

Original Paper

A Review of Frameworks and Instruments of Teacher Emotion Regulation Strategies

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Abstract

Teaching is a highly emotionally demanding job and can present educators with a variety of emotional challenges. Therefore, exploring teacher emotion regulation strategies can effectively help teachers build resilience and enhance their own sense of well-being. This study adopts literature analysis approach to review the existing representative research on the frameworks and instruments of teacher emotion regulation strategies from 1998 to 2023, and analyzes the development trends and the connection among the scales from the perspective of research objects, contexts, advantages and disadvantages. It is found that research on the development and application of frameworks and instruments of teacher emotion regulation strategies is gradually becoming more and more systematic and abundant. This study can provide reference for subsequent empirical research and provide a basis for the development of more instruments, effectively guiding teachers in regulating their own emotions and improving their teaching effectiveness.

Keywords

teacher emotion regulation strategy, emotion regulation framework, emotion regulation instrument

1. Introduction

The concept of emotion regulation originates from developmental psychology (Thompson, 1991). In the 1990s, influenced by the “affective turn”, emotion as a non-cognitive factor received attention from a wide range of scholars in the field of education (Han et al., 2021). In 2016, the perspective of positive psychology was introduced into applied linguistics, emphasizing how individuals deal with negative emotions (MacIntyre et al., 2019), that is, emotion regulation. Teacher emotion regulation refers to the process in which teachers decide what emotions they possess, when they possess emotions, and how they experience and express emotions in the context of teaching (Gross, 1998; Burić et al., 2017). Good emotion regulation ability can help teachers build resilience, thereby enhancing their sense of

well-being (Han & Xu, 2020). While insufficient teacher emotion regulation ability can lead to a series of issues such as burnout, dissatisfaction and ineffective classroom management (Macdonald, 1999). The level of utilization of emotion regulation strategies largely reflects a teacher's emotion regulation ability, which needs to be measured based on relevant analytical frameworks and appropriate instruments. Therefore, it is necessary to comprehensively understand research status on teacher emotion regulation strategy frameworks and instruments. However, there has not been systematic analyzation on this topic so far. To fill this gap, this paper will systematically review research on the frameworks and instruments of teacher emotion regulation strategies in the past two decades with the aim of providing reference for future empirical studies and providing foundation for the development of more instruments, in order to effectively guide teachers in regulating their emotions and improving their teaching effectiveness.

2. Frameworks of Teacher Emotion Regulation Strategies

As shown in Table 1, there are five representative studies on emotion regulation strategy frameworks (or models) which are classified into three categories, process model of emotion regulation, emotional labor models and integrated models.

Table 1. Frameworks of Emotion Regulation Strategy

No.	Authors	Names	Dimensions
1	Gross, 1998	process model of emotion regulation	1. situation selection; 2. situation modification; 3. attention deployment; 4. cognitive change; 5. response modulation
2	Grandey, 2000 Yin, 2016	emotional labor model emotional labor framework	1. surface acting; 2. deep acting 1. surface acting; 2. deep acting; 3. genuinely expressing
3	Gu & Gu, 2019 Aldrup et al., 2024	research emotion regulation model integrated framework of emotion regulation	1. response-focused emotion regulation; 2. antecedent-focused emotion regulation 1. external regulation; 2. internal regulation; 3. expressive regulation

2.1 Process Model of Emotion Regulation

The process model of emotion regulation (hereinafter referred to as “process model”) proposed by Gross (1998) has been the most classic and widely cited framework so far. Based on several situation points that may trigger emotions, this model categorizes individual intervention to change emotion trajectory into five dimensions, including situation selection, situation modification, attention deployment, cognitive change and response modulation. Among them, the first four, collectively called

antecedent-focused emotion regulation, occur before emotions are completely produced, while response modulation occurs after emotions are generated, which is referred to as response-focused emotion regulation. Specifically, individuals can regulate their emotions by avoiding or selecting certain situations, actively modifying existing situations, focusing or distracting attention, changing their perceptions of certain situations, and regulating responses to existing emotions. Some scholars have used this model to study how teachers regulate their emotions to deal with students' misbehaviors and the effectiveness of the strategies, and found that teachers who use cognitive reappraisal experience the least negative emotions and less likely to suppress their negative emotions (Chang & Taxer, 2021). Other scholars use this model to analyze emotion regulation strategies used by Iranian college English teachers in assessment, and find that cognitive change is the most frequently used strategy before emotions arise, while deep breathing is often employed after emotions occur (Derakhshan et al., 2023). This model focuses on the time points that trigger emotions, which contributes to a better understanding of the causes, consequences and underlying mechanisms of emotion regulation (Gross, 1998). However, since this model is not targeted at a particular situation or occupation, but rather a general model, it needs to be tailored to specific situations for analyses. Xu (2021) finds that there is no empirical evidence on when to use situation selection to regulate classroom emotions, and suggests that teachers can use this strategy during preparing classroom activities to either select or avoid triggering certain emotions in students, thereby reducing the probability of students' classroom misbehaviors. Besides, since using situation modification will create a new context, it becomes difficult to separate it from situation selection (Gross, 2015). In fact, situation selection is more focused on the anticipation of a situation, while situation modification is used as a compensatory strategy when the teaching plan does not progress as expected (Sutton, 2004). Subsequent developments of other frameworks and the construction of scales have been adapted from this model.

2.2 Emotional Labor Models

Emotional labor refers to individuals' regulation of their emotional expressions in the workplace (Grandey, 2000), generally manifesting in surface acting and deep acting. Grandey (2000) utilizes the process model as a guiding theory to understand the mechanism of emotional labor and proposes the emotional labor model (see Table 1 above), which consists of two dimensions. Surface acting essentially involves managing observable expressions, representing changing the emotions superficially, corresponding to response modulation in the process model. While deep acting involves managing feelings, signifying the internalization of emotion regulation, such as cognitive reappraisal. When students misbehave, teachers can consider the reasons from students' perspective and reappraise in order to regulate their own emotions, corresponding to attention deployment and cognitive change. However, some scholars argue that these two strategies cannot entirely explain the complex process of emotion regulation (Xu & Yang, 2023).

Following the aforementioned classification, Yin (2016) conducts interviews with high school teachers in Guangdong, a province in the south of China and develops a more detailed emotional labor

framework. In addition to the original two dimensions, he adds a new dimension of genuinely expressing and makes new explanations for the existing dimensions. Specifically, surface acting includes pretending and restraining; deep acting includes refocusing, reframing, and separating; genuinely expressing involves releasing positive emotions and outpouring negative emotions. Among them, separating refers to the separation of emotions in the workplace from one's personal life. This new dimension addresses the dysfunction caused by the inconsistency between the displayed emotions and the genuine emotions, and provides a supplement to previous research. Based on this framework, Gu and Xu (2021) conduct a case study of three novice middle school teachers and find that they use surface acting and genuinely expressing frequently, which is consistent with Yin's (2016) conclusions. Moreover, the addition of genuinely expressing better explains that under the influence of teachers' authority in Chinese socio-cultural environment, teachers can appropriately express their emotions during teaching to achieve their teaching goals (Gu & Xu, 2021).

In summary, these two types of emotional labor models take the process model as the guiding theory to understand emotional labor and propose new models to provide a new perspective for the study of emotion regulation strategies.

2.3 Integrated Models

The emotional labor model and the process model have their own strengths, so some scholars have sought to integrate the two. So far, the representative integrated models mainly fall into the following two categories (see Table 1, No. 3).

The first integrated model is represented by Gu and Gu (2019). They build a new model based on the process model and the emotional labor framework combined with data from interviews regarding emotion regulation strategies used by teachers in research life, categorizing into two broad types, response-focused regulation and antecedent-focused regulation. The former includes adaptation, action taking, communication, suppression and relaxation, while the latter comprises reframing, lowering expectations, refocusing and separating. They believe that the previous frameworks are mainly based on the Western contexts, and empirical research in China mainly focuses on the teaching context of primary and secondary school teachers, neglecting the emotion regulation of university teachers. In addition, adaptation, action taking and communication in this model reflect positive impact of subjective initiative on emotion regulation. Therefore, this integrated model focuses on English teachers in higher education, broadens the contexts, objects and dimensions of teacher emotion regulation research, and provides a reference for subsequent research.

Aldrup et al. (2024) propose that research on emotion regulation, coping, and emotional labor all fall under the umbrella of emotion management and these three concepts have overlapping parts. As a result, they integrate the process model with the concepts of coping and emotional labor to form an integrated framework of emotion regulation, which is the second integrated model. This framework consists of three dimensions, external regulation, internal regulation and expressive regulation. External regulation is to regulate the situation, comprising situation selection and situation modification.

Situation selection includes avoiding situations that trigger negative emotions and approaching situations that trigger positive emotions. Situation modification consists of problem solving and help seeking. Internal regulation is to regulate attention and appraisal of the situation, encompassing attention deployment and cognitive change. Attention deployment includes distracting attention from the situation that may trigger negative emotions or concentrating on the situation that may trigger positive emotions. Cognitive change involves cognitive reappraisal and acceptance of reality. Among them, attention deployment can only provide short-term emotional relief, while cognitive change is to modify one's perceptions about an issue to regulate emotions. Thus, internal regulation is equivalent to deep acting in emotional labor. The third dimension, expressive regulation, corresponds to response modulation in the process model, which is also similar to surface acting and genuine expression in emotional labor. Response modulation includes suppressing or venting emotions, and surface acting involves hiding and faking. Although suppression and hiding, venting and genuine expression, these two pairs of terms have similar meanings, they use different terminology. This creates inconvenience in summarizing existing research. To address the problem, this model merges the two branches of emotion regulation and emotional labor, integrates relevant frameworks, and develops a more systematic and comprehensive framework, to facilitate future research.

3. Instruments of Teacher Emotion Regulation Strategies

The development of teacher emotion regulation strategy instruments are based on the above existing frameworks for measuring the utilization status of teachers' emotion regulation strategies. As shown in Table 2, there are six representative instruments, categorized into two major types, emotion regulation scales (1-4) and emotional labor scales (5-6).

Table 2. Instruments of Emotion Regulation Strategy

No.	Authors	Names	Research Objects	Dimensions
1	Gross & John, 2003	Emotion Regulation Questionnaire	undergraduate	1. reappraisal; 2. suppression
2	Burić et al., 2017	Teacher Emotion Regulation Scale	primary teacher	1. situation avoidance; 2. active modification; 3. reappraisal; 4. suppression; 5. tension reduction
3	Heydarnejad et al., 2021	Language Teacher Emotion Regulation Inventory	high school and university EFL teacher	1. situation selection; 2. situation modification; 3. attention deployment; 4. reappraisal; 5. suppression; 6. seeking social support
4	Xu & Yang, 2023	College Teacher English Emotion	college English teacher	1. situation selection; 2. situation modification; 3. attention deployment;

			Regulation Scale			4. cognitive change; 5. response modulation; 6. help seeking
5	Yin, 2012	Teacher Labor Scale	Emotional Strategy	primary secondary teacher	and	1. surface acting; 2. deep acting; 3. genuinely expressing
6	Zhu & Wang, 2023	Senior High school EFL Teacher Labor Scale	Emotional Strategy	senior school student teacher	high EFL	1. faking; 2. suppressing; 3. hiding; 4. cognitive change; 5. attention deployment; 6. separating; 7. releasing; 8. outpouring; 9. deliberate emotional dissonance

3.1 Emotion Regulation Scales

Emotion Regulation Questionnaire (ERQ) (Gross & John, 2003) is the first questionnaire developed based on the process model. This questionnaire includes two dimensions, reappraisal in cognitive change and suppression in response modulation, as these two dimensions are the most common strategies in the model (Gross & John, 2003). ERQ consists of 10 items in total, with six items on reappraisal and four items on suppression on a 7-point Likert scale. The items encompass the regulation of general emotions (without distinguishing between positive or negative), such as “I control my emotions by not expressing them.” In addition, both reappraisal and suppression contain at least one item regulating positive or negative emotions, such as “When I feel negative emotions, I make sure not to express them.” The results indicate that the individuals who use reappraisal experience and express more positive emotions, whereas those who use suppression experience and express fewer positive emotions, thus experiencing more negative emotions. Although the initial research object of this questionnaire is undergraduates, numerous subsequent empirical studies have employed it to investigate teacher emotion regulation strategy, indicating its high applicability (e.g. Yin, 2016; Lee et al., 2016).

Although ERQ is widely used, its dimensions are limited to reappraisal and suppression, which may not offer a comprehensive understanding. In addition, the questionnaire does not focus on the school context, resulting in broad conclusions that may require supplementary interviews to obtain more comprehensive data. Therefore, Buric et al. (2017) develop Teacher Emotion Regulation Scale (TERS) specifically tailored for teachers’ use in school settings (including classrooms, offices and parent meetings) for primary school teachers in Croatia. Grounded in the process model, the scale comprises five dimensions, situation avoidance, active modification, reappraisal, suppression and tension reduction, each with 5 items, totaling 25 items on a 5-point Likert scale. The original dimension in the model is situation selection, which can be divided into choosing positive emotions and avoiding negative emotions. However, the scale is aimed at negative emotions, with items specifying concrete situations such as anger, helplessness and depression. Therefore, this dimension is changed into

situation avoidance. In addition to specific situations, each item delineates specific strategies, such as “When a student’s behavior makes me angry, I try to correct them and guide them onto the right path.” TERS emphasizes emotion regulation among educators in instructional settings. As research delves into various disciplines, the instruments become more tailored, including those specific to foreign language teaching contexts. In language instruction, teachers are tasked with imparting both language proficiency and cultural understanding, leading to a spectrum of emotional stimuli that necessitates a focused exploration of language teachers’ emotion regulation (Tsang & Jiang, 2018). Consequently, Heydarnejad et al. (2021) adapt some items from TERS to develop the Language Teacher Emotion Regulation Inventory (LTERI). This inventory comprises 27 items across six dimensions, situation selection, situation modification, attention deployment, reappraisal, suppression and seeking social support, on a 5-point Likert scale. Among them, the first three dimensions are rooted in the process model, while reappraisal and suppression align with dimensions from ERQ, and seeking social support draws from concepts proposed by Jennings and Greenberg (2009). The inventory targets English as a Foreign Language (EFL) instructors in Iranian high schools and universities, focusing on the regulation of negative emotions such as annoyance, restlessness, helplessness, anxiety. Results indicate that university educators exhibit superior emotion regulation compared to their high school counterparts. Namaziandost et al. (2023) utilize this inventory to investigate the relationship between emotion regulation and stress resilience, finding a significant correlation. Teachers adept at emotion regulation demonstrate greater composure in the face of stress.

Since the research objects of LTERI are high school and college EFL teachers, the items take parents as one of the factors that trigger teachers’ emotions, which is not applicable to the context of college English classrooms in China. Therefore, Xu and Yang (2023), drawing on the five emotion regulation strategies outlined in the process model and incorporating selected items from both TERS and LTERI, develop the College English Teacher Emotion Regulation Scale. This scale encompasses six dimensions, situation selection, situation modification, attention deployment, cognitive change, response modulation and help seeking, with a total of 27 items. It primarily addresses the regulation of negative emotions such as restlessness, boredom. This study compares the use of classroom emotion regulation strategies among teachers of different genders and teaching years, finding that teachers tend to employ situation selection more frequently than response modulation. Compared to male teachers, female teachers are more inclined to seek social support. Additionally, the level of strategy utilization does not significantly correlate with teaching years. This inventory, tailored to the university teaching environment in China, offers a precise tool for assessing emotion regulation among English teachers and provides valuable insights for future research in this domain.

3.2 Emotional Labor Scales

Teacher Emotional Labor Strategy Scale (TELSS) (Yin, 2012) is an adaptation from Diefendorff et al. (2005). The factors that will trigger emotions of the original scale, customers, are changed to students and parents to adapt the education setting. It comprises three dimensions, surface acting, deep acting,

and genuinely expressing, aligning with the emotional labor framework proposed by Yin (2016), with a total of 13 items on a 5-point Likert scale. General emotions are used instead of positive, negative, or other specific emotions. The study, conducted with a total of 1281 primary and secondary school teachers in Beijing and Chongqing, two Chinese cities, reveals a preference among teachers for genuinely expressing over surface acting.

Zhu and Wang (2023) conduct a study involving 379 high school student teachers across nine provinces and cities in China, and develop Senior High school EFL Student Teacher Emotional Labor Strategies Scale. This scale is divided into nine dimensions, among which, faking, suppressing and hiding belong to surface acting; cognitive change, attention deployment and separating are deep acting. In addition, deliberate emotional dissonance, a separate category, refers to teachers who “pretend to show negative emotions (such as anger, disappointment, etc.) but do not mentally experience these negative emotions.” Cognitive change and attention deployment are derived from dimensions in the process model. The scale consists of 38 items on a 5-point Likert scale. Designed specifically for student teachers who simultaneously embody student and teacher roles, this scale broadens the scope of emotional research. The items primarily focus on situations that trigger negative emotions, such as tiredness, conflict and stress. Compared to TELSS, this scale offers more specific situational descriptions, such as “When students do not complete their homework on time, I will show my anger.” This specificity allows for a more accurate assessment of the emotional labor strategies employed by high school student teachers, thus providing more precise guidance.

4. Conclusion

This study systematically reviews the representative frameworks and instruments for teacher emotion regulation strategies from 1998 to 2023, and comprehensively analyzes their developmental trends. The research shows that the overall development trend of the frameworks and instruments of teacher emotion regulation strategy is on an upward trend. First, the structure of emotion regulation strategy frameworks has become progressively systematic, evolving from two separate strands, the process model and emotional labor models, to integrating these two into integrated models. The contexts have become more diverse, expanding from teaching contexts to research contexts, reflecting attention to teacher emotion beyond classroom instruction. Second, the trends in research of instruments are even more significant, with the target subjects becoming more specific, from general teachers to teachers teaching specific disciplines such as language teachers. Situations are increasingly diverse, ranging from general emotions, positive/negative emotions, to specific emotions like anxiety. In recent years, research on teacher emotion regulation frameworks and instruments has received widespread attention in academia and has yielded substantial results, but there are still some limitations, such as the subjectivity inherent in self-reported instruments. Moreover, although there are integrated models combining emotion regulation and emotional labor, the corresponding scale has not been developed yet. Therefore, future research can be expanded in three directions. First, enriching data collection sources

through classroom observations and interviews. Second, developing and validating integrated scales. Third, intensifying empirical research in diverse contexts such as assessment contexts and blended classroom settings.

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