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CRITICAL THINKING IN ELT IN LOWER SECONDARY SCHOOL

Diploma thesis

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I hereby declare that this diploma thesis is completely my own work and that no other sources were used in the preparation of the thesis than those listed on the works cited page.

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ABSTRACT

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Critical Thinking in ELT in lower secondary school

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The objective of this thesis is to analyse the extent to which critical thinking techniques are being systematically applied in English language lessons in lower secondary schools.

It is divided into two main parts; the theoretical background and the practical part. The theoretical background explains the concepts of critical thinking and its use in education. The practical part examines the data generated by the questionnaire. The relationship between the importance placed on critical thinking by individual teachers, and the level to which they have been formally trained in its use is depicted.

Key words: critical thinking, teaching English, E – U – R model, teachers´ approach, language teaching, teaching methods

1 INTRODUCTION

Why engage in teaching critical thinking? For me, it is a passion ignited by both personal experiences and my belief in its transformative potential. My journey started with an online course on RWCT through which I could see the full potential. I realised how it could transform my pupils from passive consumers of information into active, discerning thinkers - individuals who not only accept what they're told but question, evaluate, and formulate their own conclusions. So, in this thesis my experience gained during the course and the theoretical background are combined.

In today's world, flooded with information, it becomes increasingly challenging to discern truth from falsehood. We confront the daunting task of sifting through fake news, various perspectives, and novel scientific discoveries. Merely accepting information without scrutiny poses significant risks, emphasising the necessity for a thoughtful and critical approach. Thus, it is imperative for individuals to meticulously assess information from multiple angles to ensure its accuracy and reliability (Šedý, 2021)

By placing new information within a broader context and assessing its relevance to personal circumstances, individuals can improve their capacity to form well-founded judgments in an era characterised by uncertainty. This approach supports a deeper comprehension of intricate subjects, developing a heightened awareness of the nuances within our world.

Furthermore, critical thinking is pivotal in promoting independent learning. It nurtures curiosity and self-sufficiency, qualities indispensable for lifelong learning, even among young learners. In a time marked by swift technological advancements and evolving societal norms, the ability to think critically is indispensable for navigating novel situations and addressing complex issues.

In my opinion, critical thinking skills are highly coveted in today's job market. Employers increasingly seek individuals capable of adapting to evolving challenges, ing innovation, and tackling intricate problems. Integrating critical thinking into educational curricula could position students as more competitive and adaptable professionals, equipping them with the requisite skills for success and independent thought.

In essence, cultivating critical thinking skills is vital for navigating the intricacies of contemporary society. By encouraging individuals to approach information thoughtfully and engage in critical analysis of their environment, we empower them to make informed decisions and adeptly adapt to the ever-changing landscape of the 21st century.

This thesis aims to demonstrate my hypothesis that, although there is a general acknowledgement about the importance of critical thinking among lower secondary school ESL teachers, the majority of them do not work systematically towards implementing critical thinking skills into their curriculum.

The thesis consists of two parts - the theoretical part, which introduces several definitions of critical thinking and among other theoretical background describes ten concrete activities for teaching critical thinking. The second – practical part is dedicated to the results of my questionnaire and depicts the results gathered in the survey. Each survey question will be carefully analysed to understand its nuances, implications, and connections. This detailed examination aims to provide a comprehensive understanding of the data and draw meaningful conclusions. Uncovering patterns and trends in the survey responses will contribute to the understanding of the topic at hand.

2 CRITICAL THINKING

The topic of critical thinking holds significant personal interest and academic relevance for me. In today's dynamic landscape, change is the only constant. The current generation entering the workforce faces a notable uncertainty regarding the alignment of their career paths with the educational pursuits they have undertaken. As such, they must cultivate a capacity for continual learning and the adept assessment of information quality. This skill set is crucial for navigating the evolving professional landscape and effectively integrating new knowledge and technologies. However, this imperative is intricately linked to the contemporary challenge of information overload. Distinguishing between reliable and less credible sources is essential for making well-informed decisions based on sound judgement and discernment.

Critical thinking means thinking for oneself. In a classroom where critical thinking is taught, everyone forms their own opinions, values, and beliefs. No one else can do the thinking for them. Critical thinking is something one must do on one’s own. So, a fundamental part of critical thinking is teaching children that their thoughts belong to them. That is why students need to feel free to think independently and make decisions about things that matter to them (Klooster, 2000).

The progression of information technology has facilitated extensive communication and content generation, highlighting the importance of individuals' capability to critically evaluate information. Currently, there is an abundance of information, yet our efficiency in managing it has not notably expanded. This overflow of information results in numerous myths and inaccuracies, contributing to an environment of information disorder where different sources propose conflicting solutions to issues. In this period, the skill of swiftly acquiring new knowledge and manoeuvring through information is essential, though difficult. Hence, the capacity to make informed decisions by assessing the credibility of statements is a crucial element of critical thinking (Sieglová, 2019).

According to Halpern (2014) there are some essential skills which are useful in many situations. A critical thinker will:

- Spot biased language and unfair associations.
- Actively seek out conflicting evidence.
- Know when to ask for help and monitor their own performance.
- Weigh the risks against the benefits.
- Figure out the best course of action from different options.
- Explain their choices clearly, adjusting for different audiences.

- Remember important information.
- Learn new skills efficiently and connect them to what they already know.
- Understand and use numbers effectively, including thinking about probabilities.
- Understand basic research principles.
- Write and understand complex texts.
- Make persuasive arguments on controversial topics.
- Use visuals like charts and diagrams for communication.
- Bring together information from different sources.
- Judge whether information is reliable and use it to make decisions (Halpern, 2014).

Grecmanová explains critical thinking as “an engaged, interactive, systematic, and intricate cognitive process”. Her perspective aligns closely with the concepts of active learning and independent thinking. She also notes that, despite the numerous definitions of critical thinking, there is a common theme: it involves individual, active thought where the learner delves beneath the surface of the studied material, considers various viewpoints, identifies connections, and applies this understanding in a logical manner (Grecmanová, 2009).

According to Šedý (2021) critical thinking embodies a dynamic process where individuals engage with information by questioning, seeking answers, and evaluating arguments. It is about being curious and open-minded, yet discerning and analytical. Critical thinkers do not just accept or reject ideas; they scrutinise them, weigh evidence, and construct well-reasoned opinions. This approach values intellectual integrity and encourages thoughtful deliberation.

Critical thinking is not just about personal beliefs; it means engaging with diverse viewpoints and incorporating them into one's perspective. It is a skill which empowers individuals to navigate the complexities of the information age, fostering informed decision-making and encouraging intellectual growth. In essence, critical thinking is not just a tool for academics; it is a cornerstone of informed citizenship and lifelong learning (Šedý, 2021).

According to Paul and Elder (2009), a well-cultivated critical thinker:

- Raises vital questions and problems, formulating them clearly and precisely. Ensuring that the core issues are addressed directly and comprehensively.
- Gathers and assesses relevant information, using abstract ideas to interpret it effectively. Involves critically evaluating sources and integrating knowledge to form a coherent understanding.

- Comes to well-reasoned conclusions and solutions, testing them against relevant criteria and standards. Helps ensure that conclusions are valid and reliable within the given context.
- Thinks open-mindedly within alternative systems of thought, recognizing and assessing, as need be, their assumptions, implications, and practical consequences. Flexibility allows for a more comprehensive analysis and understanding of diverse perspectives.
- Communicates effectively with others in figuring out solutions to complex problems. Collaboration expands the problem-solving process by incorporating a variety of viewpoints and expertise (Paul, Elder, 2009).

2.1 Definitions of critical thinking

The literature on the concept of critical thinking is essentially the same but different authors may expand or narrow the concept in different ways. Dictionary.com defines critical thinking as "disciplined thinking that is clear, rational, open-minded and informed by evidence".

Gavora states that (1995) critical thinking can be seen as "as a tool that helps students transition from superficial to deep learning, to understanding the material, to seeking and finding connections between studied phenomena, and to drawing their own conclusions" (Gavora, 1995, my translation).

Klooster defines the basic characteristics of critical thinking:

1. Critical thinking is independent autonomous thinking.
2. The acquisition of information is the beginning not the goal of critical thinking.
3. Critical thinking begins with questions and problems to be solved.
4. Critical thinking is the search for persuasive arguments.
5. Critical thinking is thinking in groups of people in the whole society.
6. Writing is the most important tool for critical thinking (Klooster, 2000).

Critical thinking can be defined as a "process by which we evaluate information". This is usually related to problems and events and the process of critical thinking shows how to arrive at a conclusion based on the facts available to us. Individuals who have trained critical thinking skills can identify problems or opportunities, gather relevant data, analyse it in an appropriate way, and reach reliable conclusions on their own without having to rely on someone else's judgement (Royal, 2015).

According to Halpern critical thinking can be defined as "the use of those cognitive skills or strategies that increase the probability of a desirable outcome. It is used to describe thinking that is purposeful, reasoned, and goal directed" (Halpern, 2014, p. 52)

2.2 Critical thinking in language teaching

> *"Do not indoctrinate your children. Teach them how to think for themselves, how to evaluate evidence, and how to disagree with you."* Richard Dawkins

This diploma thesis deals with teaching English to lower secondary school kids using some methods of critical thinking. The aim of contemporary English language teaching at schools should not only be to teach fluency and accuracy in English as a Second Language but present the language as means of communication.

> "The balance between fluency and accuracy is a good example of something that has not changed very much in spite of some temporary fluctuations in fashion. It is important for our students to learn to use English both fluently and correctly so that they can get their message across effectively while using standard grammatical lexical phonological and spelling conventions. However, something that has changed is that these conventions are no longer necessarily those of native speakers. They are, rather, those which are used by the majority of fluent, educated speakers of the language in international communication." (Ur, 2012, p.1)

In an era of abundant information, critical thinking skills are crucial for evaluating the reliability and credibility of English language resources. Learners need to discern between trustworthy sources and misinformation, analyse the validity of arguments presented in texts, and make informed decisions. As Tyers demonstrates in her video "critical thinking fosters creativity in language learning and communication". By encouraging learners to think outside the box, explore alternative interpretations, and experiment with different linguistic forms, critical thinking enhances their ability to express themselves creatively in English, whether through writing, speaking, or other forms of expression. "Critical thinking encourages learners to dissect the structure of English, including grammar, syntax, and semantics". By examining sentences and texts critically, learners can identify patterns, understand how different linguistic elements interact, and apply this knowledge to construct coherent and effective communication.[1]

The ability to think critically represents one of the important means of examining reality. It is necessary in situations where a person needs to evaluate different alternative perspectives and take a stance, form an opinion, express it, and be able to defend it. Critical thinking is primarily active and

[1]TYERS, D. 2018. *"Teaching Critical Thinking Skills"* Online. https://www.youtube.com/watch?v=9bu9SPbZanw&t=296s. Accessed 24. February 2024

independent reasoning. It starts with questions and problems which need to be solved, which capture a child's curiosity and interest. To think critically means to find one's own solutions to problems, present them to others, and argue in favour of those solutions. In the company of their peers, through discussions and debates, a child verifies, confronts, and refines their thought processes, becomes familiar with various opinions, and thus deepens and develops their own attitudes and views. “Students cannot learn to think critically until they can, at least momentarily, set aside their own visions of the truth and reflect on alternatives” (Meyers, 1986 in Bean, Melzer, 2021).

According to Hausenblas to stimulate critical thinking in the classroom, the following conditions must be met:

1. The teacher should give students the opportunity to try critical thinking before using critical thinking teaching methods to achieve a specific educational goal. Pupils must be ready and able to formulate their own opinions.
2. The teachers should give pupils the space in the lesson to express their ideas and opinions.
3. The teacher should be an open and tolerant person who accepts different thoughts, ideas and opinions and should also lead the pupils to tolerate each other's opinions.
4. The teacher should activate the pupils.
5. The teacher should value the ability of the pupils to think critically.
6. The teacher should perceive each pupil as capable of independent critical thinking and should impart this view to pupils.
7. The teachers should build a healthy self-consciousness in all pupils. Without self-esteem and self-confidence pupils will not regard their ideas and thoughts as valuable to others and will not want to present them to other pupils.
8. It is also important that the teacher is well acquainted with the methods of critical thinking and to try them out for himself because even he will not begin to automatically think critically. This is the aim of the programme *Reading and Writing for Critical Thinking,* also known as RWCT, whose mission is to introduce teaching methods in schools which promote and develop critical thinking and the need for lifelong learning (Hausenblas in Zormanová, 2012, p. 114).

Students should not see English as another school subject. Instead, English should become part of their everyday lives and incorporating some methods of critical thinking could help to achieve this aim. Using English as a second language and thinking critically combines two key competences for

the future and those are being able to communicate in English and being able to gather, sort, check and analyse different sources of information. With global distances shrinking through greater online connectivity and with the subsequent boom in access to information, schools cease to be the only true source of wisdom and information and should shift their focus on teaching pupils how to think for themselves, how to cross-reference information and sources, and how to recognise fake news and navigate themselves in the post-truth era. We as teachers should lead them and help them with this process. This of course can be only achieved if we continue to educate ourselves and are not afraid to venture into and experiment with, and dive into new perspectives on teaching methods and modern approaches to teaching.

Teaching critical thinking is tightly connected to the classroom climate and to stimulate critical thinking in a classroom the following conditions must be met:

1. Provide students with the time and opportunity to think critically.
2. Pupils must be allowed to make free guesses and conjectures.
3. Diverse thoughts, ideas and opinions must be accepted openly.
4. Teachers should encourage pupils' active involvement in the learning process.
5. A safe environment must be provided where pupils are not exposed to ridicule.
6. The teacher must express confidence that every pupil can make critical judgments.
7. Thinking must be highly valued.
8. The teacher must be prepared to formulate or refrain from formulating judgements. (Steel, Meredith, Temple, Walter, 2007)

Teachers who teach critical thinking empower students to take control of their own learning journey. By developing these skills, students engage with course materials more thoughtfully and effectively, ask deeper and more challenging questions, and participate more actively in the learning process. This active involvement not only upgrades their immediate educational experience but also lays the foundation for a lifelong practice of critical thinking (Murawski, 2014).

Students who develop critical thinking skills carry these abilities with them well into their adult lives, potentially transforming their futures. These skills are crucial for both academic and career success, as they enable individuals to view the world from multiple perspectives and make well-informed decisions. Using these skills, students „tend to expand the perspectives from which they view the world and increase their ability to navigate the important decisions in learning and in life" (Murawski, 2014).

A critical thinking user should

> "consistently display curiosity and a strong knowledge base, rely on their own reasoning, maintain openness, flexibility, and fairness in evaluations, acknowledge personal biases honestly, exercise careful judgement, be willing to defend their perspectives, approach complex issues systematically, diligently seek pertinent information, select judgement criteria judiciously, and, above all, persistently strive for results as accurate as the situation and its context allow" (Gazda et al., 2019 in Šedý, 2021, p. 288, my translation)

Critical thinking highlights a significant cultural contrast, revolving around differing perspectives on the process of human learning. If categorising these variations along a spectrum with opposing concepts at each end, one end would uphold the notion that individuals acquire knowledge through passive reception—wherein an expert imparts knowledge to a non-expert, who then assimilates it as acquired learning. Conversely, positioned at the other end of this spectrum lies the belief that individuals actively and autonomously build their understanding, drawing from both external knowledge imparted by others and their own firsthand experiences. This process, termed constructivism, underscores the critical role of personal engagement in knowledge construction.[2]

The goal is to help pupils become independent, reflective, and critical thinkers, who can think for themselves rather than just accepting information or ideas without questioning them. It involves considering alternative perspectives, evaluating evidence to develop informed opinions and make informed decisions. In pedagogy, critical thinking is a key component of active learning, helping pupils to think independently and understand the context in which English is used. By critically analysing various texts, dialogues, and situations, learners can grasp the nuances of language usage, including idiomatic expressions, cultural references, and appropriate tone (Bean, Melzer, 2021)

The model proposed for critical thinking instruction consists of four parts (Butler & Halpern, 2011; Halpern, 1998):

1. Explicitly learn the skills of critical thinking.
2. Develop the disposition for effortful thinking and learning.
3. Direct learning activities in ways which increase the probability of transcontextual transfer (structure training).
4. Make metacognitive monitoring explicit and overt (Halpern, 2014)

[2] TYERS, D. 2018. *"Teaching Critical Thinking Skills"* Online. https://www.youtube.com/watch?v=9bu9SPbZanw&t=296s. Accessed 24. February 2024

Critical thinking involves analysing, synthesising, and evaluating information. When applied to ESL, it encourages learners to go beyond rote memorization and engage with the language on a deeper level. By questioning, reasoning, and making connections, students develop a more profound understanding of English language structures and usage (Ur, 2012)

3 THE TEACHERS' APPROACH

During her lectures, Tyers demonstrates a significant divergence in the understanding of how learning unfolds. This disparity can be visualised along a continuum, with one end suggesting passive absorption of knowledge, while the other emphasises active engagement in constructing understanding. Particularly within English-speaking cultures, especially within academic contexts, the latter perspective tends to predominate.[3]

In regions where learning primarily entails receiving information without much interaction, education often revolves around memorisation and factual absorption. Conversely, in environments which prioritise active learning, critical thinking, and collaborative problem-solving play central roles in the educational approach[4].

Critical thinking in education is a vital activity which shapes students' personalities. It goes beyond the usual focus on cognitive development, helping schools reach into students' emotional and creative growth (Maňák, Švec, 2003)

According to Kasíková, understanding the various forms of teaching hinges on two fundamental perspectives on school cognition. These perspectives, transmissive and constructivist, offer insight into how knowledge is perceived and transmitted within educational settings. Transmissive teaching is characterised by the belief that knowledge is imparted from teacher to student. This approach rests on several premises: firstly, the assumption that the teacher possesses knowledge while the learner is an empty vessel awaiting instruction; secondly, the centrality of explanatory methods and the teacher's dominance in classroom discourse; and finally, the maintenance of teacher authority and student passivity within the classroom dynamic. Assessment in

[3] TYERS, D. 2018. *"Teaching Critical Thinking Skills"* Online. https://www.youtube.com/watch?v=9bu9SPbZanw&t=296s. Accessed 24. February 2024

[4] Ibid.

transmissive teaching focuses on validating pupil progress within the framework of the provided educational program (Kasíková 2011 in Zormanová, 2012)

Contrastingly, didactic constructivism underscores the role of social interaction in knowledge creation and cognitive development. This perspective acknowledges the importance of social relationships in shaping understanding and emphasises collaborative learning processes. In contemporary educational discourse, didactic constructivism has gained prominence as a guiding framework for effective teaching practices.[5]

However, it is crucial to recognise that these two perspectives represent generalised models of education. In reality, individual teaching practices often blend elements from both transmissive and constructivist approaches, resulting in a diverse array of instructional methods tailored to the specific needs of learners (Zormanová, 2012).

Transitioning from passive learning environments to a critical thinking approach can be challenging for both students and teachers. Simply telling them to think critically isn't enough. It requires clear explanations and gradual steps to develop their critical thinking skills over time. Various aspects of critical thinking methodology have unique characteristics. For example, creating an environment where students feel at ease expressing their opinions, refraining from instantly correcting errors but encouraging students to identify them on their own, recognizing the diversity in students' ideas, and supporting collaboration and teamwork (Maňák, Švec, 2003)

3.1 Transmissive approach

This approach is often just a passive transmission of knowledge. It is sometimes called “receptive” or “traditional”. Petty argues that “traditional learning has improved since the 1930s and it does not place so much emphasis on mechanical memorization.” Alternatively, the discovery approach nurtures enjoyment, motivation, and boosts students' reasoning abilities. Research indicates its effectiveness. Ultimately, the significance of the learning process is widely acknowledged by prominent experts, emphasising its importance alongside the outcome (Petty, 1996).

Transmissive teaching is characterised by the deployment of teaching strategies which deliver ready-made knowledge and skills to students, leading them directly towards acquiring pre-established

[5]TYERS, D. 2018. *“Teaching Critical Thinking Skills”* Online. https://www.youtube.com/watch?v=9bu9SPbZanw&t=296s. Accessed 24. February 2024

information. In this approach, students take on the role of passive recipients (Kalhoust, Obst, 2006 in Zormanová, 2012).

Several attributes connected to transmissive (or traditional) teaching are described by Okoň, 1966:

1. The first characteristic of traditional teaching is the focus of the teacher on the curriculum and the content of the instruction. The student and their needs, abilities, and mastery of the material remain in the background. The teacher strives to meet the curriculum requirements and often lacks time to address the needs, motivations, and difficulties of the student(s).
2. Another characteristic feature of traditional teaching is the predominance of the lecture method compared to other teaching methods. The teacher presents ready-made knowledge to the students, and the students learn either from the teacher or from textbooks.
3. A characteristic feature of traditional teaching is the easy emergence of unexpected difficulties or obstacles. Difficulties in teaching may arise, for example, due to a momentary indisposition of the teacher who uses an unfamiliar word for the students. Momentary inattentiveness of the students is also common with this method.
4. Another significant feature of traditional teaching is the inability to adapt the pace of learning to all students in the class. The teacher uses one pace for everyone, usually oriented towards average or weaker students.
5. Another characteristic of traditional teaching is the difficulty in assessing knowledge. The teacher is unable to diagnose the knowledge of all students, that is, how well individual students in the class have understood the material covered, if traditional methods are used (Okoň, 1966, Zormanová, 2012).

3.2 Constructivist approach

The constructivist teaching approach is based on the belief that each individual constructs their own understanding in a unique manner. It recognizes that even when the same explanation is given to all students and identical notes are taken, each student forms a different mental image of the material. This variation arises from numerous factors, including each student's initial understanding of the topic, which they use to interpret new information. Students also have diverse interests, needs, and abilities, all of which influence how they comprehend the material being taught (Steel, Meredith, Temple, Walter, 2007).

Such an educational method respects the psychological insight that students bring their own perspectives and experiences to the learning process. Constructivist teaching emphasises methods which help students articulate their initial ideas and consciously use them to grasp new concepts. By doing so, it encourages deeper engagement and personalised learning experiences. The approach also appreciates that learning is an active process, wherein students actively construct their knowledge rather than passively receive information.

Furthermore, constructivist teaching leverages the social nature of learning. Recognizing that learning often occurs within the context of social interaction, it employs various methods of group or cooperative learning. These collaborative techniques not only facilitate the sharing of diverse perspectives but also elevate students' ability to work together, think critically, and solve problems collectively. This holistic approach to education ensures that learning is a dynamic and interactive process, fostering a more profound and comprehensive understanding of the material taught (Steel, Meredith, Temple, Walter, 2007).

Constructivist teaching methods focus on active learning, problem-solving, creativity, and teamwork, unlike traditional teaching where students mostly listen passively. In professional discussions, terms like "modern," "alternative," "reformist," and "constructive" are often used interchangeably, but they represent different approaches. In Czech schools, modern and alternative teaching methods usually align with constructive principles, which are different from the traditional ones. In constructivist teaching, teachers see students as active learners. They guide them to build their own understanding instead of just giving information. Teachers acknowledge that students come to school with different levels of knowledge and skills, so they adjust their teaching accordingly, helping students progress step by step (Čapek, 2015)

Průcha characterises constructivism in pedagogy as “a pedagogical movement which promotes problem solving, creative thinking, group work and lesser focus on theory and drill pressure” (Průcha at al., 2013, p. 106, my translation).

Constructivism is one of the theories in education which recognises students’ knowledge based on their own experiences before entering school and is characterised as „a direction which is based on a combination of constructivism, cognitive and social skills, and which advocates the use of concrete life problem solving, creative thinking group work manipulation of ideas and opinions e.g. puzzles and building blocks, interactive computer programmes” (Hartl & Hartlová, 2015)

The aim of constructivism is to lead pupils to more and more difficult thought processes and to teach them to have their own opinion and to be able to defend it. The educational process does not

end with the successful composition of the tests, but it is a life-long learning matter (Zormanová, 2021).

4 THE THREE-PHASE MODEL OF LEARNING (E – U - R)

In this chapter, an inseparable component of Critical Thinking, the E - U - R model of learning, is elaborated. All the methods of Critical Thinking are built on this three-stage model. E – U - R is the abbreviation for Evocation – Understanding – Reflection.

The three-phase learning model is a fundamental aspect of critical thinking methods. It comprises three stages that aid in the development of students' thinking and analytical skills.

Firstly, during the evocation phase, educators assess students' existing knowledge about a topic. This step enables teachers to understand students' starting points and how to effectively support their learning.

Secondly, in the awareness phase, students are encouraged to actively seek out new information and consider different perspectives. This phase boosts curiosity and teaches students to question and evaluate the information they encounter.

Lastly, the reflection phase prompts students to contemplate and consolidate the information they have gathered. Through this process, students reinforce their learning and develop metacognitive skills, enabling them to reflect on their learning processes.

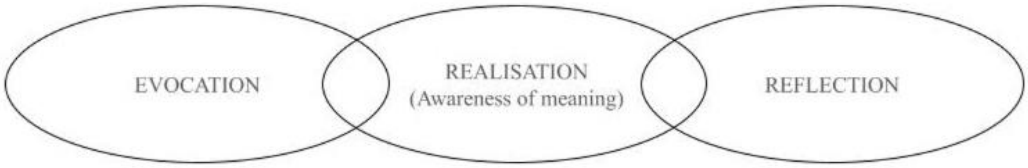
By engaging in these three stages, students look more deeply into their learning, making connections between different concepts, thinking critically, and reaching informed conclusions. The three-phase learning model is widely implemented in programs such as the Reading and Writing for Critical Thinking initiative. It serves as a valuable approach to helping students acquire essential life skills, including the ability to make informed decisions and continue learning and growing (Steel, Meredith, Temple, Walter, 2007).

4.1 What is E – U – R model?

Hausenblas and Košťálová (2007) describe the E – U – R as a simplified learning module which describes the learning process in three phases: EVOCATION – UNDERSTANDING (AWARENESS OF MEANING) – REFLECTION.

Figure 1

Model E – U - R



(Adapted from Steel, Meredith, Temple, Walter, 2007)

The E – U - R model helps teachers to plan their lessons in a way which preserves as many features of natural learning, which is the most effective, as possible. There are numerous models and tools available for lesson planning. The E – U - R model is both straightforward and effective. However, like all models, it should not be used dogmatically, but rather in a way which serves us, the teachers, and not the other way around (Hausenblas, Košťálová, 2007).

The E – U - R model, as articulated by Steel (2007), is a conceptual framework which provides insights into the processes involved when individuals learn new skills. It helps in understanding the stages and elements which contribute to effective skill acquisition.

Rooted in the principles of pedagogical constructivism, the E – U - R model emphasises the importance of what learners should do and the sequence of their actions to ensure meaningful learning. Constructivism assumes that learners build knowledge through experiences and reflections, and this model helps in structuring those experiences. It ensures that learners not only comprehend new information but also develop the ability to apply their knowledge practically.

The E – U - R model acts as a valuable tool for educators in planning and implementing teaching strategies. By using this model, teachers can design lessons which promote active learning, where students engage with the material, participate in activities, and collaborate with peers. This active involvement makes learning more effective and meaningful, as students find the teaching relevant to their lives and experiences.

The E – U - R model offers a structured approach to understanding and facilitating the learning process. It provides a coherent framework which outlines the essential components of a learning situation, helping educators create environments where students can connect new knowledge with existing knowledge, practice skills in various contexts, and reflect on their learning.

The model is grounded in extensive psychological research on learning and brain function, reflecting over a century of studies conducted globally. This research base includes findings from cognitive psychology, neuroscience, and educational psychology, highlighting how the brain processes information, forms memories, and applies knowledge. The E – U - R model (Figure 1) integrates these insights to create an evidence-based approach to teaching and learning.

In bigger classes, it is important to cater to each student's learning style. The E - U - R model helps with this by starting where each student is in terms of what they already know and can do. It offers flexibility, allowing teachers to use different activities and resources to help students understand the material in their own way. This means there are many paths to learning, which keeps things interesting and effective.

Moreover, the E - U - R model goes beyond just learning facts. It is about helping students develop all-around skills. This means not just learning new things, but also thinking critically and working together. By using this model, teachers can create classrooms where students learn to think for themselves and communicate well, setting them up for success in the real world (Hausenblas, Košťálová, 2007).

4.2 What is E – U – R not?

Traditional pedagogy has its own models for teaching, where planning typically starts with the subject matter and the teacher's activities, not the student's learning process. The E - U - R model, however, is fundamentally different despite appearing similar to these traditional models. Unlike traditional approaches which prioritise the curriculum and the teacher's role, the E - U - R model emphasises the student's learning journey.

The E - U - R model is not a strict prescription or a guaranteed law for teaching. It does not serve as a binding template with specific content which must be followed. Instead, it aims to provide guidance and support, offering flexibility rather than imposing strict rules. It is important to note that E - U - R is not an independent teaching method. Instead, it is a framework which incorporates various teaching methods to create a comprehensive learning experience.

Additionally, the E - U - R model is not a new trend borrowed from some “Western” educational systems. It is not an idea of a single theorist or the product of one practical teacher's innovation. Rather, it is a collaboratively developed approach tailored to refine educational practices. It is also not a universal thematic plan for an entire class. For experiential learning or methods focused

solely on individual development, other planning models might be more appropriate. The E - U - R model is designed to accommodate diverse learning needs and encourage meaningful engagement with the material.

4.3 Phase 1 – EVOCATION

Evocation, the initial phase of the E–U–R learning model, serves as a pivotal starting point with three primary objectives, all aimed at leveraging students' prior knowledge and experiences (Košťálová, Hausenblas, 2006).

1. The students independently and actively equip themselves with what they already know about the topic. This compels them to begin thinking independently about the topic, which is a very significant activation activity. They become aware of the extent to which they know the given topic amidst the chaotic subconscious knowledge and assemble their own cognitive bridge structure of the discussed topic, into which they can integrate new facts. Knowledge that we do not accept randomly but as part of some context is enduring. Information extracted from contexts which students cannot connect with their familiar knowledge may soon disappear. Learning involves connecting the new with the already known. The basis for students' deeper understanding of the world becomes a system of previous knowledge onto which newly acquired information can be thoughtfully connected, thus ensuring that students are internally engaged for the long term. By helping them reconstruct previous knowledge, we assist them in expanding their knowledge base and actively absorbing new facts. Moreover, this approach reveals many past misunderstandings and misconceptions, allowing students to correct erroneous opinions they might otherwise hardly notice.
2. The second goal of evocation is to activate the student. Effective learning presupposes the activity of the learner themselves. For students to be able to understand the teacher's explanation and to continuously draw from it while critically engaging with it, they must actively participate in the learning process. Active involvement means that students think independently and use their own language to express their thoughts. They demonstrate their knowledge and current level of understanding through their own coherent expression, whether oral or written. In the evocation phase, students clarify for themselves in this way what level their knowledge of the given topic is at and what knowledge schema they carry within themselves. Through the connection of old and new information, they will better understand the entire context.

3. The third goal of the evocation phase is immensely important. It is about arousing students' interest in solving the presented problem, in other words - learning. Students' internal interest is a prerequisite for them to remain actively engaged in what they are doing, to see the purpose of their work - that is, their learning. Learning with an obvious purpose is far more effective than learning where the student does not see the purpose of their learning or cannot identify with it. By formulating their own questions to which answers need to be sought, students have a specific goal towards which their work is directed. Learning based on genuine interest with a clearly defined purpose is far more effective than learning without a clear goal. If students freely set a goal, they will be fully motivated to achieve it (Steel, Meredith, Temple, Walter, 2007).

4.4 Phase 2 – UNDERSTANDING (awareness of meaning)

The second phase of the E-U-R model is referred to as the phase of becoming aware of the significance of information. As described by Sieglová (2019), during this phase, new information and ideas are encountered by the student, whether through reading text, watching a film, attending a theatre performance, listening to a lecture, or engaging in another activity. It is a learning phase during which the teacher has the least influence on the student. It is required that the student progresses through it with full internal commitment (Košťálová, Hausenblas, 2006).

The goals of becoming aware of the significance of information are:

1. The primary task of this phase is to ensure that the interest aroused in the evocation phase is maintained by the student.
2. The second purpose is to stimulate students to monitor how their own understanding of new knowledge is developing. Whether and how new information is understood, how it relates to what they already know from the past, and returning to what is unclear to them are constantly perceived by good students and capable readers. When listening to spoken speech, questions are asked or notes are made in places that are not understood so that they can be revisited later. These uncertainties are simply skipped over by passive readers, and either the information is not understood at all or only partially. Once students can continuously perceive whether they understand the text and to what extent, new information is stored in their own knowledge schemas, which are refined and strengthened. Connections are sought, and thus bridges are built between the old and the new, establishing a background for a deeper understanding of

the given topic. When greater control over their own thinking is attained, new information is better sorted because there is more belief in the ability to successfully connect new knowledge with previous knowledge (Steel, Meredith, Temple, Walter, 2007).

4.5 Phase 3 – REFLECTION

The third phase of the proposed learning model is the reflection phase. This phase holds significant importance, though it often gets overlooked in teaching. During this phase, students actively sort, unify, and systematise all the new knowledge they have acquired. They reinforce this new knowledge and reshape their original knowledge schemas. A learning process takes place, resulting in enduring understanding (Steel et al., 2007).

There are two main goals of the reflection phase.

1. Students are expected to start expressing their thoughts and acquire information in their own words. Students remember best what they can connect to independently and what they can explain using their own vocabulary. It is important to emphasise again that understanding endures when new information can be integrated into a coherent, meaningful framework.
2. There is an equally important goal of encouraging the exchange of opinions among students. This not only enriches their vocabulary but also exposes them to different knowledge schemas through their classmates. Each student is unique, and various understandings of new connections exist. It is crucial for students to engage with new information, articulate it, and be able to complement or reshape their opinions. They also learn that their thought schemas do not have to be definitive and that it is possible to adopt opinions which did not originate in their own minds (Steel, Meredith, Temple, Walter, 2007).

5 10 METHODS FOR ENHANCING CRITICAL THINKING

For a teacher to make an informed decision about which teaching method to choose, to respond flexibly, and to utilise a greater variety of activities in lesson planning, it is essential to know:

- The available teaching methods
- The strengths and weaknesses of these methods
- The purposes each method can serve
- How to apply each method in practice

Determining the best teaching method depends on the specific objectives of the lesson. The teacher should first clarify the lesson's purpose and then select an appropriate activity accordingly. What teaching methods do students prefer? According to Petty "students prefer to be active: engaging in discussions, creating objects, being creative, and participating in activities. They are generally not fond of passive methods. It is important not to succumb to the common misconception that students are inherently lazy and prefer activities which minimally disturb their daydreaming" (Petty, 1996, s. 113, my translation). Generally, the more active and engaged students are in the lesson, the more they enjoy the learning process.

Furthermore, different approaches work for each class. It is advisable to experiment with various teaching methods and not be discouraged if the class initially shows little cooperation. Through experimentation, you will discover which methods are most effective (Petty, 1996)

Critical thinking methods are designed to promote methodical thinking. According to Rutová (2015) "they help us seek answers to open-ended questions through the use of clear instructions presented in a logical sequence and structure".[6] These methods rely on a structured approach which guides teachers through complex topics, ensuring that they maintain clarity and focus.

The three phases of learning - evocation, awareness of meaning and reflection - enable us to progress systematically. During the evocation phase, prior knowledge is activated and interest in the topic is stimulated. In the awareness phase, we recognize and understand the importance of new connections and insights. Finally, in the reflection phase, we consolidate our understanding by reviewing and contemplating the learned material.

[6]RUTOVÁ, N. 2015. *"Respekt nebolí"* Člověk v tísni. Online. https://www.clovekvtisni.cz/media/publications/1754/file/pro--pr-v--metody-kritick-ho-my-len--a-e-u-r.pdf . Accessed 30. May 2024

This step-by-step approach allows learners to tackle challenging subjects which do not have a single, definitive answer. Despite the complexity and ambiguity of these topics, the structured method ensures that teachers can navigate them effectively without becoming overwhelmed or lost.

As displayed in Table 1, not all methods are suitable for each phase of the E – U – R model (Steel, Meredith, Temple, Walter, 2007).

Table 1

10 methods suitable for each particular phase of the E – U – R model.

TABLE OF METHODS BROKEN DOWN INTO THE E-U-R METHOD FRAMEWORK		
EVOCATION	**AWARENESS OF THE MEANING**	**REFLECTION**
Brainstorming (individual, pair, group) Free Writing Keywords Jumbled Sentences Mind Maps Dice Venn Diagram	I.N.S.E.R.T. Double Diary	Brainstorming (in pairs or in groups) I.N.S.E.R.T. Keywords Jumbled Sentences – verification of original assumptions Mind Maps – verification of the original concept Free Writing Double Diary – verification of the original concept Cinquain Dice Venn Diagram

(Adapted from: Steel, Meredith, Temple, Walter, 2007)

5.1 Brainstorming

Brainstorming is a pedagogical approach utilised for problem-solving and boosting creativity. It involves generating numerous ideas within a brief timeframe to address the issue at hand effectively (Zormanová, 2012)

There are several basic rules of brainstorming (Maňák, Švec, 2003)

1. Encourage all kinds of ideas: Allow everyone to freely share their thoughts, even if they seem strange. Sometimes, even the most unusual ideas can lead to great solutions.

2. Postpone criticism: Instead of judging ideas right away, save critique for later when the whole group can discuss and refine them together to find the best solution.
3. Quantity over quality: Aim to generate as many ideas as possible. Brainstorming works on the idea that the more ideas you have, the higher the chance of finding a valuable solution.
4. Document all ideas: Make sure to write down or record every idea which comes up during the brainstorming session.
5. Build on each other's ideas: Use the ideas generated by others as inspiration to come up with new ones. Collaboration can lead to even more creative solutions (in Zormanová, 2012, p. 120).

"The main point of brainstorming is to produce as many ideas as possible and then judge their usefulness" (Maňák, Švec, 2003, p. 164, my translation). Therefore, it does not guarantee complete resolution of the problem. Conversely, the innovative generation of ideas and the development of problem-solving solutions serve as highly effective initial steps for subsequent stages and methods of addressing a given problem.

The objectives of brainstorming are:

To gather as many opinions as possible on a given issue. The primary goal of brainstorming is to collect a wide range of viewpoints and ideas about a specific topic or problem. This diversity of perspectives can lead to more comprehensive understanding and innovative solutions. By encouraging everyone to share their thoughts, brainstorming leverages the collective knowledge and creativity of the group.

To seek ways to solve the problem. Brainstorming aims to identify potential solutions to the given problem. By discussing various ideas and approaches, participants can explore different strategies and evaluate their feasibility. This collaborative problem-solving process helps in finding effective and sometimes unexpected solutions which might not emerge from individual thinking.

To allow each child the opportunity to freely express their ideas and thoughts. An important aspect of brainstorming is to create an inclusive environment where every child feels comfortable sharing their ideas without fear of judgement. This open and supportive atmosphere encourages creativity and ensures that all voices are heard, boosting a sense of participation and ownership among the children.

To create a space for further discussion. Brainstorming sessions are designed to initiate dialogue and generate a starting point for deeper discussions. The ideas and opinions gathered during brainstorming can be further explored, refined, and developed in subsequent discussions. This process

helps in building a more thorough understanding of the issue and in developing better solutions (Maňák, Švec, 2003).

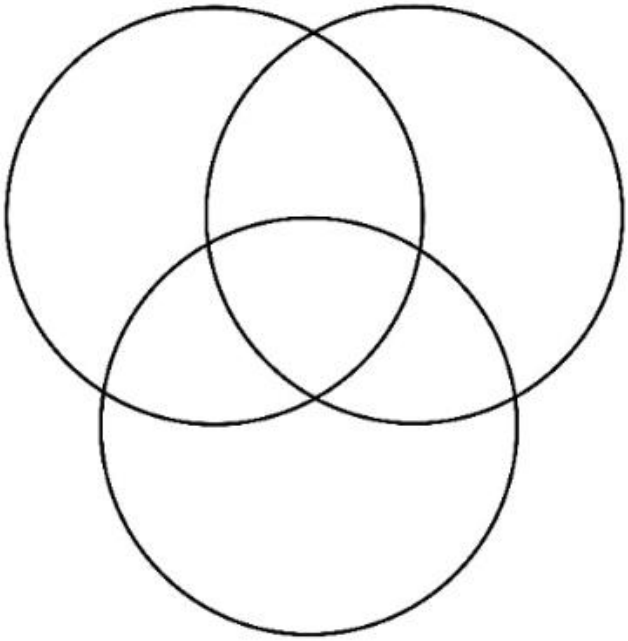
5.2 Venn diagrams

Comparing similarities and differences is a common practice in mathematics and statistics, serving as a valuable educational technique for comparison purposes. This method is often used as a didactic tool for developing critical thinking skills. By simultaneously examining the shared traits and distinctions among objects under scrutiny, such as through the process of inclusion and exclusion, employing a Venn diagram (see Figure 2), attributed to John Venn, proves beneficial. This graphical tool, rooted in set theory, aids in recognizing the relationships between two or more entities by highlighting similarities and differences (Sieglová, 2019)

Venn diagrams can take various forms, including circles, bubbles, squares, or rectangles of differing sizes and colours, overlapping to various extents. Elements within the overlapping regions represent commonalities, while those outside the intersections are not part of the set. The level of correspondence can range from complete overlap to complete separation, depending on the extent of the overlaps or distinctiveness of the patterns. Through activities like inclusion and exclusion, and the visual representation provided by Venn diagrams, learners are challenged to identify relationships and draw conclusions based on evidence. This approach not only deepens their understanding of the subject matter but also cultivates their ability to think critically, make logical connections, and evaluate information effectively. Thus, emphasising its application in teaching serves to nurture students' analytical skills and promote higher-order thinking (Zormanová, 2012).

Figure 2

Venn Diagram



(Retrieved from: tempaltelab.com)

5.3 Cinquain

As described by Sieglová (2019), cinquain "is a cognitive method aimed at developing students' abilities in analysis and creative thinking. Through this method, students engage in a structured five-line schema to produce a factual analysis of a selected concept, utilising basic grammatical functions" (Sieglová 2019, p.105, my translation).

In the first line, students present the central concept in the form of a noun. This serves as the main subject or theme of their analysis. In the second line, they choose two appropriate adjectives which describe the central noun, adding depth and detail to their understanding of the concept. In the third line, three verbs are selected which relate to the central noun, illustrating actions or processes associated with the concept. The fourth line consists of a sentence composed of four parts of speech, which appropriately characterises the given concept, showcasing the students' ability to form coherent and relevant descriptions. For the last line, students choose another noun. This noun should either be

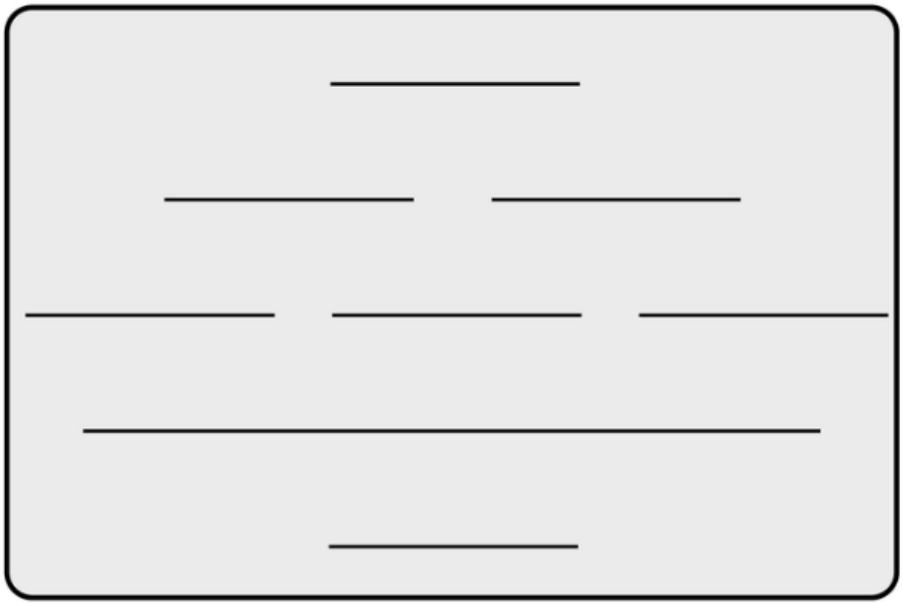
a synonym or an antonym of the noun in the first line, or it could be a word which has an associative relationship with it. This step encourages students to think critically about the relationships between words and concepts.

This method is particularly effective for brainstorming and is well-suited for activating and building upon students' existing knowledge about a given topic. By engaging in this exercise, students deepen their understanding of specialised concepts, theoretical frameworks, and their connections to personal experiences or the relevant context (Sieglová, 2019)

The five-line schema (see Figure 3) could be especially valuable in language teaching or activities aimed at enhancing communication skills. It encourages students to actively engage with vocabulary and terminology, promoting a more dynamic and interactive approach to learning. This method not only enhances their analytical skills but also develops creativity in how they express and relate concepts. It leads to a more profound grasp of the material and improves their ability to articulate ideas clearly and accurately.

Figure 3

Cinquain



(Adapted from www.havefunteaching.com)

5.4 Jumbled sentences

The jumbled text method works with the logical principles which hold the text together. According to Sieglová (2019) these principles are based on two fundamental conditions, professionally defined as cohesion and coherence.

> "Both aim at ensuring the text's unity and comprehensibility, but they differ in the functions of individual grammatical, lexical, and semantic elements within the text. Cohesion focuses on the internal consistency of the text. Its condition is the correct connection of selected grammatical and lexical elements, most commonly sentences, into a logical whole. It involves adhering to grammatical rules and lexical precision. On the other hand, coherence ensures the comprehensibility of the text in a broader context. It is the rule of external interconnection of larger units such as paragraphs or chapters. Coherence ensures the factual, conceptual, and communicative clarity of the text as a whole" (Sieglová, 2019, p. 132, my translation).

As believed by many teachers, working with text can significantly refine critical thinking skills (Steel, Meredith, Temple, Walter, 2007). By engaging with the principles of cohesion and coherence, learners are encouraged to analyse how different parts of a text relate and contribute to its overall meaning. Understanding and applying the rules of grammar and lexical accuracy to ensure cohesion helps develop logical reasoning skills. Learners must evaluate whether sentences and phrases follow grammatical conventions and logically contribute to the text (Bean, Melzer, 2021).

By systematically practising these skills through text rearrangement exercises, learners can develop a more structured and critical approach to both reading and writing, ultimately enhancing their overall critical thinking abilities (Zormanová, 2012).

5.5 Free writing

Using the free writing method, students are instructed to write for a duration of 5 minutes, jotting down whatever thoughts come to mind, either on a specified topic or one of their choosing. After the time elapses, they are encouraged to share their written reflections. If the task pertains to a particular subject, the initial phase mimics a brainstorming session, nurturing creativity and idea generation. This approach proves particularly effective during the reflection phase for demonstrating learning outcomes.

The method is governed by the following guidelines:

1/ Students are expected to engage in continuous writing during the designated time slot, even if they initially struggle to formulate coherent ideas. They may choose to express their current feelings or state before returning to the topic at hand.

2/ Emphasis is placed on producing cohesive and logically structured text, with a focus on expressing thoughts in full sentences rather than resorting to slogans or bullet points.

3/ Students are advised against revising or correcting spelling errors and stylistic choices while writing, advancing a process-oriented approach which prioritises the flow of ideas over perfectionism (Zormanová, 2012)

Čapek (2015) sees free writing as an effective method grounded in the principles of journaling. It provides students with the freedom to spontaneously express whatever thoughts come to mind, without the constraints of worrying about stylistic, content, or spelling accuracy. This method encourages a natural flow of ideas and promotes creative thinking by allowing students to write uninterrupted within a specified time limit. Knowing that their writing is private and not subject to evaluation, students can freely explore their thoughts and feelings.

The core purpose of free writing is to capture immediate impulses and impressions, which can lead to the discovery of unspoken ideas and connections. This method helps in sorting through thoughts, identifying hidden patterns, and generating new insights. By not focusing on formal accuracy, students can examine their thoughts and emotions in more detail, developing a more genuine and reflective writing process (Košťálová 2006; Steel, 2007).

Moreover, Sieglová (2019) believes that free writing serves as an excellent stress-relief tool. By removing the pressure of perfection, it creates a safe space for students to express themselves without fear of judgement. This reduction in stress can uplift overall mental well-being and create a more relaxed learning environment. Additionally, free writing can strengthen the relationship between students and teachers by building trust. When students know their writing is not being evaluated, they are more likely to open up, leading to a more supportive and understanding classroom atmosphere.

According to Steel (2007) and Sieglová (2019) a safe and trusting classroom environment is essential for effective learning. Free writing contributes to this by providing a non-threatening way for students to articulate their thoughts and emotions. It lays a solid foundation for subsequent discussions, as students who have engaged in free writing are often more prepared to share their ideas and participate in conversations.

To ensure the effectiveness of the free writing method, students are introduced to a set of rules which must be adhered to rigorously:

1. **Write whatever comes to mind**. This encourages spontaneity and captures raw, unfiltered thoughts.
2. **Write in continuous sentences**. This promotes the flow of ideas and mirrors natural thought processes.
3. **Write by hand.** Writing by hand can improve the connection between thought and expression, often leading to deeper reflection.
4. **Do not revise**. This rule ensures that the focus remains on generating ideas rather than perfecting them.
5. **Ignore inaccuracies.** This helps maintain the flow of writing and prevents the interruption of creative thought.
6. **Write continuously**. Even when at a loss for words, students are encouraged to keep writing, using filler comments to maintain momentum.
7. **Be personal**. Since the text is private, students can explore personal thoughts and feelings without concern for judgement (Steel, Meredith, Temple, Walter, 2007).

By following these rules, students can fully immerse themselves in the free writing process, unlocking their creativity and enhancing their critical thinking skills. The practice of free writing can lead to significant improvements in writing fluency, idea generation, and overall confidence in expressing oneself.

The teacher selects a topic which appropriately connects to the prepared material, formulating it in such a way that it opens up the possibility for a range of opinions or a variety of ideas. The teacher then introduces students to the topic and the free writing method, explaining the rules of free writing and placing them in a visible spot. It is crucial to ensure an atmosphere of trust for free writing. Before starting, the teacher emphasises the confidential nature of the resulting text, assuring students that they will not have to share their writing with anyone and will not be penalised for mistakes.

Students are given a time limit, usually 5 minutes, during which each student writes independently. If some students do not know how to continue, the teacher encourages and advises them on how to proceed. Before the time expires, the teacher alerts the students that one minute remains. This slight pressure often stimulates the most interesting ideas. After the time limit, the teacher allows students to finish their current thoughts.

An integral part of free writing is the subsequent discussion. The texts themselves remain confidential, and students choose which ideas they want to share. They contribute their thoughts to the discussion, selecting the most stimulating ones and discarding those which do not work. This collaborative process generates new ideas and the follow-up discussion becomes a group activity. Free writing is also suitable as a preparation for text analysis (Sieglová, 2019).

5.6 Mind maps

Among commonly used techniques are association diagrams, clusters or mind mapping (Buzan, 2007). Although visually similar, these formations differ in their creation process. With association diagrams, a student writes down words or sentences which the central keyword (or image, sound, etc.) triggers, making it a purely spontaneous process. In the case of clusters, a central concept is also chosen, around which associations gather. However, here we consider the interrelationships between associations; they can be linked, prioritised, and so on. In contrast, a mind map is a problem-solving technique primarily based on analytical thinking. A concept or problem is selected for "mapping" by determining subtopics or component problems first, followed by further analysis (Janíková at al., 2012)

All mentioned techniques involve recording in the form of concepts or key words, rather than complete sentences. They can be seen as independent activities, yet they can also serve well as preparatory exercises for writing other texts. They play an important role in the writing process because by documenting thoughts on paper, they can be better sorted, organised, and further contemplated.

If students' emotions are to be engaged within these techniques, there are several options. For association diagrams or clusters, for example, emotionally charged keywords or words which evoke emotions (such as joy, sadness, success, anger, love, as well as colours, seasons, food, etc.) can be used, or emotional images, photographs, or music can be employed. The task for students is to record all associations which these emotional stimuli evoke in them. Mind maps can be effectively used as a springboard for emotional discussions on controversial topics. Half of the class is tasked with listing ways to, for example, enforce a smoking ban in restaurants, while the other half gathers ideas on how to prevent it (Janíková at al., 2012).

Mind maps are excellent for training higher-order thinking. Buzan (2012) argues that there are a few main objectives to consider when teaching students critical thinking.

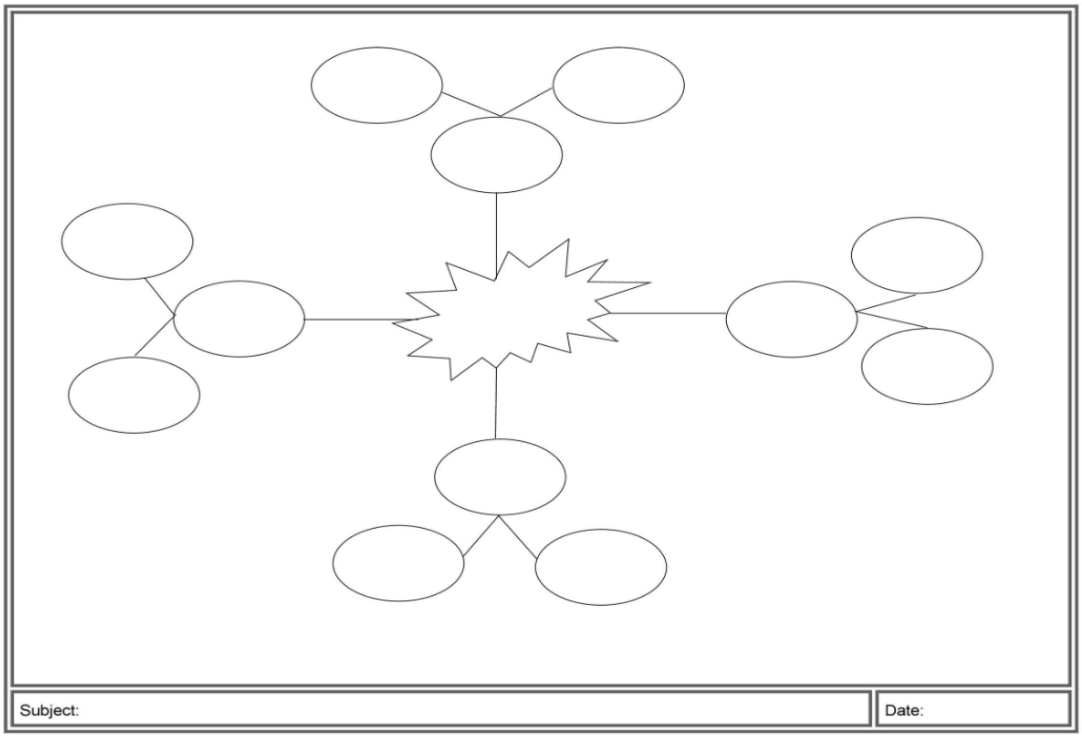
Firstly, to enable students to apply their knowledge and experiences, deepen their understanding, build on what they know, and clarify the relationships between concepts. Mind maps (see Figure 4) provide a visual framework for students to organise and integrate their existing knowledge with new information. This process helps them see how different concepts are interconnected, leading to a deeper and more comprehensive understanding. To develop intellectual skills, learn to compare, evaluate, explain, specify, and interpret. Creating mind maps "encourages students to engage in higher-order thinking skills. They must compare and contrast different ideas, evaluate their relevance and importance, explain their reasoning, specify details, and interpret the relationships between various concepts" (Buzan & Buzan, 2012, s. 42). This active engagement with the material promotes critical thinking and helps students develop a more detailed understanding of the subject matter.

To practise analysis and synthesis, and to learn how to learn. Mind mapping is an exercise in both analysis and synthesis. Students analyse the main problem by breaking it down into sub-problems and related concepts. They then synthesise this information by organising it into a coherent visual structure. This process not only enhances their comprehension of the material but also teaches them effective learning strategies. By mastering the use of mind maps, students can improve their ability to organise information, recall details, and see the bigger perspective (Steel, 2007).

Using linear notes, mutual associations might not be captured, or only very poorly. Information arranged in this way contains empty statements and leads to forgetfulness because the connections and relationships between them might not be recognised. In contrast, a mind map is a visual tool for holistic thinking, which supports all brain functions - especially memory, creativity, learning, and all thinking processes (Buzan & Buzan, 2012).

Figure 4

Mind Map Template



(Retrieved from: www.templatelab.com)

5.7 Key words

Supporting students' skills in identifying and working with keywords is crucial, not only for working with texts but also as a good thinking strategy. Keywords are valuable for understanding texts and extracting important elements. Čapek (2015) believes that the skill to identify keywords well reflects students' ability to comprehend a text and distinguish essential elements from the lesser significant ones.

Here are some activities where keywords can be used:

Keyword Filter

The Keyword Filter activity can be implemented in various formats; pair work, individual work, or group work. This method helps students better understand specialised texts, extract key information, and distinguish significant elements from less significant ones.

The teacher begins by distributing the text to the students. Each student's task is to identify 3 to 5 keywords which they believe are the most critical for understanding the text (the exact number

is specified by the teacher). These keywords should best capture the meaning and content of the text. The teacher then draws a funnel on the board with a beaker underneath it to symbolise the filtering process.

Once the students have identified their keywords, they come to the board and write their words in the beaker. Subsequent students only add words which are not already on the board. This collaborative process ensures a comprehensive collection of keywords from all students. After all contributions are made, the entire class discusses and selects the top five or three essential keywords through discussion and possibly voting. This method not only helps students learn to prioritise information but also stimulates critical thinking and group consensus. The filtered keywords can then be used for note-taking and reinforcing the learned material, as they represent well-understood concepts chosen collectively by the students.

Ten-Minute Keyword Exercise

The Ten-Minute Keyword Exercise is a quick and efficient method for testing students' understanding of a topic. The teacher selects 5 keywords related to the topic to be tested. These keywords are presented to the students, who then have ten minutes to write down everything they know about the topic, using the keywords as prompts.

This activity serves multiple purposes. Firstly, it encourages students to recall and organise their knowledge quickly, developing an ability to think on their feet. Secondly, it provides the teacher with a rapid assessment of how well the students understand the material. After the writing exercise, a discussion can follow, allowing students to share their thoughts and providing the teacher with further insights into which aspects of the topic were most engaging or challenging for the students.

This method also offers excellent feedback on what elements of the lesson were most impactful. It can reveal what resonated with the students and what might need further clarification. Additionally, the ten-minute keyword exercise helps students practise concise and focused thinking, as they must directly address the keywords without straying from the topic. This activity not only reinforces the material but also amplifies students' ability to communicate their understanding effectively.

By incorporating these keyword-based activities, teachers can significantly enhance students' comprehension and retention of the material, encouraging a deeper and more active engagement with the content.

5.8 Dice

The dice method is “a cognitive technique that uses a die to examine a chosen topic from six distinct perspectives” (Sieglová, 2019, p.107, my translation). When a one is rolled, students describe the fundamental properties of the topic. Rolling a two prompts them to compare the general characteristics of the topic with those of a related subject. If a three appears, students share any associations or ideas which the topic brings to mind. Rolling a four leads them to analyse the topic's structure and functional attributes. When a five is rolled, they consider practical applications and how the topic could be used in real-world scenarios. Finally, a six encourages students to evaluate the positive and negative aspects of the topic, providing a balanced view. This method encourages a comprehensive and multifaceted approach to understanding and discussing various subjects (Sieglová, 2019)

According to Steel at al. (2007) the Dice method symbolises an imaginary roll of a die. However, instead of numbers, each of the six sides of this die features an activity which students will subsequently perform:

1. **Describe.** Students describe what they see when they consider the given topic. They focus on its visual aspects, fundamental features, and overall appearance.
2. **Compare.** At this stage, students write down what the topic resembles and how it differs from other subjects. They choose the criteria for comparison themselves, making connections to various elements.
3. **Associate.** The task here is for students to list everything which comes to mind when they hear the topic's name. This can include concepts, objects, people, experiences, and more.
4. **Analyse.** Students break down the topic into its components, describing what it consists of and how it is structured.
5. **Apply.** In this phase, students think about the practical uses of the topic. They consider what parts of it can be used, how, and for what purposes.
6. **Argue.** Each student takes a stance for and against the topic. To defend and support their positions, it is important to present well-reasoned arguments.

The Dice method can be implemented in two ways: with or without using a physical die. When using a die, the activity begins with students working in pairs or small groups, and the teacher must ensure there are enough dice available. Without the die, the concept of the six angles serves only as a structure for analysing the given topic, and students can work individually or in groups.

The teacher introduces students to the die schema and explains the essence of all six analytical categories. Depending on the needs, the teacher divides students into pairs or groups, then presents the topic and sets a time limit. In group work, it is essential to stress the originality of responses. If a number is repeated, the student must come up with a new idea; otherwise, they are out of the round.

Without using a die, students process all analytical categories in order, first individually, then in pairs or groups. The teacher continuously monitors the activity and ensures the accuracy of responses according to each category. After completing the task, it is beneficial to include a group discussion.

The Dice Technique is suitable both as an introduction to new topics and for summarising learned material. It is also a good preparation for subsequent communication activities. Using the dice method develops students' analytical and critical thinking skills, teaching them to think deeply, organically, and in a structured manner about various subjects.

5.9 I.N.S.E.R.T.

This is a complex method suitable for working with text - reading comprehension, sorting information, training learning competencies. There are different variants of noting the information, however the objectives are mainly the following: (Zormanová, 2012)

1. Reading the text carefully, becoming aware of the information. This involves actively engaging with the text, paying close attention to the details, and absorbing the information presented. It is about more than just reading the words; it's about comprehending the meaning behind them, understanding the context, and being mindful of any underlying messages or themes.

2. Processing the text upon first reading. Upon reading the text for the first time, it is important to begin processing the information immediately. This includes mentally digesting the content, making connections between different ideas, and forming initial impressions or interpretations. By processing the text on the first read-through, you lay the foundation for deeper understanding and analysis in subsequent readings.

3. While reading, decide on one's relationship to the information. As you read, it's essential to actively engage with the material and consider your own perspective or stance on the information presented. This involves reflecting on how the text relates to your existing knowledge, beliefs, and experiences, as well as considering any biases or assumptions you may have. By consciously

evaluating your relationship to the information, you can better understand its relevance and significance to you personally.

4. Sort the most important information into the I.N.S.E.R.T. table. After reading the text, it is helpful to organise the key information into a structured format, such as the I.N.S.E.R.T. table. This involves identifying the most important points, summarising them concisely, and arranging them systematically within the table. By creating structured notes, you can strengthen your comprehension and retention of the material, making it easier to review and reference later on.

"Utilising various methods of note-taking facilitates the organisation of information, enabling the differentiation between familiar and unfamiliar concepts. Additionally, these techniques serve as invaluable aids for independent learning" (Sieglová, 2019, p.151, my translation).

INSERT means:

I interactive

N noting

S system for

E effective

R reading and

T thinking

As the name implies, this method is designed for a development of effective reading of text and better comprehension of written information (Zormanová, 2012). While working with the text, the reader marks the concept sentences or paragraphs according to the following system:

Table 2

(Insert table marking system)

✓	Information confirming existing knowledge
+	New Information
-	Information contradicting existing knowledge
?	Information which is not understood by the reader, or for which further explanation is required

(Adapted from: Sieglová, 2019, p. 151)

The markers can be adjusted according to individual needs, but it is important that they remain consistent throughout the entire text. After reading the text and introducing the markers, the reader revisits the markers to clarify, sort, and contextualise the marked information with their existing knowledge, possibly adding further insights. In this stage of working with the text, the reader creates a table to record their findings from the text. A table (see Table 2) with four columns can be created, where each column represents one marker (+, -…). In each column, learners can then write down the information from the text which they marked with the corresponding symbol (Zormanová, 2012).

5.10 Double diary

The last method described in this thesis is a method utilised to enhance text comprehension, commonly employed at the outset of engaging with any type of text, such as fiction, technical documents, poetry, or advertisements (Sieglová, 2019)

During this activity, students are instructed to read the text silently or with moderate volume. As they read, they are encouraged to underline sentences or parts of sentences which capture their attention. Additionally, students are prompted to write their own commentary adjacent to the text or in a designated table below it, addressing various aspects:

1. The rationale behind the selection of a particular idea.
2. Associations or connections it evokes.
3. Any inquiries or questions it raises.

In the subsequent phase, students revisit the underlined portions one by one, reading aloud their previously recorded observations. The teacher facilitates this process paragraph by paragraph, allowing each student to articulate their thoughts in sequence. After exhausting their comments on an idea, the teacher transitions to the next student, repeating the process until the entire text has been collectively explored. This method offers numerous benefits, including active engagement of all students in reading and analysing the text, facilitating peer discussion and learning, expanding vocabulary, and documenting new insights gleaned from classmates, all while maintaining focus on the central topic at hand (Čapek, 2015)

Zormanová describes the double diary as a method which is used with the intention that students can better connect the material from the text with their own experience and preconceptions. “It helps pupils to find personal connection to what they are learning. The pupils should be aware of why he/she should learn the following material” (Zormanová, 2012, p. 141, my translation).

Table 3

Double Diary

List the part of the text (copy it) that impressed you most, reminded you of your own experience, is a mystery to you or you cannot agree with. Write on which page we can find this text.	Write your own comment on the chosen passage. Why did you choose this passage? What questions came to your mind during the reading? What did you disagree with?

Citation	**Comment**

(Adapted from: Steel, Meredith, Temple, Walter, 2007)

6 PRACTICAL PART

In this part of the thesis two main chapters are presented. The first chapter covers the study design and is further divided into three sections (materials, participants, and procedure). All this is followed by a detailed depiction of the research results. This chapter also includes a quantitative study, which focuses on data collection and analysis. For this thesis, an on-line questionnaire was selected as the most suitable survey method.

6.1 Study Design

This chapter is divided into three sections. The first section introduces the materials used in the research. The second section presents the research participants. The third section describes the procedures of the study in detail.

6.1.1 Materials used

A questionnaire was employed in the research to gather various information from lower secondary English language teachers in the Czech Republic. This survey aimed to collect data on teachers' interest in using teaching methods which develop critical thinking in English language teaching, their knowledge of such methods, their personal opinions on using them and other relevant factors (see Appendix). The process of creating the questionnaire is described in detail in the Procedure section.

6.1.2 Participants

The targeted participants of the survey were ESL teachers in lower secondary schools in the Czech Republic. In order not to exclude anybody who qualified at an abnormally young age, or who are teaching past typical retirement age, the age range groups began at 0 and had no upper limit.

Concerning age groups, the majority of teachers who responded were between 36 and 45 years old (34.2%), followed by their older colleagues in the 46 to 55 range with 30.4%. A smaller proportion (22.8%) reported being younger at between 26 and 35 with a further 7.6% responding with 0 to 25

years old. 3.8% wished not to answer, while the final respondent (1.3%) reported being 56 or over. Concerning the gender, there were 66 female respondents, 11 males and 3 people chose the option “I wish not to answer”. Regarding their work place, 64 teachers selected state school as their educational institution, 15 respondents were from private schools and 1 respondent worked either in a church school or a language school.

6.1.3 Procedure of the questionnaire

The questionnaire was answered 81 times over a nearly three-month period from August 9, 2023 to October 30, 2023, alhough it should be noted that 1 participant submitted a totally blank response with no questions answered. The link was shared on several online teaching forums and groups of which I was a member. Where I used the English term for a given method e.g. “Cinquain”, I provided a link to a resource explaining its meaning in Czech. The links were set to open in a different tab, to make it quicker and easier for the respondent to stay engaged with the questionnaire (if the link opened in the same tab as the questionnaire, it reset the questionnaire when the respondent clicked back to it).

The questionnaire was designed to gather data to support my hypothesis that, although there is a general acknowledgement about the importance of critical thinking among lower secondary school ESL teachers, the majority of them do not work systematically towards implementing critical thinking skills into their curriculum.

The reasons for hosting this questionnaire online is to make it as accessible and simple to use for as many people as possible. Furthermore, in today‘s digitally-connected world, printing, distributing and collecting paper copies is so time and resource intensive as to make no sense. In addition, services such as Google Forms automatically produce CSV files of the responses. Once the data are in CSV format, other software, such as spreadsheets, make it a simple matter to filter the results and present them graphically. Furthermore, the digital format allows hyperlinking a term to a verified website which explains it in detail in Czech, should the English term be unfamiliar to the respondent.

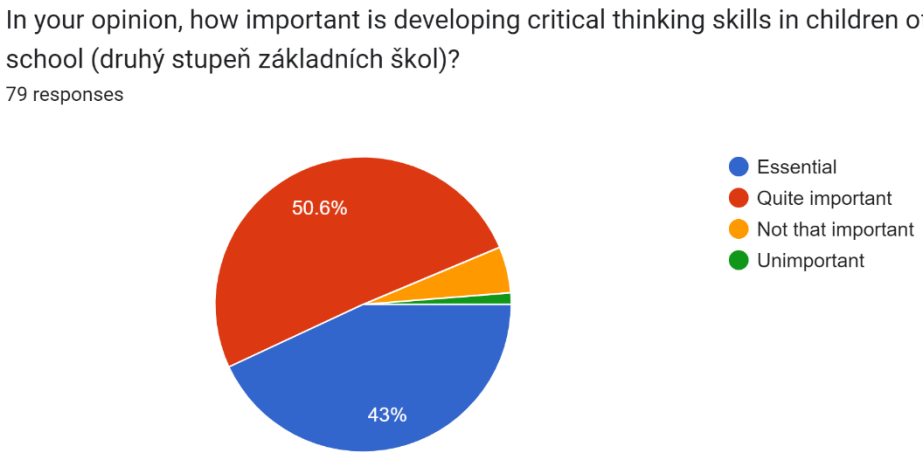
Google Forms is cross-platform software, meaning that any device capable of displaying a modern webpage is suitable, regardless of operating system, browser or screen size. When the respondent opens the link to the questionnaire, they are presented with a brief introduction which explains how to complete it.

Where questions concern personal data or opinions, I have included an opt-out response, such as ‘I don’t know’, ‘I do not wish to answer’ or ‘Other’. In formulating the questions, I have worked with a native English speaker to ensure that they are concise and unambiguous.

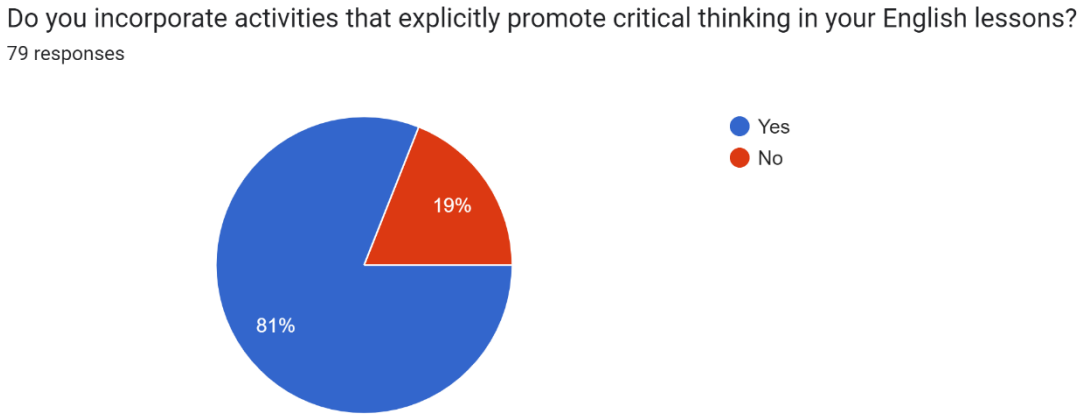
6.2 Results of the questionnaire

In this section, the outcomes of each segment of the conducted survey are showcased. Graphs have been employed to enhance the clarity and comprehensibility of the reported results. The results are explained in two levels – as simple charts and also as comparison charts.

I began by asking how important, overall, respondents thought that teaching critical thinking skills was in the target age group. In the chart below, we can see that 50.6 % of respondents consider it to be “Quite Important”, with “Essential” a close second at 43 %. A small minority rated it as “Not That Important” (5.1% or 4 people) and “Unimportant” was recorded by 1* person or 1.3%



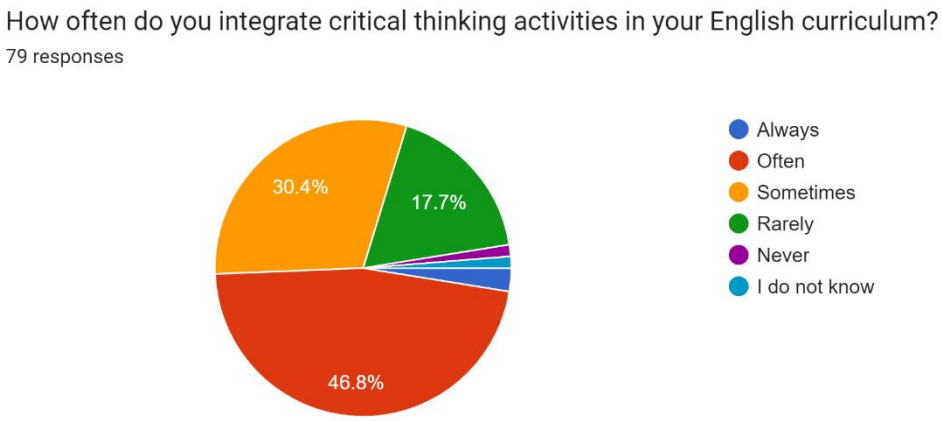
We can see in the chart for question 2 that respondents explicitly promoting critical thinking skills are in the overwhelming majority at 81 % (64 respondents), with only 19% recording that they did



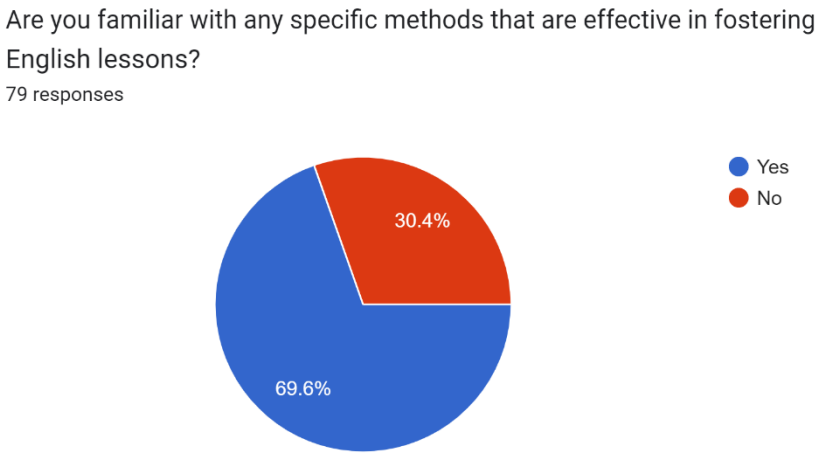
not.

Given the responses to later questions, as we shall see, this statistic began pointing to a trend.

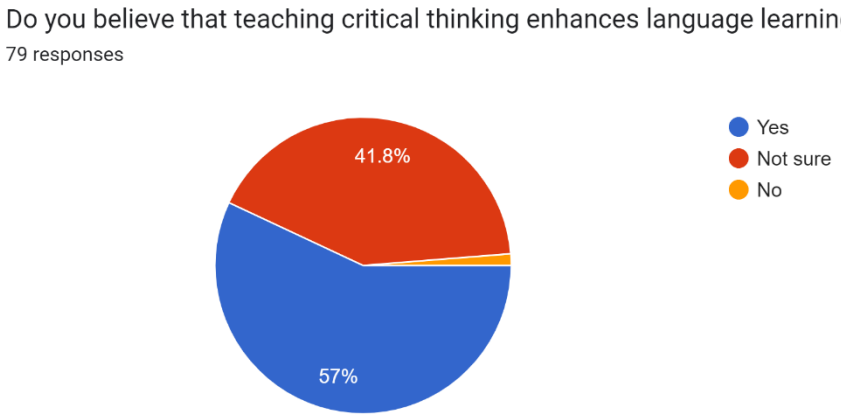
On the question of how often respondents integrated critical thinking activities into their curriculum, a clearly visible group of 46.8% replied “Often”, with the second group of 30.4% responding with “Sometimes” and a third group of 17.7% with “Rarely”. The remainder were divided between “Always”, “I Do Not Know” and “Seldom” with 2.5%, 1.3% and 1.3% respectively.



Similarly, familiarity with specific methods for fostering critical thinking skills within English lessons forms a distinct majority with 69.6% of responses. However, those who responded “No” form a significant minority at 30.4%

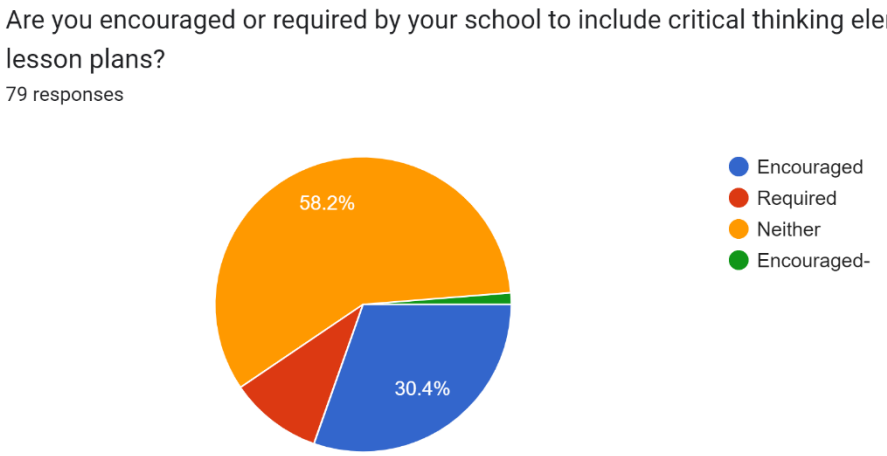


The division of opinions begins to equalise with the question of whether or not the respondent believed that teaching critical thinking enhanced language learning in English lessons. “Yes” still formed a majority at 57% but “Not Sure” at 41.8% is a substantial response itself. A single respondent (1.3%) considered that it did not improve learning in English lessons.

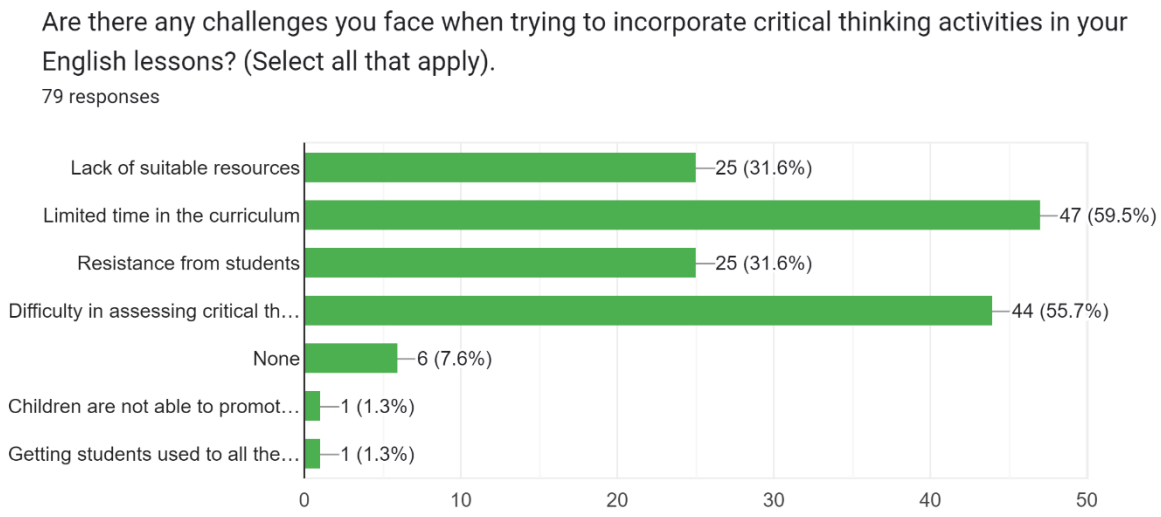


Given the responses to the previous questions, it was evident that 81% of respondents had received no formal training or professional development related to integrating critical thinking into their English lessons. 11.4% responded that they had received such training and a further 7.6% were undergoing formal training at the time they responded.

It was also noticeable that 58.2% recorded “Neither” when asked if they were encouraged or required to include critical thinking elements in their English lesson plans. 31.7% replied that they were encouraged and 10.1% that they were required to.

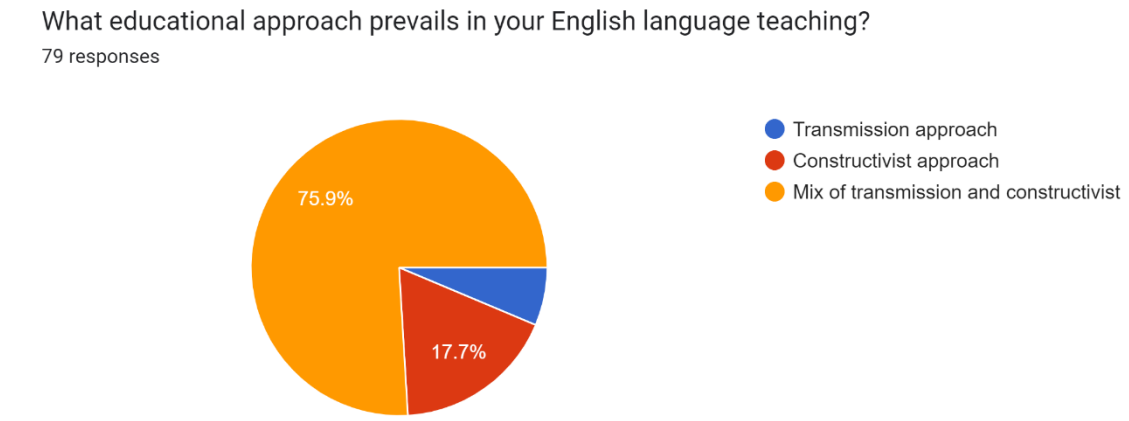


In terms of challenges faced when trying to incorporate critical thinking activities into English lessons, “Limited Time In The Curriculum” and “Difficulty In Assessing Critical Thinking” are the two greatest responses. However, they cannot be taken in isolation as respondents were asked to select all options which applied, so a further breakdown of this data is possible.

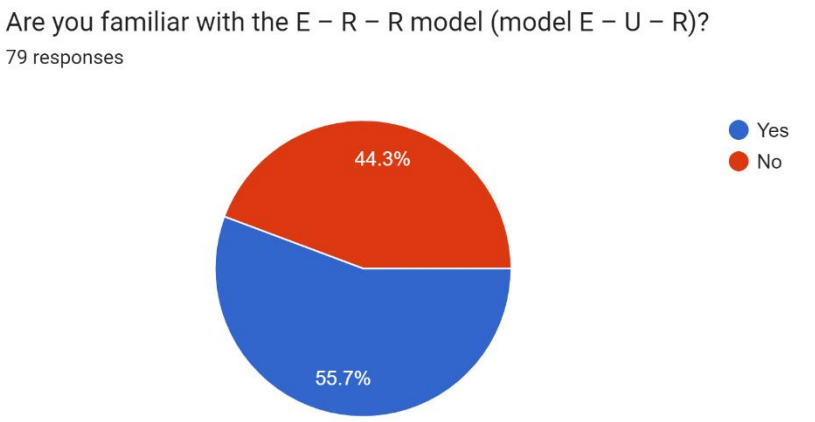


Question 9 concerned prevalent educational approaches in English language teaching. Respondents were presented with three options: “Constructivist Approach,” “Transmission Approach,” and a “Mix of Transmission and Constructivist.”

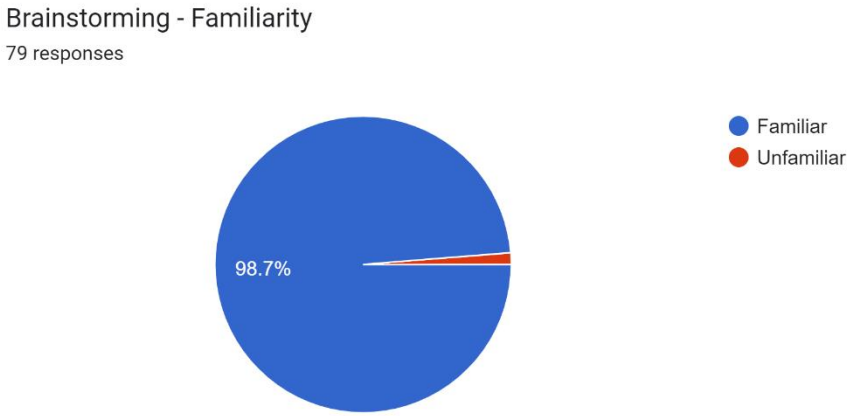
Just over a quarter of the sample (17.7%), expressed a clear preference for the “Constructivist Approach.” Conversely, a smaller but still noteworthy segment of respondents (6.3%) answered, “Transmission Approach.” Over three quarters of respondents (75.9%) indicated a “Mix of Transmission and Constructivist” approach in their English language teaching.



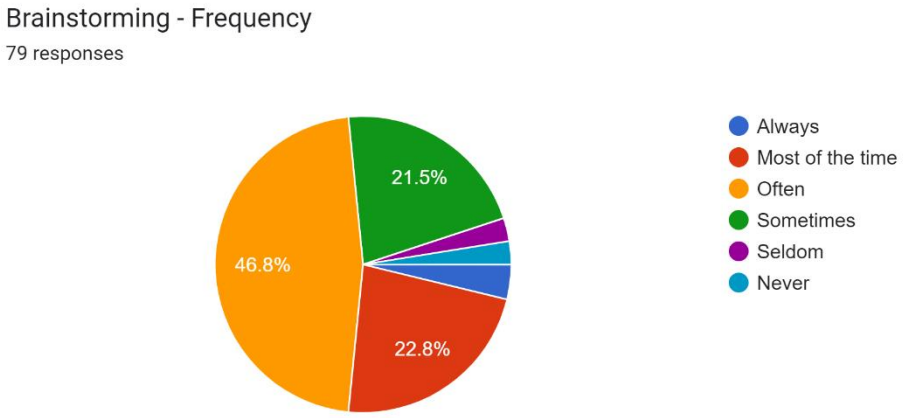
Regarding familiarity with the E - R - R model (model E - U - R) a notable portion of respondents reported “Yes” (56.7%). A significant minority of 44.3% responded “No”.



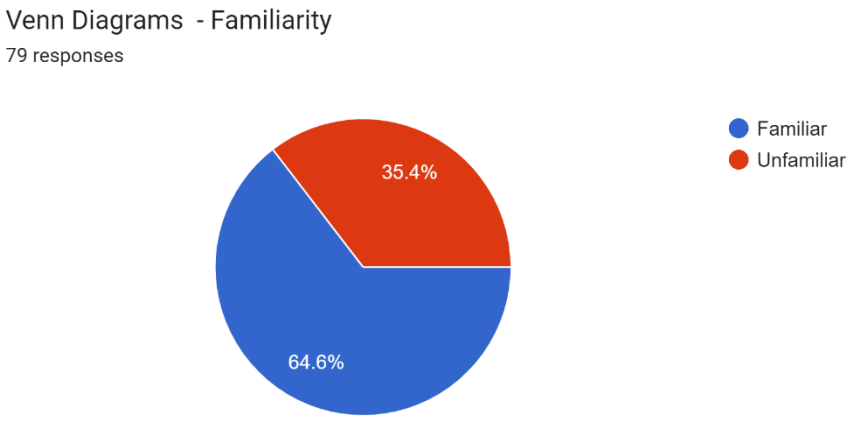
Only 1 person responded that they were unfamiliar with the method of brainstorming (1.3%). The remaining 98.7% indicated familiarity.



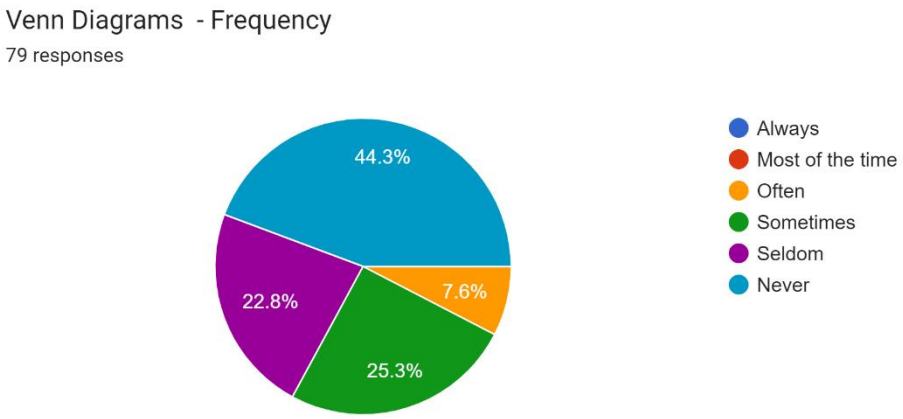
The largest group of respondents (46.8%) indicated that they use the brainstorming method “Often,” 22.8% of participants reported “Most of the time,” followed by “Sometimes,” at 21.5%. The remaining responses were divided between “Always,” (3.8%), and “Seldom” and “Never” at 2.5% each.



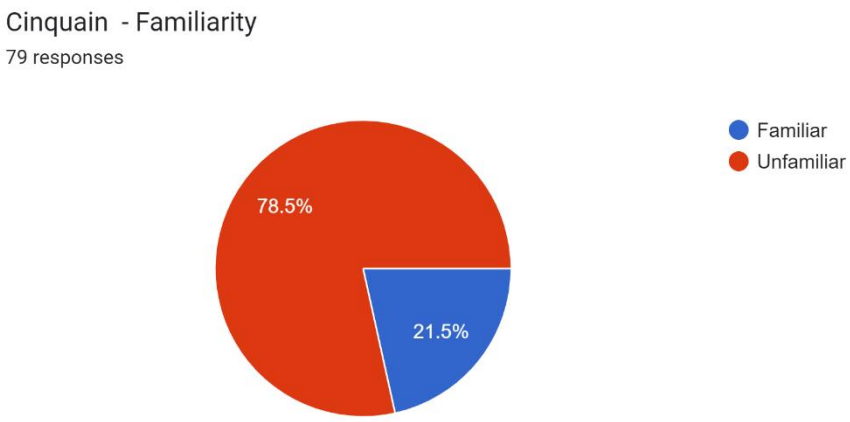
Almost two thirds of respondents indicated that they are "Familiar" with Venn Diagrams (64.6%), while a considerable group of 35.4% responded that they were unfamiliar with them.



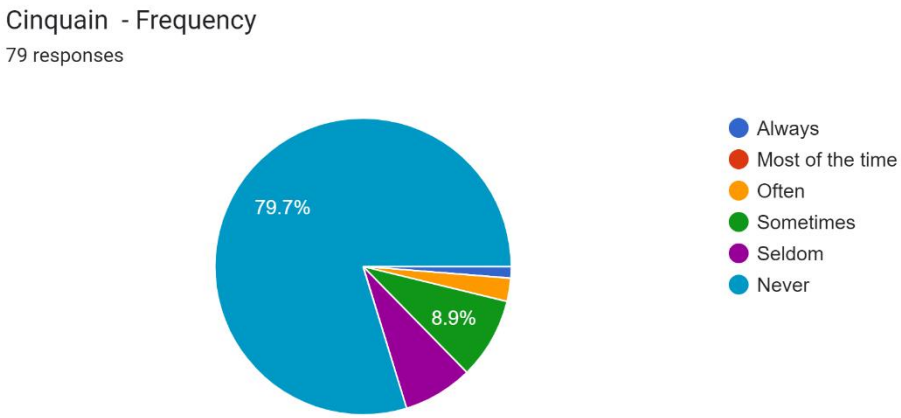
The majority of respondents (44.3%) indicated “Seldom” using Venn Diagrams, with 25.3% indicating “Sometimes” and a further 22.8% indicating “Seldom”. However, 7.6% responded that they used them “Often”.



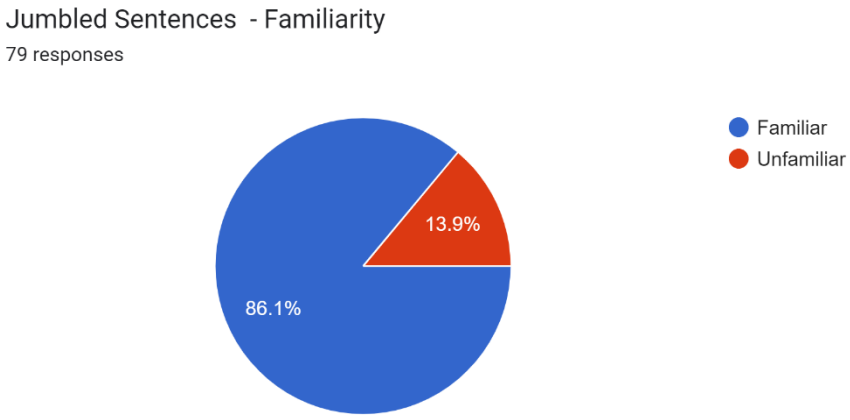
Cinquain is clearly a less familiar method among the respondents, with only 21.5% indicating familiarity. At 78.5%, “Unfamiliar” was by far the strongest response.



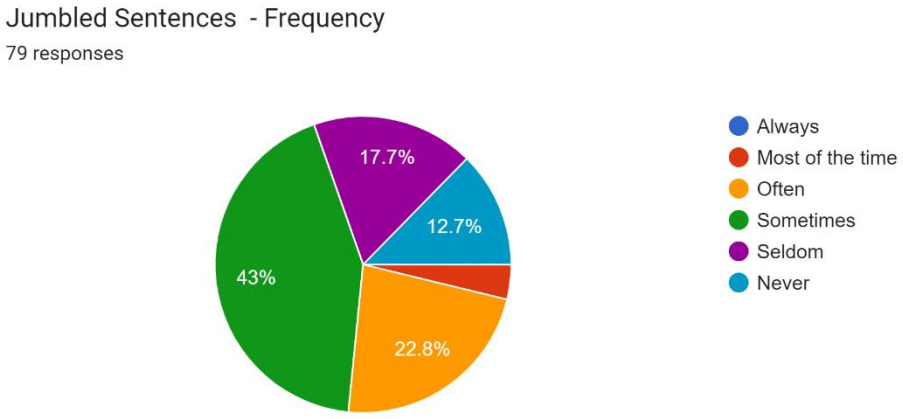
Reflecting the percentage of responses to the question of familiarity, respondents overwhelmingly indicated that they "Never" use Cinquain (79.9%). A noticeable 8.9% indicated that they "Sometimes" use it, though. A further 7.6% indicated using it "Seldom", and the remainder responded with "Often" at 2.5% and "Always" at 1.3%.



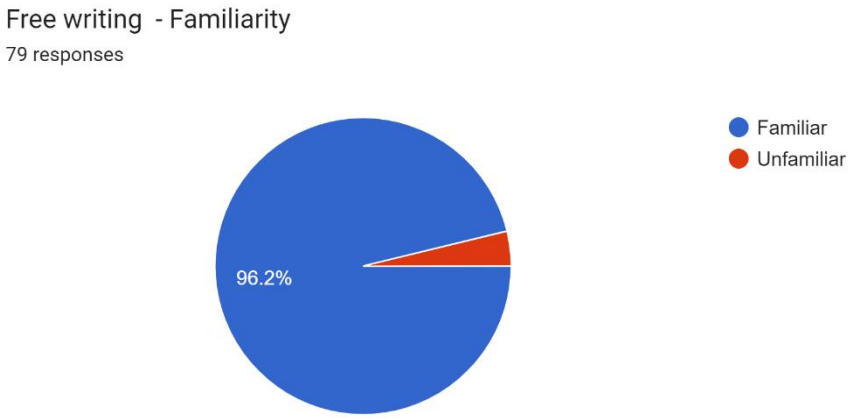
Jumbled sentences were reported as "Familiar" by 86.1% of respondents, with 13.9% expressing unfamiliarity.



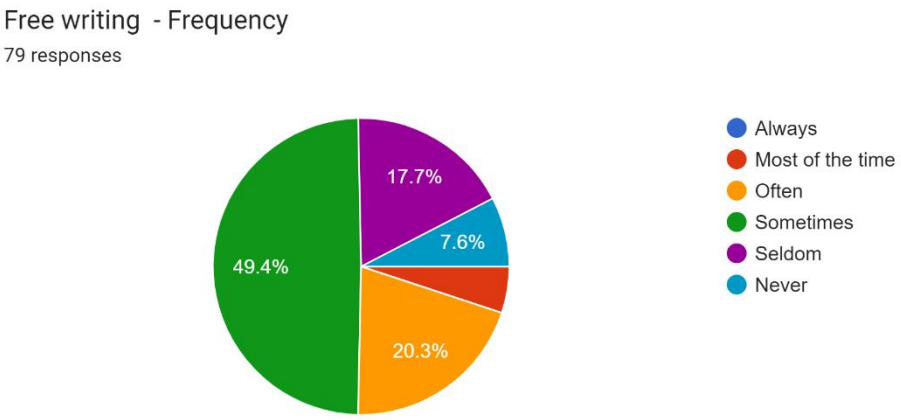
A noteworthy number of respondents (43%) reported using the "Jumbled Sentences" method "Sometimes." Additionally, 22.8% responded with "Often", 17.7% responded “Seldom”, 12.7% “Never” and a modest 3.8% indicated “Most of The Time”.



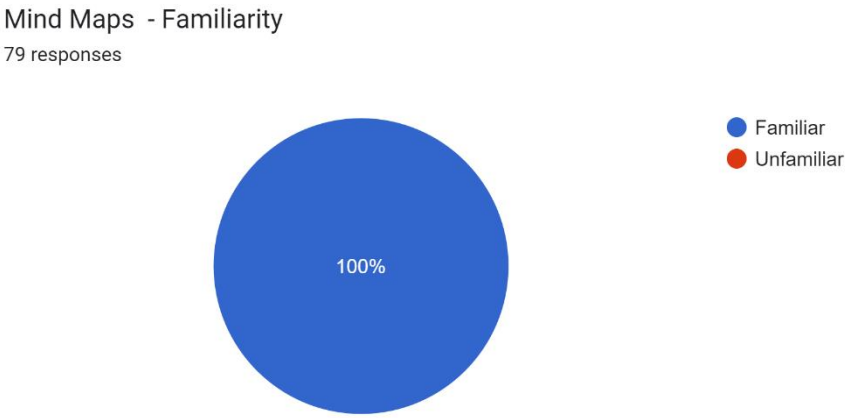
Free Writing proved to be a well-known method, with 96.2% responding “Familiar” and only 3.8% with “Unfamiliar”.



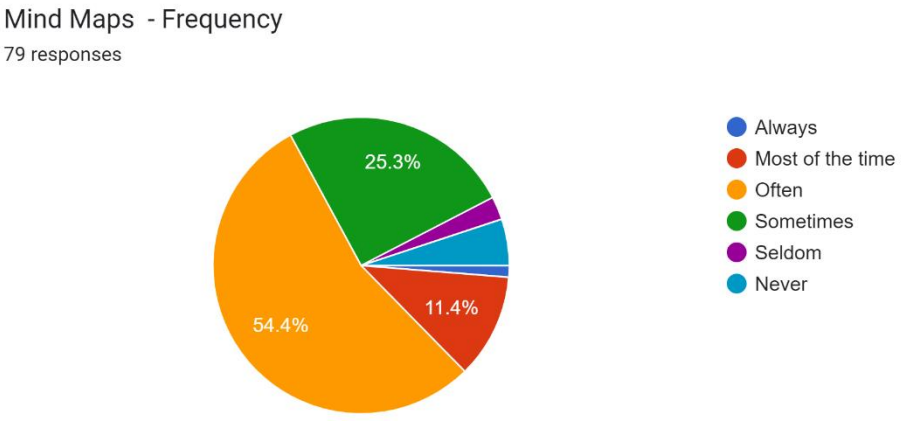
Nearly half (49.4%) of respondents reported using the "Free Writing" method "Sometimes," with a further 20.3% reporting “Often”, closely followed by 17.7% with “Seldom”. Of the remainder, 7.6 % responded “Never”, while the smallest group at 5.1% reported that they used Free Writing “Most of The Time”.



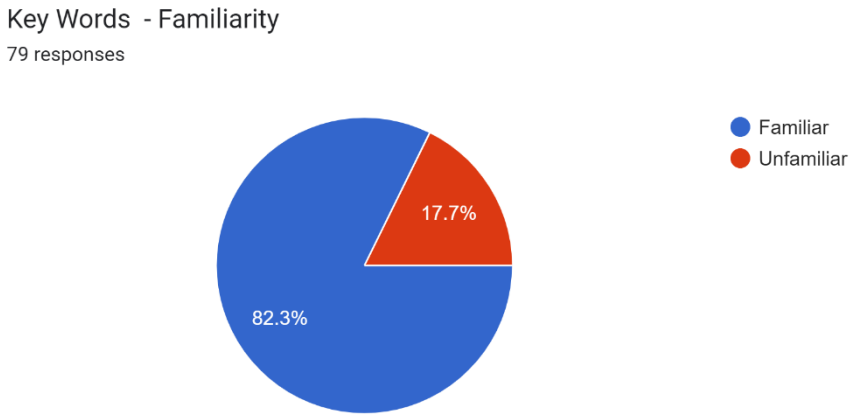
A full 100% of respondents reported being familiar with the technique of Mind Maps.



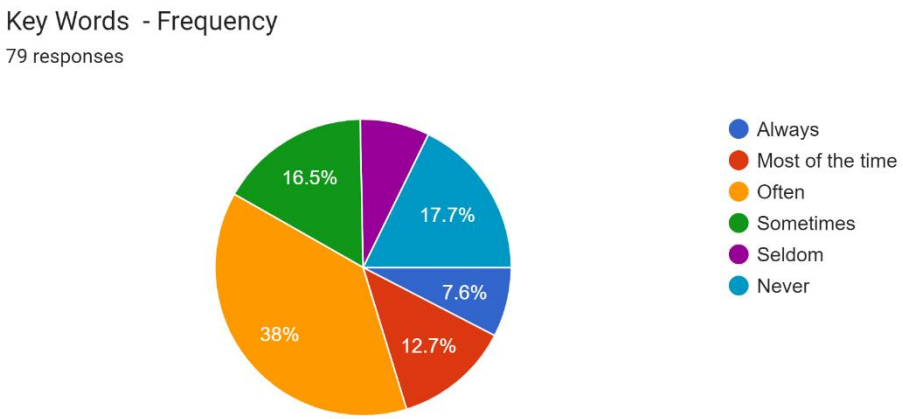
Although every respondent reported being familiar with Mind Maps, a mere 1.3% (1 Respondent) reported using them “Always” and only 11.4% reported using them “Most of the time”. The largest group of responses recorded “Often”, with the second largest group at 25.3% responding that they used them “Sometimes”. 5.1% responded “Never”, with the remaining responses divided between “Seldom” at 2.5% and “Always” at 1.3%.



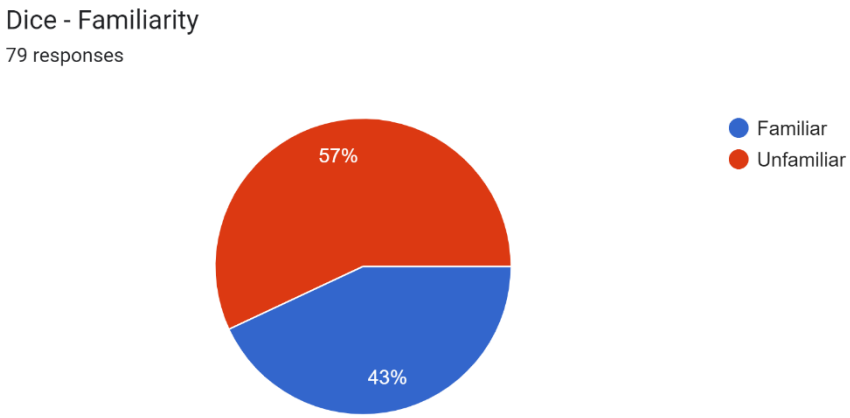
Key Words is another technique which appeared familiar to my respondents at 82.3%, although the group reporting being unfamiliar was relatively large at 17.7%.



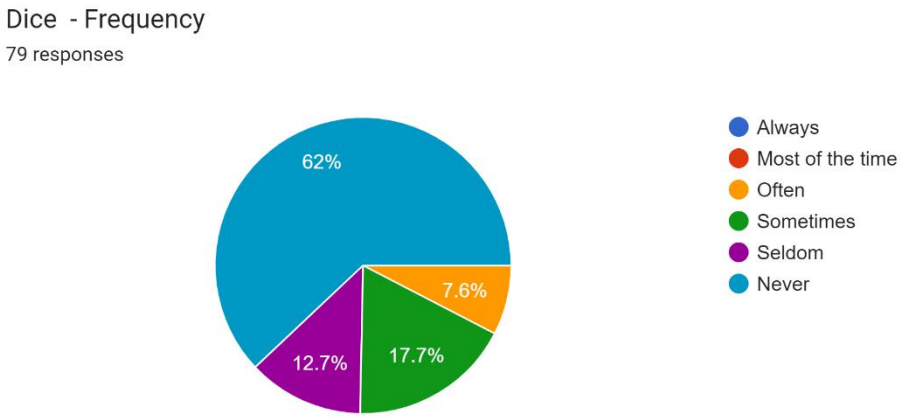
Despite such a clear majority reporting being familiar with the Key Words method, the responses for the question of how frequently they were employed in English lessons displayed less polarity.
The largest group, representing 36%, responded “Often” with the second largest group (17.7%) reporting “Never”. “Sometimes” followed with 16.5% of the data and those reporting that they used it “Always” were in the joint minority at 7.6% with an equal percentage responding “Seldom”.



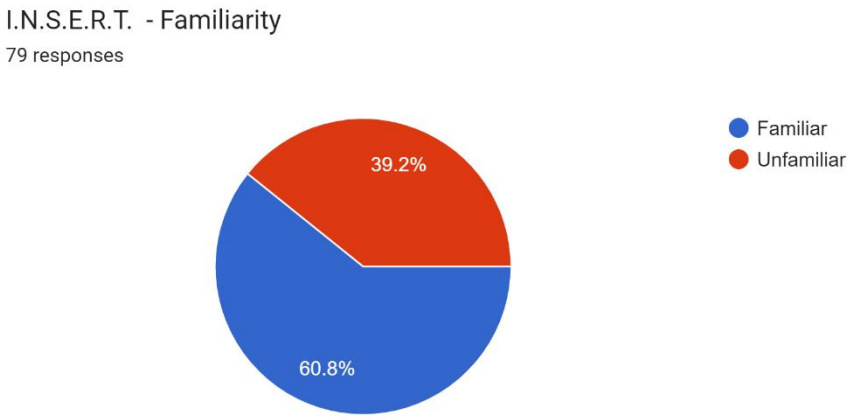
“Dice” also proved to be less well-known among my respondents. Slightly under half of them (43%) claimed familiarity with the method, while the majority of 57% reported unfamiliarity.



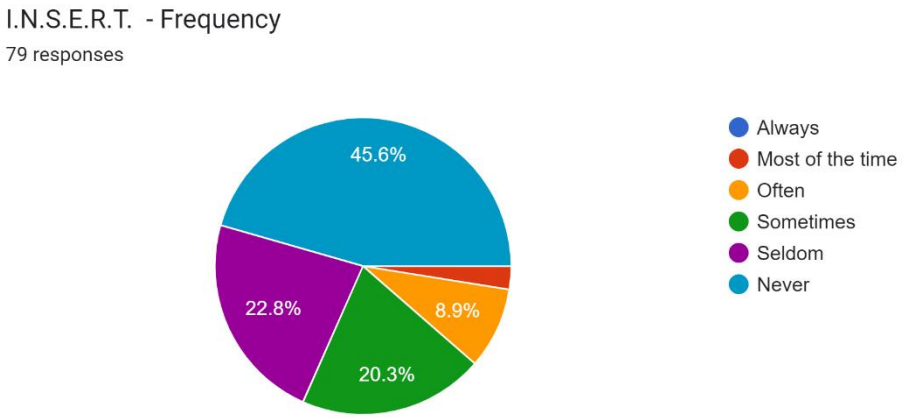
On the question of frequency of use, almost two thirds (62%) responded that they never used the method in their English lessons. In fact there was not a single report of “Always” or “Most of the time”, although 7.6% reported “Often” using it. The second-largest group of respondents at 17.7% replied that they “Sometimes” used Dice, while the remaining 12.7% responded with “Seldom”.



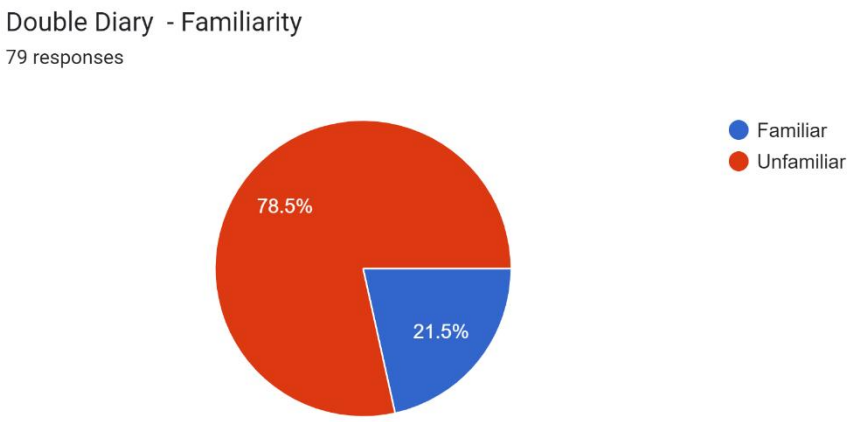
Regarding familiarity with "I.N.S.E.R.T.," 60.8% of participants indicated that they were "Familiar" with this method while the other 39.2% reported being "Unfamiliar" with it.



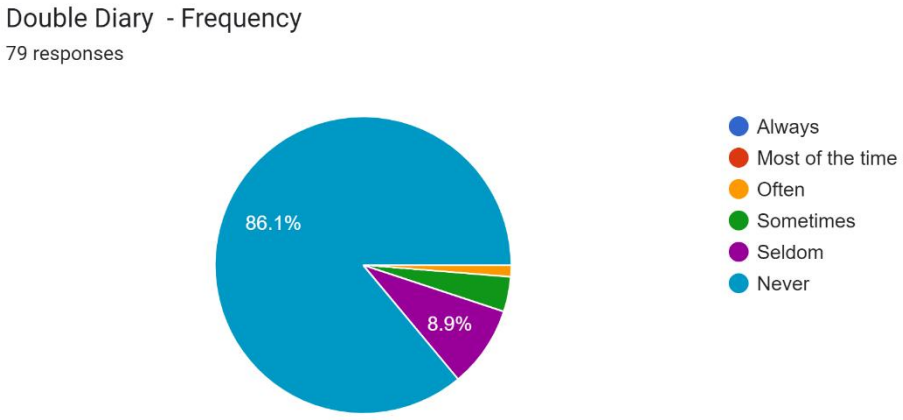
Given that 60.8% of respondents reported being unfamiliar with I.N.S.E.R.T., it is perhaps unsurprising that the largest group report "Never" using it (45.6%). Although 2.5% report using it "Most of the time", the second-largest group at 22.8% report "Seldom" using it. The next largest group, however, at 20.3% report "Sometimes" using I.N.S.E.R.T., while 8.9% responded that they "Often" use it.



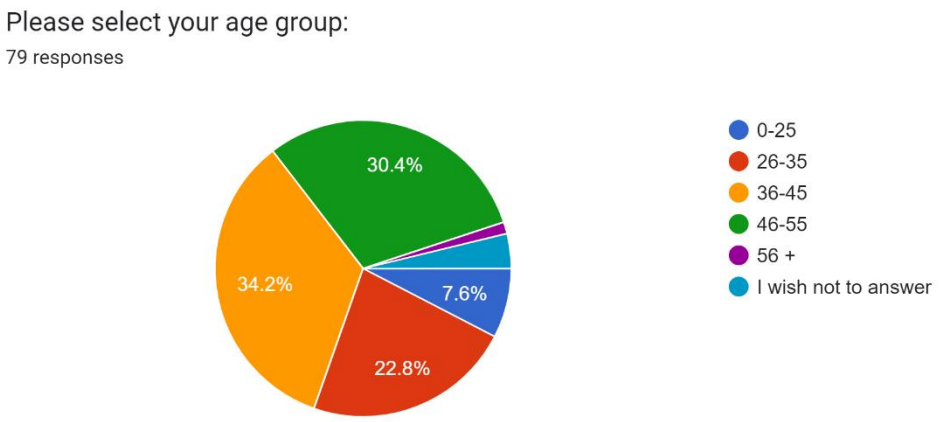
Double Diary appears to also be on the list of less well-known techniques among my respondents. Only 21.5% reported being familiar with this method, as opposed to 78.5% who reported unfamiliarity with it.



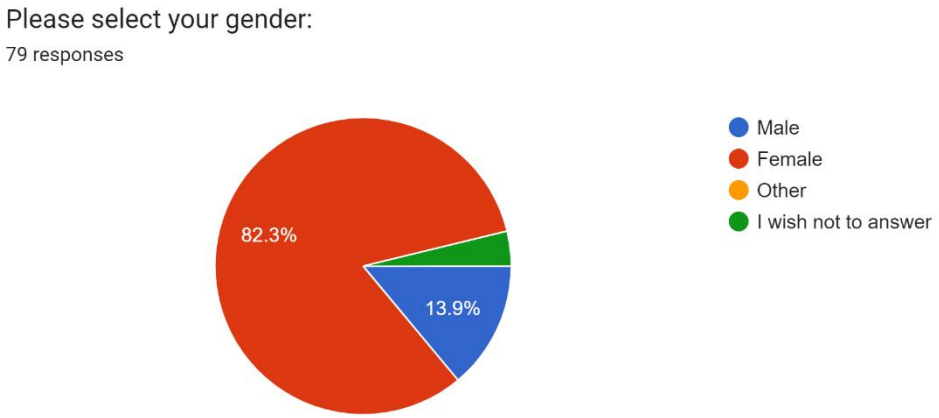
As could perhaps be predicted from the response to the previous question, those who reported employing the Double Diary method were in the minority. In fact, only one respondent (1.3%) reported “Always” using Double Diary, while those who “Sometimes” used it stood at 3.8% and “Seldom” added only 8.9%. The remaining 86.1% reported “Never” using Double Diary at all.



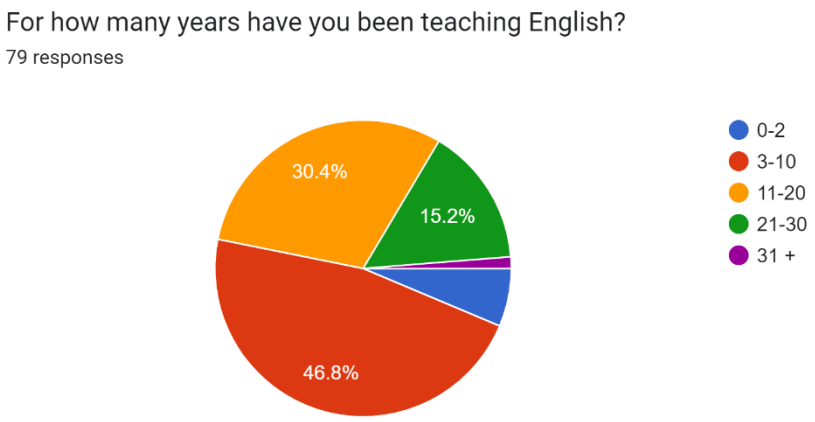
The final four questions were aimed at gathering demographic information about the respondents. For each of these questions there was an option for those who wished not to answer.



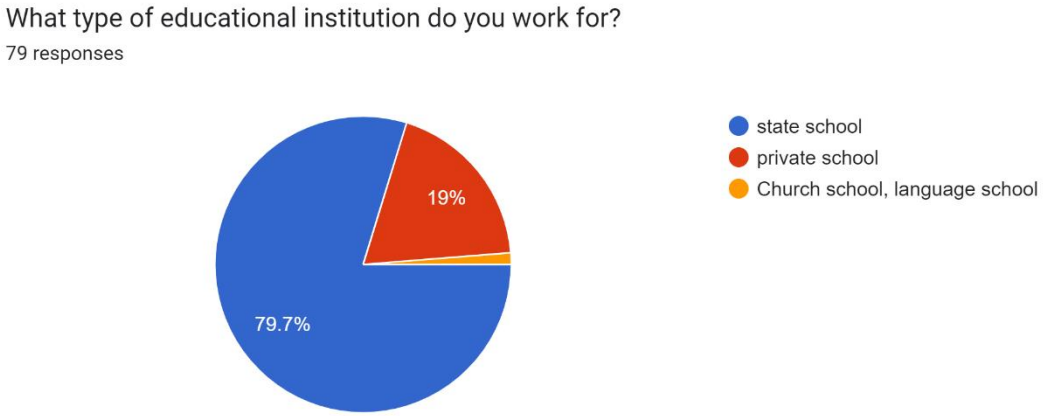
The general trend of women forming the majority group of teachers in Czech primary schools is clearly reflected in the responses of those who identified their gender. 82.3% identified as “Female”, with only 13.9% responding as “Male”. 3.8% wished not to answer and none identified as “Other”.



Nearly half (46.8% of respondents reported having been teaching for 3 to 10 years. The next range, with 11 to 20 years’ experience, totalled 30.4% and the 21 to 30 years’ experience bracket followed with 15.2%. The remainder was divided between those reporting 0 to 2 years’ experience (6.3%) and 1.3% recording experience of 31 years or greater.



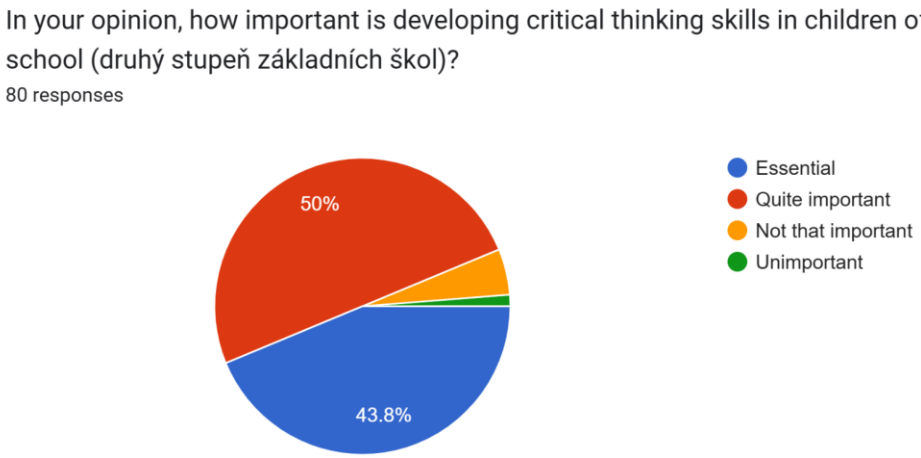
My final question was aimed at gathering data on whether my respondents were employed by state or private schools. The vast majority of respondents reported being in the state school sector (79.7%) with the remainder reporting “Private” (19%) or “Church school, language school” (1.3%).

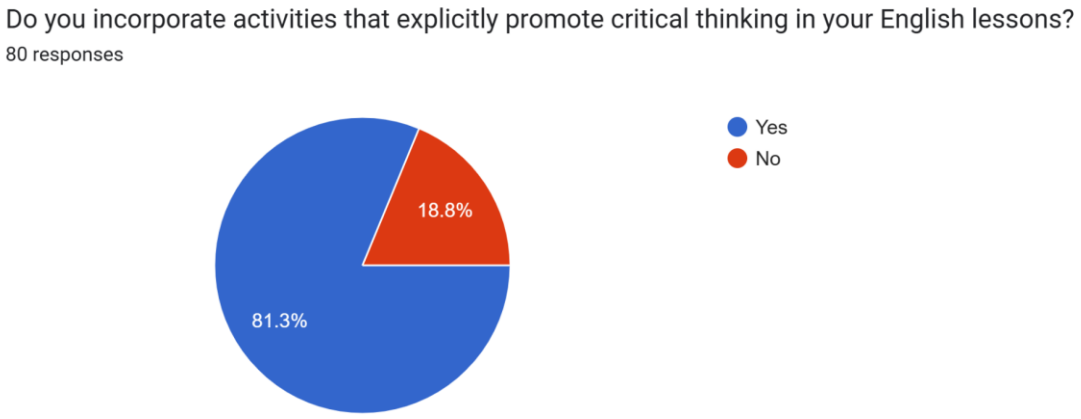


I acknowledge the limitations of my research. It is important to note that participation in the survey was voluntary, meaning only teachers who were inclined to do so took part. Therefore, it is reasonable to infer that respondents were likely motivated by the questionnaire's title, curiosity, or an affinity for using some critical thinking methods in teaching English. Conducting a larger-scale research initiative might uncover a broader spectrum of teachers who may not be as enthusiastic about using methods of critical thinking. A future survey could be implemented on a larger scale to gather more extensive data from a more diverse group of English teachers. Nevertheless, the survey included in this thesis clearly indicates teachers' interest in utilising critical thinking methods in teaching English as a second or third language.

6.2.1 Further Analysis And Conclusion

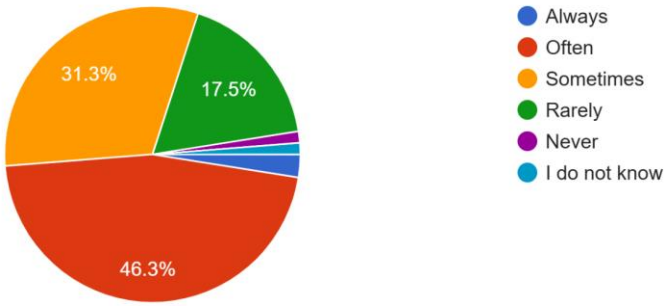
Looking at the survey results below, it appears clear from our earlier analysis that the majority of respondents, in the context of ESL classes in lower secondary school, believe that it is important to develop critical thinking skills, incorporate activities which explicitly promote critical thinking, integrate critical thinking activities 'often' and they believe that critical thinking enriches language learning in English, yet have received no formal training in something which they believe to be so important to the education of their classes.





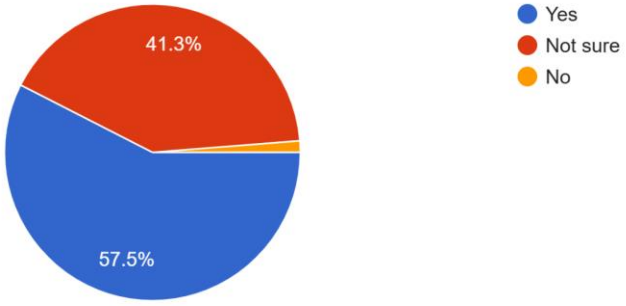
How often do you integrate critical thinking activities in your English curriculum?

80 responses



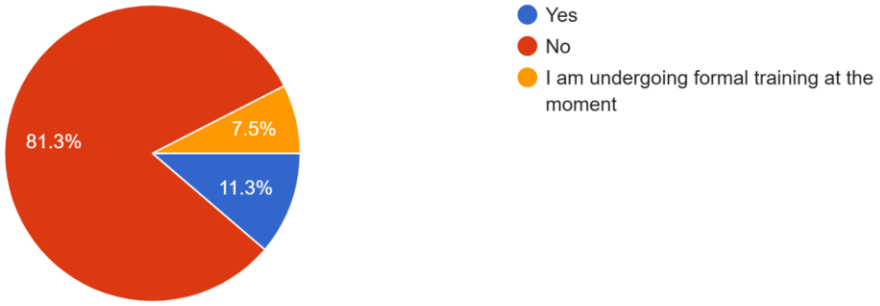
Do you believe that teaching critical thinking enhances language learning in English lessons?

80 responses



Have you received any formal training or professional development related to integrating critical thinking into your English teaching?

80 responses



Having seen evidence of teachers attaching such importance to critical thinking in their lessons, we may now analyse the collected data further. The purpose of this further investigation is to examine what, if any, systematic approach is being taken and by whom, e.g. by teachers as individuals or by schools as educational organisations.

In the graphs above, we can see that in answer to the question 'In your opinion, how important is developing critical thinking skills in children of lower secondary school (druhý stupeň základních škol)?', 50% responded 'Quite Important' and 43.8% responded 'Essential'. If we ignore the 6.2% whose response is divided between 'Not that important' and 'Unimportant', we may compare the majority responses with the information regarding receipt of formal training, shown below:

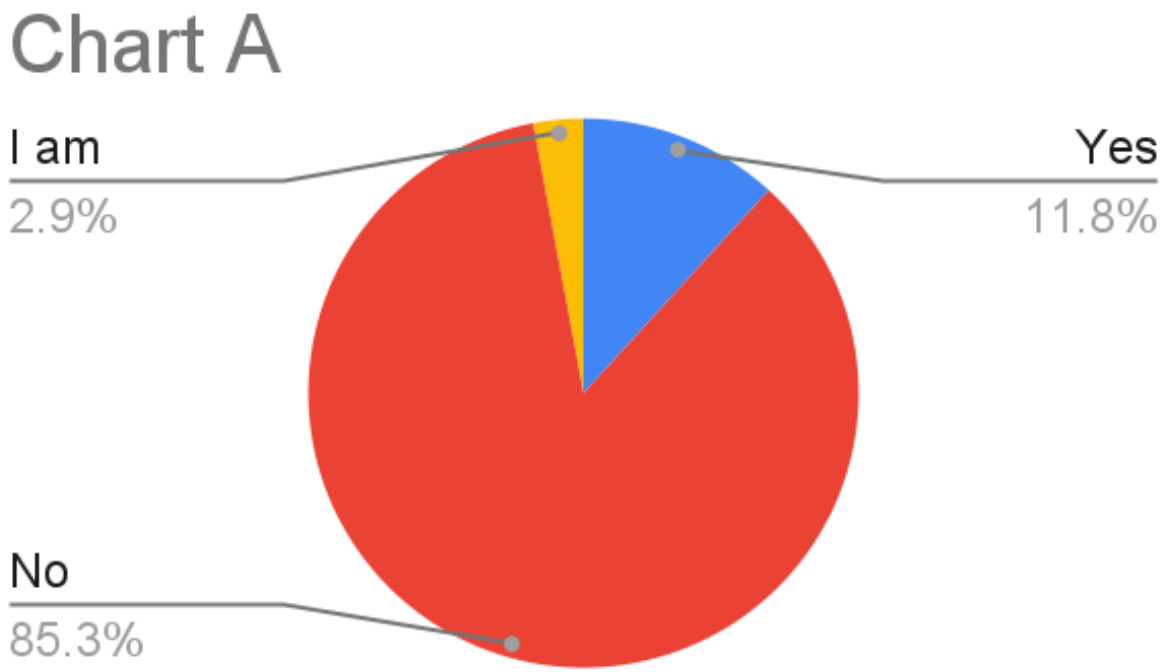


Chart A: Responses to the question, 'Have you received any formal training or professional development related to integrating critical thinking into your English teaching?' from those who answered 'Essential' to the question, 'In your opinion, how important is developing critical thinking skills in children of lower secondary school (druhý stupeň základních škol)?'

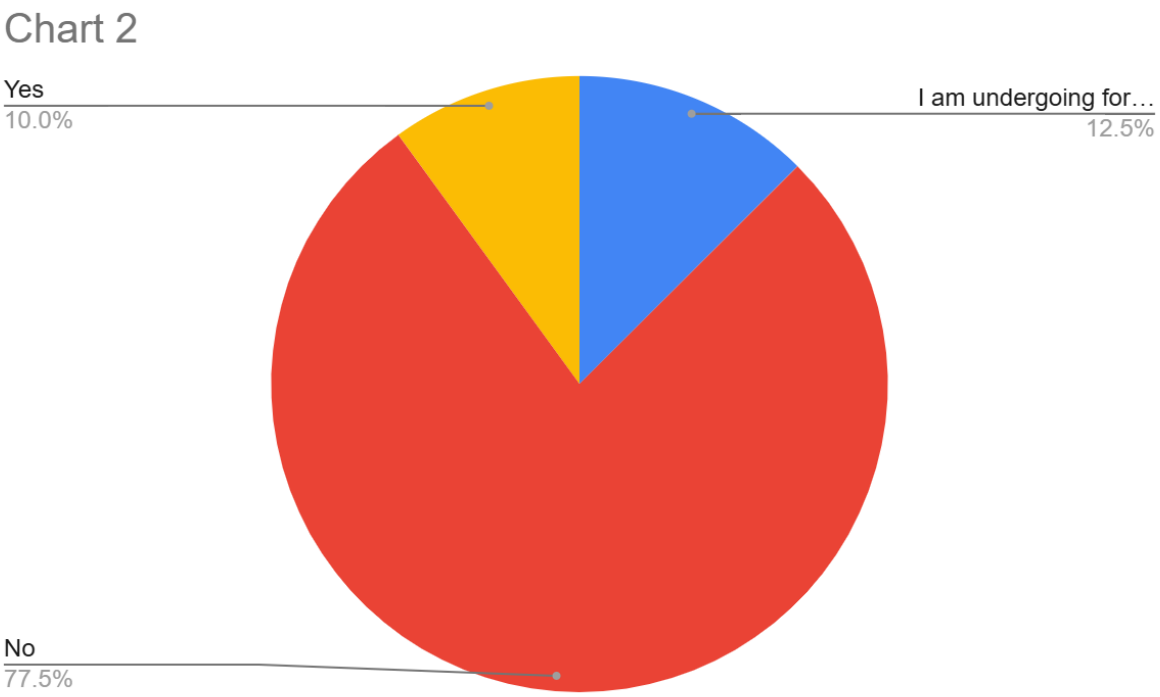


Chart B: Responses to the question, 'Have you received any formal training or professional development related to integrating critical thinking into your English teaching?' from respondents who answered 'Quite Important' to the question, 'In your opinion, how important is developing critical thinking skills in children of lower secondary school (druhý stupeň základních škol)?'

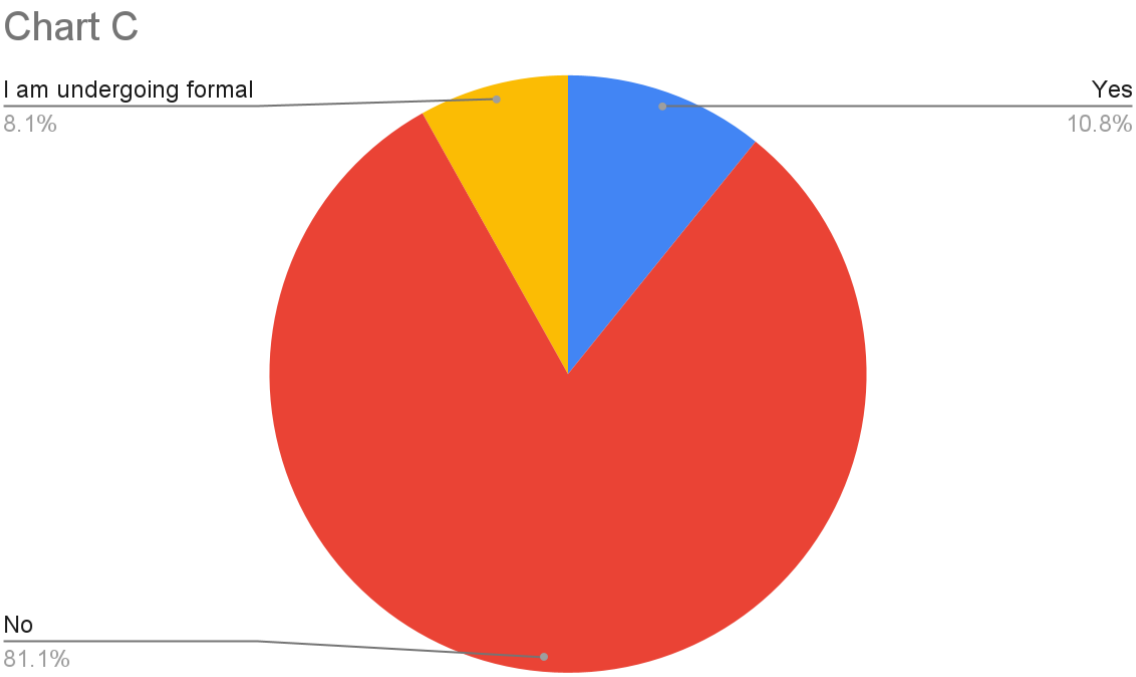


Chart C: Responses to the question, 'Have you received any formal training or professional development related to integrating critical thinking into your English teaching?' from respondents who answered 'Essential' or 'Quite Important' to the question, 'In your opinion, how important is developing critical thinking skills in children of lower secondary school (druhý stupeň základních škol)?'

In these comparisons, we can see that more than three-quarters of teachers who believe that critical thinking is either 'Essential' or 'Quite important' have not received any formal training in its integration into English teaching. One may note that, while training does exist, it is not reported as widespread. A future survey might investigate whether these courses were identified and funded by schools or by the teachers themselves.

In approaching the data from a different angle, a comparison of the data regarding schools which encourage or require critical thinking to be included in English lessons reveals that a lack of formal training is still the case for the majority of respondents.

The comparison of responses regarding receipt of training by teachers in schools which either require or encourage the integration of critical thinking into English teaching may also be considered informative regarding systematic implementation of critical thinking, or a lack thereof.

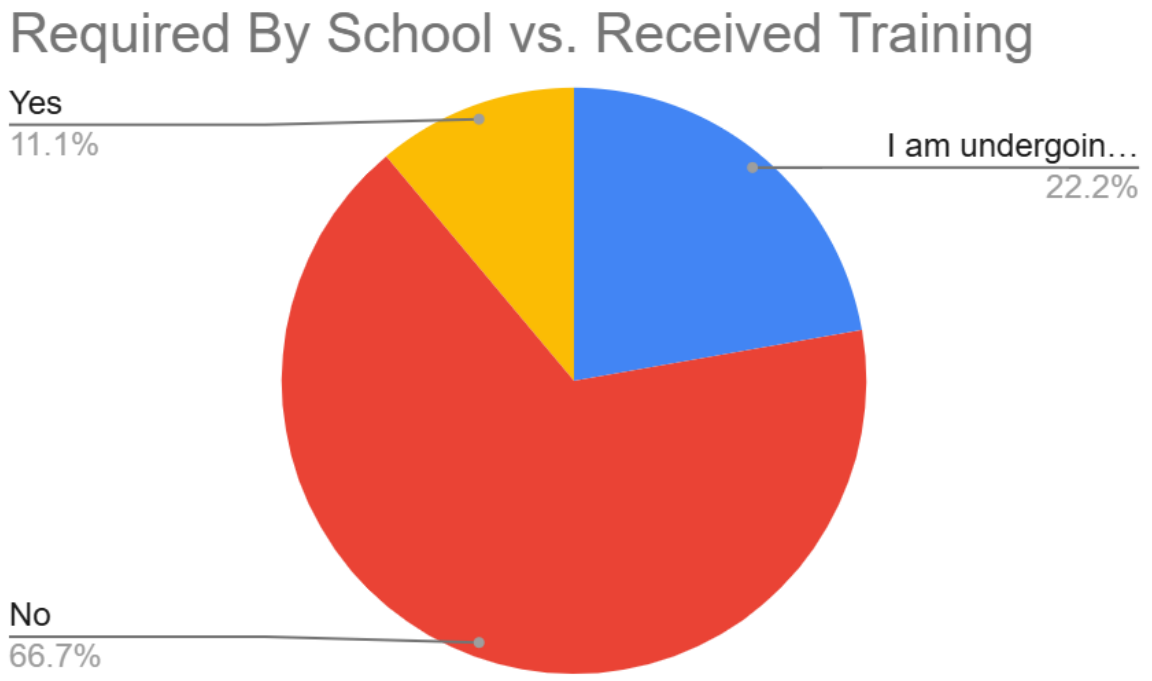


Chart D: Responses to the question, 'Have you received any formal training or professional development related to integrating critical thinking into your English teaching?' from those who answered 'Required' to the question 'Are you encouraged or required by your school to include critical thinking elements in your English lesson plans?'

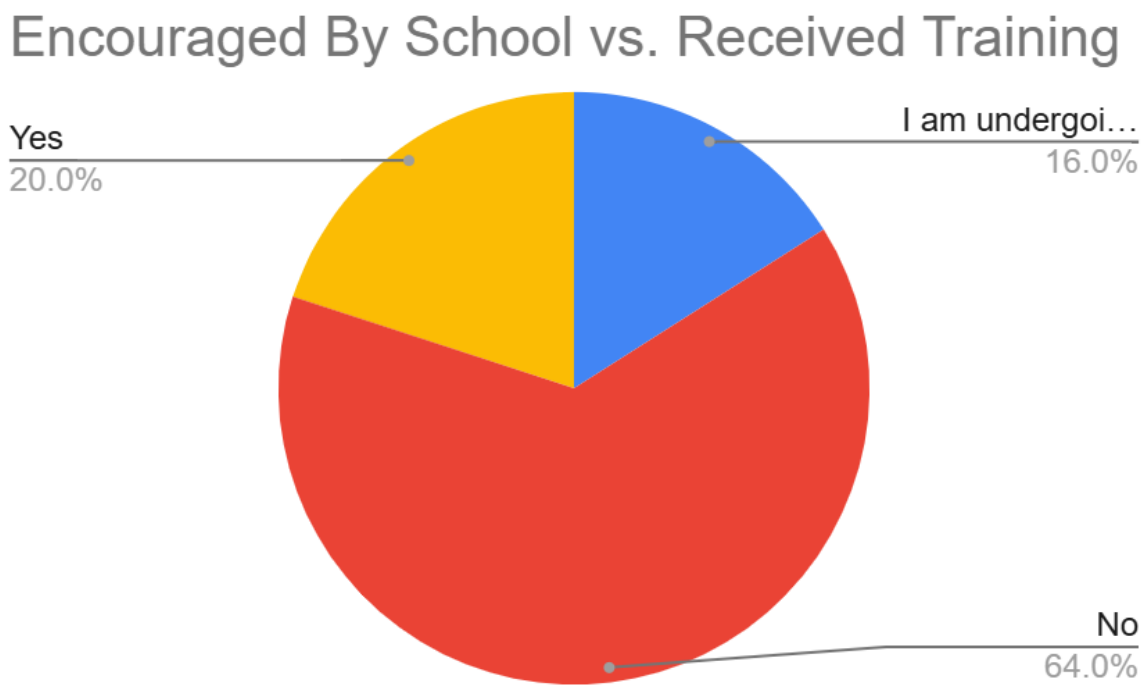


Chart E: Responses to the question, 'Have you received any formal training or professional development related to integrating critical thinking into your English teaching?' from those who answered 'Encouraged' to the question 'Are you encouraged or required by your school to include critical thinking elements in your English lesson plans?'

Charts D and E reveal that even in schools where the respondent reports that the implementation of critical thinking is either required or encouraged, those who have responded negatively to having received formal training is 66.7% and 64.0% respectively. Again, future research directed at investigating whether the schools or the teachers initiated what formal training has been reported may be of benefit to the discussion of this topic.

At this point, the data concerning respondents who answered affirmatively to the question of having received formal training is addressed.

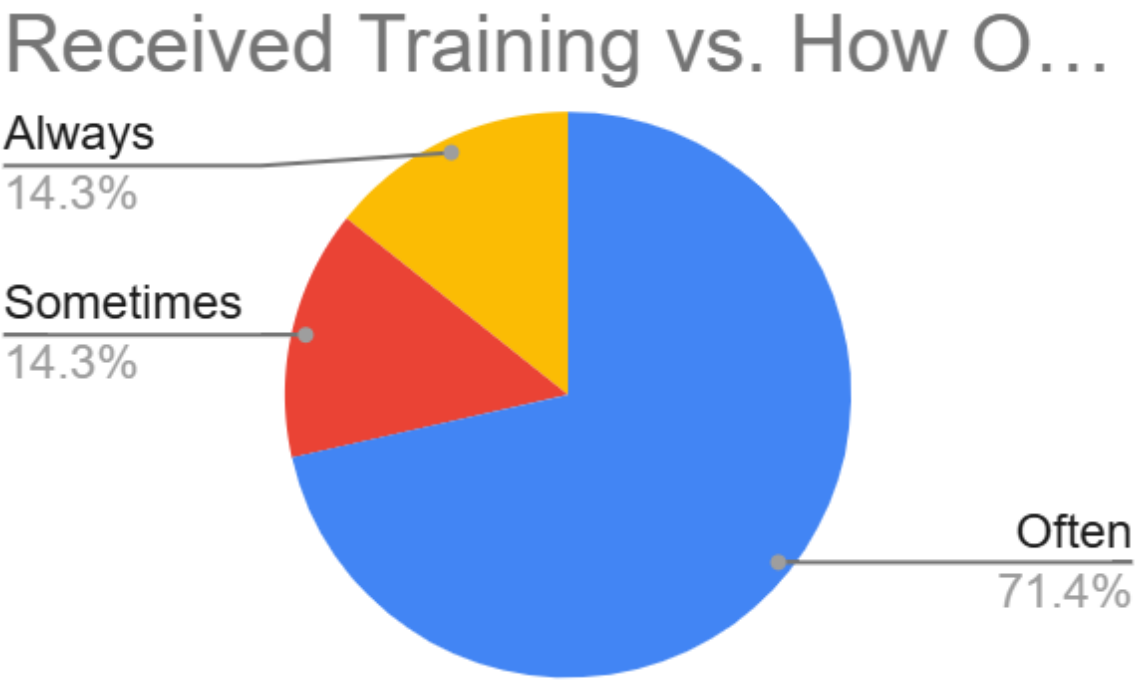


Chart E: Positive responses to the question, 'Have you received any formal training or professional development related to integrating critical thinking into your English teaching?' compared with responses to the question, 'How often do you integrate critical thinking activities in your English curriculum?'

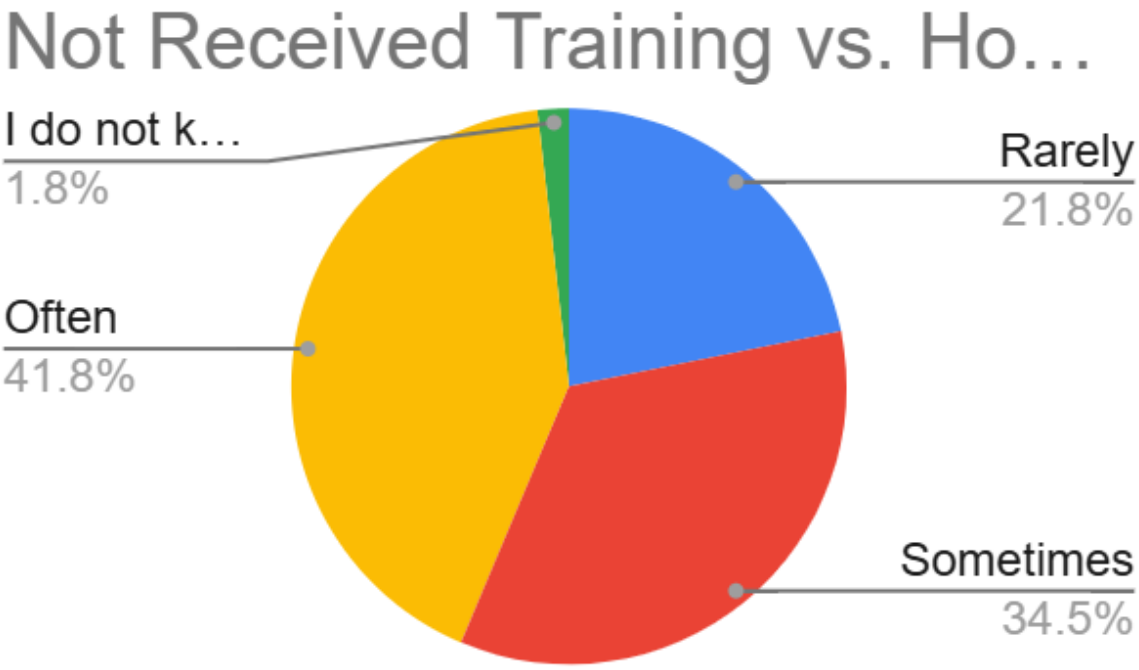


Chart F: Negative responses to the question, 'Have you received any formal training or professional development related to integrating critical thinking into your English teaching?' compared with

responses to the question, 'How often do you integrate critical thinking activities in your English curriculum?'

In Charts E and F, it can clearly be seen that 71.4% of teachers who report having received formal training also report integrating critical thinking activities into English lessons 'Often', whereas those who report not having received formal training indicate integrating critical thinking activities into English lessons 'Often' less, at 41.8% of respondents.

The comparison of the data for those who reported incorporating activities which explicitly promote critical thinking in English lessons with those who recorded positively and negatively to the question of having received formal training, at first appears to indicate that those who report not having received training incorporate activities nearly 7% less than those who report having received formal training. However, the small sample size must be borne in mind here, as the 14.3% reporting 'No' in Chart G represent 1 respondent of the 7 who report having received formal training.

The 20% reporting 'No' to integrating critical thinking activities into English lessons in Chart H by contrast, represent 11 respondents of a total of 55 who reported not having received formal training. It may be argued here that the larger percentage of respondents reporting that they have not received formal training and do not integrate critical thinking activities into English lessons is a reflection of the fact that the ratio of the non-formally trained to the formally trained is 55 to 7 among the respondents, rather than a lack of guidance resulting from training.

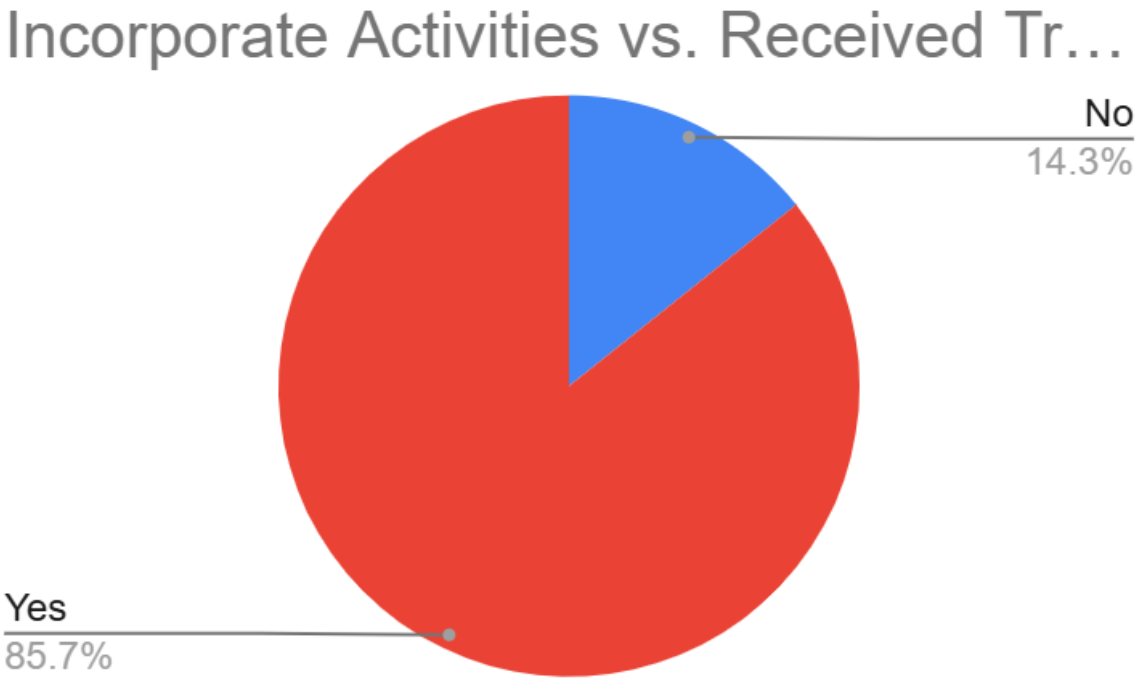


Chart G: Responses to the question, 'Do you incorporate activities that explicitly promote critical thinking in your English lessons?' from those who responded 'Yes' to the question, 'Have you

received any formal training or professional development related to integrating critical thinking into your English teaching?'.

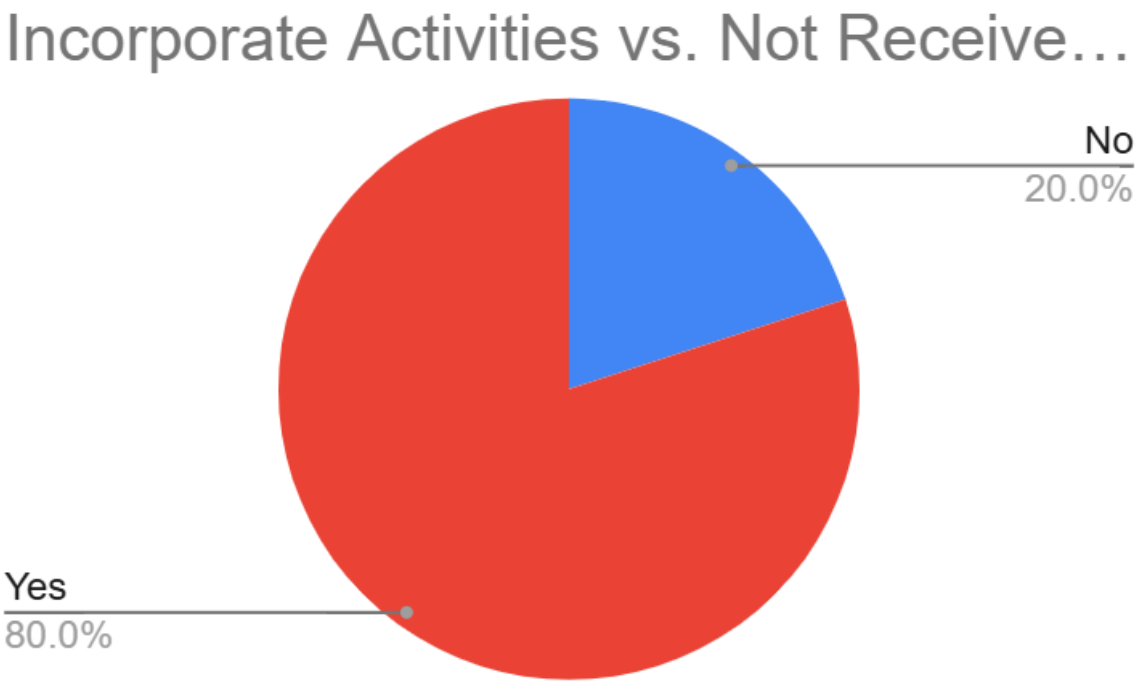


Chart H: Responses to the question, 'Do you incorporate activities that explicitly promote critical thinking in your English lessons?' from those who responded 'No' to the question, 'Have you received any formal training or professional development related to integrating critical thinking into your English teaching?'.

7 CONCLUSION

As stated at the beginning of this thesis, the aim was to test the following hypotheses:

- Firstly, there is a general acknowledgement about the importance of critical thinking among lower secondary school ESL teachers.
- Secondly, the majority of those teachers do not work systematically towards implementing critical thinking skills into their curriculum.

To test the hypotheses, a survey has been used and the data fields of the responses have been cross-referenced. The data from the survey does demonstrate a strongly positive reaction to the question of the importance of critical thinking among lower secondary school ESL teachers, with 50% and 43.8% recording opinions of 'Quite important' and 'Essential' respectively.

Furthermore, the data demonstrates that the majority of those teachers are familiar with some specific methods which are effective in this endeavour (68.8%) and are actively engaged in incorporating critical thinking activities into their English lessons (81.3%).

The second point is supported by the data that 81.3% of respondents have not received any formal training, despite almost a third (32.4%) reporting that they are either 'Required' or 'Encouraged' by their schools to include critical thinking elements in their English lesson plans.

Further cross-referencing of data fields reveals the levels to which no formal training has been received by teachers who consider critical thinking to be 'Essential' (85.3%) or Quite important' (77.5%) to learning English. It can also be seen that, although the largest group of respondents 'Often' integrate critical thinking activities into their English lessons (46.3%), the percentage is higher among those who have received formal training (71.4%) than those who have not (41.8%).

These data generally reveal a lack of formal training among respondents although they consider the topic to be important. They further reveal that even in cases where the school 'Requires' or 'Encourages' the teacher to incorporate critical thinking into their English lessons, the majority of teachers have not received formal training. This does not suggest that schools are providing the training, or that if they are, it is slow and restricted. If this were not the case, a higher percentage of trained staff could be expected.

Future investigation into this area might focus on how formal training was obtained by those teachers who have received it. For example, are the teachers looking for courses and are they funding them?

Another focus may be at which level critical thinking is no longer considered important. A survey could be conducted among heads of English departments, head teachers and even the Ministry of Education.

BIBLIOGRAPHY

BEAN, J. C., MELZER, D. 2021. Engaging Ideas. Hoboken: Jossey-Bass. 380 s. ISBN 978-1-119-70540-6

BUZAN, T, BUZAN B., 2012. Myšlenkové mapy – Probuďte svou kreativitu, zlepšete svou paměť, změňte svůj život. Brno: BizBooks. 216 s. ISBN 978-80-265-2-0030-8.

ČAPEK, R. 2019. Líný učitel: Cesta pedagogického hrdiny. RAABE. 175 s. ISBN 978-80-7496-387-2

ČAPEK, R. 2015. Moderní didaktika. Praha: Grada. 604 s. ISBN 978-80-247-3450-7.

GAVORA P. 1995. Kritické myslenie v škole. Pedagogická revue, č. 1–2.

GRECMANOVÁ, H., URBANOVSKÁ, E. 2007. Aktivizační metody ve výuce, prostředek ŠVP. Olomouc: Hanex. 178 s. ISBN 978-80-85783-73-5.

HALPERN, D. F. 2014. Thought and Knowledge: An Introduction to Critical Thinking. New York: Taylor & Francis. 654 s. ISBN 978-1-84872-628-4.

HARTL P., HARTLOVÁ H. 2015 Psychologický slovník. Praha: Portál. 776 s. ISBN 978-80-262-0873-0

KLOOSTER, D. (2001). What is Critical Thinking? Thinking Classroom/Peremena Spring 2001 (4): 36-40.

KOTRBA, T., LACINA L. 2007. Praktické využití aktivizačních metod ve výuce: Příručka moderního pedagoga. Brno: Společnost pro odbornou literaturu - Barrister & Principal. 196 s. ISBN 978-80-87029-12-1

MAŇÁK, J., ŠVEC, V. 2003. Výukové metody. Brno: Paido. 223 s. ISBN 80-7315-039-5.

McPECK, J. E., 2017, Critical Thinking and Education. Abingdon: Routledge. 170 s. ISBN 978-1-138-20689-2

PETTY, G. 1996. Moderní vyučování. Praha: Portál. 380 s. ISBN 80-7178-681-0

ROYAL, B. 2016. Principy kritického myšlení. Praha: Ikar. 256 s. ISBN 978-80-249-3521-0.

SIEGLOVÁ, D. 2019. Konec školní nudy: didaktické metody pro 21. století. Praha: Grada. 336 s. ISBN 978-80-271-2534-0.

STEELE, J. L., MEREDITH K. S., TEMPLE Ch., WALTER S. 1997. Čtením a psaním ke kritickému myšlení: Příručka I – VIII. Praha: Kritické myšlení.

ŠEDÝ, J. 2021. Kritické myšlení. Praha: Galén. 328 s. ISBN 978-80-7492-543-6

VALIŠOVÁ, A., KASÍKOVÁ, H. a kol. 2007. Pedagogika pro učitele. Praha: Grada. 299 s. ISBN 978-80-247-1734-0.

ZORMANOVÁ, L. 2012. Výukové metody v pedagogice. Praha: Grada. 160 s. ISBN 978-80-247-4100-0.

Online sources

ENNIS, R. H. 2013. CriticalThining.Net: *"Twenty – One Strategies and Tactics for Teaching Critical Thinking"*. http://www.criticalthinking.net/howteach.html Accessed 12. February 2024

HALLY, T. *"Critical Thinking and Creative Thinking"*. Mensa International Journal, prosinec 2011, číslo 555, přeložil Petr Psutka. Myšlení kritické a kreativní. Dostupné z: http://casopis.mensa.cz/veda/mysleni_kriticke_a_kreativni.html Accessed 16. February 2024

KLOOSTER D. 2000. *"Co je kritické myšlení?"* Kritické listy 1-2, p. 8-9 https://kritickemysleni.cz/wp-content/uploads/2020/05/KL01_2_web.pdf Accessed 16. February 2024

KOŠŤÁLOVÁ H., HAUSENBLAS O. 2006. *"Co je E – U – R?"* Kritické Listy, sv. 22, p.54-55 https://kritickemysleni.cz/wp-content/uploads/2020/05/KL22_web.pdf Accessed 12. February 2024

MURAWSKI, L. M. 2014. *"Critical Thinking in the Classroom…and Beyond"* Online. https://files.eric.ed.gov/fulltext/EJ1143316.pdf Accessed 30. May 2024

PAUL, R., ELDER L. 1997. *"A Brief History of the Idea of Critical Thinking"* Online. https://www.criticalthinking.org/pages/a-brief-history-of-the-idea-of-critical-thinking/408 Accessed 07. April 2024

RUTOVÁ, N. 2015. *"Respekt nebolí"* Člověk v tísni. Online. https://www.clovekvtisni.cz/media/publications/1754/file/pro--pr-v--metody-kritick-ho-my-len--a-e-u-r.pdf . Accessed 30. May 2024

TYERS, D. 2018. *"Teaching Critical Thinking Skills"* An online lecture. https://www.youtube.com/watch?v=9bu9SPbZanw&t=296s. Accessed 24. February 2024

APPENDIX

Petra Short Questionnaire Mgr.

This questionnaire is for my Master's degree research and concerns the systematic implementation of crit
lower secondary school ESL teachers . If you could take the time to complete it, I would be very grateful.
This questionnaire does not allow me to collect any personally identifiable information such as your name
It would help my research if you indicate details including your age, gender and number of years teaching
you may opt out of those questions.
Thank you very much for your time.

* Indicates required question

General questions.

1. In your opinion, how important is developing critical thinking skills in children of lower seconda
základních škol)?

Mark only one oval.

- ◯ Essential
- ◯ Quite important
- ◯ Not that important
- ◯ Unimportant

2. Do you incorporate activities that explicitly promote critical thinking in your English lessons? *

Mark only one oval.

- Yes
- No

3. How often do you integrate critical thinking activities in your English curriculum? *

Mark only one oval.

- Always
- Often
- Sometimes
- Rarely
- Never
- I do not know

4. Are you familiar with any specific methods that are effective in fostering critical thinking skills within English lessons? *

Mark only one oval.

- Yes
- No

5. Do you believe that teaching critical thinking enhances language learning in English lessons? *

Mark only one oval.

- ◯ Yes
- ◯ Not sure
- ◯ No

6. Have you received any formal training or professional development related to integrating critical thinking into your English teaching? *

Mark only one oval.

- ◯ Yes
- ◯ No
- ◯ I am undergoing formal training at the moment

7. Are you encouraged or required by your school to include critical thinking elements in your English lesson plans? *

Mark only one oval.

- ◯ Encouraged
- ◯ Required
- ◯ Neither

8. Are there any challenges you face when trying to incorporate critical thinking activities in your English lessons? (Select all that apply). *

Tick all that apply.

- [ ] Lack of suitable resources
- [ ] Limited time in the curriculum
- [ ] Resistance from students
- [ ] Difficulty in assessing critical thinking skills
- [ ] None
- [ ] Other: _____

9. What educational approach prevails in your English language teaching? *

Mark only one oval.

- ◯ Transmission approach
- ◯ Constructivist approach
- ◯ Mix of transmission and constructivist

10. Are you familiar with the E – R – R model (model E – U – R)? *

Mark only one oval.

- Yes
- No

Methods

For the following methods, please indicate whether you are familiar or unfamiliar with them. If you are familiar with them, please also rate how often you use them in your English lessons. If you are unfamiliar with them, please select 'Never' in the Frequency section. If you are unsure of the term, click it for a link to an explanation in Czech. The links will open in a new tab. Please make sure you know how to switch between tabs on the device you are using, as methods vary!

11. Brainstorming - Familiarity *

Mark only one oval.

- Familiar
- Unfamiliar

12. Brainstorming - Frequency *

Mark only one oval.

- ◯ Always
- ◯ Most of the time
- ◯ Often
- ◯ Sometimes
- ◯ Seldom
- ◯ Never

13. Venn Diagrams - Familiarity *

Mark only one oval.

- ◯ Familiar
- ◯ Unfamiliar

14. Venn Diagrams - Frequency *

Mark only one oval.

- ◯ Always
- ◯ Most of the time
- ◯ Often
- ◯ Sometimes
- ◯ Seldom
- ◯ Never

15. Cinquain - Familiarity *

Mark only one oval.

- ◯ Familiar
- ◯ Unfamiliar

16. Cinquain - Frequency *

Mark only one oval.

- ◯ Always
- ◯ Most of the time
- ◯ Often
- ◯ Sometimes
- ◯ Seldom
- ◯ Never

17. Jumbled Sentences - Familiarity *

Mark only one oval.

- ◯ Familiar
- ◯ Unfamiliar

18. Jumbled Sentences - Frequency *

Mark only one oval.

- ◯ Always
- ◯ Most of the time
- ◯ Often
- ◯ Sometimes
- ◯ Seldom
- ◯ Never

19. Free writing - Familiarity *

Mark only one oval.

- ◯ Familiar
- ◯ Unfamiliar

20. Free writing - Frequency *

Mark only one oval.

- ◯ Always
- ◯ Most of the time
- ◯ Often
- ◯ Sometimes
- ◯ Seldom
- ◯ Never

21. Mind Maps - Familiarity *

Mark only one oval.

- ◯ Familiar
- ◯ Unfamiliar

22. Mind Maps - Frequency *

Mark only one oval.

- ◯ Always
- ◯ Most of the time
- ◯ Often
- ◯ Sometimes
- ◯ Seldom
- ◯ Never

23. Key Words - Familiarity *

Mark only one oval.

- ◯ Familiar
- ◯ Unfamiliar

24. Key Words - Frequency *

Mark only one oval.

- ◯ Always
- ◯ Most of the time
- ◯ Often
- ◯ Sometimes
- ◯ Seldom
- ◯ Never

25. Dice - Familiarity *

Mark only one oval.

- ◯ Familiar
- ◯ Unfamiliar

26. Dice - Frequency *

Mark only one oval.

- Always
- Most of the time
- Often
- Sometimes
- Seldom
- Never

27. I.N.S.E.R.T. - Familiarity *

Mark only one oval.

- Familiar
- Unfamiliar

28. I.N.S.E.R.T. - Frequency *

Mark only one oval.

- Always
- Most of the time
- Often
- Sometimes
- Seldom
- Never

29. Double Diary - Familiarity *

Mark only one oval.

- Familiar
- Unfamiliar

30. Double Diary - Frequency *

Mark only one oval.

- ◯ Always
- ◯ Most of the time
- ◯ Often
- ◯ Sometimes
- ◯ Seldom
- ◯ Never

Information about you as a teacher.

This information will help me to organise the statistics. It cannot be used to identify you personally.

31. Please select your age group: *

Mark only one oval.

- ◯ 0-25
- ◯ 26-35
- ◯ 36-45
- ◯ 46-55
- ◯ 56 +
- ◯ I wish not to answer

32. Please select your gender: *

Mark only one oval.

- ◯ Male
- ◯ Female
- ◯ Other
- ◯ I wish not to answer

33. For how many years have you been teaching English? *

Mark only one oval.

- ◯ 0-2
- ◯ 3-10
- ◯ 11-20
- ◯ 21-30
- ◯ 31 +

34. What type of educational institution do you work for? *

Mark only one oval.

- ◯ state school
- ◯ private school
- ◯ Other: _____