72**	.77**	.69**	.56**	.78**	-	
AD	41.70	9.01	.00	.17	-.35**	-.41**	-.51**	-.27**	-.25**	-.25**	-.32**	-.15**	-.49**	-.36**	-.09*	-.27**	-
UIE	36.94	8.02	-.10	-.40	.64**	.53**	.43**	.60**	.62**	.55**	.62**	.67**	.51**	.47**	.66**	.65**	-.12**

Note. *$p < .05$, **$p < .01$, SK= Skewness, KU= Kurtosis, SLC: Study-life conflict Reduction, SLE: Study-life enrichment, ATT: Attitudes toward adjustment and innovation, CPS: Creative problem solving, PP: Proactive personality, AS: Academic success, LS: Life satisfaction, HW: Health & wellness, CSE: Core self-evaluation, SR: Self-regulation, PI: Psychological immunity, PSS: Perceived support opportunity from others, AD: Academic demands, UIE: University inculcating experience

Table 3

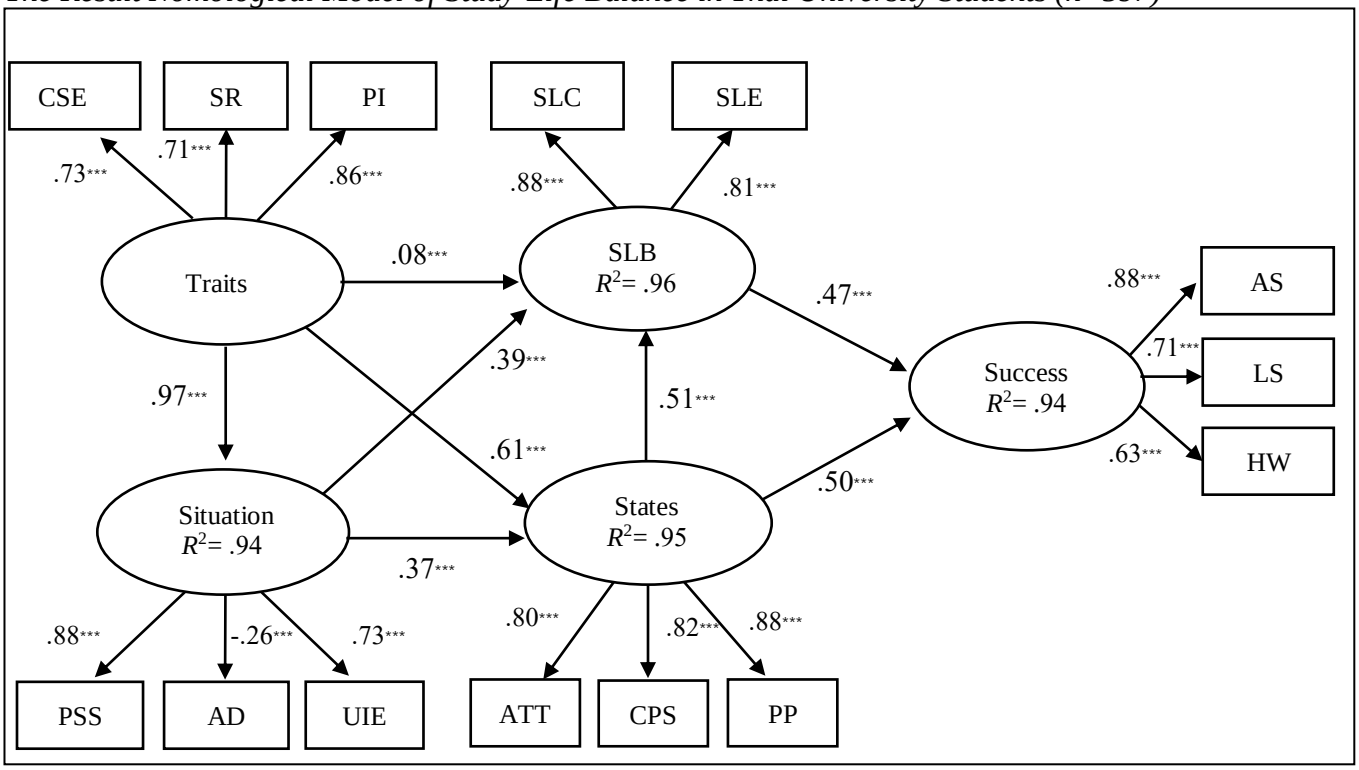
Estimated Parameter Values and Statistic Values

Variables	Estimated parameter Value			
	Factor loading (*b*)	(SE)	Standardized factor loading (β)	*t*
Measurement model				
1. SLB Construct				
Study-Life Conflict Reduction	1.00	0.00	0.88	79.92***
Study-Life Enrichment	0.74	0.02	0.81	56.11***
2. Sustainable Success Construct				
Academic Success	1.00	0.00	0.88	75.76***
Life Satisfaction	0.93	0.04	0.71	35.81***
Health and Wellness	0.61	0.03	0.63	29.23***
3. Psychological states Construct				
Favorable Attitudes toward Adjustment and Innovation	1.00	0.00	0.80	52.06***
Creative Problem Solving	0.80	0.03	0.82	60.93***
Proactive Personality	1.00	0.03	0.88	81.92***
4. Psychological Traits Construct				
Self-Regulation	1.00	0.00	0.73	66.46***
Core self-evaluation	1.00	0.05	0.71	29.81***
Psychological Immunity	1.42	0.05	0.86	61.14***
5. Situational factor Construct				
Perceived Support Opportunity from Others	1.00	0.00	0.88	73.36***
Academic demands	-0.13	0.02	-0.26	-7.22 ***
University Inculcating Experience	0.41	0.01	0.73	37.36***

Note. * $p < .05$. ** $p < .01$. *** $p < .001$.

Figure 2

The Result Nomological Model of Study-Life Balance in Thai University Students (n=597)



Note. ***$p < .001$

Table 4

Direct Effect, Indirect Effect, Total Effect, and R-square of The Model (n=597)

Latent Construct	Effect latent construct in model											
	Situational factor			Psychological state			Study-Life Balance			Sustainable success		
	DE	IE	TE	DE	IE	TE	DE	IE	TE	DE	IE	TE
Psychological traits												
b	1.94	-	1.94	0.82	0.48	1.31	0.15	1.59	1.74	-	1.33	1.33
S.E.	0.07	-	0.07	0.05	0.01	0.05	0.00	0.06	0.06	-	0.04	0.04
β	0.97	-	0.97	0.61	0.36	0.97	0.08	0.88	0.96	-	0.95	0.95
Situational factor												
b	-	-	-	0.25	-	0.25	0.35	0.17	0.52	-	0.32	0.32
S.E.	-	-	-	0.00	-	0.00	0.00	0.01	0.01	-	0.00	0.00
β	-	-	-	0.37	-	0.37	0.39	0.19	0.58	-	0.46	0.46
Psychological states												
b	-	-	-	-	-	-	0.69	-	0.69	0.52	0.25	0.78
S.E.	-	-	-	-	-	-	0.04	-	0.04	0.03	0.01	0.03
β	-	-	-	-	-	-	0.51	-	0.51	0.50	0.24	0.75
Study-Life balance												
b	-	-	-	-	-	-	-	-	-	0.37	-	0.37
S.E.	-	-	-	-	-	-	-	-	-	0.00	-	0.00
β	-	-	-	-	-	-	-	-	-	0.47	-	0.47
R^2	0.94			0.95			0.96			0.94		

Note. all coefficients are significant, DE = direct effect, IE = indirect effect, TE = total effect, R^2= correlation coefficient

For psychological states latent construct, it was found that the highest total effect was from psychological traits latent construct (TE = .97), followed by situational latent construct (TE = .37). Only the latent construct of psychological traits showed an indirect effect (IE = .36). The highest direct effect on psychological states latent construct was found in psychological traits latent construct (DE = .61), followed by situational latent construct (DE = .37). The latent construct of psychological states had an r-squared value of .95. Finally, in terms of direct effect (DE) of the situational latent construct, it was found that the direct effect was from psychological traits latent construct (DE = .97). The r-squared value of situational latent construct was .94.

Discussion and Conclusion

Discussion of Main Results

The objectives of this research were to investigate the direct and indirect effects of SLB and sustainable success among Thai university students. Results from path analysis showed the model fit for hypothesis testing with an additional pathway from psychological traits construct to situational construct. Based on path analysis, it was found that the nomological model of SLB and sustainable success supported the interactionism model which stated that 1) human behavior is affected by psychological and situational factors, and 2) each causal domain consisted of several causal factors, in which the more predictors provided the more explanation of the human behavior (Endler & Magnusson, 1976).

In terms of research hypotheses, the first hypothesis was also supported by the path model, which showed that the psychological traits construct had a direct and positive effect on the psychological states construct, with a coefficient of .61, and the SLB construct had a direct and positive effect on the psychological traits construct, with a coefficient of .08. The psychological traits construct indirectly affected

SLB construct through the psychological states construct, with an indirect coefficient of .88, and indirectly affected sustainable success through the SLB construct, with an indirect coefficient of .95. These findings support the interactionism model concept and are consistent with previous studies, such as Praneetvatakul (2017) and Bhanthumnavin (2015), which found similar path directions. In addition, PI had the highest factor loading with a coefficient of .86 in the psychological traits latent construct, indicating that promoting PI, which includes optimism, risk preference, consciousness, and stress coping, is important for improving SLB in university students. Previous studies have found that high levels of PI are positively related to good problem management, a well-balanced life, and desired behaviors (Bhanthumnavin, 2007; Choochom et al., 2011).

Results from the path analysis supported hypothesis 2, with the situational construct having a direct effect on the psychological states construct, with a coefficient of .37, and the SLB construct, with a coefficient of .39. Moreover, the situational factor construct had an indirect effect on sustainable success, with a coefficient of .46. These findings were consistent with previous research by Bhanthumnavin (2015), which reported that the situational factor construct had a direct effect on the psychological states construct and success in life. Tangchitprattanar (2018) also found that the situational construct directly influenced buying behavior based on Bloom's taxonomy latent construct and indirectly affected the buying behavior latent construct through the psychological states latent construct. Furthermore, the situational latent construct had the highest factor loading (β=.88) for PSS. Previous studies have shown a positive relationship between social support and desired behaviors in both school and workplace contexts, including research by Brough and Pears (2004) and Bualar and Bhanthumnavin (2021). Moreover, Kumar and Chaturvedi (2018) also found that social support had a positive effect on both WLB for employees and SLB for students. In addition, AD was found to have a negative coefficient in the situational construct, supporting the previous finding that students who have high levels of AD will struggle with life balance and academic success (Knoster & Goodboy, 2020; Onuoha & Idemudia, 2020).

The path model results confirmed hypothesis 3, as the psychological states construct was found to have a direct effect on the SLB construct with a coefficient of .51. This finding is consistent with the research of Mekkhachorn (2019), who found that the psychological states construct directly influenced college adaptive behavior in lower-level university students. The path model also showed that PP had the highest factor loading (β=.88) in the psychological states construct. Highly proactive individuals are known to seek out better opportunities, set practical goals, prepare adequately for challenges, prefer new methods, learn by doing, and persevere in their efforts (Bateman & Crant, 1993). This trait is associated with desirable behaviors, such as proactive idea implementation, proactive problem-solving, successful career paths, and high academic engagement (Chen et al., 2021; Seibert et al., 1999; Smithikrai, 2022), and students with higher levels of PP are more likely to exhibit SLB. Furthermore, the psychological states construct had a direct effect on the sustainable success construct, with a coefficient of .50. These findings support Bhanthumnavin's (2015) study, which found that the psychological states construct directly influenced mindful risk-taking behavior in Thai university students, with an indirect effect of 1.49.

The last hypothesis was supported by the path model, which showed that the SLB construct had a direct and positive effect on sustainable success, with a coefficient of .47. This finding confirms that SLB is an important predictor of Thai students' success, which is consistent with previous research on individuals who exhibit high levels of adaptability in life and their positive outcomes such as academic success (Benner and Curl, 2018; Cinamon, 2016), life satisfaction (Haar et al., 2014; Lyubomirsky et al., 2005), and well-being (Kreyenbühl, 2018). Additionally, the SLC had the highest factor loading with a coefficient of .88, indicating that reducing conflicts between study and personal life is an important factor in promoting SLB and consequently sustainable success.

Furthermore, an additional direct effect was found from the psychological traits construct to the situational latent construct, with a coefficient of .97. The authors have developed the influence of traits on

situations to demonstrate that an individual's traits still affect the situation they are facing (Bhathumnavin, 2007). Specifically, individuals with certain psychological traits, such as high self-regulation, are more likely to encounter distinct situations compared to those without such traits (Bandura, 1986; Bjork et al., 2013). This finding aligns with the interactionism model, which suggests that behavior arises from the interplay of personal and situational factors. The path analysis conducted in this study further supports this model, revealing that the situational construct can also be influenced by the psychological traits construct. Similar results have been reported in recent Thai studies, emphasizing the robustness of these findings (Chaitawittanun, 2020; Mekkhachorn, 2019; Tangchitprattanar, 2018).

Limitations

The current study had noticeable limitations. Firstly, it relied on self-reported measures, which measured psychological traits, situations, and psychological states solely based on responses from university students. This reliance on a single source of respondents introduces the possibility of bias, potentially magnifying the relationships between research variables (Podsakoff et al., 2003). To enhance the comprehensiveness of the data, it would be beneficial to incorporate observation-based variable measurement and collect reports from other relevant individuals, such as teachers, classmates, seniors, and parents. Furthermore, since this research employed a comparative correlation design, it was unable to definitively establish whether psychological states and situational factors were the true causes of SLB. Conducting experimental research becomes necessary to examine causality and obtain conclusive results before considering a widespread application.

Implications for Behavioral Science

The findings from the current study can be implemented in the behavioral science field in three aspects. The first aspect is the theory's implications. The present study has confirmed that the use of the interactionism model and nomological network is suitable for explaining and understanding humans' behavior. The second aspect is the measurement implication. Measuring tools adopted and well developed in this study were statistically tested for their validity and reliability. Researchers are welcome to use these measures in future studies. The last aspect is its practical implications. The results of the study indicated key factors that may influence the life balance of the students. Interestingly, among the psychological states constructs that were the most influential on human behaviors, PP was found to be the crucial variable. Therefore, it is encouraged to assess PP level among university students and provide support to those with low PP to improve their SLB and success (Chen et al., 2021; Kong et al., 2021). In addition, enhancing PI and PSS among students by applying them to general education courses, class activities, and training interventions could help improve life skills that are essential to Thai university students.

Conclusion

The results from the present study supported the idea that the interactionism model can still be used to understand human behavior by examining the relationships among psychological traits, psychological states, and situational factors on behavior, and outcome variables. The findings also revealed that study-life balance might influence students' long-term success in life. In terms of variables, psychological immunity was an important psychological trait, perceived support opportunity from others was an important situational context, and proactive personality was an important psychological state that affected the SLB of Thai university students.

Acknowledgements

This study was supported by funds derived from the Thai government budgets of the year 2022.

References

Adebayo, D., Sunmola, A., & Udegbe, B. I. **(**2008). Subjective wellbeing, work-school conflict and proactive coping among Nigerian non-traditional students. *Career Development International***,** *13*(5), 440-455. https://doi.org/10.1108/13620430810891464

Allen, T. D., Herst, D. E., Bruck, C. S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: A review and agenda for future research. *Journal of Occupational Health Psychology, 5*(2), 278. https://doi.org/10.1037//1076-8998.5.2.278

Ang, T. (2008). *Balancing work and life among students* [Master's thesis, Business]. Auckland University of Technology. http://hdl.handle.net/10292/535

Astin, A. W., & Astin, H. S. (2015). Achieving equity in higher education: The unfinished agenda. *Journal of College and Character, 16*(2), 65-74. https://doi.org/10.1080/2194587X.2015.1024799

Balmforth, K., & Gardner, D. (2006). Conflict and facilitation between work and family: Realizing the outcomes for organizations. *New Zealand Journal of Psychology, 35*(2), 69–76. https://psycnet.apa.org/record/2006-12284-002

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice Hall.

Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior: A measure and correlates. *Journal of Organizational Behavior, 14*(2), 103-118. https://doi.org/10.1002/job.4030140202

Beisser, S. R., Peters, R. E., & Thacker, V. M. (2014). Balancing passion and priorities. *NASSP Bulletin, 98*(3), 237-255. https://doi.org/10.1177/0192636514549886

Benner, K., & Curl, A. L. (2018). Exhausted, stressed, and disengaged: Does employment create burnout for social work students?. *Journal of Social Work Education, 54*(2), 300-309. https://doi.org/10.1080/10437797.2017.1341858

Bergman, L. R. (2001). Modern interactionism. *European Psychologist, 6*(3), 151–152. https://doi.org/10.1027/1016-9040.6.3.151

Bhanthumnavin, D. (2007). *Rūpbàep thêesadti pàdì-sàm-pan-tha-ni-yam láe naeo-thaang gaan dtâng sŏm-ma-ti-thaan nai kān wi-jai săa-kăa jit phrút-gà-rám-sàat nai prathêet Thai.* [Interactionism model and approach to hypothesis in researching the field of behavioral science in Thailand]. *Journal of Social Development, 9*(1), 85-117. https://so04.tci-thaijo.org/index.php/jsd/article/view/31222 [in Thai]

Bhanthumnavin, D. (2015). *Pàt-jai chēng hèt khaawng prút-gà-rám sĭang yăng mii sà-dti kăwng nák-riian rá-dàp máthá-yŏm-sà-taa.* [Antecedents of mindful risk-taking behavior in secondary school students: A path analytic approach]. *The Journal of Behavioral Science, 21*(1), 75-94. https://so06.tci-thaijo.org/index.php/BSRI/article/view/29900 [in Thai]

Bhanthumnavin, D. (2017). Psycho-social antecedents of research potentiality among graduate students: A SEM Approach. *International Journal of Behavioral Science, 12*(2), 50-70. https://so06.tci-thaijo.org/index.php/IJBS/article/view/94360

Bhanthumnavin, D., & Vaninthanondra, N. (2008). *Kān wi-jai pheûa phat-tha-naa khrueang-meūan wát thāng jit, bàep pha-hù-mít dâan gaan mii phu-mi-khum-gun ton*. [Multi-dimensional test construction of psychological immunity based on the philosophy of sufficiency economy] (Research report). The Principal Project of Research & Development of the Thai Behavioral System National Research Council. [in Thai]

Bjork, R. A., Dunlosky, J., & Kornell, N. (2013). Self-regulated learning: Beliefs, techniques, and illusions. *Annual Review of Psychology, 64*(1)**,** 417-444. https://doi.org/10.1146/annurev-psych-113011-143823

Boonlom, K. (2020). *Khwaam sam-phan ra-waang gaan bpràp dtua lae gaan yoom-rap núat-gà-ram gap khwaam sam-rèt nai gaan dam-neern chii-wít kăwng khruu nai roong-riian săng-kàt săm-nák-ngaan khèt sŭan-luang, krung-thêep má-hăa-ná-khawn.* [The relationship between the innovation

adjustment, acceptance and success of teachers' living in Suan Luang district primary schools, Bangkok] (Master's thesis, Educational Administration). University of Phayao. http://updc.clm.up.ac.th/bitstream/123456789/1376/1/ [in Thai]

Brough, P., & Pears, J. (2004). Evaluating the influence of the type of social support on job satisfaction and work-related psychological well-being. *International Journal of Organisational Behaviour, 8*(2), 472-485. https://core.ac.uk/reader/143875170

Bualar, K., & Bhanthumnavin, D. (2021). *Kār sùk-sàa bàt gìaw kâb prút-gà-rám mûng-mân nai kān rian kăwng nák sùk-sĭa rá-dàb prìn-yaa-dtrii thîi pen rûng raaek kăwng khràp-khrūa-khran-fàa*. [Study of factors as correlates of study engagement behavior of the first-generation university students]. *Journal of Education Naresuan University, 23*(4), 86-106. https://so06.tci-thaijo.org/index.php/edujournal_nu/article/view/190234 [in Thai]

Byrne, U. (2005). Work-life balance why are we talking about it at all?. *Business Information Review, 22*(1), 53-59. https://doi.org/10.1177/0266382105052268.

Chaitawittanun, N. (2020). Psycho-situational path model of ambidextrous preparation for quality aging in college students. *International Journal for Innovation Education and Research, 8*(8), 841-852. https://doi.org/10.31686/ijier.vol8.iss8.2592

Chen, P., Bao, C., & Gao, Q. (2021). Proactive personality and academic engagement: The mediating effects of teacher-student relationships and academic self-efficacy. *Frontiers in Psychology, 12*, Article ID 1824. https://doi.org/10.3389/fpsyg.2021.652994

Choochom, O., Tanachanan, S., & Thongpukdee, T. (2011*). patčhai chǣng hēt læ phon khǫ̣ng phūmkhumkan thāng čhit khǫ̣ng yaowachon* [Antecedents and consequences of youths' psychological immunity]. *Warasan Phuetikammasart, 18*(2), 1-15. https://so06.tci-thaijo.org/index.php/BSRI/article/view/2208 [in Thai]

Cinamon, R. G. (2016). Integrating work and study among young adults: Testing an empirical model. *Journal of Career Assessment, 24*(3), 527-542. https://doi.org/10.1177/1069072715599404

Colombo, L., & Ghislieri, C. (2008). The work-to-family conflict: Theories and measures. *Testing, Psychometrics, Methodology in Applied Psychology, 15,* 35-55. https://doi.org/10.4473/TPM.15.1.3

Creed, P. A., French, J., & Hood, M. (2015). Working while studying at university: The relationship between work benefits and demands and engagement and well-being. *Journal of Vocational Behavior, 86*, 48-57. https://doi.org/10.1016/j.jvb.2014.11.002

Cronbach, L. J., & Meehl, P. E. (1955). Construct validity in psychological tests. *Psychological Bulletin, 52*(4), 281–302. https://doi.org/10.1037/h0040957

Daniel, S. J. (2020). Education and the COVID-19 pandemic. *Prospects, 49*, 91–96. https://doi.org/10.1007/s11125-020-09464-3

Diamantopoulos, A., Siguaw, J. A., & Siguaw, J. A. (2000). *Introducing LISREL: A guide for the uninitiated*. Sage. https://doi.org/10.4135/9781849209359.

Endler, N. S., & Magnusson, D. (1976). Toward an interactional psychology of personality. *Psychological Bulletin, 83*(5), 956–974. https://doi.org/10.1037/0033-2909.83.5.956

Endler, N. S., & Magnusson, D. (1977). The interaction model of anxiety: An empirical test in an examination situation. *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement*, *9*(2), 101–107. https://doi.org/10.1037/h0081612

Fisher-McAuley, G., Stanton, J., Jolton, J., & Gavin, J. (2003). *Modelling the relationship between work life balance and organisational outcomes* (Poster presentation). Annual Conference of the Society for Industrial-Organisational Psychology. Orlando.

Frone, M. R. (2003). Work-family balance. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of Occupational Health Psychology* (pp. 143–162). American Psychological Association. https://doi.org/10.1037/10474-007

Grant-Vallone, E. J., & Donaldson, S. I. (2001). Consequences of work-family conflict on employee well-being over time. *Work & Stress, 15*(3), 214-226. https://doi.org/10.1080/02678370110066544

Grzywacz, J. G., & Marks, N. F. (2000). Reconceptualizing the work–family interface: An ecological perspective on the correlates of positive and negative spillover between work and family. *Journal of Occupational Health Psychology, 5*(1), 111–126. https://doi.org/10.1037/1076-8998.5.1.111

Guest, D. E. (2016). Perspectives on the study of work-life balance. *Social Science Information, 41*(1), 225-279. https://doi.org/10.1177/0539018402041002005

Gurvis, J., & Patterson, G. (2005). Balancing act: Finding equilibrium between work and life. *Leadership in Action: A Publication of the Center for Creative Leadership and Jossey-Bass*, *24*(6), 4-9. https://doi.org/10.1002/lia.1091

Gustitus, C., Golden, J. R., & Hazler, R. J. (1986). Graduate student development: An extracurricular approach. *Journal of Counseling & Development, 64*(7), 461. https://doi.org/10.1002/j.1556-6676.1986.tb01165.x

Haar, J. M., Russo, M., Suñe, A., & Ollier-Malaterre, A. (2014). Outcomes of work– life balance on job satisfaction, life satisfaction and mental health: A study across seven cultures. *Journal of Vocational Behavior, 85*(3), 361-373. https://doi.org/10.1016/j.jvb.2014.08.010

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate Data Analysis* (7th ed.). Pearson.

Hayman, J. (2005). Psychometric assessment of an instrument designed to measure work life balance. *Research and Practice in Human Resource Management*, *13*(1), 85-91. http://hdl.handle.net/20.500.11937/46385

Hendriks, J. A. (2020). *Exploring study-life balance of students and their perceptions of an engagement app* [Bachelor's thesis]. University of Twente. http://essay.utwente.nl/81857/

House, J. S. (1981). *Work stress and social support. Reading.* Addison-Wesley.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling, 6*(1), 1-55. https://doi.org/10.1080/10705519909540118

Jain, S., & Nair, S. K. (2013). Research on work-family balance: A review. *Business Perspectives and Research, 2*(1), 43–58. https://doi.org/10.1177/2278533720130104

Jöreskog, K. G., & Sörbom, D. (1989). *LISREL 7: A Guide to the Program and Applications* (2nd ed.). SPSS. Inc: Chicago, IL.

Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology, 83*(1), 17-34. https://doi.org/10.1037/0021-9010.83.1.17

Karatepe, M. O., & Demir, E. (2014). Linking core self-evaluations and work engagement to work-family facilitation: A study in the hotel industry. *International Journal of Contemporary Hospitality Management, 26*(2), 307-323. https://doi.org/10.1108/IJCHM-01-2013-0008

Kleebbua, C., & Lindratanasirikul, K. (2021). Learning climate for enhancing innovative behavior in Thai higher education. *The Journal of Behavioral Science*, *16*(1), 45-57. https://so06.tci-thaijo.org/index.php/IJBS/article/view/234673

Kline, R. B. (2005). *Principles and practice of structural equation modeling* (2nd ed.). Guilford.

Knoster, K. C., & Goodboy, A. K. (2020). A conditional process model of academic demands and student learning. *Communication Education, 69*(3), 335-355. https://doi.org/10.1080/03634523.2020.1713387

Kong, L., Yang, L., Pan, Y., & Chen, S. (2021). Proactive personality, professional self-efficacy and academic burnout in undergraduate nursing students in China. *Journal of Professional Nursing, 37*(4), 690-695. https://doi.org/10.1016/j.profnurs.2021.04.003

Krech, D., Crutchfield, R. S., & Ballachey, E. L. (1962). *Individual in society: A textbook of social psychology*. McGraw-Hill.

Kreyenbühl, I. (2018). Perspective: work-study-life balance. In *on the Line* (pp. 85-88). Springer, Cham. https://doi.org/10.1007/978-3-319-62776-2_7

Kropf, B. W. (2019). *Exploring the antecedents and outcomes of work-study conflict and work-study facilitation in working university students: An Australian perspective* [Doctoral dissertation]. School of Psychology University of Adelaide. https://hdl.handle.net/2440/128856

Kuh, G. D., Kinzie, J., Buckley, J. A., Bridges, B. K., & Hayek, J. C. (2006). *What matters to student success: A review of the literature.* National Postsecondary Education Cooperative, National Center for Education Statistics. https://nces.ed.gov/npec/pdf/kuh_team_report.pdf

Kumar, K., & Chaturvedi, R. (2018). An empirical study of social support, stress and life satisfaction among engineering graduates: Mediating role of perceived work/study life balance. *International Journal of Happiness and Development, 4*, 25-39. https://doi.org/10.1504/IJHD.2018.090489

Landolfi, A., & Presti, A. L. (2022). A psychometric examination of the work-family balance scale. A multisample study on Italian workers. *Current Psychology,* 41(2), 1-19. https://doi.org/10.1007/s12144-020-00893-z

Lockwood, N. R. (2003). Work/life balance challenges and solutions. *SHRM Research, 2*(10), 1-12. http://www.shrm.org/research/quarterly/0302worklife_summary.asp

Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin, 131*(6), 803- 855. https://doi.org/10.1037/0033-2909.131.6.803

Marcinkus, W. C., Whelan-Berry, K. S., & Gordon, J. R. (2007). The relationship of social support to the work-family balance and work outcomes of midlife women. *Women in Management Review, 22*(2), 86-111. https://doi.org/10.1108/09649420710732060

Markel, K., & Frone, M. (1998). Job characteristics, work-school conflict, and school outcomes among adolescents: Testing a structural model. *The Journal of Applied Psychology, 83*(2), 277-87. https://doi.org/10.1037/0021-9010.83.2.277

Martin, G., & Osborne, J. G. (1989). *Psychology, Adjustment, and Everyday Living. Prentice.* Prentice Hall.

McConnell, K., Geesa, R. L., & Lowery, K. (2019). Self-reflective mentoring: Perspectives of peer mentors in an education doctoral program. *International Journal of Mentoring and Coaching in Education, 8(*2), 86-101. https://doi.org/10.1108/IJMCE-07-2018-0043

McMillan, J. H., & Schumacher, S. S. (2001). *Research in education: A conceptual introduction* (5th ed.). Longman.

McNall, L. A., & Michel, J. S. (2017). The relationship between student core self-evaluation, support for school, and the work–school interface. *Community, Work & Family*, *20*(3), 253-272. https://doi.org/10.1080/13668803.2016.1249827

Mekkhachorn**,** W. (2019). *Psycho-social as correlates of college adaptive behavior in lower-level undergraduate students* [Doctoral dissertation]. National Institute of Development Administration. https://doi.org/10.14457/NIDA.the.2019.27

Mellner, C., Aronsson, G., & Kecklund, G. (2014). Boundary management preferences, boundary control, and work-life balance among full-time employed professionals in knowledge-intensive, flexible work. *Nordic Journal of Working Life Studies, 4*(4), 7-23. https://doi.org/10.19154/njwls.v4i4.4705

Nonthachot, P., Yaemyuean, A., & Uansa-ard, S. (2023). A causal model of psychosocial factors for empowering Thai youth in preventing domestic violence. *The Journal of Behavioral Science, 18*(1), 65–83. https://so06.tci-thaijo.org/index.php/IJBS/article/view/257842

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). McGraw-Hill.

Nwachukwu, C., Chládková, H., Moses, C. L., & Vu, H. M. (2022). Work-to-family conflict, family satisfaction and engagement nexus: insights from millennial managers. *Industrial and Commercial Training*, *54*(3), 413-428. https://doi.org/10.1108/ICT-10-2021-0071

Onuoha, C. U., & Idemudia, E. S. (2020). Academic demands and mental health among university students in full-time employment: The moderating role of perceived social support. *Journal of Psychology in Africa, 30*(2), 89-95. https://doi.org/10.1080/14330237.2020.1712805

Park, Y., & Sprung, J. M. (2013). Work–school conflict and health outcomes: Beneficial resources for working college students. *Journal of Occupational Health Psychology, 18*(4), 384–394. https://doi.org/10.1037/a0033614

Pavot, W., & Diener, E. (2008). The satisfaction with life scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology, 3*(2), 137- 152. https://doi.org/10.1080/17439760701756946

Peterson, D. R., Barrett, J. D., Hester, K. S., Robledo, I. C., Hougen, D. F., Day, E. A., & Mumford, M. D. (2013). Teaching People to Manage Constraints: Effects on Creative Problem-Solving. *Creativity Research Journal, 25*(3), 335-347, https://doi.org/10.1080/10400419.2013.813809

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903. https://psycnet.apa.org/buy/2003-08045-010

Praneetvatakul, B. (2017). *Pàt-jai thāng jit-săng-khom thîi gìaw-kâwng kàb prút-gà-rám bprông-gan gaan ráp lăe phrae-rôhk nai sà-thăn-thîi săa-thaa-rá-ná kăwng nák sùk-sĭa rá-dàb prìn-yaa-dtrii*. [Psychosocial correlates of communicable disease preventive behavior in public places for undergraduate students]. *Journal of Behavioral Science for Development, 10*(1), 83–102. https://so02.tci-thaijo.org/index.php/JBSD/article/view/99679 [in Thai]

Radchapattayakom, T., Vaninthanon, N., & Suppareakchaisakul, N. (2012). *Pàt-jai chēng săa-hèt dâan khrong-kaan thá-naa-káan rong-riian, khràp-khrūa-khran láe gaan mii phu-mi-khum-gun thāng jit thîi gìaw-kâwng kàb prút-gà-rám prá-yàt láe gèp-om ngern kăwng nák-riian rá-dàp máthá-yŏm-sàt dton-dton nai kèt krung-thêep má-hăa-ná-khawn* [Causal factors of school bank project, family and psychological immunity related to thrift behaviors of secondary students in Bangkok]. *Warasan Phuetikammasart, 18*(2), 61-74. https://so06.tci-thaijo.org/index.php/BSRI/article/view/2212 [in Thai]

Ragheb, M. G., & McKinney, J. (1993). Campus recreation and perceived academic stress. *Journal of College Student Development, 34*(1), 5–10. https://psycnet.apa.org/record/1993-35415-001

Sadiq, M. (2022). Policing in pandemic: Is perception of workload causing work–family conflict, job dissatisfaction and job stress? *Journal of Public Affairs*, *22*(2), Article ID e2486. https://doi.org/10.1002/pa.2486

Saenz, V. B., Ngai, H. N., & Hurtado, S. (2007). Factors influencing positive interactions across race for African American, Asian American, Latino, and White college students. *Research in Higher Education, 48*, 1-38. https://doi.org/10.1007/s11162-006-9026-3

Sánchez-Martí, A., Ciraso-Calí, A., Fernández-Sequi, H., Pineda-Herrero, P. (2023). The school-life balance effect on acquiring cross-disciplinary competences in VET: Disruption or continuity during COVID-19?. *Vocations and Learning*. https://doi.org/10.1007/s12186-023-09314-1

Samson, P. (2015). Fostering student engagement: Creative problem-solving in small group facilitations. *Collected Essays on Learning and Teaching, 3*(8), *153-164.* https://doi.org/10.22329/celt.v8i0.4227

Seibert, S. E., Crant, J. M., & Kraimer, M. L. (1999). Proactive personality and career success. *The Journal of Applied Psychology, 84*(3), 416–427. https://doi.org/10.1037/0021-9010.84.3.416

Seibert, S. E., Kraimer, M. L., & Crant, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology, 54*(4), 845-874. https://doi.org/10.1111/j.1744-6570. 2001.tb00234.x

Shi, B. (2015). Investigation on proactive personality status of the college students. In W. Striełkowski (Ed.), *Advances in Social Science, Education and Humanities Research. Proceedings of the 2015 International Conference on Social Science, Education Management and Sports Education* (pp. 1938 - 1941). Atlantis Press. https://doi.org/10.2991/ssemse-15.2015.495

Smith, K. T. (2010). Work-life balance perspectives of marketing professionals in generation Y. *Services Marketing Quarterly, 31*(4), 434-447. https://doi.org/10.1080/15332969.2010.510724

Smithikrai, C. (2022). Antecedents and consequences of proactive work behavior among Thai employees. *The Journal of Behavioral Science, 17*(1), 43-57. https://so06.tci-thaijo.org/index.php/IJBS/article/view/254132

Sorati, P. (2017). The mediating role of perceived stress in the relationship between social problem-solving styles and quality of work life among the teachers. *Journal of Research in Behavioral Sciences, 15*(4), 427-434. http://rbs.mui.ac.ir/article-1-561-en.html

Sripa, K., Glubwila, S., & Thummaphan, P. (2021). Pathways, situations, and factors associated with youth violence in educational settings. *The Journal of Behavioral Science, 16*(1), 85-100. https://so06.tci-thaijo.org/index.php/IJBS/article/view/241051

Streiner, D. L., Norman, G. R., & Cairney, J. (2015). *Health measurement scales: A practical guide to their development and use*. Oxford University.

Sukkumnoed, D., Aekplakorn, W., & Kessomboon, P. (2002). *Health impact assessment for healthy public policy: Concept, approached, and practices*. Research and Development Program on Healthy Public Policy and Health Impact Assessment (HPP-HIA), Health Systems Research Institute (HSRI).

Tak, J., & Choi, K. (2020). The effect of goal-focused self-regulation on life satisfaction: The mediating role of work-life balance and a moderating effect of WLB organizational culture. *Korean Journal of Industrial and Organizational Psychology*, *33*(1), 1–33. https://doi.org/10.24230/kjiop.v33i1.1-33

Tangchitprattanar, G. (2018). *Psychological characteristics and situational factors as correlates of buying behavior based on Bloom's Taxonomy in undergraduate students* [Doctoral dissertation]. National Institute of Development Administration. https://repository.nida.ac.th/handle/662723737/5077

Tucker, L. R., & Lewis, C. (1973). The reliability coefficient for maximum likelihood factor analysis. *Psychometrika, 38*, 1-10. https://doi.org/10.1007/BF02291170

Uddin, M., Ali, K., & Khan, M. (2020). Perceived social support (PSS) and work-life balance (WLB) in a developing country: the moderating impact of work-life policy. *Iranian Journal of Management Studies, 13*(4), 733-761. http://dx.doi.org/10.22059/ijms.2020.282543.673663

Watson, D. L., & Tharp, R. G. (2007). *Self-directed behavior* (9th ed.). Cengage Learning.

Wayne, J., Grzywacz, J., Carlson, D., & Kacmar, K. (2007). Work-family facilitation: A theoretical explanation and model of primary antecedents and consequences. *Human Resource Management Review*, *17*(1), 63-76. https://doi.org/10.1016/j.hrmr.2007.01.002

Westen, D., & Rosenthal, R. (2003). Quantifying construct validity: Two simple measures. *Journal of Personality and Social Psychology*, *84*(3), 608–618. https://doi.org/10.1037/0022-3514.84.3.608

Werbel, J., & Walter, M. H. (2002). Changing views of work and family roles: A symbiotic perspective. *Human Resource Management Review, 12*(3), 293–298. https://doi.org/10.1016/S1053-4822(02)00061-X

Worchel, S., & Goethals, G. R. (1989). *Adjustment: Pathways to personal growth* (2nd ed.). Prentice-Hall. https://psycnet.apa.org/record/1989-97565-000

Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice, 41*(2), 64-70. https://doi.org/10.1207/s15430421tip41022