11-30-2023

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Maryann Krikorian

Ran Tao

Randy T. Busse

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Maryann Krikorian, Ran Tao, & R. T. Busse

E-mail: maryann.krikorian@lmu.edu; 15031@gench.edu.cn; busse@chapman.edu

Received March 2023
Accepted for publication September 2023
Published November 2023

Abstract

The purpose of this article is to present the results of an exploratory cross-cultural validation study of a measure of contemplativity. The Scale of Contemplative Practices in Education (SCOPE) was administered to 144 undergraduate students at a university in China. The results of an exploratory factor analysis accounted for 68% of the variance with a five-factor structure, although high correlations among the factors indicate that a single factor may be the best current quantitative measure of contemplativity. Internal consistency estimates were strong for the full scale (.95) and adequate to strong for the factors (.66 to .90). Higher scores on the SCOPE were found to be significantly correlated with lower academic stress (r = -.253), while SCOPE scores were not significantly correlated with GPA (r = .094). The results are discussed in relation to comparisons found between Chinese and United States students and the potential importance of further examining contemplativity with quantitative measures.

Keywords: *scale development, higher education, contemplative practices, cross-cultural study, holistic education*

The purpose of this article is to present the results of an exploratory cross-cultural validation study of a measure of contemplativity. We define contemplativity (noun) as the state or quality of one's contemplative practice.

Contemplative practice (CP) is recognized in the literature as a state of being present and focused in the moment, listening attentively, creating a condition for being aware of one's self and surroundings, and developing an internal life with attention to the current moment (O'Reily, 1998). To date, CP has been associated with several inter-related constructs within the field of contemplative thought - there is no universal consensus on the definition. It has been proffered that CP may reach a diverse population and benefit a wider audience if designated as secular mental training (Krikorian, 2022). For the purposes of this study, we drew on the literature and operationalized CP within a secular perspective with three sub-constructs: self-compassion, mindfulness, and listening competency.

Understanding learner contemplativity may be significant to the field of education as it situates holism and integration at the center of the teaching and learning process thereby promoting learner well-being and cultures of wellness in pursuit of life-affirming experiences. Contemplativity may help educators identify and design co-curricular opportunities for professional training in support of content to impact learners' personal and social development.

With these concepts in mind, this study aimed to quantitatively investigate learner contemplativity to extend our understanding of CP and its potential benefit to practice within educational settings.

We turn now to a brief history of CP and its contemporary origins in education, followed by an overview of a developing rating scale, the Scale of Contemplative Practice in Education, (SCOPE; Krikorian, 2016) that was originally validated with a college sample from the United States. The article then delves into cross-validation of the original SCOPE measure with Chinese college learners and concludes with a discussion of the potential uses of the measure to further explore and examine CP in education.

Historical Roots of Contemplative Practice and Subsequent Emergence in Education

The history of contemplative practice dates to ancient times (Stock, 1998, 2006) and originated from religious praxes which, over time, developed into contemporary CP in the West. According to Stock (2006), classical Greek philosophy gave birth to the contemporary science of reasoning and experimental methodology, serving as a foundation for contemplation and spirituality to grow. There were spiritual and mindful aspects of the Greek tradition in philosophy involving various forms of meditation that consist of self-awareness practice. Similarly, Hart (2004) reports how practices related to contemplation were fostered in spiritual traditions for thousands of years. Spiritual and sacred organizations facilitated the following exercises applied in CP: (a) Buddhist meditation, (b) forms of yoga from Hinduism (c) Christian prayer, (d) radical questioning through dialogue by Plato, (e) the self-inquiry of Ramana Maharishi, (f) meta-physical reflection from the Sufi tradition that leads to a deeper intuitive vision of the mind, and (g) the absorbed contemplation recommended in the Jewish Kabbalah (p. 29). Repetti (2010) also calls to mind how CP can be traced to the past experiences of Indigenous communities.

Looking back, Stock (2006) contends that ancient philosophy propelled the origins of contemporary CP in the West, connecting the idea of a whole person approach with education. According to Morgan (2015), in the United States the use of CP evolved through three distinct phases. The first phase originated in ancient Eastern religious traditions as Chinese immigrants introduced Buddhist ideologies to the United States in the 1800s. The next phase was initiated in the late 1960s and early 1970s with the founding of three important universities (the American Academy of Asian Studies, the Maharishi University of Management, and Naropa University) that engaged philosophies and praxes of contemplation. The establishment of the Center for Contemplative Mind in Society in the mid-1990s symbolized the arrival of the third phase. In recent years, scholars discussed the need to decontextualize CP in education because no religious or spiritual basis is required to engage in it. To date, CP in education has been described in several ways without reaching a universal consensus in the field on its definition.

For instance, Jennings (2008) suggested that CP helps to make the mind prepared to deal with messages in different ways and simultaneously enables learners to discover their true identities, while the Center for Contemplative Mind in Society (2009) describes CP as a method that quiets the mind, allowing greater concentration while developing personal insights. Chano (2012) added that CP is learning integrated with awareness, the ability to focus on the present, and empathy for others via the practice of contemplation. More recently, Barbezat and Bush (2014) describe CP in education as an influential approach to transform the teaching and learning process, wherein a state of awareness derived from CP "can help to create a more just, compassionate, and reflective society" (p. 12).

In education, contemplativity may improve conventional academic methods as it aims to provide learners with the ability for integration (Grossenbacher & Parkin, 2006). According to Roeser and Peck (2009), contemplative education realized by CP is aimed at nurturing personal and social development via the stimulation and support of consciousness in addition to a strong will that emphasizes ethics. Morgan (2015) emphasizes the significance of CP in education when stating, "contemporary and ancient history traces the continuing presence of the contemplative in education which indicates that CP is an essential aspect of who we are and how we learn'' ([emphasis added] p. 197). Barbezat and Bush (2014) explain how instructional methods associated with CP support learners with the practice of self-inquiry during their lessons. Examples of CP in education range from supervised introspection exercises to flexible and multi-staged contemplative readings to simple moments of just being tranquil. A focus on self-awareness unites these practices, which may lead to a clearer understanding of the self-self, self-other, and self-world.

The historical context and origins of contemporary CP as presented above are intended to lay the foundation for further inquiry into contemplativity. At present, most of the research in the CP literature is descriptive in nature and has typically been studied by means of qualitative methods of inquiry (Barbezat & Bush, 2014). Although qualitative methods are important toward understanding phenomena at an in-depth social level, quantitative inquiry is warranted to advance further the research base and understandings of CP in its entirety (Krikorian & Busse, 2019). Furthermore, scholars and researchers have studied the effects of CP in education and discovered that these practices can impact learners' personal development, social development, and academic achievement (Barbezat & Bush, 2014; Waters et al., 2015). To reach a more diverse population and to benefit a wider audience it is critical to expand understandings of contemplativity in education. Quantitative means to measure CP may provide deeper understandings about contemplativity among diverse learners and its potential benefit to practice (Barbezat & Bush, 2014). Having provided a conceptual foundation of CP, we now turn to the next section on the method and procedure used for this study.

Method and Procedure

The study employed a quantitative within-group survey design to investigate the following research questions: (a) Does the SCOPE scale possess adequate internal construct validity in an international context? (b) Does the SCOPE demonstrate internal reliability in a cross-cultural

context? and (c) Does the SCOPE evidence external validity in relation to grade point average (GPA) and academic stress?

Data were collected anonymously online with a demographic survey and two scales that served as the dependent variables along with GPA: the Scale of Contemplative Practice in Education (SCOPE; Krikorian, 2016) and the Educational Stress Scale for Adolescents (ESSA; Sun et al., 2011). Participants completed a demographics section wherein they self-reported gender, age, year in program, program emphasis, and GPA. In addition, the participants were asked to complete the SCOPE and ESSA. The original SCOPE is a 30-item self-report measure that examines CP in education. The ESSA is a 16-item self-report scale that measures learners' academic stress. The ESSA and self-reported GPA data were collected to examine criterion-related validity of the SCOPE.

Participants and Sampling

The study employed a convenience sample of undergraduate learners at a private university in China. The participant (N = 144) criteria for participation in the study required that undergraduate learners be 18-years or older. The sample was comprised of mostly female learners, second year learners, and learners from education and business emphases. Of the sample, 113 provided GPA data. When GPA was involved in the analysis, the survey results of the 113 participants were used. The participants' demographics are presented in Table 1.

Characteristics	*N*	*%*
Sex		
Male	*41*	*28.5*
Female	*101*	*70.1*
Prefer not to answer	*2*	*1.4*
Age		
18	*4*	*2.8*
19	*59*	*41*
20	*69*	*47.9*
21	*10*	*6.9*
22	*2*	*1.4*
Ethnicity		
Han	*135*	*93.8*
Non-Han	*9*	*6.3*
Year in program		
	1	*.7*
First	*143*	*99.3*
Second		
Emphasis	*77*	*53.5*
Education	*67*	*46.5*
Business		

Table 1. *Total Participant Demographics (N = 144)*

Instrumentation

The Scale of Contemplative Practice in Education is the first of its kind to quantitatively assess CP in higher education. The original SCOPE is a 30-item, 5-point Likert-type rating scale ranging from 1 = strongly disagree to 5 = strongly agree that was designed to quantify contemplativity. The total score range is 30-150. The higher the scores, the more contemplativity participants might possess. There are no specific cutoff scores. Cronbach's alpha for the original total 30-item SCOPE was

strong at 0.865. An exploratory factor analysis (EFA) resulted in eight factors that accounted for 55% of the variance. Test-retest reliability was measured at 2 weeks (N = 27). Pearson's r and Spearman's rho correlations were used due to the inherently ordinal data from rating scales resulting in Pearson's r = .870 and Spearman's rho = .852, indicating strong temporal stability although the sample size was small. In addition, a dependent t-test result was not significant, which indicates the mean score between the two administrations remained stable. The original SCOPE was used for this study because it is the only scale that exists related to CP in education. In addition, the SCOPE aligns well with the current study's working definition of CP. The original SCOPE was translated into Chinese through a rigorous reverse/backward translation process for cross-validation purposes in an international context.

The original SCOPE study did not investigate criterion-related validity, therefore GPA and the Educational Stress Scale for Adolescents were included to compare the SCOPE with constructs that have been hypothesized to be related to CP outcomes. Because qualitative research suggests that CP in education may decrease academic stress the ESSA may provide deeper understandings about the validity of the SCOPE and its relationship to other constructs opposite in nature (e.g., contemplativity versus academic stress).

The original ESSA is comprised of 30-items that were first produced in English and adapted from other English language measurements. The scale was then modified, culturally adapted, and piloted, generating a 16-item scale. The Chinese version of the ESSA was later created by the backward translation method. The response format of the Chinese version is a 5-point Likert-type scale ranging from 1 = strongly agree to 5 = strongly disagree. The total score range is 16–80, with higher scores indicating less stress. The Chinese version of the ESSA consists of five factors, where the scale accounted for 64% of the total item variance and reflected adequate internal consistency (.81), temporal stability (.78), and satisfactory concurrent and predictive validity (Sun et al., 2011). For purposes of this study, the Chinese version of the ESSA was used to investigate criterion-related validity in relation to the SCOPE.

Results

In the current study, we used exploratory factor analysis as the method of cross-validation to determine which variables grouped together based on the SCOPE in an international context. To determine if the data were adequate for factor analysis, we used two standard techniques. The Kaiser-Meyer-Olkin (KMO) test should be at least .70 and Bartlett's test of sphericity should be significant at the $p < .05$ level for a data set to be considered appropriate for factor analysis. The KMO result was adequate (.914) and Bartlett's test of sphericity was significant, $\chi 2\ (351) = 3107.847$, $p < .000$) indicating the sample and data were adequate for factor analysis. Next, orthogonal rotation (varimax) was used for the EFA. Orthogonal rotation assumes no relationship among the factors. The results indicated that the orthogonal approach best fit the data (as outlined below). Five factors emerged from the varimax outcomes with an eigenvalue above one (Factor 1 eigenvalue = 12.298; Factor 2 eigenvalue = 2.449), accounting for 67.901% of the variance for the initial EFA in the current study (see Table 2 for the factor loadings of the initial EFA).

Number	Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
5	I focus on learning course content rather than my grade.	.771	.049	.243	.137	.006
6	I am open to viewpoints that are opposite to my own.	.722	.353	-.053	.146	.225
7	I am confident about my academic future even when I earn grades lower than my expectation.	.686	.159	.231	.076	-.021
9	I welcome constructive feedback when I am collaborating with my peers.	.625	.462	-.048	.071	.349
30	If called upon in class, I am able to repeat the last words of my instructor's lecture.	.581	.307	.357	.123	.288
10	I am accepting of my mistakes.	.547	.480	.112	-.014	.256
19	I am hopeful about my course grade even when I do not perform as well as my peers on a course assignment.	.540	.388	.434	.054	-.009
4	In class when I ask a clarifying question, I believe my peers may have the same question.	.525	.410	.055	.166	.274
12	I am able to support my peers when they need help on challenging assignments.	.258	.697	.359	-.005	-.013
15	I demonstrate support for my peers when they are conducting class presentations.	.491	.689	.139	-.019	.246

24	When I am listening to my peers, I ask questions to better understand their point of view.	.174	.628	.101	.439	-.033
14	I approach course lectures with curiosity and openness.	.557	.604	.267	-.017	.191

Number	Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
13	I am patient with myself when I am trying to learn a difficult subject.	.398	.590	.486	.051	.050
25	I care about how my education will contribute to the common good.	.333	.562	.392	.181	.182
17	When faced with challenging course material I try to keep my emotions in balance.	.476	.548	.353	.052	.185
16	I remind myself that others may also be experiencing the same feelings when I am struggling with course material.	.123	.484	.190	.417	.447
11	After the course concludes, I find it easy to remember what I have learned.	.087	.484	.164	.298	.201
27	In class I am able to focus even when the course content does not interest me.	.060	.152	.709	.394	.238
2	While listening to course lectures I do not engage in off task activities.	.017	.177	.676	.233	.320

28	I am patient with myself when I do not understand something the first time new information is presented.	.303	.413	.661	.143	.119
26	I am able to block out distractions while reading assigned course material.	.324	.277	.653	.333	.099
29	I am able to focus on one academic task at a time.	.506	.128	.605	.260	.108
23	I am able to focus on my current coursework without concentrating too much on graduation.	.032	.073	.214	.891	.004

Number	Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
20	I am able to be present in my current academic term without worrying about future academic experiences.	.111	.016	.211	.833	.126
22	I have focused on positive past academic experiences during my academic journey.	.384	.289	.312	.525	-.057
3	I recognize how my statements may affect someone's feelings during class discussion.	.178	.247	.116	.197	.781
1	I intentionally take care of my physical, mental, and emotional health when I am struggling in a course.	.135	.005	.285	-.092	.721

Table 2. *Initial Exploratory Factor Analysis Item Loadings*

Factor item loadings were analyzed further to identify whether an item should be retained and on which factor. Aron et al. (2009) considered an item to be meaningful if it loads at or above .30 or at or below -.30. To further investigate the factor structure, the following cascading extraction methods were used to examine the factor model fit: (a) Any items loading under 0.3 were eliminated; (b) then any items loading under 0.4 were eliminated; and (c) then any items with loading under 0.5 were eliminated (Muijs, 2011) (see Table 3).

Extrac-tions	*Items*	*Eigenvalue Elimination*	*Variance*	*Internal Consist-ency*
Below .5	*25*	*4*	*65.983%*	*.947*
Below .4	*27*	*5*	*67.901%*	*.950*
Below .3	*27*	*5*	*67.901%*	*.950*

Table 3. Extraction Structure for the SCOPE

After investigating multiple factor structures with consideration of various extraction methods, a .3 extraction provided the strongest psychometric properties and theoretically meaningful factor structure during the interpretation process. The EFA resulted in a potential 5-factor model, with a model based on the eigenvalue rule of 1 or greater for factor retention. The eigenvalues revealed a discernible gap between the first and remaining factors (Factor 1 eigenvalue = 12.298; Factor 2 eigenvalue = 2.449; see Table 4). The final EFA resulted in a scale of 27-items with five factors (see Table 5 for the final EFA factor loadings).

Factor	*Eigenvalue*	*% of Variance*	*Cumulative %*
1	*12.298*	*45.549*	*45.549*
2	*2.449*	*9.072*	*54.621*
3	*1.365*	*5.055*	*59.675*
4	*1.208*	*4.473*	*64.148*
5	*1.013*	*3.753*	*67.901*

Table 4. *Exploratory Factor Analysis Eigenvalues*

There are different guidelines as to how variance is determined and accounted for in scale development. Aron et al. (2009) and Muijs (2011) both indicated that a single or combined factor structure should account for 60% of the variance. The five-model factor for the SCOPE in the current study explained 67.901% of the total variance. This estimate is an acceptable factor structure to explain the variance within the SCOPE administered with an international population. The first factor was larger than the second factor, which indicates it as an upper-level (stronger) factor as compared with four lower-level factors. We dubbed the first factor Compassion for Self and Others, accounting for 45.549% of the variance; the second factor was titled Active Listening, accounting for 9.072%; the third factor was titled Focused Attention, accounting for 5.055%.; the fourth factor was titled Non-judgmental Awareness, accounting for 4.473%; and the fifth factor was titled Intentionality, accounting for 3.753% of the variance (see table 6).

	Factor Name/Items	Factor Loadings
	Compassion for Self and Others	
Item 4	In class when I ask a clarifying question, I believe my peers may have the same question.	.525
Item 10	I am accepting of my mistakes.	.547
Item 13	I am patient with myself when I am trying to learn a difficult subject.	.398
Item 17	When faced with challenging course material I try to keep my emotions in balance.	.476
Item 19	I am hopeful about my course grade even when I do not perform as well as my peers on a course assignment.	.540
Item 25	I care about how my education will contribute to the common good.	.333
Item 28	I am patient with myself when I do not understand something the first time new information is presented.	.303
Item 5	I focus on learning course content rather than my grade.	.771
Item 7	I am confident about my academic future even when I earn grades lower than my expectation.	.686
	Active Listening	
Item 6	I am open to viewpoints that are opposite to my own.	.353
Item 14	I approach course lectures with curiosity and openness.	.604
Item 15	I demonstrate support for my peers when they are conducting class presentations.	.689
	Active Listening Continued	
Item 24	When I am listening to my peers, I ask questions to better understand their point of view.	.628
Item 30	If called upon in class, I am able to repeat the last words of my instructor's lecture.	.307
Item 12	I am able to support my peers when they need help on challenging assignments.	.697
Item 11	After the course concludes, I find it easy to remember what I have learned.	.484
	Focused Attention	
Item 26	I am able to block out distractions while reading assigned course material.	.653
Item 27	In class I am able to focus even when the course content does not interest me.	.709

Item 29	I am able to focus on one academic task at a time.	.605
Item 2	While listening to course lectures I do not engage in off task activities.	.676
	Non-judgmental Awareness	
Item 22	I have focused on positive past academic experiences during my academic journey.	.525
Item 16	I remind myself that others may also be experiencing the same feelings when I am struggling with course material.	.417
Item 20	I am able to be present in my current academic term without worrying about future academic experiences.	.833
Item 23	I am able to focus on my current coursework without concentrating too much on graduation. I am able to focus on one academic task at a time.	.891
	Intentionality	
Item 9	I welcome constructive feedback when I am collaborating with my peers.	.349
Item 1	I intentionally take care of my physical, mental, and emotional health when I am struggling in a course.	.721
Item 3	I recognize how my statements may affect someone's feelings during class discussion.	.781

Table 6. *Final Factors Names and Items*

As indicated in Krikorian and Busse's (2019) exploratory study, the sub-constructs of the SCOPE were hypothesized to be interrelated and together comprise the construct of contemplativity. Elements of the sub-constructs within the working definition were used to label the potential latent variables that emerged from the final EFA. Factor correlations were also assessed for a better understanding of the factor structure (see Table 7).

As indicated in Table 7, although a five-factor model structure emerged, a single-factor model may be most appropriate given the moderate to strong inter-factor correlations which indicate excessive multicollinearity. Multicollinearity indicates that separate factors may not adequately address the construct; rather, the full scale may result in the best interpretation.

Factors	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1					
2	0.88				
3	0.69	0.63			
4	0.51	0.53	0.65		
5	0.80	0.83	0.89	0.86	

Table 7. *Correlations between Factors*

Internal Consistency

Internal consistency reflects the degree to which scale items are intercorrelated. The internal consistency of the SCOPE was examined in the current study with the final 27 items. The Cronbach's alpha of the total scale SCOPE (N = 144) was 0.950, indicating that the full-scale SCOPE possesses strong internal consistency. The internal consistencies of the final five factors were also examined. Four factors (see Table 8)

demonstrated a good level (above .8) of internal consistency and one factor indicated an acceptable level (above .6).

Subscale	Items per scale	Cronbach's alpha
Compassion for Self and Others	9	.904
Active Listening	7	.867
Focused Attention	4	.852
Nonjudgmental Awareness	4	.805
Intentionality	3	.659

Table 8. *Internal Reliabilities for the SCOPE Subscales*

The final EFA left the SCOPE with 27 items, with a total score range of 27 to 135. Based on the final scale, the 144 participants' mean score was 91.52, with a standard deviation of 14.021, a mode of 81, and a median of 91. A score of 81 on the SCOPE placed an individual in the 25th percentile, a score of 91 in the 50th percentile, and a score of 99 in the 75th percentile. Therefore, respondents who scored below 81 may be considered as having lower contemplativity, and those who scored 99 or above may be considered as having higher contemplativity.

Criterion-related Validity

To examine criterion-related validity, the total scores of the SCOPE were correlated with the ESSA and GPA. The means and standard deviations are presented below in Table 9 and the correlations in Table 10. As shown in Table 10 the SCOPE significantly correlated with lower educational stress but was not found to be significantly correlated with GPA.

Variables	*N*	*M*	*SD*
SCOPE	144	101.25	14.92
ESSA	144	43.67	9.92
GPA	113	2.88	.64

Table 9. *Descriptive Statistics of the Primary Variables*

Variables	SCOPE	ESSA	GPA
SCOPE	-	-	-
ESSA	-.253**	-	-
GPA	.094	-.172	-

*Note.** represents the correlation is significant at the 0.01 level (two-tailed).*

Table 10. *Correlations among the SCOPE, ESSA, and GPA*

Discussion

In this study, we examined the validity and reliability of a quantitative measure of CP with a Chinese student population at a private university in China. We compared the internal factor structure and reliability of the current administration with the original measure.

The original total 30-item SCOPE study with college students (N=253) in the United States resulted in eight factors (as compared to five factors in the current study) that accounted for 55% of the variance The original three sub constructs from the working definition (self-compassion, active listening, and mindfulness) were deconstructed and components of its definition were used to name the latent variables that emerged from the EFA. The first factor, Awareness of Feelings, accounted for 21.751% of the variance; the second factor, Accept Disappointment as Human Experience, accounted for 6.474%; the third, Focused Attention, accounted for 5.860%; the fourth, Establish Support, accounted for 4.944%; the fifth,

Listen Without Bias, accounted for 4.612%; the sixth, Kindness toward Self, accounted for 4.153%; the seventh, Question for Understanding, accounted for 3.914%; and the eighth, Nonjudgmental Understanding, accounted for 3.562%. The correlations among the eight latent factors ranged between .42 and .67, with three of the eight correlations reflecting minimally acceptable results and five of the eight indicated unacceptable results. The small number of scale items per factor may have influenced the low internal consistency for individual factors. Criterion-related validity was not accounted for in the validation of the original SCOPE.

Whereas eight factors emerged from the original SCOPE, five factors emerged in the current study. The final EFA resulted in 27 items that demonstrated the strongest psychometric properties within a theoretically meaningful factor structure. Consistent with the original SCOPE, the subconstructs of the working definition were deconstructed and elements of its definition were used to name the five factors that emerged. For example, the fifth factor of the original SCOPE was named Listen Without Bias, whereas the second factor of the current administration was named Active Listening. According to the literature, to listen actively is to listen without bias, making the factor naming process similar in nature. The decrease in factors from eight to five resulted in an increased number of scale items per factor that may have influenced the acceptable to strong internal consistency for individual factors.

We also compared Cronbach's alphas for internal consistency, wherein both studies resulted in strong reliability with the original SCOPE (N=253) at 0.865 and current study (N = 144) at 0.950. In the current study, test-retest reliability was not measured due to logistics. However, criterion-related validity was accounted for given the original SCOPE study did not investigate external validity. The current administration of the SCOPE was found to be negatively and significantly correlated with educational stress but was not found to be significantly correlated with GPA.

Cross-validation indicated strong internal consistency, an acceptable factor structure to explain the total variance within the SCOPE, and provided further data for a rationale for a single factor that may be the best current quantitative measure of contemplativity. As measured, contemplativity at present may be a unitary construct from a quantitative approach, rather than a multiple-factor construct as described from the qualitative view. Further examination of the SCOPE is warranted to sample a more diverse population. Similarly, continued inquiry related to criterion-related validity is warranted to strengthen conclusions regarding the utility of the SCOPE.

Limitations

There are several limitations to this cross-validation study of the SCOPE. First, the sample size was small and unequal in terms of gender (as self-identified), with the number of self-identified female students being three times more than that of the self-identified male students. This gender skew likely is an artifact of the academic emphases of the participants and can affect the generalizability of the results given the male population was underrepresented. Thus, conducting a study with greater balance in terms of gender would be beneficial for future studies. Second, the research design was a short-term quantitative study that generated data at one point in time rather than a longitudinal study that tracked the prospective influence of CP on learners' outcomes. Third, the two scales used in the study are subjective self-report measures,

which may compromise the results due to social desirability. A fourth limitation is that data were confined to a sample from one private university, which could affect the extent to which results may be generalizable to the wider population. Another weakness is the convenience sample of participants who were enrolled in education and business majors only. Finally, because this was a quantitative study, the parameters of the study were set, ergo no qualitative information could be gleaned from the study. A mixed method study may have provided additional useful information regarding contemplativity.

Practical Suggestions

Understanding learner contemplativity is significant to the field of education as it situates holism and integration at the center of the teaching and learning process and may help educators identify alternative pedagogical practice and design co-curricular or professional development opportunities to impact learners' personal and social development in support of course and learning content. For example, learner contemplativity may inform lesson plans, assignments, activities, and classroom policies and practices that aim to decrease academic stress and professional burnout during the teaching and learning process. In addition, learners may benefit from the practical application of a helping skills course that is concentrated on constructs of the working definition (i.e., self-compassion, active listening, and mindfulness) to reinforce counterculture principles of contemplativity for a more holistic vision of education that involves reimagining institutions as a site for healing and humanity to create and sustain life-affirming educational experiences and institutions. For a list of example practices specific to each sub-construct please see Krikorian (2022).

Conclusion

This study was a cross-cultural examination of the internal and external validity of a measure of contemplativity. The current study addresses criterion-related validity, which was lacking in the original SCOPE exploratory study. The results indicate that the SCOPE with a Chinese sample possesses adequate internal structure and internal reliability for the five-factor structure that emerged. Due to multicollinearity the full 27-item scale measure may be the current best quantitative measure of contemplativity. The SCOPE correlated with lower educational stress, indicating that contemplativity may help to alleviate academic stress, although the correlation was small. GPA was not found to be significantly correlated with contemplativity. This result was surprising given the literature described in the introduction to this article indicated that contemplativity may positively impact academic achievement. Further investigation is warranted with consideration of CP and its impact on stress and GPA in education. Finally, the factor structure from the current and original study differed. It is unclear whether the differences were due to sample size, cultural issues, or other variables. Quantitative measures such as the SCOPE may add insight and data to examine these outcomes.

Contemplative practice and education continue to evolve. As we seek to engage in evidence-based practice to validate what we study and the teaching practices and interventions that ensue, we should also consider the outcomes to decide whether CP in education warrants further investigation and, most importantly, whether the outcomes have a significant impact on people's lives. We invite discussion and debate on the SCOPE and the construct of contemplativity.

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Author Bio

Maryann Krikorian serves as a clinical associate professor and academic program director at Loyola Marymount University (LMU) School of Education in the Department of Teaching and Learning. In 2016, she earned a Doctor of Philosophy in Education from Chapman University with an emphasis in Culture and Curricular Studies as a first-generation student. In 2011, she received her Master of Arts in Guidance and Counseling at LMU and in 2008, earned her Bachelor of Arts in Psychology and Philosophy from California State University, Long Beach. She comes from a multi-racial and multi-ethnic background and strives to deepen understandings of diverse perspectives, different forms of knowledge, and holistic approaches to education. Her personal and professional experiences position her well to advocate for learners as integrated whole beings, emphasizing pedagogical philosophies that facilitate transformative learning and holistic human growth. In 2023, she was honored with the LMU Term Faculty Distinguished Teaching Award. Dr. Krikorian published a book titled, *Higher Education for the People: Critical methods of liberatory practice* (2022). Some of her journal articles and book chapter publications invite educators to prioritize the facilitation of transformative learning and holistic human growth in the preparation of the next generation of educators. She continues to present at professional conferences, reviews proposals for national and international journals, and has served as an assessor for academic programs and grants. In 2020, she was recognized with the Literati Award for Outstanding Reviewer for her contributions to the *International Journal of Mentoring and Coaching in Education*.

Ran Tao serves as a faculty member in Shanghai Jian Qiao University.in Shanghai China. In 2021, he earned a Doctor of Philosophy in Education from Chapman University.

R.T. Busse is an Emeritus Full Professor in the Counseling and School Psychology Program at Chapman University. Dr. Busse's areas of scholarly interests include methods for assessing single-case intervention outcomes, academic task attack strategies, selective mutism, and the concept of other-esteem.