



**IMPACT OF TEACHERS' MINDFULNESS AND  
PROFESSIONAL SKILLS TOWARDS CLASSROOM CLIMATE  
ON STUDENT OUTCOMES WHILE LEARNING ENGLISH  
AS A SECOND LANGUAGE IN SRI LANKA**

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**Abstract:**

Public education system of Sri Lanka suffers from poor education outcomes and wide disparities in academic achievement across schools, and studies reveal that students' outcomes are best when the teachers are qualified in both subjects, they are assigned to teach and in pedagogy. At present teacher stress has become a critical issue in the

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educational field which affects negatively towards classroom climate; teacher student relationship, teacher creativity, teaching methodologies and student outcomes, while a positive classroom climate results in better academic, social, and emotional outcomes for students. Though the studies have revealed that teacher can improve their well-being, as well as the classroom climate and the student outcomes through the use of mindfulness practices which was taught by the Buddha 2600 years ago, any convincing evidence of the influence of both, teachers' mindfulness and professional skills on classroom climate towards student outcomes in Sri Lanka or any other country cannot be found. To fulfil that gap, this study explored the influence of teachers' mindfulness and professional skills on classroom climate towards student outcomes in the government schools in Sri Lanka, using pre-test and post-test experimental design. Data was collected before and after 8-week intervention period, from a sample consisted of 230 students and nine teachers of English, that were observed quantitatively. Findings revealed that teachers' mindfulness and professional skills as two of the most influential factors that decide the student outcomes directly and via classroom climate of a school, that offer valuable recommendations to the education system in Sri Lanka, in order to enhance student academic and behavioural outcomes by taking steps to improve the professional skills of teachers and the mindful living of both teachers and students.

**Keywords:** Teacher's Mindfulness (TM), Teacher's Professional Skills (TPS), Student Outcomes (SO), Classroom Climate (CC) and the Student Mindfulness (SM) Teaching English as a Second Language (TESL)

## 1. Introduction

Social and economic development of a country is directly linked with the student academic and behavioural outcome, as it produces the manpower for the country which is responsible for the economic and social development of the country.

At present teacher stress has become a critical issue in the educational field which affects negatively towards classroom climate; teacher student relationship, teacher creativity, teaching methodologies and student outcomes (Herbet et al., 2018; Wickramasinghe et al., 2017), and at the same time studies have revealed that teacher can improve their well-being, as well as the classroom climate through the use of mindfulness practices which was taught by the Buddha 2600 years ago (Harris, et al., 2015; Wilkes, 2018; Herbet, 2018).

In Sri Lanka public education system suffers from poor education outcomes and wide disparities in academic achievement across schools (Abayaekara A. et al., 2018). According to Arunathilaka et al. (2017), students' outcomes are best when the teachers are qualified in both subjects, they are assigned to teach and in pedagogy.

Though there are considerable research conducted on the influence of mindfulness on student outcome or the influence of professional skills on student outcome elsewhere separately; empirical studies on the influence of both mindfulness and professional skills

of teacher on classroom climate towards student outcomes cannot be found in Sri Lanka or elsewhere. This research aims to address this significant gap by exploring the influence of those two factors in classroom climate towards students' outcomes in government schools in the Sri Lankan context. The main objective of this study is to explore the factors influencing in classroom climate towards student outcomes.

## 2. Literature Review

Mindfulness is purposeful awareness of and attention on the present moment without judgment (Flook, et al., 2013; Hölzel, et al., 2011). According to the mindfulness guidelines, 2018; mindfulness is the practice of focusing attention on the experience of the current moment, with an attitude of non-judgmental acceptance and curiosity. According to the studies, people who have practised mindfulness show thickening of the grey matter in their frontal cortex. This is the area of the brain responsible for attention, self-regulation, executive function, and planning. They also show thickening of the hippocampus (responsible for memory function), the insula and precuneus (responsible for self-awareness and emotional processing). Those who practise mindfulness also show reduced activity in the amygdala (associated with distraction, anxiety, fear, depression and stress) and the default mode network (associated with worry and rumination, depression, and schizophrenia) (Figure 1).

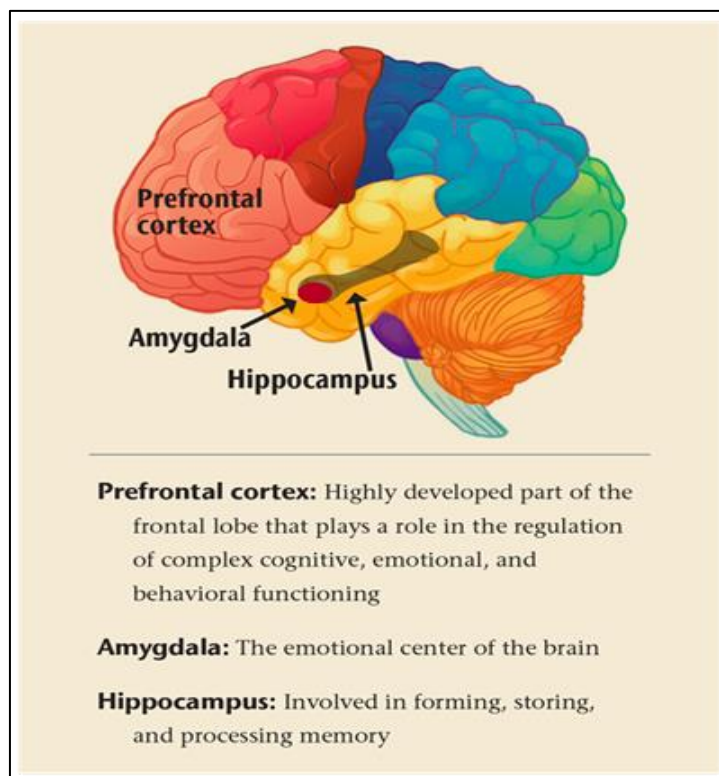
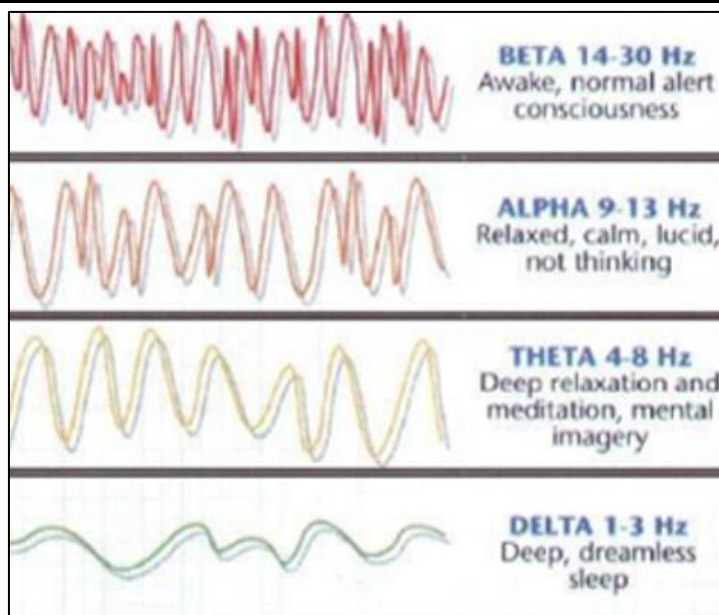


Figure 1: Mindfulness and Brain Structure (Holzel et al., 2011)



**Figure 2:** Brain Wave Patterns (Schutt, 2010)

According to neurologists there are four types of brainwave patterns; Beta, Alpha, Theta and Delta. Lazar et al. (2005) has revealed that when a person practices mindfulness meditation regularly, there can be seen a change of brain wave patterns gradually go from Beta to Delta. This indicates that mindfulness meditation leads to a calmer and relaxed mind (Figure 2 cited by Halpin, 2017).

### 3. Teachers' Mindfulness

According to Flook et al. (2013), Meiklejohn et al. (2012), Abram T. (2020), the mindful teacher is clear-minded, and kind-hearted in word and deed in the classroom. These researchers identify three necessary domains or facets of teacher expertise that encompass both instructional (i.e., content) and interpersonal (i.e., relational) aspects of teaching. These domains include: content knowledge (i.e., knowledge of subject matter), pedagogical knowledge (i.e., best practices for communicating subject matter to students), and knowledge about students and their learning (i.e., developmental knowledge). "mindful teacher" – one who is clear-minded and aware (not distracted), calm-bodied (and not reactive), and kind-hearted (and not critical, coercive or biased) in word and deed, especially in his or her interactions with students, in the classroom. Mindful teacher addresses the gap between abilities and actions and more effective in the classroom, thus connecting with their students in meaningful and productive ways. As the student affective and cognitive outcome is affected by the teachers' mindfulness, it is possible to see teachers' mindfulness as a variable which may be positively related to the student outcome.

**H1:** There is a positive relationship between Teachers' Mindfulness and Student Outcome.

**H2:** There is a positive relationship between Teachers' Mindfulness and Classroom Climate.

#### 4. Teachers' Professional Skills

Professional development for teachers is a key mechanism for improving classroom instruction and student achievement. Content knowledge, curriculum knowledge, pedagogical skills, managerial skills and communicative skills are considered as the main components of professional skills of a teacher (Ball & Cohen, 1999; Cohen & Hill, 2000; Corcoran, Shields, & Zucker, 1998; Darling-Hammond & McLaughlin, 1995; Elmore, 1997; Little, 1993; National Commission on Teaching and America's Future, 1996). Professional development affects student achievement through three steps. First, professional development enhances teacher knowledge and skills. Second, better knowledge and skills improve classroom teaching, third, improved teaching raises student achievement. If one link is weak or missing, better student learning cannot be expected. If a teacher fails to apply new ideas from professional development to classroom instruction, for example, students will not benefit from the teacher's professional development. As teachers' professional skills affect the student outcome strongly, teachers' professional skills can be seen as an important variable that can be positively related to the student outcome.

**H3:** There is a positive relationship between Teachers' Professional Skills and Classroom Climate.

**H4:** There is a positive relationship between Teachers' Professional Skills and Student Outcome.

#### 5. Classroom Climate

Effective teaching and effective learning have been a central focus of classroom environment in current educational situation (Suleman & Hussain, 2014). Learning environment refer to the social, psychological and pedagogical context in which learning occurs and which effects students' achievements and attitudes (Fraser, 1998). A classroom is place where teacher and student communicate each other. Classroom normally consists of a teacher, students, and physical facilities and teaching aids together they build up a classroom culture. Ambrose (2010) describes classroom climate as a system made up of multiple person and environmental factors interacting with each other: "*the intellectual, social, emotional, and physical environments in which our students learn. Climate is determined by a constellation of interacting factors*" (p. 170). Each of these four environments described by Ambrose not only contribute to the greater system that is a classroom climate, but also to students' overall ability to learn. It is possible to see that the student affective and cognitive outcome is affected by the classroom climate as a mediating variable between teachers' mindfulness and professional skills.

**H5:** Classroom Climate mediates the relationship between Teacher's Mindfulness, Teacher's Professional Skills and the Student Outcomes.

## 6. Student Mindfulness

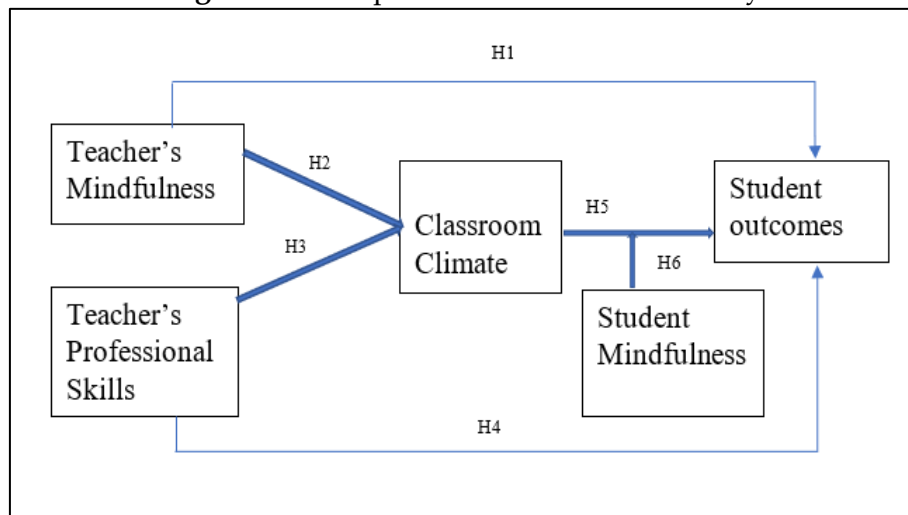
Students must have opportunities to learn experientially to help foster clear, calm, and concentrated states of awareness. In these states, students may experience personal growth, and strengthen personal qualities, such as caring for others, curiosity, humility, open heartedness, and open-mindedness. By practicing awareness exercises in the classroom, youth may develop better executive control skills and healthy mindsets that help support positive development and reduce emotional-behavioral difficulties (Greenberg et al., 2003). It is clear that student mindfulness can moderate the relationship between classroom climate and student outcome.

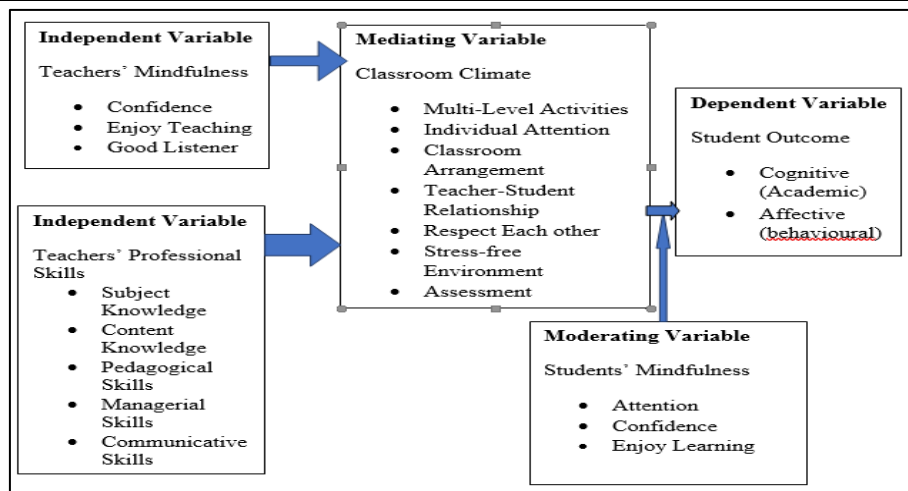
**H6:** Student Mindfulness moderates the relationship between Classroom Climate and Student Outcomes

## 7. Theoretical Foundation

Considering the theoretical models; effective teaching, effective professional development, and the impact of Vipassana introduced by Kennedy, 1998; Guskey & Sparks et al., 2004, Heneveld and Craig, 1994; Gopalakrishna, 2005; and Kyriacou, 1989; the conceptual framework shown in figure 5 was created for this study.

**Figure 3:** Conceptual framework of this study





The objectives of this research study were

- 1) To study the impact of teacher's mindfulness on student outcomes,
- 2) To analyze the impact of teacher's professional skills on student outcomes,
- 3) To investigate the effectiveness of teacher's mindfulness on classroom climate,
- 4) To investigate the effectiveness of teacher's professional skills on classroom climate,
- 5) To identify the significance of classroom climate on student outcomes as a mediating factor, and
- 6) To identify the significance of student's mindfulness on student outcome as a moderating factor.

## 8. Methodology

The research philosophy chosen for this study is positivism. In a positivist view of the world, science and scientific research is seen as the way to get the truth indeed. Using the pretest and posttest experimental method, this study explored the impact of teachers' mindfulness and professional skills towards classroom climate on student outcomes of Senior Secondary students of the government schools in Sri Lanka. Data was collected before and after eight-week intervention period, from a sample consist of 230 students that were selected using the stratified random sampling technique and nine teachers of English, in the schools of Type 1AB, Type 1C and Type 2 in the Western Province of Sri Lanka, that were observed quantitatively. Two classes from grade 11 were selected from each selected school, according to the willingness of the teacher of English and the Principal. And the students for the experimental and control groups were selected randomly. Irrespective of the school or school type, selected sample from each school was collectively taken as one whole group, consisted of experimental and control. The duration of the intervention period was 8 weeks.

As the first step of the data collection procedure, structured observation and interviews were conducted for both teachers as well as for the students of both groups; experimental and control in each school. After having the friendly discussion on the



subject and the difficulties the teachers face, each student was asked the difficulties they have while learning English as a Second Language, and they were asked to write 15 sentences on 'Myself' for further clarification of the difficulties and for assisting the teachers to take necessary remedial steps for the feedback. When their essay on 'Myself' and the Pretest English Language answer scripts observed, the said difficulties were seen very clearly, by the researcher as well as the teachers.

As the Second step of the experimental research, the researcher discussed the following areas with the teachers of English of the both groups in each school (in three hour two sessions) to help the teachers to improve their professional skills.

- 1) Structure of the question paper - G.C.E. (Ordinary Level) English Language:
  - competencies and competency levels,
  - essential learning outcomes and desired learning outcomes,
  - text types and testing techniques,
  - marking criteria, and
  - the importance of knowing those areas by the teacher as well as students.
- 2) The difficulties, the students of grade 11 have; letter formation, mechanics of writing (capitalization), reading difficulties, grammar, vocabulary, essay writing (content – facts, spelling, vocabulary, and organization) etc. by observing the errors and difficulties of the students' essays on 'Myself' and their answer scripts of the third term Grade 10 English Language test paper conducted by the school at provincial level, and the remedial steps to be taken to overcome them
- 3) The problems the teacher faces while teaching; classroom management, methodology etc.
- 4) The measures that can be taken to overcome those problems.

As the third step the teachers and the students of the experimental group was given the Mindfulness Training by an expert in mindful training Rev. Athurugiriye Dhammavihari and the researcher herself using the activities; mindful listening, mindful sitting, mindful eating, mindful walking, mindful games and activities, mindful drawing, body scanning, Simon says game, mindful clapping game.

### **8.1 Mindful Walking**

We walk leisurely, enjoying every step. While walking we become aware of the contact of our feet with the ground, and the flow of our breathing. At that moment we do not regret about past or we do not fear about our future. We become 100% present with every step. As we continue walking, synchronizing our breathing and our steps, we become aware of our whole-body walking. This mindful walking helps us to relax any tension in our shoulders or arms. We can aware of the sounds around us, we can aware of the beauty of the nature and enjoy the trees, or the horizon, or the people around us. By being aware of our five senses, we know that we are in the present moment. Every step will be a nourishment and a healing. Our planet earth has so many great virtues. The earth is solid—it can carry so many things. It is patient—it takes its time moving glaciers and carving rocks. The earth doesn't discriminate. We can throw fragrant flowers on the earth,



or we can throw urine and excrement on the earth, and the earth purifies it. The earth has a great capacity to endure. And it offers so much to nourish us—water, shelter, food, and air to breathe. When we walk mindfully on the face of the earth, we are grounded in her generosity and we cannot help but be grateful. All of the earth's qualities of patience, stability, creativity, love, and nondiscrimination are available to us when we walk reverently, aware of our connection. We are made of body and mind. Our body can radiate the energy of peace and compassion. Our mind also has energy. The energy of the mind can be powerful. If the energy of the mind is filled with fear and anger, it can be very destructive. But if we sit mindfully, if we walk mindfully and reverently on the earth, we will generate the energies of mindfulness, of peace, and of compassion in both body and mind. This kind of energy can heal and transform (Thich Nhat Hanh, 2019).

## 5.2 Mindful Eating

When you eat the apple, just concentrate on eating the apple without thinking of anything else. Being focused and slowing down will allow you to truly savor all the qualities the apple offers: its sweetness, aroma, freshness, juiciness, and crispness. Most of the time, we barely look at the apple we are eating. We grab it, take a bite, chew it quickly, and then swallow. This time, take note: What kind of apple is it? What colour is it? How does it feel in your hand? What does it smell like? Going through these thoughts, you will begin to realize that the apple is not simply a quick snack to quiet a grumbling stomach. It is something more complex, something part of a greater whole. Then, give the apple a smile and, slowly, take a bite, and chew it. Be aware of your in-breath and out-breath a few times to help yourself concentrate solely on eating the apple: what it feels like in your mouth; what it tastes like; what it's like to chew and swallow it. There is nothing else filling your mind as you chew—no projects, no deadlines, no worries, no "to do" list, no fears, no sorrow, no anger, no past, and no future. There is just the apple. When you chew, know what you are chewing. Chew slowly and completely, twenty to thirty times for each bite. Chew consciously, savoring the taste of the apple and its nourishment, immersing yourself in the experience 100 percent. This way, you really appreciate the apple as it is. And as you become fully aware of eating the apple, you also become fully aware of the present moment. You become fully engaged in the here and now. Living in the moment, you can really receive what the apple offers you, and you become more alive. We can become fully aware of the miracle of our body – the taste buds in our mouth, and our body transforming food into energy and vitality. This food is a gift of the earth, the sky, numerous living beings, and much hard and loving work. May we eat with mindfulness and gratitude so as to be worthy to receive this food. May we recognize and transform unwholesome mental formations, especially our greed and learn to eat with moderation. We accept this food so that we may nurture our brotherhood and sisterhood, build our Sangha, and realize our ideal of serving all living beings (Thich N. H., 2019).

### **5.3 Mindful Sitting**

We must find a comfortable position, where we can relax our body completely. We can sit on a cushion or on a chair; cross-legged in the lotus or half-lotus position, or kneeling position. We must be in a relaxed position with back upright., our two knees touching the ground, and our hands placing gently in our lap. We relax the muscles in our face to, release any tension around the jaw and mouth, and we relax our shoulders gently. If our legs or feet fall asleep or begin to hurt while sitting, we gently adjust our position while following our breathing.

Mindfulness is a kind of energy that we generate within us and around us. We become aware of our breathing and come to our body. By being fully present for ourselves and whatever we are doing, we can be mindful; while standing, walking or lying down; while speaking, listening, working, playing and cooking, brushing our teeth, washing the dishes, walking to work, or eating a meal. Mindfulness is not a hard work. It's very pleasant and relaxing, and we don't need extra time to do it. The energy generates from mindfulness brings peace, and happiness in everyday life (Thich N. H., 2019).

### **5.4 Mindful Listening (for five minutes)**

Students were asked to sit comfortably, close their eyes, and to listen to the sound of the environment; sounds of the birds, sounds of vehicles etc. the sounds they hear. Sounds closer to them and far away sounds. Then they become aware the sounds they couldn't hear till that moment. Then they become aware about themselves. Then they were asked to aware on their pattern of breathing. Inhaling next exhaling. At the end of this five minutes the students and teachers become calm and peaceful. When they practice this mindful listening every day for 5 minutes, they become aware of their mind, feelings and their behavior as well as others feelings emotions more and more and become a calm, peaceful and happy child and happy person.

As the fourth step, the researcher herself became an active participant of the experimental group while observing the students' behaviour and did different types of language activities (See annexure).

### **5.5 Instrumentation and Operationalization**

Mindfulness intervention programme took place for 8 weeks. Focused group was met once a week for two-hour session. Every day, 5-minute homebased individual mindfulness activities were practiced individually. Discussions, interviews, observation sheets, researcher's notes, pretest and posttest marks of the respondents, 3<sup>rd</sup> term grade 10 English Language paper and first term grade 11 English Language paper were the instruments used. Before intervention, Pretest was conducted for the focused group to measure their state of mindfulness of both students and teachers, teachers' professional skills, and the classroom climate by the researcher, by being with the students as well as the teachers of grade 11 in selected 9 classes in each selected school, using structured observation sheets while having face to face friendly discussions and interviews as an

active participant and a passive participant. After going through all the records kept in each observation, the data related to each variable were entered into the observation sheets.

## 5.6 Intervention

Knowledge related to teachers' professional skills were given to both the teachers of experimental and control groups to bring them to the same level in professional skills, while mindful practices were applied only to the teachers and students of experimental group. The intervention period was 8 weeks.

## 6. Findings

### 6.1 Student Outcomes of the Two Groups before and After Intervention

Mean and the standard deviation for the pretest and posttest of Student Outcomes of experimental and control groups were shown in Table 2. Before the treatment, mean score of the students in the experimental group, the student outcome of English Language was 42.95. After the treatment the mean score is 47.40. The difference between the mean score of the pretest and the posttest of student outcome in the experimental group is 4.45, a significant improvement.

Mean score of the students in the control group, was 49.68 at the pretest. and the posttest mean score is 50.58. Though they were not provided the treatment, there is a difference between the mean score of the pretest and the posttest of the control group as 0.9. This difference can be assumed as the effect of the treatment given to the both groups on professional skill development programme. Therefore, the researcher can assume that the mean difference of the experimental group is solely not due to the mindfulness intervention, the influence of the professional skill development programme too is included in that increment. When the difference of 0.9 is deducted from the difference of 4.45 of the experimental group, 3.55 can be taken as the actual effect of the mindful intervention.

**Table 2:** Mean Score of the Student Outcome of the Two Groups

| Groups             | Pre-tests mean | Post-tests mean | Difference |
|--------------------|----------------|-----------------|------------|
| Experimental Group | 42.95          | 47.40           | 4.45       |
| Control Group      | 49.68          | 50.58           | 0.90       |
| <b>Difference</b>  | 6.73           | 3.18            | 3.55       |

It is revealed that the mean score of the experimental group is significantly higher than the mean score of the control group. Hence, there is a statistically significant increase in the performance of the students who were given the mindful treatment. This proves that mindfulness of the teachers and the mindfulness of the students influence the student outcome significantly.

## 6.2 Regression Analysis

**Table 3: Results from Regression Analyses**

| Coefficients          |                             |            |                           |       |        |      |                         |       |
|-----------------------|-----------------------------|------------|---------------------------|-------|--------|------|-------------------------|-------|
| Independent Variables | Unstandardized Coefficients |            | Standardized Coefficients |       | t      | Sig. | Collinearity Statistics |       |
|                       | B                           | Std. Error | Beta                      |       |        |      | Tolerance               | VIF   |
| 1                     | (Constant)                  | -14.324    | 2.472                     |       | -5.795 | .000 |                         |       |
|                       | TPS-difference              | 3.883      | .587                      | .982  | 6.610  | .000 | .164                    | 6.101 |
|                       | TMF-difference              | -2.563     | .506                      | -.752 | -5.064 | .000 | .164                    | 6.101 |

a. Dependent Variable: Student Outcome Pre-Post Difference

The result from multiple linear regression analysis with Student Outcomes as the Dependent Variable and Teachers' Mindfulness (TMF) and Teachers' Professional skills (TPS) as the Independent Variables are shown in table 3. The highest Variance Inflation Factor (VIF) value is more than 5. Hence there is substantial problem of multicollinearity. In table 3, the p-values for TMF and TPS are less than 0.05. Teachers' mindfulness and teachers' professional skills variables are significant predictors of overall student outcome. Hence Student Outcome depends on TMF and TPS. The R-square value was .178. which means 18% of the variation in student outcome can be explained by TMF and TPS.

The regression equation can be written as overall student outcome.

$$(SO) = - 14.324 + 3.883 (TPS) + -2.563 (TMF)$$

**Table 4: Model Summary**

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Durbin-Watson |
|-------|-------------------|----------|-------------------|----------------------------|---------------|
| 1     | .423 <sup>a</sup> | .179     | .172              | 5.490                      | 1.230         |

a. Predictors: (Constant), TPS-difference, TMF-difference  
 b. Dependent Variable: SO-Difference

**Table 5: ANOVA**

| Model |            | Sum of Squares | df  | Mean Square | F      | Sig.              |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1     | Regression | 1493.746       | 2   | 746.873     | 24.776 | .000 <sup>b</sup> |
|       | Residual   | 6842.846       | 227 | 30.145      |        |                   |
|       | Total      | 8336.591       | 229 |             |        |                   |

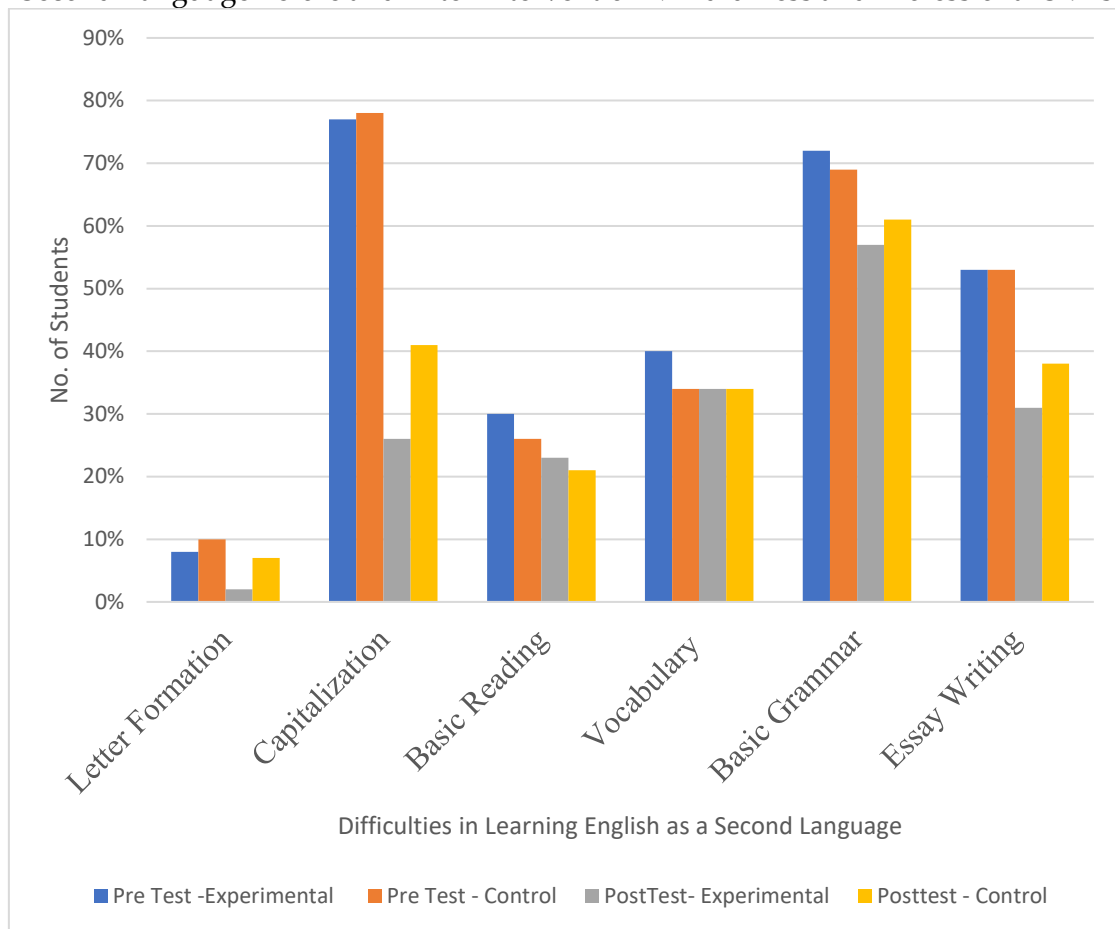
a. Dependent Variable: SO-Difference  
 b. Predictors: (Constant), TPS-difference, TMF-difference

The overall regression model was significant.  $F(2, 227) = 24.78, p < .001, R^2 = .179$ . It is strong evidence that suggests student outcome can be improved by the improved mindfulness and the professional skills of the teacher.

The first objective of this study was to find out the impact of teacher's mindfulness on student outcomes, and it was hypothesized that, there is a positive relationship between Teachers' Mindfulness and Student Outcome. The Pearson correlation

coefficient between the two variables teachers' Mindfulness (TMF) and the student outcomes (SO), there is a small positive correlation between the two variables ( $r = .146$ ,  $n = 230$ ,  $p < .0005$ ). As the direction of the relationship is positive, it is statistically proven that there is a positive relationship between the teachers' mindfulness and the students' outcome. The results support the findings by Meyer L. (2018); Flook et al., (2013). It is statistically proven that to improve the outcomes of the students, mindfulness of the teachers should be improved.

**Figure 4:** Difficulties of Grade 11 Students in Nine Schools in Learning English as a Second Language Before and After Intervention Mindfulness and Professional Skills



The second objective of this study was to analyze the impact of teacher's professional skills on student outcomes, and it was hypothesized that there is a positive relationship between Teachers' Professional Skills and Student Outcome. The Pearson correlation coefficient between the two variables teachers' professional skills (TPS) and the student outcome (SO), shows that there is a positive correlation between the two variables ( $r = .294$ ,  $n = 230$ ,  $p < .0005$ ). As the direction of the relationship is positive, it is statistically proven that there is a relationship between the teachers' professional skills and the students' outcome. The results support the findings by the Model of Effective Professional Development (Kennedy, 1998; Guskey & Sparks et al., 2004). It is statistically

proven that to improve the outcome of the students, professional skills of the teachers should be improved.

As some students in each class were troublesome and unable to reach the expected level, teachers in both experimental and control group were frustrated before intervention. Students and teachers couldn't tolerate each other. They didn't want to listen to each other. But after intervention teachers in the experimental group became calm and they began to listen to the students. They tried to understand the students' difficulties. Teachers created multi-level tasks to support them. As a result of this friendly approach, they began to respect each other and students became confident enough to create a healthy rapport between teachers as well as their peers. Students' aggressive, uncontrollable nature and behaviour changed into a self-motivated, friendly, self-controlled behaviour. This behavioural change in the classroom has directly influenced the students' academic outcome. Learning teaching process became enjoyable for both parties in the experimental group while control group remained unchanged to some extent. Though the control group was not given the mindful treatment; professional skill training for the teachers of both groups; experimental and control were given to bring them to same level. At the pretest the researcher observed that the teachers in both groups faced the same difficulties mentioned above and they were unable to find solutions for classroom management or to get the attention of the students to create an interest in them to learn the language. At the posttest, it was revealed that teachers of both groups are competent enough to select appropriate teaching techniques and tasks that help the students to achieve the outcomes related to each competency level and teachers' use of multi-level tasks have created a kind of interest in students to learn the language in an enjoyable manner with confidence. As a result of this self-motivation, students showed a kind of self-discipline instead of the aggressive.

After intervention it was revealed that number of students that were unable to write letters in the experimental group were decreased from 8% to 2%, while in control group 10% to 7%. Students that were unable to use capitalization where necessary was decreased from 77% to 26% and 78% to 41% respectively. Students that were unable to read the words as they couldn't identify the sounds that each letter represents decreased from 30% to 23% and 26% to 21%. Students that were unable to comprehend the meaning of the new vocabulary as they have no practice of guessing the meaning contextually has been decreased from 40% to 34% while the no. of students who has the difficulty of comprehending vocabulary in control group remains same. The number of students in experimental group that were unable to use the basic knowledge of grammar has been decreased from 72% to 57%, it has been decreased from 69% to 61% in the students in control group. While the number of students in experimental group that were unable to write even a simple essay on a familiar topic has been decreased from 53% to 31%, number of students in control group has been decreased from 53% to 38%.

The third objective of this study was to investigate the effectiveness of teacher's mindfulness on classroom climate, and it was hypothesized that there is a positive relationship between Teachers' Mindfulness and Classroom Climate. The Pearson

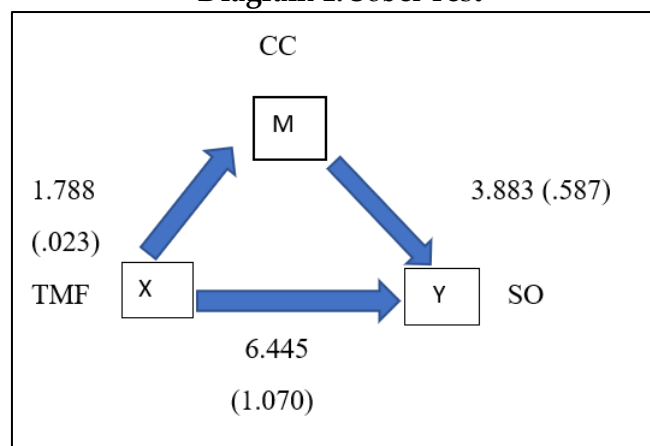
correlation coefficient between the two variables teachers' mindfulness (TMF) and the Classroom Climate (CC), there is a very strong, positive correlation between the two variables ( $r = .870$ ,  $n = 230$ ,  $p < .0005$ ). As the direction of the relationship is positive, it is statistically proven the effectiveness of teachers' mindfulness, on the classroom climate. These results support the findings by Meyer L. (2018); Flook et al., (2013).

The fourth objective of this study was to investigate the effectiveness of teacher's professional skills on classroom climate, and it was hypothesized that there is a positive relationship between Teachers' Professional Skills and Classroom Climate. The Pearson correlation coefficient between the two variables teachers' professional skills (TPS) and the Classroom Climate (CC), there is a very strong, positive correlation between the two variables ( $r = .993$ ,  $n = 230$ ,  $p < .0005$ ). As the direction of the relationship is positive, it is statistically proven the effectiveness of teachers' professional skills, on the classroom climate. The results support the findings by Shah et al. (2014). The researcher experienced the importance of professional skills; content knowledge, curriculum knowledge, managerial skills, pedagogical skills and communicative skills that create a positive classroom climate; a healthy learning teaching environment as a passive and an active observer.

The fifth objective of this study was to identify the significance of classroom climate on student outcomes as a mediating factor.

In this study based on the Sobel equation the results define that the significant value (p value) is 0, which is less than 0.05. It is statistically proven that, there is a significant mediating effect of classroom climate on the relationship between teachers' mindfulness, teachers' professional skills and student outcome.

**Diagram 1: Sobel Test**



Results of Sobel Test: Test statistics = 6.59117224 Standard Error = 1.0533489 P-value = 0.

The sixth objective of this study was to identify the significance of student's mindfulness on student outcomes as a moderating factor. According to the regression analysis, the significant value (p value) of MbyX is 0.000, which is less than 0.05. It is statistically proved that there is a significant moderating effect of student mindfulness on



the relationship between classroom climate and student outcomes. These results support the findings by Meyer L. (2018).

### **6.3 Limitations**

The limitations of this study are that the mindfulness practice of each participant may vary according to their individual differences, the time they engage in activities mindfully.

## **7. Significance of Study and Recommendations**

This study is a substantial contribution to the knowledge gap of concept focused on how Government Schools in Sri Lanka can use mindfulness to less stress of the teachers as well as students and improved professional skills of teachers as tools to improve classroom climate and student outcomes.

The information gained through this study will shed some insight into the policy makers, curriculum developers, curriculum implementers, teachers and teacher educators and the persons who are interested in this field of mindfulness to gain spiritual happiness.

Mindfulness practice should be introduced and practiced continuously with the teachers and the students in the schools of Sri Lanka to create an enjoyable stress-free learning teaching environment which contributes to have a successful student outcome.

### **7.1 Recommendations**

The first recommendation is to adopt a policy to implement mindfulness in the school curriculum. The second recommendation is to implement continuous professional skill development programmes on curriculum, Syllabi, learning outcomes, methodology of achieving the objectives and outcomes, knowledge and skill of creating simple to complex multi-activities, formative assessment with immediate feedback when and where necessary etc. should be conducted while monitoring the implementation of curriculum in the schools in Sri Lanka. The third recommendation is to implement continuous mindfulness development programmes for teachers in Sri Lanka.

## **8. Conclusion**

Findings of this study added to the current body of research that exists on mindfulness practices in education, the effectiveness of professional skill development programmes for teachers, effective classroom climate and the outcomes of the students. Based on the findings of the study, it is evident that mindfulness is an effective tool which can be employed in all the schools in Sri Lanka as a remedy for the stress of both teachers and students, and poor academic outcomes of the students in Sri Lanka.

### **Conflict of Interest Statement**

The authors declare no conflicts of interest.

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## Appendix 1

**Table 2:** Operational Definitions of the Variables in this Study

| Variable                           | Operational Definition   | Items of the Questionnaire/ Observation Sheet  | Source & Scale   |
|------------------------------------|--|--|--|
| (SOs–Affective Domain)             | Affective Domain of the Students - Student Behavioural Outcome   | 1. Abasenteesam - No. of students of each class (irregular participation)<br>2. Passive participation<br>3. Lack of Teacher Student Relationship<br>4. Lack of Student - Student Relationship<br>(Participatory Observation) | (adapted from Syed Kamal – Ud- Din Shah 2014;)<br><br>No. of students of each class                            |
| Student Cognitive Domain           | Students' Academic Outcomes  | 1. Letter Formation<br>2. Capitalization<br>3. Basic Reading<br>4. Vocabulary Comprehension<br>5. Basic Grammar<br>6. Essay Writing<br>(Active Participatory Observation and interviewing)                                   | (adapted from Syed Kamal – Ud- Din Shah 2014;)<br><br>No. of students of each class with these each difficulty |
| Teacher's Subject knowledge (TPS)i | Competencies related to sounds of English language, mechanics of writing, Listening, Speaking, Reading, Writing, Vocabulary and Grammar            | Ability of using English as a Second Language<br>(Passive Participatory Observation)   | (adapted from Syed Kamal – Ud- Din Shah 2014;)<br><br>5-point Likert Scale                                     |
| Curriculum Knowledge (TPS)ii       | Understanding of Competencies, Competency Levels Learning outcomes essential and desired level to be achieved by the students in English Language. | 1. knowledge on basic competencies to be achieved by students<br>2. knowledge on learning outcomes<br>(Passive Participatory Observation and interviewing)   | (adapted from Syed Kamal – Ud- Din Shah 2014;)<br><br>5-point Likert Scale                                     |

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|                                 |  |  |  |
|---------------------------------|--|--|--|
| Pedagogical Skills (TPS)iii     | Knowledge and skills of using the methodology of TESL (Teaching English as a second language) in the learning teaching process; teaching techniques, teaching aids, and assessment procedure | 1.Using multi-level activities (simple to complex)<br>2. Assessment – more formative & feedback & summative<br><br>(Passive Participatory Observation)           | (adapted from Syed Kamal – Ud- Din Shah 2014;)<br><br>5-point Likert Scale |
| Managerial Skills (TPS)iv       | Management of physical and human resources of the classroom  | 1.physical resources (classroom environment-classroom arrangement<br>2.human resources (eye contact, Individual Attention<br>(Passive Participatory Observation) | (adapted from Syed Kamal – Ud- Din Shah 2014;)<br><br>5-point Likert Scale |
| Communicative Skills (TPS)v     | Communication between teacher and the student in the classroom   | Teacher -Student relationship<br><br>(Passive Participatory Observation)   | (adapted from Syed Kamal – Ud- Din Shah 2014)<br><br>5-point Likert Scale  |
| Teacher's Mindfulness (TMF)     | Effectiveness of being at the present moment<br>And self-awareness   | 1.Confidence<br>2.Teacher enjoys teaching<br>3. A good listener<br>(Passive Participatory Observation)   | (adapted from Meyer L. 2018<br><br>5-point Likert Scale                    |
| Student Mindfulness (SMF)       | Effectiveness of being at the present moment<br>and self-awareness   | 1.Student attention<br>2.Confidence<br>3.Student enjoys Learning<br><br>(Active and Passive Participatory Observation)   | (adapted from Meyer L. 2018<br><br>5-point Likert Scale                    |
| Student Academic Outcomes (SOs) | Achievements levels of Competencies related to Reading, Writing, Vocabulary and Grammar  | Marks obtained for English Language Grade10<br>Last Term Test Paper (Pre-Test) &<br>Grade 11 First Term Test Paper (Post Test)                                   | Test Papers prepared at Provincial Level                                   |

## Appendix 2

Some language activities done:

- 1) Writing capital and simple letters in the Alphabet of English Language – to help them to identify the differences, formation,
- 2) Using capital letters where necessary- at the beginning of a name of a person, animal, place, the word 'I'- to help them to use capital and simple letters where necessary
- 3) Sounds of the letters – vowel sounds, consonant sounds – a, e, i, o, u three letter words, four letter words, - to help them to read the words correctly
- 4) Re writing the sentences using capital letters where necessary - to help them to use capital and simple letters where necessary
- 5) Listen to a simple text and fill the form using the given words – to improve listening skill – listening comprehension
- 6) Read the text and fill the form – read and find specific information- reading and writing skills
- 7) Prepare a form and complete with their information – form filling
- 8) Practice asking questions on personal information - speaking - like a game
- 9) Prepare a form and fill with friend's information – using the language – speaking, listening, reading and writing skills
- 10) Writing on 'Myself' using the model given. – parallel writing
- 11) Give a speech on 'Myself'.
- 12) Writing about 'My Best Friend' using the model given. – parallel writing
- 13) Give a speech on 'My Best Friend'.
- 14) Comprehension questions on 'Vandalism' – Unit 1 – lesson 1- Grade 11- Reading and writing – group work – answers in complete sentences. Ask them to find words they can understand and create their own definition for vandalism. Eg: What is vandalism? What are the two levels of vandalism? Explain each level with examples. What are the reasons for vandalism? What are the bad effects of vandalism? How can we stop vandalism? Etc.
- 15) Write the answers on the board by the students in each group.
- 16) Discuss the answers with the other groups and do the needed corrections by the students on the board.
- 17) They do the corrections in their writing books.
- 18) Students practice asking and answering the questions orally in groups. They help each other speaking
- 19) They make a circle. Pass the ball and ask and answer the questions by each. They help each other when needed.
- 20) They write an essay on 'Vandalism' using the answers.

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