

# Introduction to the International Educators PTSI Research Journal

## Researching PTSI in the English Language Teaching Profession. Beyond the Battle field

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### Introduction.

For decades, PTSD (post-traumatic Stress Disorder) has been assigned to service men and women who suffered a serious mental injury while in combat duties. There is a stigma attached to PTSD and no one likes to 'wear' the tag PTSD for the implications are far reaching from self-induced depression, to job loss. PTSD is defined by Xue-Rong Miao et al (2018) "*Posttraumatic stress disorder (PTSD) is a chronic impairment disorder that occurs after exposure to traumatic events. This disorder can result in a disturbance to individual and family functioning, causing significant medical, financial, and social problems.*"

Until now the professions most openly associated with PTSD have been Military, Police Officers, Firefighters, Emergency Medical and Ambulance Personal, Healthcare Workers, Journalists and First Responders. Waheed,A,. et al (2019.) The notion that educators teaching students whose mother tongue is not English may suffer PTSD did not allow, pursuant to a narrow definition, PTSD to extend to the field of this specialized area of educators. Zhang, 2022, skirted the issue of student stress,",,, teachers' *empathy can reduce the stress level which, in turn, positively affects*

*learners' engagement level..."* but the research did not explore the deeper fundamental medical/neurological/ issues that existed.

In 2023 this notion that PTSD was only for certain professions was challenged. (Mondragon, 2023.) However Mondragon was equating PTSD in teachers with the effects of COVID, and as such the research is limited to a unique specific event (COVID) and thus distinguishable from our broader spectrum approach herein. However what is notable is the high % of teachers (11%) found in the limited 5 surveys (Mondragon) of teachers who claimed to have suffered 'PTSD' in COVID. The question not addressed in the survey, namely was COVID an event that fits within the hitherto accepted medical definition of PTSD, and the answer seems to be no. The 2022 study by Mondragon et al. did suggest that teachers faced significant stress during COVID-19, and some might have developed PTSD 'like' symptoms. It's a meta-analysis, which combines data from multiple studies.

While COVID-19 was a stressful and traumatic experience for some (especially frontline workers), it doesn't automatically give to rise to a claim of PTSD. PTSD typically arises from a specific traumatic event, not simply a stressful situation. The study highlights though the specific challenges teachers faced during COVID-19 (remote learning, safety concerns, etc.), which could contribute to stress and potentially PTSD like symptoms in some cases. The legal and insurance ramifications that would occur if PTSD arose from COVID are unfathomable if one considers that a potential 96,000,000 teachers all qualified for an insurance claim. However, the authors herein with decades of medical, legal, educational and military experience submit that PTSI (defined herein as Post Traumatic Stress Injury, Post Traumatic Stress Input ) is a serious medical issue that falls within the unique world of English language teaching requiring greater research, analysis and medical support for the profession.

We note the letter D in PTSD stands for 'disorder' and has been condemned as derogatory. In 2012. The *Washington Post* suggested replacing the word 'Disorder' with the word 'Injury.' *"Military officers and some psychiatrists say dropping the word "disorder" in favor of "injury" will reduce the stigma that stops troops from seeking treatment. "No 19-year-old kid wants to be told he's got a disorder," said Gen. Peter Chiarelli, who until his retirement in February led the Army's effort to reduce its record suicide rate."* 2012. Jaffe, G.

It is this paper's contention (we transition the name from PTSD to PTSI) and that the field of PTSI extends to the English Language teaching profession. That profession gives rise to the underlying elements that can cause harm. We add to the medical definition of PTSI to include language learning and PTSI injuries that can and do emanate from and as a direct result of activities in the English language classroom. PTSI, both forms, namely Post Traumatic Stress Injury (teachers) and Post Traumatic Stress Input (student language learners) is, we submit, a branch of PTSD and

arguably needs intensive research by the educational academic world, psychologists, the medical profession and allied professions.

We further expand the notion that the title *Post Traumatic Stress Injury* extends to students, (I = input) and we submit below that the final word (injury) should also be changed from Injury (for teachers) to 'input' for students whose mother tongue is not English who are learning English pursuant to an Education system. Also we note a distinction that whilst PTSD is considered a mental health disorder, PTSI proponents argue it's a biological injury which opens up further enquiry.

We submit below and expand that Language Teacher training (sometimes called TESOL training) hence forth should expand beyond traditional norms of teaching grammar, pronunciation, vocabulary acquisition and so on to include elements of teacher/student PTSI. Teachers must not to be equated to First Aiders who give basic primary help, but to be equated to para medics (for example) who have high level training and perform life saving techniques and who carry legal liability. (see for example Tucker & Harlan, 2023) *"2 paramedics found guilty of criminally negligent homicide in Elijah McClain's death."* A recent online 'mock court case' argued the liability of English teachers for failing to teach their students to a satisfactory level of L2, and whilst novel, was based on sound legal theory. It is not unreasonable to expect that English teachers and educational entities will carry legal liability as this area of law progresses.

<b>Factor</b>	<b>PTSD</b>	<b>PTSI</b>
Cause	Specific traumatic event	Chronic exposure to stressful situations
Professions Affected	Veterans, emergency responders, etc.	English TESOL Teachers, English language lecturers, Language academics
Individuals Affected	Primarily adults	Adults and students (especially non-native speakers, young English language learners)
Impact	Mental health disorder	Biological injury
Specific challenges	Withdrawal from society	Cultural adjustment difficulties, violence in educational zones, student trauma, Language fear, cultural conflict

### **Definition of PTSD**

Post-traumatic stress disorder (PTSD) is a mental health condition that can develop after a person experiences or witnesses a terrifying ordeal.

## Definition of PTSI for English Language Educators

PTSI (Post-traumatic Stress Injury) is a term used by some as an alternative to PTSD (Post-traumatic Stress Disorder). There's debate around the terminology, and here's why:

- **Same Symptoms:** PTSI refers to the same set of symptoms as PTSD – intrusive thoughts, flashbacks, avoidance behaviors, hypervigilance, and negative thoughts and moods – all stemming from a traumatic event.

## The Distinction Between PTSD and PTSI

Cause: PTSD is traditionally linked to a specific traumatic event (e.g., combat, accidents, violence). PTSI, on the other hand, is proposed to arise from chronic exposure to stressful situations inherent in certain professions (e.g., English language teaching) or demanding language acquisition for non-native speakers.

Impact: PTSD is generally considered a mental health disorder affecting thoughts, emotions, and behaviors. PTSI proponents argue it's a biological injury, implying a deeper physiological impact beyond just mental health.

**Traumatic event.** We submit that learning a second foreign language is/can be a 'traumatic' event for young learners for the following reasons:-

- i. Learning a language that is not their mother tongue – the neurological process of hearing / seeing / a language with a different grammar system, underlined by another culture, is/can be a 'traumatic event' for the brain's neurological processes. (see below discussion on the amygdala)
  - ii. Teaching English as a Second, Foreign or other language can have traumatic side effects in students which need to be recognized by well trained language teachers.
  - iii. PTSD/PTSI requires a 'traumatic event'. While teaching English itself wouldn't be considered a traumatic event (at least at this point in time pending research on the definition to extend to certain events described herein) there are situations within the teaching environment that could be highly stressful and contribute to chronic stress, which can have negative consequences similar to PTSI symptoms. Here are some elements of teaching English that may be particularly stressful (or even traumatic)
- **Unruly or disrespectful students:** Dealing with disruptive or disrespectful behavior can be emotionally draining and lead to feelings of helplessness or frustration for both teacher and students.

- **Large class sizes with limited resources:** Managing a large number of students with limited resources or support staff can be overwhelming and lead to feelings of inadequacy or burnout.
- **Constant pressure to meet academic standards:** Feeling pressure to achieve high test scores or meet strict academic goals can create significant stress, especially if resources are limited.
- **Language barriers and cultural clashes:** Communicating with students from diverse cultural backgrounds can be challenging, leading to misunderstandings, confusion and frustration for both teacher and students.
- **Unrealistic expectations from parents or administrators:** Facing pressure from parents or administrators with unrealistic expectations can create significant stress and feelings of inadequacy.
- **Violence or threats in the school environment:** Unfortunately, some teachers may experience violence or threats of violence in their workplaces, which can be highly traumatic. (2023. Curan, C.)

### **Chronic Stress vs. Trauma**

It's important to distinguish between chronic stress and a traumatic event for the elements of PTSI(injury). While these situations above can be very stressful, they wouldn't typically meet the currently accepted criteria for a 'traumatic event', which is a singular, shocking, or life-threatening experience in PTSD terminology. But It's time to recognize that these events affect young learners as much as soldiers in the battle field in their own unique way. Mondragon (2023) argues, *"...teachers are more vulnerable to "shared trauma" and "compassion fatigue" [49,58,59]. In other words, teachers might be indirectly experiencing the trauma of the populations they serve, resulting in emotional, physical, and cognitive responses that have not yet surfaced."*

### **Impact of Chronic Stress**

However, chronic exposure to these stressful situations can lead to burnout, anxiety, and depression. These symptoms can overlap with some of the symptoms of PTSI, like difficulty concentrating, fatigue, and irritability.

### **History of PTSD:**

The struggles people experience after trauma have been recognized for centuries, though the understanding and terminology have evolved.

- **Early Observations:** Even before the formal diagnosis, symptoms were documented. Civil War soldiers exhibited signs of what we now call PTSD, with terms like "nostalgia" or "melancholia" used to describe their lethargy, withdrawal, and emotional outbursts.
- **20th Century Descriptions:** The 19th century saw the emergence of terms like "shell shock" (WWI) and "combat fatigue" (WWII) to describe the psychological impact of war.
- **Vietnam War and Modern Diagnosis:** The experiences of Vietnam veterans played a crucial role in solidifying the concept of PTSD. Their mental health struggles brought the issue to light, and by 1980, the American Psychiatric Association (APA) formally recognized PTSD in the Diagnostic and Statistical Manual of Mental Disorders (DSM-III).

### **Who Suffers from PTSD?**

PTSD can develop in anyone who has experienced a traumatic event. This can include:

- Warfare and Combat
- Natural Disasters (earthquakes, hurricanes)
- Serious Accidents (car crashes, plane crashes)
- Physical or Sexual Assault
- Childhood Abuse
- Witnessing Traumatic Events (violence, accidents)

While anyone can experience PTSD, some groups are at higher risk, including:

- Military Veterans
- Survivors of Abuse
- First Responders (police, firefighters, paramedics)
- Victims of Violent Crimes

### **Research into student stress**

There's a vast amount of research on student stress. It's a recognized issue with significant consequences for student well-being and academic performance. Here we outline a breakdown of some key areas:

#### **Prevalence:**

Studies show a high prevalence of student stress across all ages, from secondary school to higher education. The OECD (*Organisation for Economic Co-operation and Development*, 2015) reports that over two-thirds of students experience stress related to poor grades and test anxiety.

## **Sources of Stress:**

Research has identified various factors contributing to student stress, including:

- \*Academic Pressure: Workload, deadlines, fear of failure, and pressure to achieve high grades.
- \*Time Management: Difficulties in juggling academic commitments, extracurricular activities, and personal life.
- \*Financial Concerns: Student loans, living expenses, and job insecurity.
- \*Social Pressures: Fitting in, peer relationships, and social media comparisons.
- \*Mental Health Factors: Anxiety, depression, perfectionism, and lack of sleep can exacerbate stress.
- \*Fear of looking foolish in front of peers especially in an English language class

## **Impacts of Stress:**

High levels of stress can negatively affect students in several ways:

Physical Health: Headaches, stomachaches, sleep disturbances, and weakened immune system.

Mental Health: Increased anxiety, depression, and difficulty concentrating, suicide

Academic Performance: Lower grades, decreased motivation, and difficulty completing assignments.

Social Life: Withdrawal from friends and family, strained relationships.

## **PTSI is a relevant field to explore in English Language Teaching.**

Post Stress Traumatic Injury/ Input is recognized in education. Students suffer stress. Teachers suffer stress, yet it is not widely considered as a factor in teaching students. Students whose mother tongue is not English have to use separate enological functions to form the new language - this neurological activity is not something that is familiar to the brain's neurology. Research clearly shows the amygdala changes under stressful situations and research has shown students who are relaxed have a different amygdala output during the learning process. (2017, Andolina.)

Studies use brain imaging techniques like fMRI (functional magnetic resonance imaging) to investigate brain activity during language learning. fMRI measures blood flow, which indirectly reflects neuronal activity. Research shows the amygdala becomes more active during language learning, especially when encountering unfamiliar or challenging language elements.

Stress and the Amygdala: The amygdala is associated with emotions like fear and stress. When stressed, the amygdala can divert resources away from areas crucial for language learning.

## **What neurological research helps us understand English second language learning?**

Neurological research has helped us to understand second language learning in a number of ways. For example, brain imaging studies have shown that different parts of the brain are activated

when we learn and use a second language. One study found that the hippocampus, which is responsible for memory, is more active when people are learning a second language. This suggests that 'memory' plays an important role in second language learning.

Another study found that the Broca's area, which is responsible for speech production, is more active when people are speaking a second language. (Dewar, H, 2017) This suggests that speech production is also an important part of second language learning. In addition, brain imaging studies have shown that the brains of bilingual people are different from the brains of monolingual people. For example, bilingual people have more gray matter in the brain, which is associated with intelligence and cognitive function.

Here are some other specific findings from neurological research on second language learning:

- Second language learning can change the structure of the brain. Studies have shown that bilingual people have more gray matter in certain areas of the brain, such as the hippocampus and the Broca's area.
- Second language learning can improve cognitive function. Studies have shown that bilingual people have better memory, attention, and problem-solving skills than monolingual people. Ali. A. 2023
- Second language learning can protect against cognitive decline. Studies have shown that bilingual people are less likely to develop dementia and other forms of cognitive decline later in life.

Overall, neurological research has helped us to understand that second language learning is a complex process that involves many different parts of the brain. This research can help us to develop more effective teaching methods for second language learners. For example, knowing that memory is important for second language learning, we can develop teaching methods that focus on helping students to remember new vocabulary and grammar. Additionally, knowing that second language learning can improve cognitive function, we can encourage students to learn a second language.

### **What neurological research on the amygdala has been carried in relation to second language acquisition?**

The amygdala is a small almond-shaped structure in the brain that plays a role in processing emotions, especially fear and anxiety. It is also involved in learning and memory.

There is some neurological research on the amygdala in relation to second language acquisition. For example, one study found that the amygdala is more active when people are learning a second language in a stressful environment. This suggests that stress (PTSI) can interfere with second language learning. (2017, Andolina.)



Another study found that the amygdala is less active when people are learning a second language in a supportive environment. This suggests that a supportive environment can help to reduce stress and improve second language learning. (Willis, J. 2014)

In addition, some research has shown that the amygdala is involved in processing feedback on second language learning. For example, one study found that the amygdala is more active when people receive negative feedback on their second language learning. This suggests that negative feedback can trigger the amygdala's fight-or-flight response, which can make it difficult for people to learn effectively. This merely supports Krashen's 1981 pre PTSD research hypothesis.

On the other hand, some research has also shown that the amygdala is involved in processing positive feedback on second language learning. For example, one study found that the amygdala is more active when people receive positive feedback on their second language learning. This suggests that positive feedback can trigger the amygdala's reward system, which can motivate people to continue learning.

Overall, neurological research on the amygdala in relation to second language acquisition is still in its early stages. However, the research that has been done suggests that the amygdala plays an important role in second language learning.

Here are some implications of this research for second language teaching that directly impact PTSD:

- Teachers should create a supportive learning environment. This can help to reduce stress and improve second language learning.
- Teachers should provide both positive and negative feedback. Positive feedback can motivate students to continue learning, while correctly applied negative feedback can help students to identify areas where they need to improve. (2009, Ellis)
- Teachers should be aware of the potential negative impact of stress on second language learning. If teachers see that a student is feeling stressed, they can provide support and help the student to manage their stress.

By also understanding the role of the amygdala in second language acquisition, teachers can develop more effective teaching methods and help their students to learn more effectively. This will reduce PTSD.

## **Teachers' PTSD**

### **Post traumatic Stress Injury.**

It is submitted that teachers are under stress and English teachers who teach students whose mother tongue is not English are more likely to suffer higher levels of stress in teaching. How can

a teacher of English recognize he or she may be suffering from Post Traumatic Stress Injury in the classroom where students are failing or not grasping the nuances of the new language?

English teachers, especially those instructing students with different native tongues, can face significant stress. Here's how an English teacher can recognize potential signs of stress exceeding healthy levels and avoid mistaking it for full-blown PTSD (injury):

### **PTSD in the Classroom**

- PTSD is typically linked to a specific traumatic event, which teaching challenges usually aren't. Herein however we extend the definition of 'traumatic event' to include, for example, Error Correction. Incorrectly done Error Correction can lead to a student having PTSD. Other traumatic events we suggest include negative teacher criticism, poor grade that results in undue pressure from parents, unintentional or negligent teacher comments inter alia.

### **Recognizing Stress in the Classroom**

- **Student Frustration:** If students seem consistently frustrated or failing to grasp concepts, it can be stressful for the teacher. But it doesn't necessarily indicate the teacher has PTSD but may be a sign the student has PTSD.
- **Teacher Reactions:** The key is to notice how the teacher reacts to student struggles. Does the teacher become overly critical, withdraw emotionally, or feel helpless? These reactions might suggest stress impacting their ability to cope.

### **Strategies for Teachers**

- **Positive Reinforcement:** Focusing on student progress and celebrating small wins can boost morale for both teacher and students.
- **Teaching Methodology:** Reflecting on teaching methods and incorporating techniques that cater to different learning styles can make learning more effective, reducing stress for both teacher and students.

By recognizing the signs of stress and taking proactive steps towards self-care and effective teaching methods, English teachers can create a more positive learning environment for themselves and their students. If stress persists and significantly impacts daily life, consulting a mental health professional is recommended to rule out any underlying conditions.

### **Students' PTSD**

These may be some of the signs and symptoms of student PTSD. These may be some warning signs that English language teachers should be aware of:-

### Verbal Cues:

- **Increased complaints:** Students may frequently complain about feeling overwhelmed, frustrated, or confused.
- **Negative self-talk:** They might make negative statements about their abilities to learn English, like "I'll never get this" or "I'm so stupid."
- **Withdrawal from participation:** Stressed students may become reluctant to answer questions, participate in activities, or speak in English.
- **Increased questions:** While not always negative, a surge in basic questions ("How do you say...?" "What does this mean?") might indicate confusion or a fear of making mistakes.

### Non-Verbal Cues:

- **Physical manifestations:** Stress can manifest physically, with students appearing tired, fidgety, or having difficulty focusing.
- **Changes in facial expressions:** Look for furrowed brows, tightly closed lips, or avoidance of eye contact, which might indicate anxiety or frustration.
- **Body posture:** Slouching, crossed arms, or tense posture can signal discomfort or a desire to withdraw.
- **Changes in behavior:** Students who are usually outgoing may become withdrawn, while quiet students may become disruptive.
- **Missed classes:** An increase in absenteeism can also be a sign of stress or anxiety related to the English language class.

### Changes in Learning Patterns:

- **Difficulty concentrating:** Stressed students may have trouble focusing on lessons, instructions, or completing tasks.
- **Increased errors:** While errors are expected in language learning, a sudden increase in mistakes could indicate stress-related difficulty processing information.
- **Difficulty remembering new concepts:** Stress can impair memory, making it harder for students to retain new vocabulary or grammar rules.
- **Loss of motivation:** Stressed students may lose interest in learning English or completing assignments.

It's important to note that these signs can also be indicators of other issues. However, by observing these behaviors, a teacher can identify students who might be struggling and take steps to support them.

### **Discussion.**

The notion of PTSI (injury or Input) in English language teachers has been discussed for decades though not with such specificity as herein. Mondragon et al, 2023, threw down the gauntlet by arguing teachers suffered PTSD with the fundamental cause being the COVID pandemic. We respectfully argue that PTSD is not the right terminology and the definitions for PTSD does not encapsulate those who suffer PTSI but their research has opened the window for vast research.. For the purposes of this paper and journal we submit PTSI is endemic to the English teaching profession, though strong arguments exist for occurring in other professions such as nursing, airline employees, et al.

That there will fierce opposition to this claim from governments (as issues for better training and health insurance coverage, student welfare, abound) there is no turning back the clock. Our research paper is ground zero. PTSI (injury or Input) do/does exist in the English language teaching and learning sphere and must be addressed. Though statistics are not reliable we can see from the British Council that there are circa 1.5 billion English language learners globally. (U.K. Parliament report 2017.) Unfortunately, there aren't any definitive global statistics on the exact number of English teachers worldwide. If, for example, and there are no official statistics available, If each teacher can teach 200 students, then around 7,500,000 teachers would be required to instruct 1.5 billion students globally. Given the preponderance of online teachers teaching one on one, we suggest the number of English teachers to be +/-25-30% greater.

Even allowing for a +/- 25% error, this suggests that PTSI/PTSI is a potentially very serious problem for English teachers and global English language learners.

### **Conclusion and recommendations**

This research has shed light on the unique challenges faced by English language learners (ELLs), particularly young learners who may have experienced Post-Traumatic Stress Input (PTSI) and more importantly, English language teachers who, we submit, may suffer PTSI(njury). While all learning presents hurdles, acquiring a new language involves navigating unfamiliar neurological processes on top of the emotional toll of potentially traumatic experiences. For English language educators, including the TESOL profession, the burden is compounded by the lack of widespread training in neurobiology, leaving teachers unequipped to fully address the specific needs of traumatized ELLs.

Moving forward, a multi-pronged approach is crucial. Whilst we continue to incorporate what we have hitherto learnt in so far as second language acquisition goes, ELL programs going forward might incorporate trauma-informed practices to create a safe and supportive learning environment. Simultaneously, equipping English Language Educators with knowledge of the neurological processes involved in second language acquisition, alongside trauma-sensitive teaching methods, is essential. By recognizing the unique challenges faced by young ELLs with PTSI, and by providing the necessary support systems for both students and teachers, we can empower them to succeed in the language learning journey.

Secondly we need to establish support systems for English Language Teachers and those in second language research academia who may suffer PTSI, namely Post Traumatic Stress Injury. This we submit can be attributable to a multitude of biological interventions and even in the case of academia the demand to write and publish research in high Indexing. One must contemplate the legal liability of higher educational intuitions who demand this as a condition of employment (but that is for another time.) Much more intensive research needs to be undertaken with the English language teaching profession such that teachers and academia can not only understand PTS(Input) in their students, but also educational systems be aware that English language teachers may and do suffer PTS(I)njury and the appropriate treatment.

Thirdly global recognized TESOL entities such as IATEFL, British Council, TESOL International Association, JALT, PALT, and the hundreds of other country wide registered organizations should consider incorporating PTSI training. Indeed our recommendation would be to establish a World authority that provides all global educational entities with relevant materials.

The final word we leave with Mondragon, 2022. *"...that there is a need for more research on PTSD and teachers worldwide, since a significant proportion of teachers may be suffering from PTSD. It is therefore urgent to investigate it further, but also to provide teachers with the necessary resources to cope emotionally... Improving the emotional state of teachers in the pandemic and post-pandemic eras would have a direct impact on society, as it would directly influence the quality of education and the emotional state of students and future generations. We must remember that the social role of teachers is paramount in society, and even more so when faced with traumatic social challenges."*

## **Index.**

2019. Abdul Waheed, Shabana Gul, Muhammad Khan Riaz & Muhammad Naeem. *Prevalence of Post-Traumatic Stress Disorder and Its Impact on Job Satisfaction and Perceived Job Performance: Evidence from Afghanistan*. Jinnah Business Review, Vol. 7, No. 1, pp. 37-45

2023. Ali, A. *Effect of Bilingualism on Cognitive Development in Children*. Alustath Journal For Human and Social Sciences. DO - 10.36473/ujhss.v62i4.2278
2017. Andolinia, D., & Borreca. A. *The Key Role of the Amygdala in Stress in The Amygdala - Where Emotions Shape Perception, Learning and Memories* DOI: 10.5772/67826
2023. Curan, C. School kids are so violent coming out of the pandemic that they're sending teachers to the hospital, but an expert says to resist 'get tough' approaches, FORTUNE. <https://fortune.com/2023/09/24/why-high-school-students-violent-dangerous-pandemic-solutions-discipline/>
2017. Dewar, H., Hedin, M., Jones, H. Broca's Area Is the Brain's Scriptwriter, Shaping Speech, Study Finds. Johns Hopkins Medicine. [https://www.hopkinsmedicine.org/news/media/releases/brocas\\_area\\_is\\_the\\_brains\\_scriptwriter\\_shaping\\_speech\\_study\\_finds](https://www.hopkinsmedicine.org/news/media/releases/brocas_area_is_the_brains_scriptwriter_shaping_speech_study_finds)
2023. Gondo, D., Moreau, D, Campillo, P. Student Stress and the Effects of Relaxation: A Study Conducted at the University of Lille in Northern France. (<https://www.mdpi.com/2039-7283/13/3/54>)
2009. Ellis. R. Corrective Feedback and Teacher Development. L2 Journal. <https://escholarship.org/uc/item/2504d6w3>
2015. Ellis. R. Principles of Second Language Acquisition. <https://www.cal.org/wp-content/uploads/2022/05/PrinciplesofInstructedSecondLanguageAcquisition.pdf>
2012. Jaffe, G. The Washington Post. New name for PTSD could mean less stigma. [https://www.washingtonpost.com/world/national-security/new-name-for-ptsd-could-mean-less-stigma/2012/05/05/gIQAIv8M4T\\_story.html](https://www.washingtonpost.com/world/national-security/new-name-for-ptsd-could-mean-less-stigma/2012/05/05/gIQAIv8M4T_story.html)
1981. Krashen, S. Second Language Acquisition and Second Language Learning. [https://www.sdkrashen.com/content/books/sl\\_acquisition\\_and\\_learning.pdf](https://www.sdkrashen.com/content/books/sl_acquisition_and_learning.pdf)
2022. Mondragon, I., Fernandez, N., I, Naiara., Ozamiz-Etxebarria, Villagrasa, B, Santabárbara, J. *PTSD (Posttraumatic Stress Disorder) in Teachers: A Mini Meta-Analysis during COVID-19*. MDPI. <https://www.mdpi.com/1660-4601/20/3/1802>
2015. OECD. PISA Results. Vol. 3. <https://www.oecd.org/pisa/PISA-2015-Results-Students-Well-being-Volume-III-Overview.pdf>
2020. Pascoe, M., Hetrick S., Parker, A. The International Journal on the Biology of Stress. The impact of stress on students in secondary school and higher education (<https://www.tandfonline.com/journals/ists20>)

Tucker, E, & Harlan , J. 2 paramedics found guilty of criminally negligent homicide in Elijah McClain's death. (2023). <https://edition.cnn.com/2023/12/22/us/elijah-mcclain-paramedics-trial-verdict/index.html>

U.K. Parliament British. Council ( 2017). – supplementary written evidence (BBC0057)  
<https://committees.parliament.uk/writtenevidence/61980/html/>

Willis. J. The Neuroscience Behind Stress and Learning. G. Lucas educational Foundation. (2014).  
<https://www.edutopia.org/profile/judy-willis>

Xue-Rong Miao, Qian-Bo Chen, Kai Wei, Kun-Ming Tao & Zhi-Jie Lu. (2018). *Posttraumatic stress disorder: from diagnosis to prevention*. Military Medical Research

Zhang, Z. (2022). Toward the Role of Teacher Empathy in Students' Engagement in English Language Classes. <https://pubmed.ncbi.nlm.nih.gov/35719575/>  
DOI: 10.3389/fpsyg.2022.880935