Identifying English Teachers' Emotional Labour While Teaching

Speaking In the EFL Class: A Narrative Inquiry

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Abstract

The use of emotional labour in teachers is of course very much needed both

outside the classroom and in the classroom. Emotions can be divided into

positive and negative emotions. However, not many studies have conducted

the range of these emotions in emotional labour and various kinds of regulation.

This study used narrative inquiry that aimed to identify English teachers'

emotional labour while teaching speaking in EFL class. The research data were

collected through interview and then analyzed by using thematic analysis. The

research found that the English teachers at one of the senior high school in

Mojokerto felt both negative and positive emotions when teaching speaking.

However, with the negative emotions that arise, this was easily overcome by

regulating it. The regulating carried out by the teachers are social interaction

and the use mindset. With those regulations, teachers easily changed their

negative emotions into positive emotions. The same went for positive emotions.

In this study, some positive emotions need to be regulated and some do not.

Keywords: Emotional Labour; Teaching Speaking; Regulation

Introduction

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In English class, the role of teacher can be seen by an act of emotional support and behavior. This is called the interaction between teachers and students. Classroom interactions that support emotional support reveal the teacher's effectiveness as a teacher. Emotions must be carried out by the teacher as a workforce. These emotions are called emotional labour.

Emotional labour has been repeatedly shown to contribute to emotional overtiredness as individuals are alienated from "real" emotions (Cooper, Dewe, and O'Driscoll, 2001). Hochschild's (1983) definition of emotional labor has led much of the research on this concept as "managing emotions to create publicly observable facial and body expressions" (p. 7). Emotional labour refers to some certain emotions that must be shown by the teachers in accordance with the rules of work. Teachers are often expected to create a positive and supportive classroom environment while managing their emotional responses to challenging situations such as student misbehavior, difficult teaching materials, or cultural differences. Meanwhile for the emotional regulation can be defined as a response process for monitoring, evaluating, and modifying emotional reactions (Thompson, 1991).

Whenever a teacher instructs and interacts with students, they commonly experience a wide range of emotions, including joy, pride, love (positive emotion) and anger, exhaustion, hopelessness, fear, shame, and boredom (negative emotion) (Sutton and Wheatley, 2003; Frenzel et al., 2016; Buric et al., 2018; Chen, 2019b). One of the teachers doing at the instructional stage is teaching speaking, especially in teaching language. When it comes to teaching speaking, patience and enthusiasm are definitely required. Those who

study English as a foreign language in countries where English is not the first language are defined as EFL students (Gebhard, 2006).

With the problem about emotional labour, the emotions that arise when the teacher teaches speaking in the classroom really need regulation. HOŞGÖRÜR (2015), Tösten & Şahin (2017), Zheng et al., (2018), and Burić and Frenzel (2021) have advocated for increased support and training for teachers in emotional labour and regulation. This includes providing resources and activities for managing emotions in the classroom, as well as promoting self-care and stress management strategies for teachers. Additionally, some have called for a reevaluation of the expectations placed on teachers in terms of emotional labour, focusing on creating more sustainable and realistic job expectations.

Some previous studies have focused on the teachers; emotional labour and leadership behavior. There is HOŞGÖRÜR (2015) showed that teachers think leadership behaviors of teacher are necessary for concerning emotional labour indicate that teacher's exhibit naturally felt emotions dimension the most. There is Tösten & Şahin (2017) concluded the result there were different scores of the number of teachers, the working time at schools, the type of graduated faculty, and the type of school. There is Zheng et al., (2018) showed the result of the study is teachers with effective leadership practices showed a negative impact on surface acting and a positive impact on deep acting. The last is Burić and Frenzel (2021)'s work which the results showed to improve teacher well-being, interventions that facilitate teacher emotional regulation strategies are likely to improve classroom performance as well.

Furthermore, based on the statements above, this study gives an

objective to identify English teachers' emotional labour while teaching speaking in EFL class with some contributions:

- 1. The findings of this study are expected to be a reference for helping other researcher to give usefull information who are interested in conducting releveant research.
- 2. Teachers and students who are majoring in education. The findings are to give information and evaluate the use of emotional labour and the the regulations.

In contrast to the previous study, I differentiated this one. As part of the current study, this study intends to the emotional labor of English teachers while teaching speaking in EFL classes. Then I looked for a range from negative emotions to positive emotions that occurred along with the regulations carried out by the English teachers. This study aimed to answer the following research question:

1. How do the senior high school English teachers regulate emotional labour while teaching speaking in EFL class?

Method

This study employed a qualitative narrative inquiry as a design. This design was described as a subset qualitative research methods in which human behavior is explained thorugh stories (Polkinghorne, 2015). This research conducted at a senior high school in Mojokerto. There were two English teachers who participated in this research. They were chosen as participants because have more that 10 years of teaching experience. With the

teacher's long teaching experience being able to measure the emotional level of the teachers's work when teaching speaking in class and what habita are carried out as their regulation.

In this research, I used narrative interview to collect the data. there were the interview steps to be systematically arranged. These steps of interviewing were adopted from Perez (2020):

- Preparation: In this step, the first point to do is go familiar with the field of study. This may include conducting preliminary research, reading documents, and absorbing rumors and informal accounts of particular events.
- 2. Initiation: At this stage, there is a question that refers to the topic that want to research. Preparing field notes and starting to record the initial process to end of the interview is urgently needed.
- 3. Main Narration: At this stage, I asked the main questions according to the topic research and the participant begins to tell a narrative of their experiences as much as possible until the story ends. Do not interrupt participants while speaking.
- 4. Questioning phase: Questions were asked just to highlight something. This was useful for reassuring whether what the participant conveyed is true.
- 5. Concluding coda: In the end of the interview, stop recording and try to develop some small-talks for interesting discussions.
 - Once data were collected by using the previous mentioned steps, data

analysis followed. The collected data were analyzed by using a thematic analysis by Braun and Clarke 2019 to identify, analyze, and report themes found the data. They are: 1) Familiarizing with the data; 2) Generating initial codes; 3) Searching the themes; 4) Reviewing the themes; 5) Define themes; and 6) Writing-up.

Findings

In this section, I have interviewed 2 English teachers at one of the senior high school in Mojokerto where the names of the participants will be pseudonymed and replaced with Mrs. Bunga and Mrs. Mawar. Each interview will be given 20 minutes to 40 minutes therefore, the total for Mrs. Bunga is 24:29 minutes and Mrs. Mawar is 40:55 minutes. As shown in the table above, I conducted two interviews starting on 13 March 2023, 15 April 2023 for Mrs. Mawar and 1 April 2023, 14 April 2023 for Mrs. Bunga.

1. Regulating in emotional labour

The last stage, we coducted the final result obtained from the interviews of the two teachers as participants regarding emotion regulation. The following table includes the themes and sub-themes stage which will be discussed narratively along with the excerpts.

Table 1. Regulating in Emotional Labour

Themes of	Sub	Teacher	Excerpt
Regulation	Themes of	s	
Emotional	Regulation		
Labour	Emotional		
	Labour		
Interacting	Interaction	Mrs.	"Getting closer with the students

with other	with	Bunga	again, for example by asking
people	students	Mrs.	about material that has been taught by previous teacher or just asking how they are doing, so the students can tell more their stories. Interact with the students again so I will not be awkward." "At the school, besides the
	with other teachers	Bunga	students, I also met other teachers. I found my happiness when I could interact with the teachers."
	Joking with students	Mrs. Bunga	"Students are sometimes out of the box. Sometimes I say something funny or just make a joke, I am happy because I think it is entertainment. Actually, teachers are able to adjust the way students learn."
	Sharing stories with students	Mrs. Mawar	"I feel happy when I ice breaking, such as playing games or short stories so I do not get bored."
	Giving instruction to control the class	Mrs. Bunga	"They are still difficult to control. But when they were seated, I gave interesting instructions such as chanting to tell them so stay quiet and not be noisy."
Doing physical activity	Warming up	Mrs. Mawar	"Then also given warming up material such as puzzle questions about what material will be studied."
	Playing games	Mrs. Mawar	"The solution is, I make another game like a guessing game which if they like it and make them excited again."
	Doing physical exercise	Mrs. Mawar	"Warming up can usually be in the form of guessing games or also sometimes by stretching to make

Preparing academic material	Eating Food Watching movie Preparing the material before D-day.	Mrs. Bunga Mrs. Bunga Mrs. Bunga	the body fresher when starting the class." "When I feel relieved, I usually eat a lot of food." "On the way home, I buy snacks, I eat while watching movies or YouTube." "Usually I fix it so I do not get tired, I have to make installments for the media in the previous days."
	Evaluating the material that have been taught.	Mrs. Mawar	"I even think what else should I do to teach it so that these student quickly understandbecause as teachers we also try to find out how to make these students understand more and maximize their understanding."
Thinking optimistical ly	Positive thinking that will meet again with students and other teachers.	Mrs. Bunga	"That empty feeling of mine was only fleeting. Because I have a thought that tomorrow I will definitely meet again and interact again with other students and teachers. Then I also thought about what I will do after this, for example resting at home so that the empty feeling disappears because I also have to charge my energy too."
	Thinking about resting at home after teaching.	Mrs. Bunga	"Then I also think about what I will do after this, for example resting at home."

In table 1. There are several kinds of themes and sub-themes that describe the regulations of the two English teachers. There are 4 themes and

several sub-themes in each theme and several things that need to be considered from the results of the table will be discussed. However, I will only describe 3 themes that are the most striking and need to be discussed in this research.

A. Interacting with Other People

As a workforce, of course emotions are definitely needed. One of them is emotion to the teacher. This emotional control needs to be done in order to provide comfort in teaching and socializing both with students or the people around them in order to achieve the target value both from teachers' perspective and from the student's point of view.

One of the teacher's activities is called social activities. Social activity is an activity as a preparation for dealing with other people. All teachers must have experienced this. One of the social activities that must be carried out by the teacher is interacting with students. This is for regulating self-emotions that are positive or negative emotions. This statement is provide the social activities which I will explain as follows:

("Getting closer with the students again, for example by asking about material that has been taught by previous teacher or just asking how they are doing, so the students can tell more their stories. Interact with the students again so I will not be awkward.") (Mrs. Bunga, 2nd interview, track: 12:50-13:40)

Look at from the statements above, it can be seen that Mrs. Bunga can find pleasure when interacting with students. Interacting with students is also enough to make the teacher feel happy. From this interaction the teacher is also able to add other relationships and insights. In addition, Mrs. Bunga also interacted with students with small talk and telling stories to students. At this

statement, students are also able to change the teacher's emotions into good emotions.

Another activity that must be carried out by the teacher is interacting with the other teachers. This works because interacting with teachers can add new relationships and knowledge to their activities at school. With interacting with other teachers, a teacher can share some positive experience, collaborate on a project, take breaks together, attend professional development opportunities, and so on. Building positive relationship with the colleagues can have a big impact on the teacher overall mood and job satisfaction. Here is the statement that can be proven that this social activity is needed.

("At the school, besides the students, I also met other teachers. I found my happiness when I could interact with the teachers.") (Mrs. Bunga, 2nd interview, track: 04:40-05:10)

Mrs. Bunga statement above can be said that to feel happy in teaching is also necessary to Interact with other teachers. Mrs. Bunga said that her work partners often talk to her even if it was just small talk. Mrs. Bunga felt a sense of pleasure form warmth given to other teachers because of concern for one another.

Stories can be a powerful tool for connecting with students and building positive relationship, which in turn can increase a teachers' sense of well-being and job satisfaction. This might can encourage students to share their own stories, either individually or as a group. This can help build a sense of community and connection within classroom, and provide opportunities for students to learn from one another.

("I feel happy when I ice breaking, such as playing games or short stories so I do not get bored") (Mrs. Mawar, 2nd interview, track: 08:13-08:27)

Mrs. Mawar said that to overcome boredom in the classroom is creating exciting games or just sharing stories. This is another way of enhancing social relations between teachers and students. Incorporating storytelling into the classroom can be a powerful way to increase a teacher's mood and create a positive and engaging learning environment for students.

B. Doing Physical Activity

The next regulation of emotional labour in positive emotions is Physical activity. Physical activity refers to all energy expended through movement. As self-regulation, the teacher of course needs a reward for themselves for doing their emotions well. The statement below will be stated how important rewards are for themselves as an increase the emotions well and mood.

Teaching is one of the most demanding professions, which can lead to high levels of stress and fatigue. Engaging in physical activity, such as aerobics, yoga, or weight training, can help reduce stress levels. Exercise stimulates the production of endorphins, which act as natural pain relievers and improve mood. By incorporating regular physical activity into their routine, teachers can better manage stress and improve their mood and emotional well-being.

("Warming up can usually be in the form of guessing games or also sometimes by stretching to make the body and brain fresher when starting the class.") (Mrs. Mawar, 2nd interviewed, 01.50.02.08)

In the statement above, Mrs. Mawar also uses stretching activities as a warm-up before starting learning. Stated that this warm up can make the body and mind fresh again before starting learning.

Another physical activity is eating. Eating also exerts a lot of energy for movement. One of the rewards that a teacher does as self-regulation after teaching is eating. Eating often increases energy and also person's mood. However, the context in the statement that I present below is as a self-reward after working.

("When I am relieved, **I usually eat a lot**. Because at school it really drains so much energy. **I usually buy food or on the way home I buy snacks** and I eat while watching movies or YouTube.") (Mrs. Bunga, 2nd interview, 18.16-18.54)

Regulation for Mrs. Bunga when feeling relived is ordering some foods or snacks to eat. This is a physical action that requires a real movement.

Watching a movie can actually heighten a teacher's emotions. Movies have the power to evoke a range of emotions in viewers, including teachers. Depending on the content and themes presented in the film, it can make teachers happy, sad, inspiring, motivating or even angry.

("When I am relieved, I usually eat a lot. Because at school it really drains so much energy. I usually buy food or on the way home I buy snacks and I eat while watching movies or YouTube.") (Mrs. Bunga, 2nd interview, 18.16-18.54)

It is worth noting that the emotional impact of movies on teachers can vary depending on individual preferences, personal experiences, and the specific content of the movie. Some films may resonate more strongly with certain teachers, while others may have a very different emotional impact. Additionally, the emotions evoked by a movie can be influenced by a variety of factors, including teacher's mood, current situation, personal connection with the topic presented in the film.

C. Thinking Optimistically

While positive thinking can have considerable benefits, it is not a solution for all issues that instructors may confront. Cultivating a positive mindset, on the other hand, can help instructors handle obstacles with greater resilience, improve their emotional well-being, and create a more positive classroom environment.

This regulation is about an optimistic mind which is usually defined as a positive thought. With this optimistic mind, can increase enthusiasm and a good mindset. An example can be seen from the statement below:

("That empty feeling of mine was only fleeting. Because I have a thought that tomorrow I will definitely meet again and interact again with other students and teachers. Then I also thought about what I will do after this, for example resting at home so that the empty feeling disappears because I also have to charge my energy too") (Mrs. Bunga, 2nd interview, 17.00-17.31)

The statement that T1 had said was an overflow of the feeling of emptiness she felt after leaving school, but to overcome this, T1 had positive thoughts such as meeting and communicating again with other students or work partners. So that relieves the Mrs. Bunga and is not such a big deal.

The most relaxing thing when imagining is to rest and lean back at home after tiring activities. Teaching can be a demanding and fulfilling profession, therefore taking to recharge and relax is essential for teacher's well-being.

("That empty feeling of mine was only fleeting. Because I have a thought that tomorrow I will definitely meet again and interact again with other students and teachers. Then I also thought about what I will do after this, for example resting at home so that the empty feeling disappears because I also have to charge my energy too") (Mrs. Bunga, 2nd interview, 17.38-17.48)

Mrs. Bunga stated that teaching can be physically and mentally tiring. If the teacher feel exhausted, take a short nap to recharge energy. Besides, that is an activity that helps the teacher relax.

Discussion

This study identified the English teachers' emotional labour while teaching speaking in EFL class followed by the regulation which will be discussed in this study. Based on the overall findings above, I can conclude that teachers need to regulate their emotions both within the school environment and outside of school. However, to know how to regulate an emotions, I also have to know the emotions that arise by the teachers first. The emotions that appear in this discussion are emotions that need to be regulated. Therefore, in this stage there are two regulations that appear by the teachers.

A. Occurrences of Teacher Emotional Labour

Based on the results that have been mentioned, there are several emotions that arise that are felt by the two teachers. There are seven positive

emotions and ten negative emotions. However, in these emotions there are 5 emotions that are not regulated by the teacher. There are calmness, satisfaction, enjoyment, fun, and frustration. Meanwhile, other emotions can be regulated by the teachers in two more prominent ways. What stands out here is mean that regulations are often done by teachers. Then these emotions that are need to be regulated are (positive emotions: happiness, relieved, and excitement; negative emotions: tiredness, sadness, confusion, laziness, boredom, un-motivation, stress, and emptiness). These emotions need to be regulated with two striking regulations.

B. Social Interaction as Regulation

In social interaction, in terms of functional perspectives on emotion, affective responses assist individuals with adapting to and navigating social environments (Lopes et al., 2011). This is because emotions play an important role in social interactions. By understanding their own emotions and those of others, individuals can be more effective in building healthy relationships and solving problems in social interactions. On the other hand, individuals who are able to read and understand other people's emotions will be better able to communicate effectively, understand other people's perspectives, and avoid unnecessary conflicts. For example, someone who is able to recognize signs of emotion such as facial expressions or body language can more easily understand how others are feeling and respond properly.

According to previous study which done by Hosgorur (2015), showed that as far as teacher leadership behaviors are concerned, teachers believe that they were always needed and often demonstrate them. In present study, it has

similarities to Hogorur's research. With the form of interaction described above, it also leads to teacher leadership in the classroom in how can teachers control the class well and condition their emotions by regulating social behavior.

C. The Use of Mindset as Regulation

The teachers' perceptions of emotional display rules, or their beliefs about the proper kinds of emotional expressions that need to be displayed, have been linked to their emotional labor strategies, anxiety, contentment, enthusiasm, and burnout (Chang, 2020; Huang et al., 2019). The teachers need to have awareness of the emotions being felt. This allows the teachers to identify and recognize the emotions that arise in themselves and also in students. This awareness can help teachers overcome negative emotions and reinforce positive ones.

In this study, there is in line with previous study by Burić and Frenzel (2021), showed that this study can increase teachers' use of deep acting and expression of natural felt feelings and decrease their use of surface acting. The two things have significant similarities. Deep acting is a strategy for managing emotions by fixing actual feelings to suit certain social situations. In surface acting, individuals try to understand their feelings and try to change those feelings to suit the needs of the social situation. Meanwhile, natural feelings refer to emotions that appear spontaneously and authentically in response to certain situations or events. These emotions arise naturally without being intentional or forced, and are often normal and healthy responses to situations at hand.

Basically, this study mention that regulations are so complex from previous studies which can be classified into the two points above. Regulations that emerged were generated from the results of interviews and then analyzed in such a way as to produce quite diverse data.

Conclusion

Based on the analyzed, it can be concluded that two English teachers at one of senior high school in Mojokerto had the experience both negative emotions and positive emotions. The teacher feels negative emotions (sad, tired, confused, stress, un-motivation, etc) when a number of regulations appear that need to be carried out by the teacher as a workforce. These regulations are social interaction and mindset development. With this regulation, it is hoped that teachers will be able to control well into positive emotions (i, e. happy, satisfied, relieved and calm). However, in this study, positive emotions can also be regulated. For example rewarding themselves for doing physical activity such as eating food and watching movie to recharge the energy. When a teacher has positive emotions, it can have a positive impact on the class and the students.

Referring to the research findings, the suggested are expected for other researchers, result of this study, it can be seen that it is necessary to know in advance the meaning of emotional labour itself and how it is actually regulated. This is because various people can define regulation with different activities and purposes. Re-check the interview guidelines properly so as not to do too many repetitions of the interview. For teachers, it is hoped that the results of this study will be able to suggest that teachers need to do regulation as self-emotional control in order to improve the quality of learning and positive emotions. This research is useful to find out how important

regulations need to be carried out by teachers as educators. For students, especially students who are still in the teacher pre-service stage, it is hoped that they will add insight by knowing how to regulate emotions when teaching.

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References

- Burić, I., Slišković, A., & Macuka, I. (2018). A mixed-method approach to the assessment of teachers' emotions: development and validation of the Teacher Emotion Questionnaire. *Educational Psychology*, 38(3), 325–349. https://doi.org/10.1080/01443410.2017.1382682.
- Burić, I., & Frenzel, A. C. (2021). Teacher emotional labour, instructional strategies, and students' academic engagement: a multilevel analysis. *Teachers and Teaching: Theory and Practice*, 27(5), 335–352. https://doi.org/10.1080/13540602.2020.1740194.
- Chang, M.-L. (2020). Emotion display rules, emotion regulation, and teacher burnout. Frontiers in Education, 5. https://doi.org/10.3389/feduc.2020.00090.
- Chen, J. (2019b). Exploring the impact of teacher emotions on their approaches to teaching: A structural equation modelling approach. *British Journal of Education Psychology*, 89(1), 57-74.
- Cooper, C. L., Dewe, P. J., & O'Driscoll, M. P. 2001. *Organizational Stress: A Review and Critique of Theory, Research, and Applications*. SAGE Publications, Inc. DOI: https://dx.doi.org/10.4135/9781452231235.
- Frenzel, A. C., Pekrun, R., Goetz, T., Daniels, L. M., Durksen, T. L., Becker-Kurz, B., & Klassen, R. M. (2016). Measuring Teachers' enjoyment, anger, and anxiety: The Teacher Emotions Scales (TES). *Contemporary Educational Psychology*, 46, 148–163. https://doi.org/10.1016/j.cedpsych.2016.05.003.
- Gebhard, J. (2006). Teaching English as a foreign or second language: A teacher self- development and methodology guide.
- Hochschild, A. (1983). The managed heart: Commercialization of human

- feeling. Berkeley: University of California Press.
- HOŞGÖRÜR, T. (2015). The Relationship between Teachers' Leadership Behaviours and Emotional Labour. *Journal of Educational Sciences Research*, 5(2), 165–190. https://doi.org/10.12973/jesr.2015.52.9
- Huang, S., Yin, H., & Tang, L. (2019). Emotional labor in knowledge-based service relationships: The roles of self-monitoring and display rule perceptions. Frontiers in Psychology, 10. https://doi.org/10.3389/fpsyg.2019.00801.
- Lopes, P. N., Nezlek, J. B., Extremera, N., Hertel, J., Fernández-Berrocal, P., Schütz, A., & Salovey, P. (2011). Emotion Regulation and the Quality of Social Interaction: Does the Ability to Evaluate Emotional Situations and Identify Effective Responses Matter? *Journal of Personality*, 79(2), 429–467. https://doi.org/10.1111/j.1467-6494.2010.00689.x
- Maguire, M., & Delahunt, B. (2017). Doing a Thematic Analysis: A Practical Stepby-Step Guide for Learning and Teaching Scholars . 3(3).
- Perez, C. (2020). The narrative interviewer. *Integrating Postmodern Therapy and Qualitative Research*, 81–94. https://doi.org/10.4324/9780429297410-5
- Polkinghorne, D. E. (2003). International Journal of Qualitative Studies in Education. *International Journal of Qualitative Studies in Education*, 16(6), 883–886. https://doi.org/10.1080/714858243.
- Sutton, R. E., & Wheatley, K. F. (2003). Teachers' Emotions and Teaching: A Review of the Literature and Directions for Future Research. *Educational Psychology Review*, 15(4), 327–358. https://doi.org/10.1023/A:1026131715856.
- Tösten, R., & Şahin, Ç. Ç. (2017). Examining the Teachers' Emotional Labor Behavior. *Journal of Education and Training Studies*, 5(10), 18. https://doi.org/10.11114/jets.v5i10.2621.
- Yin, H., Huang, S., & Lee, J. C. K. (2017). Choose your strategy wisely: Examining the relationships between emotional labor in teaching and teacher efficacy in Hong Kong primary schools. *Teaching and Teacher Education*, 66, 127–136. https://doi.org/10.1016/j.tate.2017.04.006
- Zheng, X., Yin, H., & Wang, M. (2018). Leading with teachers' emotional labour: relationships between leadership practices, emotional labour strategies and efficacy in China. *Teachers and Teaching: Theory and Practice*, 24(8), 965–979. https://doi.org/10.1080/13540602.2018.1508432