



An Overview of Research on Emotions in Asian Learners and Educators: Implications and Future Directions

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Abstract In contrast to a burgeoning research literature on the role of emotions in learning and instruction in Western culture, research on how emotions impact student and teacher development in Asian countries is lacking. The present paper reviews seven publications included in the 2019 Special Issue of *The Asia–Pacific Education Researcher* examining the role of emotions in Asian learners and in Asian educators. Three studies conducted with Asian students across education levels (primary, secondary, post-secondary) and countries (China, Singapore) explored students’ emotions ranging from global constructs (engagement, satisfaction) to discrete experiences (hope, gratitude) in relation to personality, self-regulation, persistence, and contextual variables (perfectionism, self-compassion, resilience, relatedness). Four studies additionally investigated the emotional experiences of pre-service and practicing Asian teachers (China, Hong Kong, Philippines) in relation to varied motivational variables (self-efficacy, self-theories, passion, psychological capital), social-environmental factors (cooperative interactions, practicum evaluations), as well as psychological and physical health (coping styles, burnout, sleep quality). Study findings and protocols are discussed with respect to specific directions for future research on academic emotions in an Asian educational context.

Keywords Teachers · Students · Emotions · Well-being · Asian

Research on the role of emotions in learning and instruction is burgeoning in Western culture, as evidenced by rapid growth in empirical studies, meta-analytic reviews (e.g., D’Mello 2013; Greene et al. 2018; Wang et al. 2019), and informational handbooks for researchers and educators over the past two decades highlighting both students’ and teachers’ emotional experiences (e.g., Hall and Goetz 2013; Mayring and von Rhoebeck 2003; Pekrun and Linnenbrink-Garcia 2014; Zembylas and Schutz 2016). Based mainly on North American and European samples, this burgeoning literature highlights various aspects of emotions in educational spaces including the role of not only negative but positive emotions (e.g., anxiety vs. enjoyment), the importance of evaluating discrete emotion constructs (e.g., pride vs. enjoyment, Goetz et al. 2010; epistemic emotions, Chevrier et al. 2019), and possible subtypes of a specific emotion (e.g., five types of boredom; Goetz et al. 2014). Moreover, existing research with Western samples has informed continued theoretical development on academic emotions to better capture the moderating and mediating roles of domain characteristics (e.g., subject area; Goetz et al. 2007), cognitive appraisals (e.g., control, value; Pekrun et al. 2009), emotion regulation strategies (e.g., Harley et al. 2019), and assessment methods (e.g., experience sampling; Goetz et al. 2016).

Following from well-documented findings showing clear cross-cultural differences in how emotions are experienced and expressed (e.g., shame, guilt; Wong, and Tsai 2007), researchers have consistently argued for greater research on the generalizability of existing findings on the role of emotions in educational contexts in different

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cultures (e.g., DeCuir-Gunby and Williams-Johnson 2014). However, in contrast to substantial existing literatures on emotions experienced by students and teachers in Western educational contexts, research on emotion-related variables in Asian countries is currently lacking. Nevertheless, ongoing efforts to translate, validate, and compare existing comprehensive measures of academic emotions for students in Western vs. Asian countries are encouraging (e.g., Germany vs. China; Frenzel et al. 2007), with initiatives to develop culturally appropriate emotion assessments for Asian teachers also showing promise (e.g., Chen 2016; Hong et al. 2016). Similarly, recent publications demonstrate clear empirical relations between Asian students' emotions and learning as well as assessment outcomes (e.g., Chen and Brown 2018; Ganotice et al. 2016), with an emerging literature further exploring Asian teachers' emotions in relation to emotion regulation and instructional practices (Chen 2019; Wu and Chen 2018). To further expand on this recent progress, the 2019 Special Issue of *The Asia-Pacific Education Researcher* includes seven empirical studies examining the role of emotions in motivation and well-being in Asian students (Caleon et al. 2019; Fong and Cai 2019; Luo et al. 2019) as well as well-being and performance in pre-service and practicing Asian teachers (Chen 2018; Lu 2019; Nalipay et al. 2019; Zhang et al. 2019; for an overview, see King and Chen 2019). The following sections highlight key findings from each study and suggest directions for future research on emotions in Asian learners and educators.

Emotions in Asian Learners

To directly address the research gap on the intersection between emotions, personality characteristics, motivation, and well-being in Asian students, the present Special Issue included three studies conducted with students across education levels and countries (Fong and Cai 2019: primary school in China; Caleon et al. 2019: secondary school in Singapore; Luo et al. 2019: post-secondary institutions in China). The studies also examined varied emotion constructs ranging from general measures of emotional engagement, well-being, and satisfaction to more specific emotional experiences of hope and gratitude, and included both a large-scale national study of moderation effects (Luo et al. 2019) and smaller-scale investigations of proposed mediational processes (Caleon et al. 2019; Fong and Cai 2019). Outlined below are critical findings from each study on how students' emotions are related to other psychological variables in an Asian education context, and how these results can inform meaningful directions for ongoing research in this domain.

Luo et al. (2019): Emotional Engagement and Satisfaction

The first study in this Special Issue by Luo et al. (2019) explored the extent to which Chinese college students' emotional engagement (i.e., enjoyment while studying) predicted their ratings of satisfaction with their post-secondary learning experiences. Study findings showed students' emotional engagement to correspond with greater learning satisfaction, over and above the effects of both behavioral engagement (e.g., in-class concentration, note-taking, collaboration) and cognitive engagement (e.g., use of effective study strategies). Moreover, these results showed students' cognitive engagement levels to be unrelated to their learning satisfaction when their emotional engagement was high, with high emotional engagement also buffering against lower satisfaction levels that would otherwise result from low cognitive engagement. In other words, Chinese college students who enjoyed the learning process were not only more satisfied with their learning outcomes, but they tended to remain satisfied even when they used ineffective study strategies.

Key strengths of this study include a notably large sample size affording significant power to detect effects (over 67,000 students from 55 institutions) and controlling for varied potential confounds including both demographic variables (e.g., gender, location, institution type) and relevant psychological processes (e.g., social relatedness, motivation). As such, this study provides a useful starting point for future analyses on this invaluable national database (China College Student Survey) that could include Hierarchical Linear Modeling (HLM) analyses to more explicitly account for contextual factors (e.g., geographic region, flagship institution status) and Structural Equation Modeling (SEM) to more powerfully examine emotion constructs as latent variables (e.g., emotional vs. behavioral/cognitive engagement). These findings also highlight the importance of research efforts to develop reliable multi-item measures of both emotional engagement (enjoyment) and learning satisfaction, and to examine relations between learning satisfaction and other positive emotional experiences (e.g., pride, hope, relief) as well as relations between emotional engagement and other academic outcomes (e.g., performance, attrition, choice of major).

Fong and Cai (2019): Perfectionism, Self-compassion, and Hope

The second paper by Fong and Cai (2019) further explored students' positive emotions by assessing the more specific emotional experience of test-related hope in relation to both maladaptive personality characteristics (perfectionism) and adaptive emotion regulation strategies (self-

compassion). This study expanded on previous research with Hong Kong students by exploring these variables in a younger, primary school sample (grades 4–6) and capitalized on a sufficiently large sample size (over 1000 participants) by conducting SEM analyses of a hypothesized mediational model that fit the data well. Overall, findings showed that although perfectionistic *striving* (high personal academic standards) corresponded with greater feelings of hope, perfectionistic *concerns* (self-criticism over failing to meet unrealistic expectations) were related to lower levels of hope, with each effect being partially due to the mediating effects of self-compassion (a combination of patience, perspective, relatedness). In addition to utilizing self-report scales adapted from established measures (e.g., hope: Achievement Emotions Questionnaire, AEQ), the authors bolstered confidence in their findings by showing their measurement model to not vary as function of potential confounds (gender, grade level).

Given these findings showing sophisticated emotion regulation strategies to be evident and beneficial for positive emotions as early as primary school, these mediating effects of self-compassion should be replicated in future studies exploring other positive and negative emotions (e.g., anxiety, guilt, pride, enjoyment). Moreover, this mediational path could reasonably be expected to be stronger among older Hong Kong students (e.g., secondary, post-secondary) for whom emotion regulation strategies should be more explicit and well-practiced. Finally, although this study was firmly situated in Pekrun's (2006) Control-Value Theory of Achievement Emotions with respect to construct rationales (e.g., perfectionism and control appraisals) and measure selection (AEQ), future research that incorporates recent conceptual developments that merge emotion regulation theory (i.e., Gross 2015) with Pekrun's model is encouraged to allow for other potentially beneficial emotion regulation strategies to be explored (see Harley et al. 2019). For example, just as self-compassion may allow for perfectionism to contribute to positive emotions due to cognitive change, other strategies such as situation selection (e.g., choosing a quieter place to study) or attentional deployment (e.g., visualizing test success) may also help Chinese students better manage their perfectionistic thoughts.

Caleon et al. (2019): Gratitude, Relatedness, and Well-being/Resilience

The third publication on student emotions in this Special Issue by Caleon et al. (2019) investigated relations between another discrete positive emotion in a different cultural context, namely, feelings of gratitude among secondary school students in Singapore. Although the study evaluated a smaller sample size ($N = 190$), it did afford sufficient

power to demonstrate empirical support for a proposed mediational model showing the benefits of gratitude on student well-being and resilience to be due, in part, to feelings of relatedness. More specifically, students who reported more gratitude for positive developments in their lives (i.e., feelings of thankfulness and appreciation toward something or someone) reported stronger relationships with their parents, teachers, classmates, and friends that, in turn, contributed to greater persistence despite challenges or interpersonal conflicts (resilience) as well as greater enjoyment of school activities (well-being). This study expands upon the preceding studies in focussing specifically on students' perceptions of relatedness as a mediator (cf. "common humanity" subscale of self-compassion in Fong and Cai 2019), and exploring school-related enjoyment not as a predictor (cf. "emotional engagement" in Luo et al. 2019) but as an outcome.

With respect to research directions prompted by these findings, given the retrospective, socially oriented nature of feelings of gratitude (e.g., Control-Value Theory; Pekrun 2006) that have long been hypothesized to follow specifically from the assistance of others (e.g., Attribution Theory; Hareli and Weiner 2002), larger-scale studies could examine this emotion longitudinally to test whether gratitude is in fact best modeled as an antecedent or consequence of relationships with others (e.g., cross-lagged SEM analyses). Additionally, whereas this study explored the overall *quality* of students' relationships with others, research efforts to more closely examine the availability, frequency, and usefulness of the social *support* provided by others (e.g., financial vs. emotional support provided by family vs. friends; cf. "support matching," Lakey and Cohen 2000) should provide valuable insights into the role of gratitude in Asian learning contexts. Finally, as trait-like expressions of gratitude by students to instructors can signal that students persistently attribute their success to teacher assistance rather than their own efforts (Frenzel and Stephens 2013), future studies contrasting the effects of gratitude with emotions that imply greater personal control over academic setbacks (e.g., hope, guilt) on persistence outcomes (e.g., resilience, attrition) are also encouraged.

Emotions in Asian Educators

As a complement to the first section of this Special Issue exploring the correlates of students' global and specific emotions in Asian classrooms, the second section extended this focus to include four studies investigating the motivational, self-regulatory, physiological, and contextual correlates of the emotional experiences of Asian teachers. The study samples in this section include both pre-service teachers from across China (Chen 2018) and the

Philippines (Nalipay et al. 2019), as well as practicing teachers at primary and secondary schools in China (Zhang et al. 2019) and lead educators from China and Hong Kong (Lu 2019). Moreover, Asian educators' emotions were explored in relation to varied motivational variables including self-theories (Dweck 1999), self-efficacy (Bandura 1977), and passion (Vallerand 2008), as well as emotion regulation (coping styles), physical health (sleep quality), and social–environmental features (cooperative interactions, practicum evaluations). Taken together, these studies comprise an engaging corpus of emerging findings on the relations between emotions and critical psychological, physical, and contextual correlates among Asian educators, with specific directions for future study arising from each contribution outlined below.

Nalipay et al. (2019): Self-theories, Emotions, and Job Satisfaction

In the first study in this Special Issue on emotions in educators, Nalipay et al. (2019) explored how self-theories of teaching ability corresponded to multiple teaching-related emotions that, in turn, predicted teaching satisfaction among bilingual pre-service teachers in the Philippines. Bolstered by the use of established self-report measures (e.g., teacher emotions: Frenzel et al. 2016), latent variables (i.e., to assess self-theories), and alternative analyses of reverse causality, study findings showed pre-service teachers who believed their teaching abilities to be a stable trait or talent (entity beliefs) to be associated with higher teaching-related anxiety and anger. In contrast, results showed teacher education students who believed that teaching abilities could be improved through learning or effort (incremental beliefs) to experience greater teaching-related enjoyment that, in turn, corresponded with higher teaching satisfaction (e.g., their present teaching being close to their ideal). Accordingly, these novel findings demonstrate a clear relationship between motivational beliefs, discrete emotions, and overall occupational satisfaction in Filipino educators.

Following from these promising findings, future research on emotions in Southeast Asian teachers may benefit from exploring different positive emotions beyond enjoyment (e.g., hope, pride, relief) and additional negative emotions beyond anxiety and anger (e.g., shame, boredom) that can otherwise pose multicollinearity issues ($r = 0.70$) due to a shared underlying phenotype (i.e., negative, activating emotions; Pekrun 2006). Future SEM analyses of emotions in this context are also recommended to model multiple latent emotion variables (and their covariances) simultaneously to better control for potential overlap (e.g., among negatively or positively valenced emotions). Similarly, analyses of the emotional implications of self-

theories concerning more specific teaching abilities are required, given recent findings showing self-efficacy beliefs in teachers to have opposite effects on well-being depending on the specific ability in question (e.g., instructional strategies vs. student engagement; Wang et al. 2015). Finally, considering existing research showing pre-service teachers to report more idealized responses on self-report measures of motivation and emotions than practicing teachers (e.g., causal attributions and anger; Reyna and Weiner 2001), further work to examine relations between motivational variables and emotions among practicing Filipino educators (e.g., novice vs. experienced teachers) is needed to replicate these encouraging results.

Chen (2018): Self-efficacy, Emotions, and Performance

In an effort to further examine relations between teaching-related motivation, emotions, and performance, Chen (2018) conducted a study with over 1000 pre-service teachers in China in which an established tripartite measure of instructional self-efficacy beliefs (Tschannen-Moran and Hoy 2001) was examined in correspondence with five teaching-related emotions (joy, love, sadness, anger, fear) and practicum performance. Following from Confirmatory Factor Analyses (CFA) supporting the modeling of self-efficacy and emotions as latent variables, findings showed Chinese pre-service teachers who were confident in their pedagogical abilities (instructional strategies) to feel more positive emotions (joy, love) that, in turn, predicted better performance. Moreover, student teachers who believed they could manage problematic student behavior (classroom management) also reported greater joy and lower levels of sadness. Finally, pre-service teachers who expressed more confidence in being able to motivate students (student engagement) reported lower levels of all negative emotions, with lower levels of anger in particular contributing to better performance.

This research expands on the afore-mentioned study by Nalipay et al. (2019) in exploring multiple other positive and negative emotions commonly reported by Chinese teachers (see Chen 2016), and indirectly highlights the potential role of “passion” in teachers' emotions as assessed via the self-report measure of “love” (e.g., scale item: “I am passionate about the nature of teaching”; see Vallerand 2008). These results are also consistent with North American findings showing teachers' self-efficacy beliefs specific to motivating students to be more consistently beneficial for emotional well-being than self-efficacy beliefs pertaining to pedagogical practices or behavior management (Wang et al. 2015). To extend these findings further, research exploring more varied positive emotions beyond enjoyment and love ($r = 0.54$), such as pride or

hope, as well as negative emotions beyond anger and fear ($r = 0.58$), such as boredom (e.g., Goetz et al. 2015), is recommended to avoid potential multicollinearity issues. Research aimed at replicating these relations in practicing Chinese teachers is also warranted, as although practicum scores provide some indication of future teaching effectiveness, observational and self-report indicators of instructional quality in an actual employment context would provide a more ecologically valid test of the effects of self-efficacy and emotions on current teaching performance.

Zhang et al. (2019): Psychological Capital, Coping, and Burnout

The third study in this Special Issue section by Zhang et al. (2019) investigated the combined effects of motivational beliefs (self-efficacy, tenacity), optimism, and hope (collectively referred to as “psychological capital”), as well as occupational stress, on burnout as mediated by coping strategies in Chinese practicing teachers. SEM findings showed positive coping styles (e.g., leisure time) to partially mediate the benefits of psychological capital on teacher burnout, with negative coping styles (e.g., substance use) mediating the detrimental effects of occupational stress on burnout levels. Moreover, multi-group SEM analyses showed these mediated pathways to be stronger for more experienced Chinese teachers (i.e., teaching for more than 10 years), particularly with respect to maladaptive effects of stress on burnout via health risk behaviors (e.g., smoking, drinking, medication). In addition to latent analyses of established scales (e.g., Maslach Burnout Inventory) allowing for greater confidence in the study findings, preliminary analyses further showed common-method variance due to cross-sectional protocols to not significantly inflate observed relations.

Despite the significant mediational role played by teachers’ coping strategies in this analysis, the direct effects of psychological capital and occupational stress on burnout remained significant thus suggesting that other coping variables need to be assessed to more fully account for these direct relationships. Accordingly, future studies could explore various adaptive and maladaptive coping and emotion regulation strategies as informed by well-known conceptual frameworks (e.g., cognitive reappraisal, response modulation; Gross 2015; Harley et al. 2019) and multi-faceted self-report measures (e.g., problem solving, wishful thinking; Tobin et al. 1989). Further analysis of how negative coping mediates the effects of psychological capital, and how positive coping mitigates stress, is also warranted by these findings, as is further study of relations between the emotion-specific subscales of the composite measures assessed (e.g., effects of hope on emotional

exhaustion as mediated by coping strategies). Moreover, as conducted by Chen (2018), an examination of disambiguated relations between specific types of self-efficacy and burnout is recommended given potentially opposite indirect effects on teacher well-being via coping strategies (see Wang et al. 2015).

Lu (2019): Sleep Quality, Enjoyment, and Passion

The final empirical publication in this Special Issue by Lu (2019) offers a unique perspective on how teachers’ emotional experiences (enjoyment, passion) impact, and are impacted by, both physiological factors (sleep quality) and social-environmental features (cooperative interactions). Based on experience sampling data obtained from samples of teacher leaders from Hong Kong and China, cross-lagged SEM analyses revealed reciprocally mediated relations between sleep quality and passion over time. Whereas better sleep quality contributed to greater passion for teaching via greater work-related enjoyment (and, to a lesser extent, cooperative interactions with others), passion for teaching was further observed to contribute to better sleep quality in the future. These findings thus highlight the benefits of examining teachers’ emotional experiences using longitudinal methods that provide useful evidence for determining causal relations between critical variables, as well as the added value of real-time assessments that afford greater ecological validity relative to traditional, retrospective self-report measures.

These findings also replicate those of Chen (2018) with Chinese pre-service teachers in showing both enjoyment (joy) and passion (love) to correspond with optimal development (sleep hygiene) in practicing Chinese teachers. Similarly, these results suggest that future ESM research with Chinese educators should explore various other emotions experienced by teachers in class to allow for cross-cultural comparisons of the frequency and intensity of teachers’ emotions during instruction or interactions with students and colleagues (cf. ESM findings with German teachers for the emotions of enjoyment, pride, anger, anxiety, boredom, shame; Goetz et al. 2015). Finally, further research could expand on the three-day ESM protocols implemented by Lu (2019) in evaluating changes in teachers’ emotions over a longer period of time and in relation to other emotion-related behaviors (e.g., ESM findings on teachers’ discrete emotions and emotional labor over a 2-week period; Keller et al. 2014) to provide an even more nuanced perspective on how the experiences and expression of emotions by Chinese teachers change and intersect over time.

Summary: Challenges and Future Directions

As a complement to the burgeoning literature on the role of emotions in the educational experiences of learners and educators in Western countries, the collection of studies included in this Special Issue of *The Asia-Pacific Education Researcher* provide important emerging findings on how emotions are related to key contextual factors (e.g., relatedness, performance), psychological variables (e.g., motivation, personality, emotion regulation, well-being), and physical health (sleep quality) in Asian students and teachers. The present samples were recruited from across educational levels (primary school to post-secondary institutions) from both Asian and South Asian countries (China, Hong Kong, Singapore, Philippines), and examined a range of both positive and negative emotions encountered by students and teachers as both general constructs (e.g., satisfaction) and specific discrete experiences (e.g., gratitude). Moreover, the study rationales and measures were consistently derived from comprehensive theories of emotions and emotion regulation (e.g., Pekrun 2006; Valderand 2008) with nuanced analyses exploring both potential moderation effects (e.g., emotional engagement, years of experience) and mediation processes (e.g., self-compassion, coping strategies).

With respect to consistent directions for future research, whereas findings from Lu (2019) showcased the unique empirical contributions of repeated ESM assessments, all of the remaining studies were cross-sectional in nature warranting longitudinal follow-up investigations to replicate assumed causal links in Asian populations (e.g., gratitude as an antecedent vs. consequence of social relatedness in Caleon et al. 2019). Given that each of the studies in the Special Issue also exclusively examined emotion variables using self-report measures, continued research with Asian learners and educators utilizing alternate assessment methods including qualitative interviews, experimental tests, physiological metrics, and observational protocols is necessary to ascertain the replicability of the findings reported. Likewise, although some studies examined specific background variables as covariates or possible moderators (e.g., gender and grade level, Fong and Cai 2019; gender, location, institution type, Luo et al. 2019; years of experience, Zhang et al. 2019; country effects, Lu 2019), most analyses did not account for demographic factors as potential confounds underscoring the need for more research on how background variables such as age, gender, SES, country, institution type, or discipline impact the emotional experiences of Asian students and teachers.

From a conceptual standpoint, although each study in this Special Issue was clearly situated in at least one

prominent theoretical tradition with an explicit focus on emotion processes (e.g., Job Demands-Resources Model, Zhang et al. 2019), with Pekrun's (2006) Control-Value Theory of Achievement Emotions having been most consistently incorporated, more research is needed to validate and expand on academic emotion theories specific to teachers with Asian samples. For example, although a self-report measure of teachers emotions developed by Frenzel and colleagues was administered in Nalipay et al. (2019), none of the present studies examined the full theoretical model proposed by Frenzel et al. (2009) in which teaching emotions are hypothesized to be predicted mainly by perceived progress toward teaching goals. Finally, in order for future research on emotions in Asian educational contexts to move forward most effectively, greater efforts to address conceptual overlap and terminological inconsistency are required. For example, although the emotion of enjoyment is consistently referred to as such in the above studies with teachers (Chen 2018; Lu 2019; Nalipay et al. 2019), it is assigned notably different labels in the studies with students including "emotional engagement" (Luo et al. 2019) and "school well-being" (Caleon et al. 2019). Although these labels are consistent with their respective theoretical traditions, it is anticipated that the continued development of culturally appropriate conceptual frameworks will promote greater clarity and consistency of emotion constructs and thus enable even greater collaborative strides in empirical research on the role of emotions in Asian educational contexts.

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