EFFECTS OF POSITIVE EDUCATION APPROACH ON ACADEMIC BOREDOM, INTRINSIC MOTIVATION, POSITIVE EMOTIONS AND THOUGHT-ACTION REPERTOIRE AMONG PRIVATE COLLEGE STUDENTS IN SHAANXI PROVINCE, CHINA

By

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Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

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September 2022

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Academic boredom can be best described as a negative and deactivating academic-related activity emotion, which is frequently reported by Chinese college students. High levels of academic boredom are associated with multiple learning factors such as intrinsic motivation. To date, however, scarce intervention studies have addressed this issue, especially among Chinese college students. More importantly, most of them adopted the deficit-based approaches which make students with high levels of academic boredom feel being labelled as problematic, and others who may not have high levels of academic boredom feel temporarily neglected, imposing an adverse impact on their mental health. Additionally, those intervention studies only aimed to reduce academic boredom, while few studies examined the effects of interventions on both reducing academic boredom and increasing positive constructs like intrinsic motivation and positive emotions. Given the limitations, further studies on academic boredom are more imperative. The purpose of this study was to investigate the effects of the positive education approach (PEA) based on China's "6+2" positive education model on learning-related boredom (LRB), class-related boredom (CRB), intrinsic motivation (IM), positive emotions (PE), and thought-action repertoire (TAR) among Chinese private college students as compared to the traditional education approach (TEA). This study is an experimental study using a quasi-experimental non-equivalent pre-test post-test control group design due to its naturally existing groups (intact classes). The participants obtained through cluster random sampling and fishbowl technique were four intact classes students, totaling of 173 undergraduate freshmen (139 females and 34 males) ranging in age from 17 to 23 (M=19.18, SD=.1) years from China. After that, random assignment was used to assign two intact classes as the control group and two intact classes as the experimental group. The experimental group received 13 sessions of positive education interventions based on China's "6+2" positive education model using the activity teaching pattern, which is defined as the PEA, while the control group received 13 sessions of college student mental health education course according to

official documents using the teacher-centred lecturing style, which is defined as the TEA. All participants were asked to complete the assessments two times: pre-test (one week before the intervention) and post-test (one week after the intervention). The results showed that: PEA was effective in reducing LRB and CRB, and increasing IM. The mean score in LRB for post-test (M=22.00, SD=7.59) was significantly lower than that for pre-test (M=31.12, SD= 9.08) (p <.01). The same results were found for CRB, where the mean score in CRB for post-test (M=21.14, SD=7.24) was significantly lower than that for pre-test (M=29.98, SD=9.20) (p <.01). In addition, the mean score in IM for post-test (M=62.52, SD=12.07) was significantly higher than that for pre-test (M=53.58, SD=13.80) (p <.01). The profile plot indicated that there were increases in the mean score for PE from pre-test (M=26.57, SD=5.68) to post-test (M=28.43, SD=6.29) and TAR from pre-test (M=8.13, SD=5.20) to post-test (M=9.27, SD=5.70) that were not statistically significant; the TEA was not effective in reducing students' LRB, CRB and increasing IM, PE, and TAR (p <.01). There were no statistically significant differences in the mean scores of LRB, CRB, IM, PE, and TAR from pre-test to post-test (p <.01); the PEA was much better than the TEA in reducing students' academic boredom (LRB, CRB) and improving their wellbeing (PE, TAR) as well as academic success (IM) (p <.01). An examination of the mean scores indicated a significantly lower level of LRB in the experimental group (M=22.00, SD=7.59) than in the control group (M=31.11, SD=8.28) (p <.01); a significantly lower level of CRB in the experimental group (M=21.14, SD=7.24) than in the control group (M=31.17, SD=9.40) (p <.01); a significantly higher level of IM in the experimental group (M=62.52, SD=12.07) than in the control group (M=54.30, SD=14.35) (p <.01); a significantly higher level of PE in the experimental group (M=28.43, SD=6.29) than in the control group (M=25.51, SD=5.41) (p <.01); a significantly higher level of TAR in the experimental group (M=9.27, SD=5.70) than in the control group (M=5.48, SD=4.01) (p <.01). Thus, the PEA can both reduce academic boredom and increase intrinsic motivation in China. Positive emotions and thought-action repertoire could also be improved but the significance level did not occur. This study provided empirical evidence that PEA is one of the effective interventions in addressing both academic boredom and motivational issues in education that are increasing due to various development happening in the students' surroundings.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

KESAN PENDEKATAN PENDIDIKAN POSITIF TERHADAP KEBOSANAN AKADEMIK, MOTIVASI INTRINSIK, EMOSI POSITIF DAN REPERTOIR TINDAKAN PEMIKIRAN DALAM KALANGAN PELAJAR-PELAJAR KOLEJ SWASTA DI WILAYAH SHAANXI, CHINA

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Kebosanan akademik boleh digambarkan sebagai emosi aktiviti akademik yang negatif dan menyahaktifkan, yang sering dilaporkan oleh pelajar-pelajar kolej di China. Tahap kebosanan akademik yang tinggi dikaitkan dengan pelbagai faktor pembelajaran seperti motivasi intrinsik. Walaubagaimanapun sehingga kini, kajian intervensi untuk menangani isu ini adalah terhad, terutamanya dalam kalangan pelajar-pelajar kolej di China. Lebih penting lagi, kebanyakan mereka menggunakan pendekatan berasaskan defisit yang menjadikan pelajar yang mempunyai tahap kebosanan akademik yang tinggi dilabelkan sebagai bermasalah, dan mereka yang mungkin tidak mempunyai tahap kebosanan akademik yang tinggi rasa diabaikan buat sementara waktu, sekaligus menyebabkan kesan buruk terhadap kesihatan mental mereka. Di samping itu, kajian-kajian intervensi tersebut hanya bertujuan untuk mengurangkan kebosanan akademik, manakala beberapa kajian mengkaji kesan intervensi ke atas kedua-duanya iaitu mengurangkan kebosanan akademik dan meningkatkan konstruk positif seperti motivasi intrinsik dan emosi positif. Memandangkan limitasi tersebut, kajian lanjut mengenai kebosanan akademik amat penting. Kajian ini bertujuan untuk mengkaji kesan pendekatan pendidikan positif, positive education approach (PEA) yang berdasarkan model pendidikan positif "6+2" China mengenai kebosanan berkaitan pembelajaran, learning-related boredom (LRB), kebosanan berkaitan kelas,class-related boredom (CRB), motivasi intrinsik, intrinsic motivation (IM), emosi positif, positive emotions (PE), dan himpunan pemikiran-tindakan, thought-action repertoire (TAR) dalam kalangan pelajar-pelajar kolej swasta di China berbanding Pendekatan Pendidikan Tradisional, Traditional Education Approach (TEA). Kajian ini adalah kajian eksperimen berbentuk kuasi-ekperimen menggunakan kumpulan kawalan pasca ujian pra-ujian yang tidak setara kerana kumpulannya yang sedia ada secara semula jadi (intact classes). Peserta telah dipilih melalui persampelan rawak kluster dan fish bowl technique untuk empat kumpulan, seramai 173 mahasiswa sarjana muda (139 perempuan dan 34 lelaki) berumur antara 17 hingga 23 tahun (M=19.18, SD=.1) dari China. Selepas

itu, pemulihan secara rawak digunakan untuk memilih dua kumpulan sebagai kumpulan kawalan dan dua kumpulan sebagai kumpulan eksperimen. Kumpulan eksperimen itu menerima 13 sesi intervensi pendidikan positif berdasarkan model pendidikan positif "6+2" China menggunakan corak pengajaran aktiviti, yang ditakrifkan sebagai PEA manakala kumpulan kawalan menerima 13 sesi kursus pendidikan kesihatan mental pelajar kolej mengikut dokumen rasmi menggunakan gaya pengajaran berpusatkan guru, yang ditakrifkan sebagai TEA. Semua peserta diminta untuk melengkapkan penilaian dua kali: pra-ujian (satu minggu sebelum intervensi) dan pasca ujian (satu minggu selepas intervensi). Dapatan menunjukkan bahawa: PEA berkesan dalam mengurangkan LRB, CRB, dan meningkatkan IM. Skor min dalam LRB untuk pasca ujian (M = 22.00, SD = 7.59) jauh lebih rendah dari pra-ujian (M = 31.12, SD = 9.08) (p <.01). Keputusan yang sama didapati untuk CRB, di mana skor min dalam CRB untuk pasca ujian (M = 21.14, SD = 7.24) jauh lebih rendah dari pra-ujian (M = 29.98, SD = 9.20) (p <.01).. Di samping itu, skor min dalam IM untuk pasca ujian (M = 62.52, SD = 12.07) jauh lebih tinggi dari pra-ujian (M = 53.58, SD = 13.80) (p <.01). Plot profil menunjukkan bahawa terdapat peningkatan dalam skor min untuk PE daripada pra-ujian (M=26.57, SD=5.68) kepada pasca ujian (M=28.43, SD=6.29) dan TAR daripada pra-ujian (M=8.13, SD=5.20) kepada pasca ujian (M=9.27, SD=5.70) yang tidak signifikan secara statistik; TEH tidak berkesan dalam mengurangkan LRB, CRB pelajar dan meningkatkan IM, PE, dan TAR (p <.01). Tiada perbezaan yang signifikan secara statistik dalam skor min LRB, CRB, IM, PE, dan TAR daripada pra-ujian hingga pasca ujian (p <.01).); PEA adalah jauh lebih baik daripada TEH dalam mengurangkan kebosanan akademik pelajar (LRB, CRB) dan meningkatkan kesejahteraan mereka (PE, TAR) serta kejayaan akademik (IM) (p <.01). Pemeriksaan skor min menunjukkan tahap LRB yang jauh lebih rendah dalam kumpulan eksperimen (M = 22.00, SD = 7.59) berbanding kumpulan kawalan (M = 31.11, SD = 8.28) (p <.01).; tahap CRB yang jauh lebih rendah dalam kumpulan eksperimen (M = 21.14, SD = 7.24) berbanding kumpulan kawalan (M = 31.17, SD = 9.40) (p <.01).; tahap IM yang jauh lebih tinggi dalam kumpulan eksperimen (M=62.52, SD=12.07) berbanding kumpulan kawalan (M=54.30, SD=14.35) (p <.01).; tahap PE yang jauh lebih tinggi dalam kumpulan eksperimen (M=28.43, SD=6.29) berbanding dalam kumpulan kawalan (M=25.51, SD=5.41) (p <.01).; tahap TAR yang jauh lebih tinggi dalam kumpulan eksperimen (M=9.27, SD=5.70) berbanding dalam kumpulan kawalan (M=5.48, SD=4.01) (p <.01). Oleh itu, PEA boleh mengurangkan kebosanan akademik dan meningkatkan motivasi intrinsik di China. Emosi positif dan himpunan tindakan pemikiran (thought-action repertoire) juga boleh diperbaiki tetapi belum mencapai tahap signifikan. Kajian ini memberikan bukti empirikal bahawa PEA adalah salah satu intervensi yang berkesan dalam menangani masalah kebosanan akademik dan motivasi dalam pendidikan yang semakin meningkat akibat pelbagai perkembangan yang berlaku di persekitaran pelajar.

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This thesis was submitted to the Senate of the Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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CRB	Class-Related Boredom
IM	Intrinsic Motivation
LRB	Learning-Related Boredom
PE	Positive Emotion
PEA	Positive Education Approach
S.D	Standard Deviation
TAR	Thought-Action Repertoire
TEA	Traditional Education Approach

CHAPTER 1

INTRODUCTION

1.1 Overview

To begin with, this chapter introduces the context of learning in China and then moves on to explain students' learning problems that have arisen within that context, which include academic boredom, intrinsic motivation, and mental wellbeing (positive emotions and thought-action repertoire). In addition, the researcher briefly introduces the positive education approach. After that, the researcher elaborates the problem statement, research objective, hypotheses, significance of the study, limitations of the study, and operational definition.

1.2 Background

Learning is essential to the development of individuals and societies. In recent years, with the rapid development of China's economy, China's higher education has also entered a stage of rapid development. The Chinese Government has been investing money and good facilities in higher education in recent years. According to the Ministry of Education of the People's Republic of China (2017), in 2016, the total number of students in various types of higher education in China reached 36.99 million, and the gross enrolment rate for higher education reached 42.7%. However, due to rapid development, a series of problems related to learning have arisen. Apparently, the issue of academic boredom is getting more serious and deserves to be further studied and explored especially in the context of education in China (Liu, 2022; Shi, 2017; Wang, 2016; Zhao, 2013).

1.2.1 Academic Boredom

Academic boredom refers to a negative and deactivating academic-related activity emotion (Pekrun et al., 2010; Sharp et al., 2018). Previous studies note that academic boredom is commonly reported by college students in learning settings across different countries (Mann & Robinson, 2009; Parker et al., 2021;Sharp et al., 2018;Tze et al., 2016). For example, recently one study found that Canadian college students reported a grade of 6.41 on a 10-point scale regarding how often they experienced boredom in university, and 73% of students reported experiencing boredom when attending the class (Parker et al., 2021); similar results were found for England college students (58%) (Mann & Robinson, 2009) and Chinese college students (50%) (Tze, 2011; Tze, 2013b; Tze et al., 2016).

As a pervasive negative emotion, academic boredom is closely related to students' learning factors and outcomes. In the past decades there has been ample empirical evidence regarding the negative effects of academic boredom on academic performance

(Camacho-Morles et al., 2021), intrinsic motivation (Parker et al., 2021), effort (Pekrun et al., 2010; Sharp et al., 2018), self-efficacy for self-regulated learning (Tze et al., 2013b), use of learning strategies (Artino, 2009; Pekrun et al., 2010), learning engagement (Tze et al., 2014). Recently, Tze et al. (2016) conducted a meta-analysis of 19052 students and affirmed that there was a negative correlation (r=-.24) between academic boredom and learning outcomes like intrinsic motivation. Additionally, their findings also demonstrated that boredom experienced during the class was most detrimental to student learning and academic outcomes. Similarly, Camacho-Morles et al. (2021) further corroborated the negative influence of academic boredom on student academic outcomes (r=-.25). Currently, the interventions to combat academic boredom, including systematic desensitisation therapy, attributional retraining (AR) therapy, mindfulness training, life analytic group counselling, Satir's model group counselling, emotional instruction method, and psychoeducational video approach, are the subject of few studies (Antonietta, 2005; Feng, 2017; Gao et al., 2018; Ijeoma & Oladipo, 2019; Parker et al., 2021; Perry et al., 2014; Trunnell et al., 1996). For example, systematic desensitisation therapy seems to teach students deep muscle relaxation strategies to get the feelings of relaxation to control over boredom (Ijeoma & Oladipo, 2019). Attribution retraining (AR) treatment aims to use cognitive skills like optimistic attributional styles to increase students' ability to take control of their own studies (Perry et al., 2014). In China, Gao et al. (2018) used Satir's model of group counselling to treat only those college students who had high levels of boredom.

1.2.2 Intrinsic Motivation

As we all know, "education is the lighting of a fire". Studies have shown that college students' motivation is one of the important elements to improve their academic success and wellbeing (Hope et al., 2019). Intrinsic motivation belongs to an autonomous motivation style in which students are fully engaged in an activity for the sake of the activity itself rather than other tangible rewards (Ryan & Deci, 2000). There is a lot of solid empirical evidence showing that intrinsic motivation is positively related to students' wellbeing and academic performance (Chia et al., 2016). However, despite such empirical support for the importance of intrinsic motivation, empirical evidence suggests that college students' learning motivation tends to decrease after entering college in both western countries and China (Corpus et al., 2022; Pan & Gauvain, 2012; Trolian & Jach, 2020; Zhou et al., 2022). Previous studies suggested that when teachers used autonomy-supportive approaches like providing choices, acknowledging students' feelings, and giving positive feedback in their classroom teaching, students would show more positive educational outcomes including greater intrinsic motivation, higher wellbeing, and greater academic performance (Bao & Lam, 2008; Han & Huang,2022; Patall et al., 2008). Students who experienced enjoyment and interest had improvements in intrinsic motivation (Løvoll, et al, 2017). Thus, if students lack intrinsic motivation to learn, teachers may try to reflect on their teaching approach and redesign their teaching content to create a learning environment that allows students to perceive more autonomy and positive emotions when learning (Zhou et al., 2022).

1.2.3 Positive Emotions and Thought-Action Repertoire

Emotions, especially positive emotions, play a very important role in student learning quality and mental health. Recently, Camacho-Morles et al. (2021) used a meta-analysis method to evaluate the relationship between positive emotions and student academic performance. Their findings corroborated that there existed a positive correlation between enjoyment of learning and academic performance (r=.27). Thus, the more positive emotions students experience, the greater performance they will obtain. However, research showed that over 30% of university students from 8 countries struggled with mental distress according to a World Health Organisation survey (Auerbach et al., 2018). Studies pointed out that positive emotions broadened the scope of attention and thought-action repertoires (Fredrickson & Branigan,2005) while negative emotions induced narrowing of attention and cognitive-behavioural repertoires, thus resulting in poorer academic performance (Pekrun et al., 2014). An increasing amount of empirical evidence has indicated that fostering positive emotions can be an effective intervention to help students increase their mental wellbeing (Seligman et al., 2009;Tejada-Gallardo et al., 2020;Zhao et al.,2019). For example, Zhao et al., (2019) found that compared with using the teacher-centred lecturing style, cultivating positive emotions using positive activities and life skills could significantly prevent Chinese students from suffering depression.

1.2.4 Positive Education Approach (PEA)

Positive education is a new educational paradigm that aims to promote students' traditional skills for learning and their wellbeing through cultivating important components of wellbeing such as PERMA model using effective positive activities and practical exercises that directly contribute to student flourishing (Seligman et al., 2009; Seligman 2011). The whole student can be involved in and benefit from it, which helps avoid the stigma that is correlated with attending traditional mental health services like individual or group therapy (Cage et al.,2019). In addition, students tend to be more willing or motivated to participate, which in turn helps create an autonomy-supportive, mutually connected, and higher competence learning environment that is beneficial to both students' intrinsic motivation and their wellbeing. There is solid empirical evidence showing the effectiveness of PEA on students' academic performance and their wellbeing (Adler,2016; Norrish et al., 2013; Seligman et al.,2009; Tejada-Gallardo et al., 2020; Waters, 2011).

Ren (2006) brought positive education to China in 2006. After ten years of exploration and practice, Tsinghua University summarised experiences of positive education practice in China and developed a unique positive education model for China: "6+2", which added the positive-self module and the physical and mental health regulation system as well as the character strength and virtue cultivation system to PERMA model (Zeng & Zhao.,2019). Different levels of Chinese educational institutions have used this 6+2 model of positive education in the past five years, involving over 17500 students and 900 teachers from several provinces in China (Seligman & Adler, 2019). The schools are located in Beijing, Tianjin, Yuncheng of Shanxi Province, and so on. Empirical evidence demonstrated that students' positive emotions, intrinsic motivation, and

academic performance had significantly improved after participating in the positive education programme (Zeng & Zhao, 2019; Zhao et al., 2019).

1.3 Problem Statement

In China, boredom is a pervasive negative emotion among higer institution students (Liu, 2022; Shi, 2017). According to research work, close to 50% of Chinese college students felt that class was boring (Tze,2013;Tze et al.,2016). A recent study from China indicated that college students were more likely to experience boredom in class than in other learning situations (Liu,2022). Moreover, academic boredom has detrimental effects on learning factors and academic performance of Chinese college students (Tze et al., 2016; Zhao, 2013; Zhou et al.,2016). For example, Zhao (2013) found a negative relationship between academic boredom and intrinsic motivation in both private and public Chinese college students, which could inevitably lead to poor academic performance. Recently, Lei and Cui (2016) conducted a meta-analysis to explore the relationship between academic emotions and learning outcomes among Chinese mainland students based on 35 studies involving 17548 participants. Their findings demonstrated that there was a significantly negative relationship between low-arousal negative emotions such as boredom and academic performance.

Although some academic boredom reduction interventions are available, there still exist some weaknesses. First, most existing interventions use deficit-oriented approaches like systematic desensitisation therapy or attributional retraining treatment, mainly focusing on identifying and correcting problematic thoughts that lead to the experience of boredom and maladaptive behaviours like skipping future lectures (Mann & Robinson, 2009). In other words, they mainly focus on fixing, healing, or remedying academic boredom. However, the pathological approach that these deficit-oriented interventions used can bring various detrimental consequences. First, the pathological approach may label participants as at-risk, especially when given to those who are assessed with higher levels of academic boredom using group counselling (Gao et al., 2018), thereby likely creating a stigma and causing downward spirals of mental wellbeing that lead to other serious learning and mental health problems requiring professional help and attention (Clement et al., 2015; O'Connell et al., 2009; Sharp et al., 2018; Stewart et al., 2019). Meanwhile, others who may not have higher levels of academic boredom at the time can be temporarily neglected and may become vulnerable when academic challenges strike them in the future (Sharp et al., 2018; Tze et al., 2016).

Second, existing boredom-reduction interventions are only dedicated to alleviating academic boredom by focusing on symptom control, which are only designed to fix boredom but seldom foster the positive constructs that facilitate individual thriving. However, the White Bear experiments conducted by Wegner et al., (1987) revealed that avoiding, suppressing, and controlling distress only led to symptom rebound, and giving a specific thought to use as a distractor could help them reduce unwanted negative thoughts. Additionally, preventing or mitigating negative affects does not necessarily guarantee that people will increase their positive emotions toward flourishing (Fredrickson, 2000).

In addition, despite various benefits of intrinsic motivation and mental wellbeing in learning quality that have been repeatedly documented (Corpus et al., 2022; Froiland & Worrell, 2016; Taylor et al.,2014), Chinese college students showed lower engagement in class, declined intrinsic motivation to learn and lower levels of psychological wellbeing (Liu, 2017; Sun, 2019). Thus, it might be beneficial for the researcher to understand students' academic success (intrinsic motivation) and their wellbeing (reduced academic boredom, improved positive emotions, and thought-action repertoires) from a holistic view.

The emergence of positive education in recent years has provided a different evidence-based approach. Positive education is to improve both optimal development and flourishing and academic performance by applying theories and interventions in positive psychology in schools or other educational institutions (Norrish, 2013; Seligman et al.,2009). Seligman (2011) proposed the first positive education model, known as PERMA, which represents five elements of students' wellbeing: positive emotions (P), engagement (E), positive relationships (R), meaning (M), and accomplishment (A). Seligman (2011) argued that cultivating each of these elements could help individual improve their wellbeing. The positive education approach (PEA) can reduce negative emotions because wellbeing is a protective factor that can lead to fewer negative emotions. According to the broaden-and-build theory of positive emotions (BBT) developed by Fredrickson (1998, 2001), positive emotions broaden students' thought and action repertoires, undo negative emotions, enhance intrinsic motivation, and construct personal resources which can assist students effectively deal with negative feelings and finally induce upward spirals of mental well-being that lead to fewer negative emotions and better performance. In addition, according to Ryan and Deci (2002), people are more intrinsically motivated and show higher levels of wellbeing when their three basic psychological needs for autonomy, competence, and relatedness are met in the learning environment. Many empirical studies from western countries have demonstrated that positive education as a new educational paradigm is very effective to reduce students' negative emotions, increase wellbeing as well as their traditional skills for learning (Adler,2016; Norrish et al., 2013; Seligman et al.,2009; Tejada-Gallardo et al., 2020; Waters, 2011). After introducing PEA to China, Chinese researchers developed China's "6+2" positive education model based on PERMA model. There is solid evidence showing its effectiveness in improving both students' academic performance and wellbeing like reducing depression and increasing enjoyment (Zeng & Zhao, 2019).

However, in general, elementary and secondary level students are more involved than college students in number regarding the effectiveness of positive education approach based on China's "6+2" positive education model on wellbeing and academic performance. Moreover, nothing is known up to date about the effectiveness of positive education approach (PEA) based on China's "6+2" positive education model both on mitigating academic boredom and increasing intrinsic motivation as well as mental wellbeing (thought-action repertoire, positive emotions) among Chinese private college students (Zeng & Zhao, 2019). In one of those rare attempts, one study found that positive education could improve vocational technical college students' intrinsic motivation after giving one semester of positive education course based on China's "6+2" positive education model as compared to those in a control group (Zeng & Zhao, 2019). However, there are some differences between normal Chinese college students and

vocational technical college students in terms of their relatively poor quality of academic performance (Ding & Levin, 2007).

Given that academic boredom has negative impacts on Chinese college students' learning quality and the importance of intrinsic motivation and mental health in lifelong learning, coupled with the positive relationships between positive emotion and students' intrinsic motivation and academic performance (Pekrun et al., 2002; 2010), the researcher is greatly convinced that PEA based on China's "6+2" positive education model could be helpful in mitigating academic boredom, boosting intrinsic motivation, and enhancing the mental wellbeing of Chinese college students.

This current study theoretically contributes to the control-value theory of academic emotions (CVT) and broaden-and-build theory of positive emotions (BBT) as well as basic psychological needs theory (BPNT) by creatively integrating those three theories and then developing positive education interventions under this integrative theoretical framework. Testing the effectiveness of the positive education approach (PEA) based on China's "6+2" positive education model on academic boredom, intrinsic motivation, positive emotions, and thought-action repertoire are the major contributions of this study to the CVT, BBT and BPNT. Further, a research gap exists and more effort should be made to develop and evaluate the usefulness of positive education interventions in reducing students' boredom, increasing intrinsic motivation, positive emotions, and thought-action repertoire among Chinese college students.

1.4 Objectives

The overall objective is to determine the effectiveness of positive education approach (PEA) based on China's "6+2" positive education model on learning-related boredom (LRB), class-related boredom (CRB), intrinsic motivation (IM), positive emotions (PE), and thought-action repertoire (TAR) among Chinese private college students as compared to the traditional education approach (TEA).

Specific objectives:

1. To determine the effect of the PEA on LRB, CRB, IM, PE, and TAR among private college students in China;
2. To determine the effect of the TEA (the control group using conventional method) on LRB, CRB, IM, PE, and TAR among private college students in China;
3. To compare the effects of the PEA and the TEA on LRB, CRB, IM, PE, and TAR among private college students in China at post testing.

1.5 Hypothesis

The following six hypotheses were developed to achieve objective 1.

Hypotheses 1:

H1(a): For the PEA group, the LRB post-test scores of students would be significantly lower than their LRB pre-test scores.

H1(b): For the PEA group, the CRB post-test scores of students would be significantly lower than their CRB pre-test scores.

H1(c): For the PEA group, the IM post-test scores of students would be significantly higher than their IM pre-test scores.

H1(d): For the PEA group, the PE post-test scores of students would be significantly higher than their PE pre-test scores.

H1(e): For the PEA group, the TAR post-test scores of students would be significantly higher than their TAR pre-test scores.

The following six hypotheses were developed to achieve objective 2

Hypotheses 2:

H2(a): For the TEA group, the LRB post-test scores of students would be significantly lower than their LRB pre-test scores.

H2(b): For the TEA group, the CRB post-test scores of students would be significantly lower than their CRB pre-test scores.

H2(c): For the TEA group, the IM post-test scores of students would be significantly higher than their IM pre-test scores.

H2(d): For the TEA group, the PE post-test scores of students would be significantly higher than their PE pre-test scores.

H2(e): For the TEA group, the TAR post-test scores of students would be significantly higher than their TAR pre-test scores.

The following six hypotheses were developed to achieve objective 3

Hypotheses 3:

H3(a): The LRB post-test scores of students in PEA group would be significantly lower than the LRB post-test scores of students in the TEA group

H3(b): The CRB post-test scores of students in PEA group would be significantly lower than the CRB post-test scores of students in the TEA group

H3(c): The IM post-test scores of students in PEA group would be significantly higher than the IM post-test scores of students in the TEA group

H3(d): The PE post-test scores of students in PEA group would be significantly higher than the PE post-test scores of students in the TEA group

H3(e): The TAR post-test scores of students in PEA group would be significantly higher than the TAR post-test scores of students in the TEA group

1.6 Significance of the study

This study adopts PEA, a strength-focused, evidence-based new educational approach, to mitigate academic boredom, improve intrinsic motivation, positive emotions, and thought-action repertoire in comparison to the TEA. To the best of our knowledge, this study plays a pioneering role in mainland China.

From the theoretical perspective, on the one hand, based on the existing theories and evidence-based research works, the researcher integrates the control-value theory (CVT) and basic psychological needs theory (BPNT) into the broaden-and-build theory (BBT) and forms a reasonable theoretical foundation to intervene in academic boredom, intrinsic motivation, positive emotions, and thought-action repertoire using PEA based on China's "6+2" positive education model among Chinese private college students. PEA based on China's "6+2" positive education model is used for the first time to intervene in combating academic boredom and improving intrinsic motivation, positive emotions, and though-action repertoire in mainland China. Thus, the empirical evidence derived from this study is expected to contribute to the body of knowledge in terms of student wellbeing and academic success, which is exactly in line with the goal of education in the 21st century: education should use a whole-student approach as it is oriented towards students' all-round development that leads to improve social, emotional, moral and intellectual abilities instead of simply imparting knowledge.

From the practical perspective, this study develops the intervention programme based on China's "6+2" positive education model, including 13 sessions of lesson plans in which each session has targeted positive activities and skills, afterschool assignments and teaching guidelines and procedures on how to apply it when implemented independently. Those positive interventions will elicit students' positive feelings and broaden their range of attention, thinking and action, thus helping them to promote intrinsic motivation for academic success. Meanwhile, students will have a feeling of autonomy, competence, and connectedness in which they are deeply engaged in academic tasks and show higher levels of wellbeing. Finally, this study will provide a reference and practical support for researchers, practitioners, and China's Ministry of Education to further prevent college students' academic boredom and promote intrinsic motivation and psychological wellbeing, as well as to encourage teachers to embed PEA into their teaching subjects in an attempt to increase positive emotions and create a harmonious classroom environment.

1.7 Scope and Limitation of the study

This study is conducted in a private college located in Shaanxi Province of China. And all participants were freshmen aged from 17 to 23 years, so the findings could not be generalised as a national conclusion directly.

This current study only involves two different educational intervention programmes: the positive education approach (PEA) based on China's "6+2" positive education model and traditional education approach (TEA) based on official documents using the traditional teacher-centred method. Moreover, because all participants are Chinese college students, only Chinese version is available for the assessment scales.

This study is focused on academic boredom, intrinsic motivation, positive emotions, and thought and action repertoire. Thus, the findings cannot be generalised to other academic emotions like anxiety, academic performance, and other wellbeing indicators like life satisfaction. Moreover, this study is limited to students enrolled in the Mental Health Education courses, so the findings cannot be generalised to other subjects like English or physical education.

This study is not a double-blind randomised controlled experimental study and the research uses a quasi-experimental study for 13 weeks. Thus it should be aware of some problems when the results are generalised. In this study, the researcher establishes a control group that is equivalent to the experiment group to control or balance several internal threats like maturation, history, and attrition.

1.8 Operational Definitions

1.8.1 Academic boredom

Academic boredom is conceptualised as a negative and deactivating academic-related activity emotion (Pekrun et al., 2010, p.532). According to the framework of academic emotions, there are two types of academic boredom, one associated with learning and the other related to classes (Pekrun, Goetz & Perry, 2005; Pekrun, Goetz, Tiz & Perry, 2002) . Learning-related boredom means that students develop habitual boredom in the process of learning, whilst class-related boredom means that students develop state boredom when engaging in class activities (Pekrun, Goetz & Perry, 2005; Pekrun, Goetz, Tiz & Perry, 2002; Pekrun, Goetz, Deniels et al., 2010).

In this study, the operationally defined indicators of class-related boredom involve motivational components (motivation to get rid of the circumstance or make activity changes), physiological components (lessened arousal), cognitive components (changed time perception), and particular affective components (unpleasant, aversive emotions), and are measured by using *Chinese Version of Class-Related Boredom Scale (CCRBS)*.

In addition, the operationally defined indicators of learning-related boredom also involve the aforementioned four interrelated psychological components and are measured by using *Chinese Version of Learning-Related Boredom Scale (CLRBS)*.

1.8.2 Intrinsic Motivation

Intrinsic motivation (IM) can be described as individuals doing an activity because they feel satisfied from the act of doing the activity itself, and not because the activity has some operationally separable consequences (Ryan & Deci, 2000).

In this study, the operationally defined indicators of IM for doing a classroom activity or afterschool assignment for the sake of the activity itself, which involve IM to know (refers to satisfaction in learning something new), IM to accomplish (refers to satisfaction of academic achievement), and IM to experience (refers to satisfaction of the academic experience itself) and are measured by using *Chinese Version of Intrinsic Motivation Scale (CIMS)*.

1.8.3 Thought-Action Repertoire

Thought-action repertoire (TAR) can be described as a variety of conscious thoughts and action tendencies which an individual is able to call up at any given moment (Fredrickson, 1998; Hoeppner et al., 2019).

In this study, the thought-action repertoire (TAR) refers to the breadth of students' thought-action tendencies after taking different intervention approaches (PEA and TEA) by using a thought listing task: The *Chinese Version of Modified, Open-Ended Twenty Statements Test (CMOETST)*. Participants were told to use "I would like to …" to write things that they would have wanted to do at this moment and the answers should be no less than twenty things.

1.8.4 Positive Emotions

Positive emotions refer to very short, multicomponent reactions to certain alteration in how the present situations are interpreted or appraised. Positive emotions can be experienced once prospects or good fortune is registered by this multisystem reaction (Fredrickson, 2001;2013).

In this study, the operational definition for positive emotions involves the degree of interest, excitement, strength, enthusiasm, pride, alertness, inspiration, determination, attention, and activeness experienced by a student, and are selected from *Chinese Version of Positive and Negative Affect Schedule (CPANAS)* to assess students' positive emotions.

1.8.5 Positive Education Approach

The positive education approach (PEA) can be best described as a new educational approach that applies positive psychology theories and interventions to promote both academic achievements and student wellbeing, mainly focusing on improving positive factors rather than reducing negative factors (Slemp et al., 2017; Norrish et al., 2013; Seligman et al., 2009; Green et al., 2011).

In this study, the operational definition of PEA refers to positive education intervention programmes which follow the Chinese model of "6+2" positive education and develop 13-session weekly (per session 90 min) course delivered in the activity teaching pattern to foster Chinese college students' positive emotions. The positive education intervention programme includes one part of introduction (teaching meditation skills) and six modules: positive relationships (cultivating empathy and active constructive responding skills), positive emotions (heightening feelings of positivity and dealing with negative feelings), positive self (using strengths while increasing self-confidence), positive engagement (experiencing and creating a flow state), positive meaning (developing growth values and triggering internal drive to attain aims) and positive achievements (boosting willpower and growth mindsets). The researcher helps students increase positive emotions mostly using positive activities and practical skills.

1.8.6 Traditional Education Approach

The traditional education approach (TEA) is the opposite of the positive education approach. It usually aims to enhance wellbeing by reducing negative factors and teaching mental health literacy such as correcting negative thoughts, emotions, and behaviours, rather than directly developing positive competencies to increase wellbeing (Waters, 2011; Seligman et al., 2009).

In this study, the operational definition of TEA refers to the traditional education intervention programme (i.e. mental health education course) delivered using the teacher-centred approach to increase Chinese college students' mental health. Basic Requirements for the Teaching of Mental Health Education Courses for Normal College Students, a document issued by the Ministry of Education of China, consists of three main contents: understanding the basic psychological knowledge, knowing and developing yourself, and fostering the competencies of self psychological adaptation. Specifically, it includes setting learning goals, planning college career, improving learning skills, mastering emotional management, maintaining interpersonal relationships, learning about sex and psychological health and romantic relationship, managing stress and learning coping strategies, finding the purpose of life and coping with psychological crisis. Teachers start their lesson with a specific case study and analysis. The course design is teacher-centred with no targeted classroom activities. The course focuses more on delivering theoretical knowledge and correcting negative aspects including thoughts and behaviours to increase student wellbeing.

1.9 Summary

As we all know, learning is very important for students' academic success and future career development. However, many Chinese college students reported being bored during class and while studying (Tze et al., 2013; Zhou et al., 2021; Zhou et al.,2016). According to Pekrun et al.(2011), academic boredom comprises of four interrelated components: cognitive assessments, affective experiences, motivational processes and physiological reactions, which can elicit a downward spiral effect of emotional wellbeing that in turn influences students' intrinsic motivation and their academic performance (Pekrun et al., 2011). Existing interventions mainly use deficit-oriented approach, focusing on identifying and correcting problematic thoughts that lead to experience of boredom (Antonietta, 2005; Feng, 2017; Gao et al., 2018; Ijeoma & Oladipo, 2019; Parker et al., 2021; Perry et al., 2014; Trunnell et al., 1996). Furthermore, there are few studies that have investigated the effects of psychological interventions not only on mitigating academic boredom but also improving positive constructs like intrinsic motivation and positive emotions. In addition to academic boredom, Chinese college students also reported declined intrinsic motivation for learning and lower levels of mental wellbeing (Liu, 2017; Sun, 2019).

Positive education promotes preventative and positive techniques that educate the whole student body on health information and skills to minimise negative emotions before they develop and to raise their wellbeing, in contrast to the normal post hoc and pathological conventional approaches to education. Empirical evidence has been accumulated regarding the effectiveness of the positive education approach (PEA) on students' wellbeing and academic performance in different countries (Adler,2016; Norrish et al., 2013; Seligman et al.,2009; Tejada-Gallardo et al., 2020; Waters, 2011). However, up to date, no experimental study has been done to explore the experimental causality between PEA based on China's "6+2" positive education model and academic boredom, intrinsic motivation, positive emotion, and thought-action repertoire. This is the first study to examine the effects of PEA based on China's "6+2" positive education model on Chinese private college students' academic boredom, intrinsic motivation and wellbeing (positive emotions and thought-action repertoire) under the integrated theoretical framework involving CVT, BBT and BPNT.

This study aims to investigate the effectiveness of the positive education approach (PEA) based on China's "6+2" positive education model on learning-related boredom (LRB), class-related boredom (CRB), intrinsic motivation (IM), positive emotions (PE), and thought-action repertoire (TAR) among Chinese private college students. By using PEA the researcher experts to reduce students' academic boredom while at the same time improving their intrinsic motivation, positive emotions and thought-action repertoires.

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