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Original Research

Effects of English Reading Anxiety Reducing Strategy Training on Students' Reading Performance

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Abstract
This study looked into methods that improve pupils' reading performance while
lowering their reading anxiety. The project employed a descriptive case study
design in conjunction with action research. Seventy sixth-grade students ($N = 35$
from sections A and B) participated in the study. They were divided into two
groups: the experimental group (section A) and the control group (section B). Three
evidence-based techniques were taught to the experimental group: deep breathing,
gradual muscular relaxation, and positive self-talk. The mean, standard deviation,
and analysis of variance (one-way ANOVA) were used to correlate the t-test results.
The empirical data's findings showed that worried readers' reading performance
was enhanced when they employed anxiety-reduction techniques; in other words,
the techniques had an effect on the readers' reading ability. The results showed that
lowering students' reading anxiety and raising their reading proficiency require the
use of English reading anxiety reduction techniques, including progressive muscle
relaxation, positive self-talk, and deep breathing.

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INTRODUCTION

In Ethiopia, English is used as a medium of instruction from grade nine through higher education, and it is taught as a topic beginning in grade one. For EFL language learners, then, the most crucial skill is rigorous English language instruction with a concentration on reading comprehension in particular (Liu, 2018). For a variety of reasons, pupils may not understand the writer's intended meaning during the reading process. Due to the fact that the language is foreign to the nation, as its significant name suggests, the most influencing language-learning component

processes is pupils' perceptions and opinions. In particular, FLRA (foreign language reading anxiety) is a unique complex of self-perceptions, beliefs, feelings, and behaviors associated with language acquisition in the classroom that results from the peculiarities of the language learning process. According to Bensalem (2020), kids have more difficulty comprehending textual meaning and interpreting texts when they are exposed to FLRA.

A significant amount of L2 research has been done in recent years with an emphasis on

communication anxiety (2007). Finally, the study showed that there was a statistically significant increase in English language anxiety among female students. Achame and Abebe (2019) also investigated the connection between grade nine students' English language proficiency and their anxiety related to learning a foreign language. The study's findings showed that grade 9 students at the targeted schools had varying degrees of foreign language anxiety (high, medium, and low). In particular, their data showed a substantial correlation between students' sex

and foreign language anxiety, meaning that

female students were more anxious than male

students.

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FLRA, which is thought to be a factor influencing second language acquisition and a predictor of L2 performance (Al-Khasawneh, 2016). According to Sato's (1999) study, reading in a foreign language can be stressful due to two factors: strange writing systems and scripts. They contended that L2 learners who are more comfortable with the L2 scripts would be less likely to feel anxious throughout the reading act, even though the reader would eventually not understand the entire text due to their poor knowledge of the cultural material underpinning the text. Lien (2011) looked into the relationship between reading anxiety and the reading methods used by 108 EFL college students. Students completed an intensive eighteen-week extra reading course, after which they completed a survey. The results demonstrated a negative correlation between reading strategies and reading anxiety. The findings demonstrated that although students with high anxiety levels used basic tactics, such as translation, to help them understand the text, students with low anxiety levels tended use more comprehensive reading strategies. Overall, the results demonstrated that, compared to students in the other groups with extremely low anxiety levels, children with high anxiety levels used more reading strategies.

It was possible to infer from the two local investigations that they both addressed anxiety levels in both sexes as well as simple general linguistic anxiety. This one, however, focuses on the impact of teaching reading strategies on students' post-training reading performance. As a result, the researchers observed a number of pupils in the targeted primary school displaying symptoms of reading anxiety. Informally, a few students also mentioned that they became anxious when reading in a foreign language and that they lost their love for reading. Without knowing what goes wrong, there's no way to ease the children's fear when they read in a foreign language. Stated differently, determining the extent of students' reading anxiety and the methods teachers employ to manage it is vital to tackling the problems that pupils encounter when reading in the target language. Accordingly, the following research question was raised to cover the research gap:

Berhane and Mishra (2019) studied general anxiety related to foreign language learning in Ethiopian university EFL students. For the study, 103 participants were chosen from four EFL courses at two Ethiopian institutions. The kids in the study had mean anxiety levels that were higher than average. Comparing the results to Na's other anxiety domains, the analysis also revealed that the majority of students experienced greater levels of

- 1. What do students think about reading about anxiety before learning anxiety reduction strategies?
- 2. Are the anxiety-reduction strategies significant predictors of students' reading performance?

Review of literature Reading Anxiety

Anxiety induced by unfamiliar vocabulary, unusual topics, poor reading comprehension, and students' reading trepidation is known as FLRA (Cheng, 2017). According to Rajab et al. (2012), anxiety can impede L2 reading and lead to poor comprehension, which can exacerbate learners' personal and social problems. They contend that since L2 tasks are more challenging, L2 readers suffer from them as they have to cope with unknown words, spellings, sentence structures, syntax, and words, as well as difficult semantic relationships, unseen linguistic components, an unfamiliar text culture, and a lack of L2 background information.

According to Rajab et al. (2012), reading anxiety does exist and must be taken into consideration, despite the fact that it is less stressful than speaking. According to Zaccoletti et al. (2020), teachers should teach students reading strategies, ask them to attribute their failure to insufficient use of strategies, and help them manage their anxiety because all of these things can improve students' reading comprehension and the importance of reading instruction.

Anxiety Reduction Strategies

Identifying feelings and understanding the connection between thoughts, feelings, and

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practicing various behaviors; relaxation techniques and developing stress-management skills; and recognizing unhelpful and anxious thoughts and changing them are the three main areas that instructional practices for reducing anxiety focus on (Damayanti, 2022). To improve students' reading anxiety-reducing techniques, the present researchers integrated progressive muscle relaxation, deep breathing, positive self-talk into a reading intervention that had already been tested.

Progressive muscle relaxation

One of the more traditional forms of physical activity is called progressive muscle relaxation (PMR; Ranjita & Sarada, 2014). It works by sequentially straining and releasing different muscle groups, starting with the head and neck muscles and working down the legs to the ankles (Khaira, Gopal, Saini & Isa, 2023). The process reduces the physical aspects of anxiety while also diverting the clients' attention from thinking about their anxious feelings.

Progressive relaxation and breathing incorporate eight activities: a) Introduction to the project or session; b) Hands, Arms, Legs, and Feet; c) Chest, Stomach, and Lower Back, positive self-talk; d) Deep Breathing, Complete Natural Breathing; e) Head, Neck, Shoulders, and Natural Breathing; f) Energizing Breathing; g) Relaxation of the upper body muscles; and h) alternate and energizing breathing techniques.

Every session, students in Buchler (2013) were guided through two muscle portions and one breathing exercise to carry out the tasks. By the end of the second week (two days a week, for twenty minutes each), the students

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had learned two breathing techniques to assist them cope with tension and anxiety in addition to engaging in the full-body progressive muscle relaxation exercises. For these exercises, students either stood next to their desks or remained seated. On the classroom's side, the researchers were keeping an eye on everything. By providing exercises and modeling the strategy, an English teacher helped to facilitate the problem.

Deep Breathing

Deep breathing is characterized by slow, diaphragmatic breathing intended to balance the body's levels of oxygen and carbon dioxide (McKenna, Gallagher, Forbes, & Ibeziako, 2015). It was crucial that air be inhaled via the nose and expelled through the mouth for deep breathing to work as well as possible. This kind of breathing would notify the body, causing it to react during a highly nervous period with less severe symptoms. Anxiety and sadness can linger because of the internal experiences that are suppressed (Ellis, Hutman, & Chapin, 2015).

Additionally, inhibited respiration is harmful to neurological function. Since the brain has little to no oxygen reserve, any alteration in blood oxygen levels brought on by breathing inhibition might exacerbate anxiety and have detrimental effects. One's breathing slows down. The rate of digestion increases. Blood pressure decreases, and the heart rate lowers. Normal sweating resumes (Buchler, 2013). Their analysis provided credence to the theory that prolonged, restrained breathing can occur in nervous individuals.

According to Buchler (2013), breathing can reduce anxiety by requiring active and concentrated thinking. We experience an increase in blood pressure and a quick heartbeat. When we're anxious, our blood flows more to our muscles than to our brain's cognitive area, which is why we lose consciousness. Detoxification is inhibited. The pace of breathing quickens. In order to give us energy, blood sugar is released, which also depletes our energy stores. You sweat more, and your rate of sweating increases. The body experiences an overall exhilarating impact due to the release of adrenaline (McCabe, Rubinson, Dragowski & Elizalde-Utnick, 2013). It is necessary to teach attentive breathing to both adults and children. They are instructed to become conscious of their body's sensations, particularly those related to deep breathing.

Positive Self-talk

Students' capacity to manage stress and anxiety will be greatly impacted by their ability to speak for themselves. It is crucial that self-talk be constructive and honest since it frequently dictates how things work out for a person. According to James, Reardon, Soler, James, and Creswell (2020), self-talk is a conversation in which the person manages and modifies assessments and beliefs, interprets feelings perceptions, and provides and guidance and affirmation to themselves. Children and teenagers who suffer from anxiety frequently hold illogical or improper beliefs, thoughts, or self-talk. These kids and exhibit teenagers frequently distorted information processing, a false recollection of

upsetting experiences, and a propensity to see threats in ordinary settings.

Studies have shown that anxiety is influenced by negative self-talk, and that anxiety increases the difficulty of learning new behaviors and performing current ones. A child's quality of life may be negatively impacted by negative self-talk because it often leads to a self-fulfilling prophecy (Hall, 2017). When they examined the relationship between self-talk and anxiety, the findings showed that for every level of anxiety, there was a higher level of negative self-talk and a strong positive link.

The facilitator of the anxiety-reduction technique would provide direction during the exercises by saying things like, "If you find your mind wandering, bring it back to thinking about what your muscles are doing right now." "How is your body feeling?" "Can you see in your mind's eye the tension and anxiety flowing out of your body?" Armed with stress management techniques, the student will be able to make changes to their behavior and reduce the strong feelings of anxiety.

Myhasuk (2014) asserts that "self-talk," or the words we say to ourselves, is how our attitudes and beliefs affect how we react. Our bodies will react appropriately to the information that our brains can process. With patience, time, and practice, we will start to notice a noticeable improvement in our ability to control our anxiety and feel much better in our everyday lives—even if we might not notice it right away.

Students will be given instructions like "You may choose to put your head down on your desk or shut your eyes" during instruction. "Listen to the positive self-talk

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and repeat the phrases to yourself" (Myhasuk, 2014)). The researchers went over a list of twelve self-talk phrases for anxiety and panic. Consequently, each child will receive copies of these words to take home. They will find that two or three of these phrases work wonders for them. They are going to try repeating these words twice a day, before bed and in the morning. In a few weeks, they'll be astonished at how much of a difference it makes in regaining control over their tension and anxiety.

Self-talk to lessen anxiety and stress "Select the positive self-talk statements that you like," was the advice given. Repeat these words aloud to yourself to help you remember them: "Feel free to come up with your own," because "the more you say them to yourself, the easier they will be to remember when you need them." I won't be harmed by a panic attack; B) I refuse to let negative thinking define who I am; C) I can spot negative ideas coming on and quickly replace them with real, uplifting ones; D) I am capable and strong; E) I am in charge of my thoughts and the choices I make; F) I am free to be who I am without feeling guilty, ashamed, or apologetic; G) I am proud of my accomplishments, no matter how small; H) I am calm, positive, self-assured, and composed; K) I have the ability to control my thoughts if I so choose; and L) I choose thoughts that are uplifting and constructive for me (see Buchler, 2013).

Materials and Methods Research Design

This study employed a quasi-experimental research design that involved the treatment of two different classes of students passing

through two instructional processes in real classroom settings. It was because the experimenter could not artificially create groups for the experiment (Creswell, 2018). The researchers assigned groups as the control and experimental group treatments, administered a pretest to both groups, conducted experimental treatment activities with the experimental group only, and then administered a posttest to both groups to assess the differences between the two groups.

The total subjects for the study (N = 70) were sixth-grade students. The two groups 6 (A) (N = 35) and 6 (B) (N = 35) were selected through a purposive sampling technique, which is widely used in research for the identification and selection of information-rich cases for the most effective use of a limited resource (see Creswell, 2018), and the experimental group was assigned by lottery.

Sample Size

The school where the data were collected had a total of 70 sixth grade students (35 in Section A and 35 in Section B). The two sections were taken as experimental and control groups because they were manageable. Grade six was selected because it was where the researchers observed prevailing problems regarding reading anxiety.

Sampling Techniques

The students were selected through a purposive sampling technique, as indicated by Williams and Todd (2016). Besides, the grade was selected because it was estimated that 9–10% of younger children have more anxiety disorders than adults (Francis, Hudson,

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Kohnen, Mobach, & McArthur, 2020). Therefore, as Grade Six students are estimated to be between 11 and 13 years old, they were considered more anxious than students in later grades and, thus, appropriate for the study. Thus, Section A was selected as the experimental group, and Section B was selected as the control group.

Instruments

The data were collected through three research-based anxiety reduction strategies: students' engagement and response during strategy lessons, the researchers' observations, pre- and post-reading tests, journaling, and a written script adopted from Buchler (2013).

Reading Tests

Both pre- and post-reading tests constituted 16 items were developed by the researchers to examine the participants' reading proficiency, emphasizing reading comprehension and vocabulary. The items used in the test were true or false, multiplechoice, and the completion of the missing elements given in the choices. Attempts were made to create both valid and reliable tests, with special attention paid to whether the word "difficulty level" was appropriate for Grade 6 students or not. The tests were prepared in line with the student's textbook and were evaluated by three English language teachers (one is an M.A. in TEFL and two of them are BEd in English) at the school. The test was administered to both experimental and control groups at the same time, with the help of two English language teachers in the school.

Girma T. & Tamiru O. **Journaling**

Data from journal entries demonstrates how students respond to different strategies. Writing a journal allows the researcher to opportunities for create gathering spontaneous, open-ended data at different phases of the study, according to Fritson, Nelson, Vontz, and Forrest (2013). The data points were deliberately included in comprehensive instructional plan. anticipated that the information will naturally make its way into the lesson to encourage students to interact with the subject matter and share their experiences. During the journal writing process, the researcher took a more proactive and engaged approach, using semistructured. open-ended questions and suggestions to let participants share their honest thoughts and build connections. It was crucial to communicate that the study really valued and benefited from the perspectives of the participants. The journal-style interviews worked best when thev were more conversational than official.

Observation

The observations themselves served as the third source of information. An instruction plan included observations made during the teaching of anxiety-reduction techniques as well as information on how the students used them. Formal data collection was conducted with the aid of a checklist document.

Methods of Data Analysis

Before and after the four-week implementation program, the students took

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pre- and post-reading examinations to gauge their reading proficiency, which was primarily focused vocabulary and comprehension. They took the post-reading exam following a four-week training period. Using the t-test, one-way ANOVA, and variable mean, the researchers compared the test results before and after the implementation program. The one-way ANOVA could compare two or more groups, but the t-test could only compare the means of two groups. As a result, the test was regarded as a unique instance of a one-way ANOVA.

To assess and compare the students' development before, during, and after the reduction techniques anxiety program activities, the t-test data were evaluated. Qualitative analysis was used to examine information obtained from field notes, journal entries, and observations. The data was arranged and coded, interpretations were provided through analytical memoranda, alternate explanations were looked for, and the report was written using the participants' actual words in relation to the category or theme names (see Williams & Todd, 2016).

Validity

Three distinct approaches were employed in this study to verify the validity of the instruments. The first was technique triangulation, which is characterized as applying information from multiple sources to a single spot (Noble and Heale, 2019). Thus, the data were triangulated using field notes, observations, pre- and post-tests, and journal entries.

The researchers offered the observation prompts to three subject-matter experts in

order to assess whether or not they could be understood by other readers and yield reliable data. As a result, the specialists carefully reviewed the prompts and returned them to the researchers with a few modifications. Next, the researchers applied the suggestions and made the necessary adjustments.

Reliability

The Internal Consistency Reliability

The reading proficiency of the kids was measured before and after the intervention using the t-test. Kuder-Richardson's formula 21 (KR-21), which is frequently used to calculate the internal consistency reliability test, was therefore employed to measure the tests' internal consistency reliability. As a

sci. Technol. Arts Res. J., July.-Sep. 2023, 12(3), 38-57 result, this study's reliability coefficient is 0.93, whereas the standardized reliability coefficient of measurement is linked to exam results. There is a range of 0.0 to 1.0. Consequently, the t-test's internal consistency

reliability was 0.93, demonstrating a strong

Inter-Rater Reliability

reliability connection.

By comparing data among raters, the interrater reliability of the pre- and post-tests in the current study was examined for consistency. As a result, two raters in the TEFL field were given the students' work from the general reading ability tests that were administered in weeks one and two in order to assess the interrater reliability of the instruments, as shown in Table 1.

Table 1

Inter-rater reliability of Test One and Test Two

Tests	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N Number of Items
Test One	.91	.91	2
Test Two	.97	.97	2

Since they are greater than 0.7, Test One's (.91) and Test Two's (.97) Cranach's alpha coefficients show the consistency of inter-rater reliability, as shown in Table 1.

RESULTS AND DISCUSSION Results

The experimental group was given three anxiety reduction techniques (deep breathing, increasing muscle relaxation, and encouraging self-talk) so they might maybe overcome the

limitations of stressful situations without having to wait for someone else to arrange the environment or assist with the task. We used field notes, journal questions, and observation prompts to get a deep understanding of these events. The post-reading test, which consisted of 16 items, was administered in eight sessions to correlate the reading performance of students who experienced anxiety reduction strategies with that of the control group, which did not take the six lessons. The data were analyzed and discussed

both qualitatively and quantitatively in the following sections.

Students' Feedback on the Anxiety Reduction Training

Lesson One

Table 2

The researchers distributed journals and discussed the goals of the publication. Before teaching the students anxiety-reduction techniques, the researchers asked them to describe their thoughts, feelings, and actions related to reading anxiety.

Sci. Technol. Arts Res. J., July.-Sep. 2023, 12(3), 38-57 Following the therapy group's introductions, the following diary prompts were provided:

The Journal Prompts before Treatment

- 1. How well-versed in anxiety are you?
- 2. How does experiencing anxiety affect your body?
- 3. What happens to you when you read and are unclear about the answer?
- 4. Do you occasionally lose your train of thought while reading and forget what you read?

Students' Responses to Prompts before Anxiety Reduction Strategies Training

No	Prompts	F	%
1	It makes me forget something	2	5.71
2	It is a disease—worry, tension	8	22.86
3	I sweat, shiver and have a tendency to tap my pen	9	25.71
4	I get headaches and stomachaches	3	8.57
5	I feel like the only person who is nervous is me.	1	2.86
6	I forget to read and write.	10	28.57
7	I do not know what I feel or say.	2	5.71
	Total	35	100

To find out if students were aware of anxiousness before the intervention, Prompt (1) was used (Table 2). Of the students, two (5.7%) said it caused them to forget things. Eight (22.9%) others stated that anxiety is a condition, a worry, an emotion, or tension. Nine students (25.7%) said they sweat, get hot, start to shake a little, and often tap their pens in response to the suggestion (2) of them, 3 (8.6%) occasionally experience headaches or stomachaches when they experience anxiety. In response to prompt (3), the participants engaged in impromptu dialogue and openly described the physical and mental

experiences associated with anxiety. According to one respondent (2.8%), he thought he was the only one who was anxious before the procedure. Although the students were laughing, they shared a sense of identity. Ten students, or 28.6%, reported that they forgot what they intended to write or say in response to Prompt #4. Nevertheless, two students (5.7%) asserted that they were unable to recall or identify their feelings. Second Lesson Deep breathing and progressive muscular relaxation was the first techniques for reducing anxiety that were covered in lesson two. The exercises were demonstrated Sci. Technol. Arts Res. J., July.-Sep. 2023, 12(3), 38-57 bulk of them, felt favorably about these two tactics. One respondent mentioned that he was able to relax and clear his head throughout the PMR course and that he felt a soothing relaxation in his breathing. One participant said she could use this next weekend to make things run a little more smoothly. However, two (6%) students responded negatively, stating that they found the tactics dull and unappealing. They stopped doing the activities as a result, believing that the students were

by the English teacher, who was seated in front of the class. The hands and arms were the main focus of the relaxation techniques. The breathing exercises were followed by the relaxation exercises while the students stayed seated. Deep breathing was the first breathing technique. The instructor demonstrated how to sit properly to enhance relaxation. Data collection at each session was done using the observation checklist form. Following a peer discussion of the strategies, the 8-minute and 22-second course was repeated. In their second session, the students learned about deep breathing and progressive muscular relaxation. The instructor demonstrated the sitting position by taking a seat on a stool in front of the students. The relaxation techniques concentrated on the hands and arms. Each pupil took a seat in the exact same spot as the instructor. There was complete participation for this session, albeit a few people were glancing around to get approval from their buddies, and a couple of them laughed when the teacher instructed them to flex their biceps and smile a little. The students were asked to reflect on their early experiences applying the anxiety-reduction approaches after the exercises.

Students' Reflections on the Anxiety Reduction Strategies

- 1. What do you feel after you practice progressive muscle relaxation?
- 2. Do you want to use it in the future? If not, why?

Students reflected on what they had just learned after learning the strategies in their notebooks for prompts 1 and 2. 33 (94%), the

Lesson Three

making fun of them.

Lesson three began with the researchers reading the script for positive self-talk. Every pupil received a paper with twelve affirmations about themselves. Students are instructed to either read loudly or silently to themselves, close their eyes, or envision the words in their minds after the teacher reads aloud each sentence. The teacher gave the student instructions to practice at home. In their journals, the children wrote about their initial encounters with positive self-talk.

The teacher asked the pupils to circle three or four phrases that most appealed to them on their sheet.

They wrote explanations of their decisions in their notebooks. The positive self-talk was followed by progressive muscular relaxation techniques. It was instructed to the kids to get comfortable and focus. Vigorous breathing followed the relaxation stage. Students circle two or three of the sentences that most appeal to them after going through the list of twelve. A few students soon adopted two or three of the phrases because they felt the approach was effective.

Table 3

Prompts after the Anxiety Reduction Strategy Training

1. Have you used any of the twelve constructive self-talk expressions you learned, or have you created your own?

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2. If not, can you recall a recent instance where you could have benefited from using positive self-talk?

Then the students were told to select the best from the 12 positive self-talk phrases that worked for them.

Students' Responses to Positive Self-Talk

No	Positive self-talk phrases	F	%
1	I won't get hurt by a panic attack.	9	25.71
2	When I catch myself thinking something negative, I rapidly replace it with an honest, uplifting idea.	2	5.75
3	I am competent and powerful.	12	34.27
4	I am composed, upbeat, self-assured, and confident.	4	11.42
5	I am self-assured and growing more powerful every day.	7	20
6	I select ideas that I find uplifting and beneficial.	1	2.85
	Total	35	100

Table 3 demonstrates that, in order of strength to weakness, the most popular positive selftalk statements were "I am strong and capable." 12 (34.27%), "I won't be harmed by a panic attack." 9 (25.71 percent): "I am confident, and I am getting stronger every day." 7 (20 percent): I am relaxed, positive, confident, and self-assured. Students demonstrated excellent practice of four sentences (11.42%). People say things like, "I'm noticing that I'm thinking negatively." I quickly replace them with genuine, uplifting concepts and employ weak language that fails to encourage and raise the students."

To introduce this technique, the researchers read the script for positive self-talk. There was an impromptu conversation about the effectiveness of self-talk and how they had observed Olympic athletes using it prior to competition. Numerous pupils stated that this

was the first time they had ever used it. One student shared that, in order to help him perform better, he had written a motivational statement at the top of the posttest.

"I am strong and capable." "That is the one that will work best for me, but I know it works." A different student stated, "Positive thinking is good for enhancing self-esteem or making you feel like you can do this." "However, I don't really tell myself any of these phrases." Certain remarks, including "It's new to me, but I don't think it will work" and "It doesn't work for me," were also highly negative of this strategy. "I do not fit these." Throughout the entire lesson, we kept a careful eye on these students to try and figure out why there was such a significant reaction at such a young learning age. In the end, there was a positive reaction to positive self-talk

and its importance. Overall, the replies from the students show that they are using the tactics.

Breathing Exercises

Energized breathing is a new breathing technique that was introduced in the fourth session. In order to move their arms back and forth like windmills without running into anyone or anything, students had to stand. Before beginning this technique, the class was informed of the advantages of the breathing technique. The ideal posture for this method was demonstrated by the co-teacher, who stood in front of the class. They gave directions on how to perform the breathing exercise. The pupils had a great time using this entertaining strategy, and they laughed as they went along. Students kept journals during these early sessions, documenting their experiences.

A student commented, "It was surprisingly comforting because I suffer from anxiety and find it difficult to remain calm." She had self-exposed that she had an anxiety issue. It was a little helpful, but I still feel uncomfortable and overworked." "The breathing exercises made me feel relaxed," another person commented. I felt okay about it, even though I yawned a little. A few students mentioned that they have practiced breathing techniques before sporting events. "I knew the deep breathing would relax me because I do that every day at the gym (we do it as a class)."

Someone else mentioned, "It really helped when I started deep breathing." "I am a very tense person, but I do that a lot; I just breathe when I get really tense." When performing the breathing exercises, most of the students closed their eyes. In every lesson, four to 10

Sci. Technol. Arts Res. J., July.-Sep. 2023, 12(3), 38-57 kids had their eyes open. In each lesson, just two or three kids engaged completely.

Lesson Four

Four students were doing PMR exercises when the researchers and co-teacher entered the room. The fourth lesson began with a writing exercise. The students were instructed by the researchers to consider the writing or drawing they had completed in the previous lesson and to incorporate their ideas into their notebook entries. However, writing piqued the interest of every pupil more than sketching did. The co-teacher then started the relaxation instruction while seated in a chair in front of the classroom. The head, neck, and shoulder stretches were taught to the students. Natural breathing was the breathing method that came after the relaxation exercise. The session clarified the distinction between breathing and the optimal times for natural breathing.

Lesson four then covered the practice of two anxiety-reduction techniques: (a) upper-body muscle relaxation and (b) energetic and alternate breathing. The co-teacher assumed the learned position by thinking aloud while seated in his chair. The teacher and the researchers watched from the side of the room. Students then used the following prompt question to guide their journal writing as they discussed their experiences:

The students were instructed by the researchers to provide a response to a question about deep breathing techniques in no more than five sentences, along with one photo. The following table provides a summary of the positive and negative reactions that students had to deep breathing (Table. 4).

Table 4

Students'	Response to	the Deen	Rreathing	Frercise
Siudenis	Response to	me Deeb	Dreaming	Likercise

St/Code	Students' Responses
S1	It's simple and quite soothing. When I'm anxious and upset, they really assist.
S2	It boosts my self-assurance.
S 3	They are quick and simple
S4	You are breathing deeply, and no one is aware that you are.
S5	The fact that the tactics actually worked is what I found most appealing about them.
S 6	If we all did these, they would calm us down
S7	I enjoyed that it is something we can do without something else.
S 8	I've overcome my anxieties.
S9	You can do it practically anywhere and at any time.
S10	The strategies don't require a lot of time and no one is aware that you are performing them.
S11	it soothes me and improves my academic performance.
S12	The techniques aren't my style; they don't seem to work for me.
S13	I am not anxious, so it doesn't work on me.
S14	I have new strategies to handle the little anxiety I have.

As Table 4 indicates, most of the students responded positively, whereas very few students answered negatively. This indicates that students like engaging in deep breathing strategies.

Lesson Five

Progressive muscular relaxation for the head, neck, shoulders, and breathing was the first exercise in lesson five. The inclusion of "natural breathing" was used as a breathing technique. From one side of the room, the researchers and the co-teacher observed. The instructor took a seat and finished the tasks. He emphasized to the kids that there were no guidelines for their writing and that they might use Amharic or English, although the majority of them write in English, to illustrate, label, or simply write about their experiences. The two writing prompts were previously written by the researchers as follows on the whiteboard:

- 1. Have you already tried the progressive muscle relaxation techniques you've learned?
- 2. Have you used any of the breathing techniques you have learnt thus far, if there have been any instances in school where you may have used them? Are there any more areas where these breathing exercises could have been beneficial?

In response to prompt (1), many respondents stated positively that they use it at school. The prompt brought out responses such as:

- Yes, I have exercised it at home and in class sometimes.
- I have used PMR since we learned it, but the reason
- I have used it is that I have anxiety.
- I like it a lot. I think it will help in future situations.

There were also 5 students whose responses were negative, as in:

- o I didn't use it,
- o I didn't use it, let me try it.
- o I forget it.

Prompt 2 brought out some responses. One student who self-exposed that he had an anxiety disorder shared, "It was surprisingly comforting," mostly because I suffer from anxiety and find it difficult to remain calm. Four respondents suggested that they always feel overworked and uncomfortable, but it

helped a little. One wrote, "The breathing exercises made me feel relaxed." I yawned a little, but it made me feel good. Some students shared that they have used breathing exercises before athletic events (Table 5). "I knew the deep breathing would relax me because I do that every day." Another shared, "When I started taking deep breaths, it helped me a lot." Students' responses to the three strategies—the PST, the PMR, and deep breathing exercise—were measured as follows:

Table 5

Students' Responses to the Strategies

Strategies	I lik	ke it.	Ιd	lon't like	I d	on't need	It does	sn't	Tot	al
			it.		it.		Work	for me.		
	N	%	N	%	N	%	N	%	N	%
Progressive muscle relaxation	29	82.85	2	5.71	1	2.85	3	8.57	35	100
Positive self-talk	31	88.57	2	5,71	0	0	2	5.71	35	100
Deep breathing	27	77.14	0	0	4	11,42	3	857	35	100

Conclusion of middle lessons (lessons 4, 5, and 6).

The middle sessions were mostly concerned with encouraging self-talk. Along with consistently expressing the importance and application of this tactic, the goal was for them to become more proficient in the 12 phrases that were provided and to claim them as their own. During these lessons, students were rehearsing the phrases, writing as many of them as they could on their own and with a partner, and visualizing them in their thoughts. The breathing exercises were effectively finished, and the session was peaceful and fruitful.

Lesson Six

The researchers gave the class a memory exercise to start the course. Without seeing, the class as a whole had to memorize as many of the affirmations for self. Students called out different words for four minutes. Afterward, they pulled out their 12 phrase papers and discussed the ones they had missed. They wrote down three of the phrases that they thought best described them and one of their own in their journals. The deep breathing practice was introduced to the class by the

English teacher. He informed them that the exercise will consist only of his own prompts rather than the lesson. Using his own cues, he led them through the relaxation techniques for the head, neck, and shoulders. The scenario was being observed by the researchers.

The whiteboard was used to write the diary prompts. The students were free to write anything that came to mind regarding the three anxiety-reduction techniques, according to the researchers, who explained that the prompts were only meant to get them started. The questions were as follows:

- 1. Which technique for reducing anxiety makes you feel the most at ease? Why?
- 2. What aspect of anxiety-reduction techniques appeals to you the most?
- 3. In what situation do you feel uneasy?

The students' responses to prompt 1 were summarized under positive and negative headings. Accordingly, 31 students responded positively, arguing that the strategy that

Table 6

helped them the most is positive self-talk, and they have used it a lot. A few respondents stated negatively that they dislike self-talk because it makes them appear as if doing so abnormally would result in increased anxiety or a panic attack.

Students' responses to prompt 2 confirmed that the strategies were easy and very relaxing, helping them a lot when they were stressed and tense. Some respondents specified that when they took deep breaths, nobody knew that they were doing it. Therefore, they agreed that the strategies would work.

The Significance of Anxiety Reduction Strategy Training

The table shows the pre-test results of both experimental and control groups by correlating students' achievements before the intervention. It summarizes their result and explains their achievement in terms of mean, mean difference, and standard division.

The Result of Pretest Score of the Control and the Experimental Groups

Groups	Mean	Difference	Sd	
Experimental (<i>N</i> =35)	8.05	0.03	3.065	
Control $(N=35)$	8.08		3.087	

The initial stage of the statistical analysis of the data, as indicated in Table 6, was to verify that the two participant groups were homogeneous prior to the start of the treatment. The group homogeneity is demonstrated by the experimental and control means of 8.05 and 8.09, respectively, as the difference between the group means is not statistically significant (P 0.05). This suggests that

prior to the intervention, reading difficulties were about equally present in both groups.

The Post-Reading Tests of Both Groups

The results of a paired t-test and the descriptive statistics are displayed in the following table. Based on the mean, the statistical result compares the experimental group's post-reading test to that of the control group.

Table 7Correlation of the Differences between Pre and Post-Tests

	Mean	Mean difference	
Experimental (N=35)	11.114	1.574	
Control $(N=35)$	9.54		

Table 7 shows that the difference between the mean scores of both groups in the post-reading comprehension test suggests that the experimental group (M=11.114) was significantly more proficient than the control group (M=9.54) at the end of the study. Additionally, the mean difference (M=1.574) between the pre- and post-tests of each group shows the effectiveness of the strategies when compared to both pre-test results (M=0.03).

The Results of treatment Group's Pre-Post Reading Tests

The marks for the experimental group before and after the strategy training were recorded.

The marks were treated as continuous data and summarized by giving their average and standard deviation (SD), and the paired t-test is used to compare the means of the two samples of related data. The paired t-test compares the mean difference of the values to zero. It depends on the mean difference, the variability of the differences, and the amount of data. The following table summarizes the results. Table 8 shows the pretest and posttest results of the experimental group by correlating students' achievement before and after the intervention. It explains the achievement in terms of mean and difference.

Table 8

Analysis of the Pre- Post-Reading Test of the Experimental Group

Exp. Group $(N = 35)$	Pretest (16 Items)	Posttest (16 Items)	Difference
Mean	8.057	11.114	3.057

As shown in Table 8, the mean score of the treatment group in the pre-reading proficiency test (M=8.057) was lower when compared with the post-test (M=11.114). Thus, there was an increase in the mean of 3.057, indicating the significance of the change. Besides, the results of the pre- post-tests of the experimental group show the effectiveness of the strategies.

The Results of the Pre- and Post-Reading Tests in the Control Group

A pre- and post-reading test was administered to the control group to correlate the performance of the control group before and after the intervention. Table 9 shows the pre-test and post-test of the control group by correlating students' achievement before and after the intervention given to the experimental group. It explains the achievement in terms of mean and difference.

Table 9

Table 10

The Results of the Control Group's Pre-and Post-Reading Tests

Control Group (N = 35)	Pre-test mean	Post-test mean	Difference
Mean	8.74	9.54	0.80

As shown in Table 9, the control group's mean score in pre-reading test proficiency (M = 8.74) and post-reading test proficiency (M = 9.54) increased by 0.80. This indicates that the change was not significant. Rather, it shows there were no improvements in students' performance in reading the test.

Pre- and Post-Reading Tests of Both Groups

The statistical analysis of the experimental and control group mean score differences on pretest and post-reading tests is shown in Table 10. The table explains the achievement in terms of mean and difference.

Pre- and Post-Reading Test Results of the Two Groups

Groups	Pretest mean	Posttest mean	Difference
Experimental (N=35)	8.057	11.114	3.057
Control (N=35)	8.740	9.54	0.80
Mean difference	0.683	1.574	2.257

Table 10 indicates that the difference between the means in the treatment group was more significantly proficient than the control group at the end of the intervention. In addition, the different results of the pre- post-tests for both groups show the effectiveness of the strategies. The mean difference between the groups on the pre-test (M = 0.683) indicates there is no significant difference between them on the pre-reading test. This shows both groups are almost at the same level of reading performance. But the post-test mean of both groups (1.574) shows a great difference. The mean of the experimental group is also (posttest-pretest) 3.057. This effect size indicates that the change from pre- to post-test was significant. The mean of the control group's posttest and pretest means is 0.8, which indicates a slight change. Besides,

students did not show any behavioral or mental improvement. The slight change, on the other hand, indicates that the difficulty level of pre- and post-reading tests is consistent. Lastly, Table 10 shows that the means of the pre-post-tests for the treatment group differ significantly from those of the control group. It implies that the strategies employed were successful in lowering the experimental group's reading.

Discussion

This study has shown that students' negative self-talk is prevalent in aggravating their reading anxiety. It depicted that they sometimes considered themselves ill because they were so stressed. In relation to this finding, Hall (2017) reports that negative self-

talk brings about disproportionate anxiety, which interferes with both current behavior and the ability to learn new behaviors. He also argues that a higher level of anxiety is closely correlated with a higher level of negative self-talk and a lower level of positive self-talk. Thus, it leads to giving training that encourages students not to undermine themselves.

The results further indicated that there was no significant difference between the control and experimental groups in reading anxiety or reading performance before the test. However, there were significant changes from pre- to post-test, i.e., the reading anxiety level of the students significantly decreased after the intervention, which implies they were negatively affected by the reading anxiety before the intervention, which encouraged less reading performance. In connection with this, studies by Liu (2018) showed that FLRA negatively affects the foreign language reading process and performance. During the anxiety-reduction lessons, students liked progressive muscle relaxation, breathing exercises, and positive self-talk. This finding coincided with Buchler (2013) who claimed that what students say positively to self is very positive and truthful.

The results also revealed that sixth grade students at the targeted school lacked the skills to cope with reading comprehension due to fear, often marked by physiological signs such as sweating and tension. The experimental group's strategy use showed a significant difference between the means of the pre- and post-tests, in contrast to the control group. This demonstrated that the experimental group's reading anxiety was positively lowered by the intervention strategies. The

findings that the reading performance of students who experienced anxiety reduction strategies was significantly improved were also supported by the previously tested reading intervention. Damayanti (2022) also supports the findings in that the reading performance of students who experienced anxiety reduction strategies was significantly improved.

CONCLUSIONS

It is possible to draw the conclusion from the data that anxious readers can become more proficient readers if they employ strategies for reducing anxiety, such as gradual muscular relaxation, deep breathing, and positive selftalk. It is also possible to argue that by positive anxiety management exhibiting behaviors, teachers will introduce students to methods and approaches for reducing anxiety. Ultimately, it is possible to draw the conclusion that by implementing effective reading anxiety reduction strategies, students can improve their reading comprehension, accelerate their decoding processing, and read more quickly.

RECOMMENDATIONS

Based on the conclusions drawn, teachers are recommended to train students on how to reduce their reading anxiety by providing an open-communication classroom and discussing positive coping skills. In practical terms, individuals should apply progressive muscle relaxation (PMR), deep breathing, and positive self-talk because they are simple to learn, don't take a lot of time, require little training, are inexpensive, and don't require

suggested that more research be done at various grade levels to determine the efficacy deep breathing techniques, gradual muscular relaxation, and positive self-talk.

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DECLARATION

No conflict of interest.

DATA AVAILABILITY STATEMENT

All data are available from the corresponding author upon request.

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