

UNIVERZITA PALACKÉHO V OLOMOUCI
PEDAGOGICKÁ FAKULTA
Ústav cizích jazyků

Diplomová práce

Bc. Radka Burd'áková

Obor: Anglický jazyk completus

Flow in Education

**The Conditions of Flow in the Traditional Czech School
Environment**

Olomouc 2023

vedoucí práce: doc. PhDr. Václav Řeřicha, CSc.

Prohlášení:

Prohlašuji, že jsem diplomovou práci vypracovala samostatně a použila jen prameny uvedené v seznamu literatury.

V Olomouci 5. 12. 2023

.....

Radka Burdřáková

Acknowledgements:

I would like to thank doc. PhDr. Václav Řeřich, CSc. for his support, motivation and valuable comments on the content and style of my thesis.

Furthermore, I would like to thank the Vidnava Elementary School and Kateřina Dornáková for allowing me to carry out my research. Their patience and benevolence helped me in conducting my research.

Finally, thanks to my family for their support and resilience during the writing of my thesis.

Contents

List of Figures.....	7
List of Tables.....	8
Abstract.....	9
Introduction	10
THEORETICAL PART	12
1 Flow	12
1.1 Definition and Historical Background (Explanation of the Term and its Origin).....	12
1.2 Measuring Flow	13
1.2.1 The Experience Sampling Method (ESM)	14
1.2.2 Interview.....	14
1.2.3 Questionnaire.....	15
1.3 Negative Aspects of Flow	15
1.4 Flow Nowadays	16
2 Individual and Contextual Factors (Conditions) to Promote Flow.....	17
2.1 Challenge-skill Balance	17
2.2 Clear Goals	19
2.3 Immediate Feedback	20
2.4 Attention on the Task at Hand	21
2.5 The Loss of Self-Consciousness	22
2.6 The Merging of Action and Awareness.....	23
2.7 The Paradox of Control.....	24
2.8 The Transformation of Time.....	25
2.9 Autotelic Personality and Autotelic Experience	26
3 Flow in Education.....	28

3.1	Positive Impact and Importance of Flow on Educational Process.....	29
3.2	Paradox of Flow in Education and in Different Cultural Environments	30
3.3	Flow Center.....	32
3.4	Goals in Education.....	33
3.5	Instruction in Education.....	33
3.6	Attention and Involvement in Education	35
3.7	Alternative School Environment	35
4	Czech School Environment	37
4.1	Historical Changes and Current Setting in Czech School Environment	37
4.2	Environmental Obstacles	39
4.3	Flow in Czech School Environment	40
4.3.1	The Kellner Family Foundation	40
	PRACTICAL PART.....	42
5	Introduction to the Research.....	42
5.1	Hypothesis and Research Questions	42
5.2	Research Group, Participants, Environment.....	43
5.2.1	Characteristic of the Research School	43
5.2.2	Characteristic of the Research Groups	43
5.3	Research Plan.....	45
5.4	Characteristic of Research Methods	46
5.4.1	The Opening Questionnaire.....	46
5.4.2	Observation.....	47
5.4.3	Experiment	48
5.4.4	Final Questionnaire	48
6	Research and its Parts	50

6.1	Questionnaire and Observation Evaluation	50
6.1.1	Group A	50
6.1.2	Group B	54
6.2	Experiment.....	54
6.2.1	Topic of the Lesson	54
6.2.2	Group A – Lesson Plan.....	54
6.2.3	Application of conditions of flow in lesson plan.....	58
6.2.4	Summary.....	62
6.2.5	Group B – Lesson Plan.....	62
6.3	Final Questionnaire.....	65
7	Research Evaluation and Results.....	66
	Conclusion.....	73
	Bibliography.....	75
	Online sources	77
	Appendix 1: The Opening Questionnaire.....	86
	Appendix 2: Classroom schema	88
	Appendix 3: The Final Questionnaire	89
	Anotace.....	92

List of Figures

Figure 1 – Challenges and Skill.....	19
Figure 2 – What activities do you like to do outside of school? What are your hobbies?	50
Figure 3 – What is your favorite subject at school?	50
Figure 4 – Would you like information from your favorite subject to appear in English lessons?51	
Figure 5 – What topics would you like to discuss in English lessons?	51
Figure 6 – Are you happy when the topics in your English lessons concern you?	51
Figure 7 – Do you learn language better when the topic is related to you or to your interests? ...	52
Figure 8 – Do you like competitive activities?.....	52
Figure 9 – What activities do you prefer in English lessons?	52
Figure 10 - What do you prefer to use in English lessons?	
Figure 11 – What skills do you prefer in English lessons?	53
Figure 12 - What do you like to practice in English lessons?	
Figure 13 – What qualities should an ideal teacher have?	53
Figure 14 – Would you like to have more time for one subject?	53

List of Tables

Table 1 – A final year evaluation of the students of 8th grade (2022-2023).....	44
Table 2 – Experimental model, sample	45
Table 3 – Experimental model, used	45
Table 4 – Lesson plan with the conditions of flow.....	57
Table 5 – Questions	58
Table 6 – Traditional lesson plan	64
Table 7 – Final questionnaire evaluation – Group A.....	68
Table 8 – Final questionnaire evaluation – Group B.....	69
Table 9 – Comparison with coefficient and average	70
Table 10 – Final questionnaire evaluation – item 17.....	70
Table 11 – Goals’ fulfillment in percentages	71
Table 12 – Overall lesson evaluation in percentages	72

Abstract

The thesis deals with the flow in education, specifically in the environment of a traditional Czech school. The theoretical part deals with the conditions of flow and their influence on the students and the conditions and possibilities of the traditional Czech school environment. The practical part compares two equivalent classes at the lower secondary school - one will be taught with the application of flow conditions and the other will be taught traditionally. The research will provide information about which group learned more effectively and with more enjoyment and how the applied flow conditions were perceived by the students. The study also aims to summarize the main points that can lead to flow in education.

Key words: flow, positive psychology, conditions of flow, flow in education

Introduction

The topic of my master thesis is focused on the concept of flow. The first this concept came across to me while writing my bachelor's thesis, which dealt with experiential learning. This scheme caught my attention. Almost anyone who wants to educate, teach, or guide someone with the goal of enriching students, providing them with new information, or enabling them to gain knowledge, and wants to do it conscientiously and correctly, wants students to be deeply engaged in the learning activities.

In my teaching practice, I have experienced these feelings of satisfaction when students liked an activity and wanted to repeat a task or game they enjoyed. When students do what they enjoy and love, the learning process is expected to be more effective and sustained than when they do what they have to do. Like the author of the flow model, Mihalyi Csikszentmihalyi, was driven by a desire to explore and map this psychological topic in detail, and I was excited enough to learn more about it and apply it to my teaching.

This thesis is divided into two main parts - theoretical and practical. First, the theoretical part discusses what the concept of flow is, its historical background, the reasons for its emergence, how it is measured, its negative aspects and how flow is perceived today. This is a brief summary of what can be found in the first chapter of the theoretical part. The second chapter presents the factors that can support the state of flow. These are classified according to Csikszentmihalyi's nine-dimensional model. The next chapter deals with the role that "flow" plays in education. Finally, the fourth and final chapter of the theoretical part concerns the traditional school system, conditions and environment. Advantages and disadvantages that may support or hinder "catching the flow" are described.

In the practical, research part, two very similar groups will be compared during a lesson in a traditional school setting. One will be taught in a traditional way using textbooks, workbooks, explanatory methods, etc. and the other will be taught with regard to the demands and needs of the pupils as identified by observation and questionnaire. In this teaching, 'flow' conditions will be applied according to the possibilities of the traditional school environment. The results of this work will show us whether it is possible to modify the teaching plan (in schools that follow the traditional teaching system) so that there is a greater chance of bringing pupils to "flow", and how these "flow" conditions are applicable to the traditional school environment. The research will

also determine whether the goals of lessons are accomplished more effectively and more thoroughly when the conditions of flow are applied than when lessons are taught traditionally.

This type of research using an experimental research method must include a pre-research section that includes lesson observations and a questionnaire that provides information about the research group that is crucial to the experiment. Immediately after the lesson (experiment), further questionnaires will be given to the students of both groups to assess their feelings and state of mind during the lesson. They will also be given short tests to measure their fresh knowledge and whether the goals of the lessons have been successfully achieved.

Hopefully this research could become a simple guide, a model or just an idea for those teachers who are struggling to get along with today's children. The demands, needs and expectations of students and the learning process have changed and staying with old-fashioned teaching methods is not the answer. Teachers need to change their approach to pupils to make the learning process more effective and ensure that pupils gain knowledge that is useful and meaningful to them.

THEORETICAL PART

1 Flow

1.1 Definition and Historical Background (Explanation of the Term and its Origin)

The aim of this chapter is to clarify the concept of flow in general and from a psychological perspective, as well as to introduce the origin of the concept of flow and the circumstances of its emergence.

The word "flow" can be defined in many ways depending on the contextual meaning. The following lines give examples of definitions of the term flow according to the online Oxford English Dictionary:

- The action or fact of flowing; movement in a current or stream; an instance or mode of this. Originally said of liquids, but extended in modern use...
 - The flow of money, as receipts and payments into and out of a business, esp. considered as a measure of liquidity or profitability (cash flow)
 - A diagram showing the movement of goods, materials, or personnel in any complex system of activities (as an industrial plant)
 - A watery moss, a morass'
 - Used attributively designating a system, device, etc., in which a fluid or other material flows continuously
 - A gradual deformation of a solid (as rock or a metal) under stress in which it suffers a permanent change in shape without fracture...
 - Any continuous movement resembling the even flow of a river and connoting a copious supply; an outpouring or stream
- (Oxford English Dictionary, flow)

Most relevant to this thesis, however, is the definition given by Mihaly Csikszentmihalyi, who has been working on flow theory for several decades. He defines flow as a state of optimal experience characterized by total absorption in a given task; a union of activity and consciousness

in which the individual loses track of time and self. The state of flow is perceived positively, and the experiences accompanied by the state of flow want to be repeated (J. A. Schmidt, 2010, p. 605).

The concept of flow originated around 1970 when psychologist Mihaly Csikszentmihalyi's own curiosity led him to research, develop and work on this psychological state. He began his research by observing students at an elite art school in the United States. He found that these students were absolutely passionate about their artwork and then began to develop the theory of flow. During one of his observations, he noticed that students were not aware of any obligations or distractions during the process of creation and were losing track of time. The strange thing was that after the work was completed, the final products seemed to lose their value to these students (the authors of the projects/products).

Mihaly Csikszentmihalyi's flow model has in recent decades shifted our understanding of the experience of deep engagement and the individual and contextual factors that can support it. This model has relevance for research and practice and finds application in fields such as education, psychology, psychiatry, anthropology and business (J. A. Schmidt, 2010, p. 605).

Individuals who experience this optimal state describe their feelings as flowing or express themselves as being in flow - hence such a state of mind is generally referred to as "flow". These people have also arrived at five points that characterize it. They are as follows:

- Intense focus on the task at hand
- A deep sense of involvement and merging of action and consciousness
- A sense of control over one's actions in dealing with the task at hand.
- Enjoyment or interest in the activity
- A distorted sense of time (usually time seems to pass very quickly).

(J. A. Schmidt, 2010, p. 605)

Much research has specified the changes that the brain experiences when one gets into flow, and it has been confirmed to minimize distractions, maximize productivity and performance, and prevent procrastination (Nash, 2019).

1.2 Measuring Flow

Over the decades as flow theory has been developed, ways to measure it have also been established. Many authors and scientists have successfully developed and tested several methods of how this psychological state can be detected and its dimensions measured. Flow is a subjective

experience, so methods that can track individuals' feelings and opinions are preferred. In the following lines, several basic categories of flow assessment are presented.

1.2.1 The Experience Sampling Method (ESM)

The experience sampling method is a procedure that allows people's lives to be examined, the usual activities they do, and therefore to observe when and where they feel happy, when they do things they like, and when they think positively. It usually follows a longer period of time, e.g. a day or a week, and is very individual. Participants systematically self-report their daily activities and describe how they feel at a randomly selected point in time. Whenever they receive a pager signal, which they carry with them throughout the follow-up, they should complete the form as soon as possible. The form consists of questions about the place they are currently in, the activity they are currently doing, the people they are currently with, and their current mental state (Csikszentmihalyi, 2014, pp. 21-24).

This is a very reliable method, which has the advantage that respondents answer at the moment they are currently in the state (cognitive, emotional, motivational), directly during the activity. Respondents do not have to think about a past event. These tend to be biased later in the moment. Another advantage is that signals are reported irregularly. Participants cannot anticipate when they will be stopped to complete the questionnaire (Csikszentmihalyi, 2014, p. 247).

1.2.2 Interview

This method is very useful in qualitative flow research and has the advantage of exploring the depth and dimensions of the experience. It focuses on the individual and semi-structured questions lead to an extended description of the state of mind and circumstances. It helps to identify the factors that support and disrupt the flow state, and what actions maintain this mind-set. The interview explores broadly how respondents get into a state of flow, what leads them to this experience, and how they avoid obstacles. There is space to describe feelings in depth. The negative aspect is that this method is time consuming (Csikszentmihalyi, 2014, p. 246).

The interview method is sometimes combined with observation. Researchers first conduct a survey in the research area to ensure quality questions and to better evaluate the responses (Lonczak, 2019).

1.2.3 Questionnaire

Flow questionnaire also called paper and pencil method of investigating flow condition is mostly used when we need to find out the dimensions of flow instead of confirming its occurrence. Most commonly used are self-assessment questionnaires that contain questions on all aspects that need to be followed to support flow. The main advantage of this method is the ability to cover a large sample of people, it is time-saving, efficient and inexpensive. The main disadvantage is the risk that the answers will not be accurate and truthful (Demetriou, 2015).

There are many types of self-assessment questionnaires that have been developed by many authors. Their use is recommended according to the type and purpose of the research or the department and participants being tested. Responses are usually marked using a scaling system (Lonczak, 2019).

1.3 Negative Aspects of Flow

The positive impact is why the flow theory and research was developed, but it is energy and people need to be careful not to abuse it. It is widely known that energy can serve a good and useful purpose but can also do harm, e.g. fire heats or burns, atomic energy can provide electricity but can destroy the world, etc. Through the experiences, recollections and conversations or speeches of war veterans or criminals, it is clear that the flow occurs even in such unpleasant situations. For a soldier, being in flow is a way to survive or escape from the harsh realities of war, and criminals and rapists find no better way to entertain and satisfy themselves (Csikszentmihalyi, 2008, p. 69). Flow cannot therefore be generalized as just a force for good. It is beneficial when it makes life richer, more intense, more meaningful and when it increases the power and complexity of the self. In many cases, it all depends on individuals' perceptions and social criteria. What may be great and beneficial for some may be limiting for others, e.g. religion may promote declining cultures while suppressing other cultures, or a good scientific step forward may be successful for science and a few other scientists, but may be bad for all of humanity or the environment. People should learn how to enjoy their lives without limiting other people's opportunities to enjoy their lives (Csikszentmihalyi, 2008, p. 70).

1.4 Flow Nowadays

This passage highlights the complexity of individuals' experiences in the digital age, where immersion in online activities can resemble a state of flow but can also raise concerns about possible addiction. It calls for further research to better understand and distinguish between these phenomena.

Many people, regardless of age, spend a significant amount of time engaging in a variety of online activities, including social media, gaming and web browsing. These activities can be both purposeful, such as research, or simply for the sake of being online (Nakamura, Csikszentmihalyi, 2009). Some digital game researchers suggest that players may experience a state of flow while playing. This state is characterized by a loss of time awareness, a strong desire to continue playing, and a sense of blending action and awareness (Boyle, Connolly, Hainey, & Boyle, 2012; Procci, Singer, Levy, & Bowers, 2012; Sherry, 2004). Similar experiences of flow have been noted in individuals who engage in shopping and browsing websites (Hsu, Chang, & Chen, 2012). People can become so absorbed in these activities that they lose track of time and become highly focused on the activity (Procci et al, 2012). Some Internet-related behaviors can become almost addictive. This addiction-like characteristic may not be consistent with traditional understandings of flow as a constructive or beneficial state of engagement (Thatcher, Wretschko, & Fridjhon, 2008; Voiskounsky, 2010).

Some researchers have questioned whether the experiences of individuals engaged in potentially addictive online activities actually conform to Csikszentmihalyi's concept of flow. They suggest that further research and better measurement tools are needed to distinguish between genuine flow experiences and problematic addiction-like behaviours (Procci et al., 2012).

2 Individual and Contextual Factors (Conditions) to Promote Flow

Research on the experience of flow has revealed a consistency in the conditions when this positive state most often occurs. Several interviews with chess players, climbers, and dancers confirmed the importance of intrinsic motivation in promoting flow and established some of the conditions of flow. There are many variations of activities that can bring their participants into flow, but there are certain conditions that typically occur during these activities that must be met in order to experience it. These are: engagement, challenges and skills, goals, feedback and attention (J. A. Schmidt, 2010, p. 606).

Bonaiuto et. al. (2016) confirm that flow is a subjective experience and can occur within any activity that requires high motivation and focus. Certain people can reach a state of flow when they are challenged according to their current abilities.

According to Nakamura and Csikszentmihalyi (2009), the flow state includes nine dimensions that are crucial for entering this state of mind. They are balance between challenge and skill, clear goals and unambiguous feedback, fusion of action and awareness, focus on the task at hand, sense of control, loss of self-consciousness, time transformation, and autotelic experience.

Except for some individuals with specific characteristics, almost anyone can get into flow. In addition to the conditions that must be met, there is another piece of advice that supports flow. It is important to avoid all possible distractions such as the use of technology and social media (Wilcox and Stephen, 2013).

More detailed descriptions will follow in separate chapters below.

2.1 Challenge-skill Balance

The following section introduces the importance of getting the challenges and skills right and how they relate to each other.

Challenges and skills are considered as two main conditions. The flow condition occurs when challenges and skills are relatively high and in balance (Csikszentmihalyi and Csikszentmihalyi, 1988; Csikszentmihalyi, 1997).

The following figure (Figure 1) shows four states that can arise from a combination of different levels and intensities of these conditions. The interrelationships between challenge and

skill induce specific mental states of mind. Flow occurs when both (challenge and skill) are at a high level. When challenges are high and skills are low, people may experience anxiety. The opposite situation, low challenges and high skills, causes excessive relaxation or boredom, and finally, when both conditions are set at low levels, people tend to experience apathy. This is a simple chart suitable for our purposes. Some authors give a more detailed structure divided into 8 or even 16 channels, but this is not crucial for the aims of this paper (J. A. Schmidt, 2010, p. 606).

Challenges and skills need to be reviewed throughout the process (activity) and updated as circumstances change. The flow model is dynamic, and to maintain this mindset, activity settings must be checked and changed depending on individual personal development. If someone becomes more skilled, the task must become more difficult and the goal should become more challenging to avoid boredom. Otherwise, the state of flow could stagnate. People who are about to experience flow should also be careful in choosing the right level of task. If someone finds the task too difficult and too far beyond their abilities, a state of anxiety may set in. This anxiety can be chased back by immediately matching skills to tasks and bringing them back into balance. The extra task should be done in a way that improves one's abilities, or the goals should be lowered to match the abilities. And if the chosen activity is completely beyond one's ability (too easy) and there is little or no challenge to achieve, a state of apathy can easily set in.

Some authors, such as Schweinle and others (2006), suggest that young students in primary school may perceive challenges differently. Activities that should be challenging may make them feel frustrated instead of providing them with opportunities for personal development.

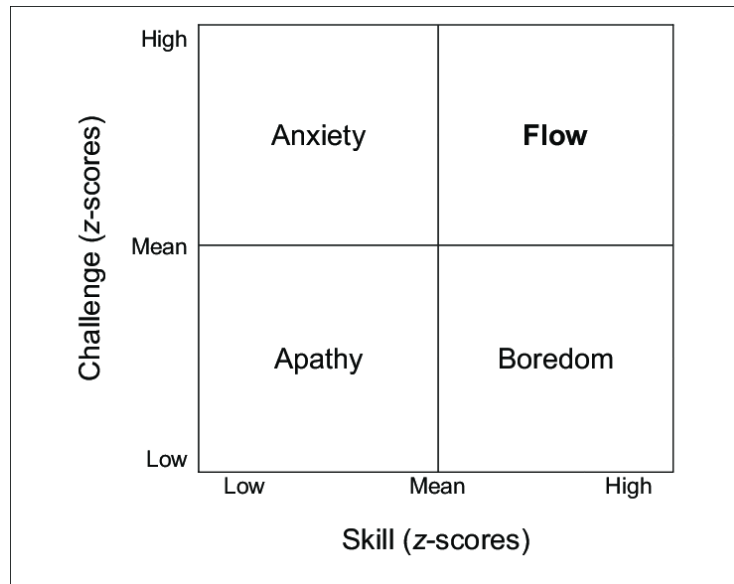


Figure 1 – Challenges and Skill

2.2 Clear Goals

Another essential condition that supports flow is proper goal setting. These should be clear and understandable. Flow can only occur when it is known what needs to be achieved, what needs to be done, and they should be consistent with our goals (Csikszentmihalyi, 1997). Goals should be realistic with respect to the time devoted to the activity, the type of activity and the attitude of the learners. According to the nature of the activity, the objectives are defined and their difficulty is determined. Objectives can be divided into two groups - explicit and implicit. Explicit goals are usually encountered in sports activities or any competition where it is generally known what is success and what is failure, e.g. football, etc. Whereas implicit goals are usually encountered in creative activities (e.g. music, writing) where the goals are not assumed to be clear to everyone. Individuals usually have to make them up themselves so that they don't get lost. This process should include assessment to monitor how they are progressing towards their implicit goals (Csikszentmihalyi, 2008).

If explicit goals are set correctly, it is important to plan carefully and understand the details when embarking on a journey or pursuing a specific goal. It also highlights the benefits of a structured approach to the task, which can eventually lead to a state of flow.

At the beginning of any endeavour, it is essential to develop a well-thought-out plan and thoroughly understand all aspects and complexities related to the goal. This initial phase will allow

you to establish a solid foundation for your goal. Once we have confidence in the structure and plan, we are more likely to get into a state of flow (Jackson & Eklund, 2004). When we follow a structured plan, we are less susceptible to distractions from the environment. In a chaotic or disorganized environment, it is easier to lose focus and get distracted by unimportant things. For long-term or challenging goals, it is helpful to break them down into smaller, manageable checkpoints or milestones. This approach helps us stay motivated because we see progress more often and each checkpoint feels like an achievable step toward our larger goal (Hunter and Csikszentmihalyi, 2000).

In conclusion, careful planning, understanding details, maintaining structure and breaking goals into smaller steps are essential components for achieving success and maintaining motivation in various activities. These principles can help individuals maintain focus and productivity while working towards their goals.

2.3 Immediate Feedback

From the point of view of this thesis providing feedback is very important. Feedback is an evaluation of the progress of an activity. It includes an assessment of how well a person is doing in relation to their goals or tasks. This condition is closely related to the previous condition, namely having clear goals, because feedback is key to understanding whether we are getting closer to our goals. Achieving success in an activity is related to creating order in one's own consciousness. When we achieve a clearly defined goal, we feel a sense of accomplishment. This success contributes to the experience of flow and allows us to become absorbed in the activity without the need for constant self-reflection (Csikszentmihalyi, 2008).

When a goal is achieved in a state of flow, there is no need for extensive reflection or self-evaluation. The passage suggests that in this state, we do not have to constantly think about whether we have performed all the required actions or whether we have performed them correctly because planning and execution are seamlessly integrated into our performance (Jackson & Eklund, 2004). In the flow state, we have a natural awareness of our performance. We can intuitively judge whether we have performed well or not without the need for explicit analysis (Csikszentmihalyi, 1997).

Feedback can come from two main sources - internal and external. External sources include evaluations from others or receiving awards, while internal sources include our own feelings, emotions, physical states and their consequences. Hunter and Csikszentmihalyi (2000) emphasize

the importance of the body as a source of information in sport or other activities. The body's feedback is crucial to achieving a flow state. It is important that feedback is clear and unambiguous. Ambiguity in feedback can lead to chaos and turn the experience of flow into an experience of anxiety (Csikszentmihalyi, 2008).

This passage initially focuses on positive feedback in the context of the flow experience. Positive feedback can bring joy and satisfaction. However, Sidorova (2015) also emphasizes the importance of negative feedback. Negative feedback helps to identify weaknesses in performance and can serve as an intervention during training. Working on these weaknesses can restore the balance between challenge and skill and improve performance. Many studies confirm a strong positive correlation between immediate feedback and learning. That is, receiving feedback immediately after an action or performance can significantly aid the learning process (Bangert-Drowns et al., 1991; Epstein et al., 2010; Kluger & DeNisi, 1996). Immediate feedback is also associated with better performance in sport. It helps athletes predict good outcomes and make necessary adjustments to their skills and strategies (Baca & Kornfeind, 2006; Chambers & Vickers, 2006; Zatoń & Szczepan, 2014).

2.4 Attention on the Task at Hand

As already mentioned, flow is a mental state where one is fully engaged in what one is doing and one's attention is completely focused on the task at hand. Attention and focus are essential components for experiencing flow. A quote from the Flow Questionnaire perfectly captures the essence of flow. In flow, the mind does not wander and individuals do not think about unrelated things. They are completely absorbed in their current activity (Csikszentmihalyi & Csikszentmihalyi 1988, cited in Moneta, 2012, p. 25).

During the flow state, our mind is fully focused on a particular activity, whereas in the ordinary state of mind, distractions are common. For example, when we are working on a task (writing an email or doing street maintenance), we are often distracted by unrelated tasks or thoughts during our time at work, such as browsing social media or thinking about unrelated issues. It is believed that a positive approach to the task and a genuine enjoyment of the work are key factors in achieving flow. When an individual enjoys what they are doing, their attention naturally focuses and they become resistant to external distractions (Csikszentmihalyi, 2008).

There are many factors that can influence our ability to achieve and maintain a state of flow, which is highly valued for its potential to increase productivity, creativity, and overall well-being. The ability to maintain intense focus on a task depends on the nature of the task itself, which can be boring, enjoyable or anxiety-inducing, and these categorizations can affect our ability to maintain focus. This is closely related to the condition of balance between challenge and skill. When a task is too easy or too difficult relative to our skills, it can affect our ability to enter a state of flow, which occurs when there is an optimal balance between the challenge of the task and our skills (Nakamura & Csikszentmihalyi, 2002). Boredom can lead our minds to wander and think about other things that are unrelated to the task. Anxiety, on the other hand, can cause us to focus on ourselves, stress, and potential threats related to the activity. These states of mind can disrupt the flow state.

Research by Miller (1956) suggests that our capacity for attention, memory, and perception is limited. He originally suggested that we are able to process approximately seven plus or minus two pieces of information. Later research (Baddeley, 1994; Cowan, 2010) has adjusted this to approximately four plus or minus two chunks. When we are fully engaged in a task, our attention is consumed by the task, leaving no room for self-conscious thoughts. Reaching a state of flow often leads to a loss of self-awareness. In this state, individuals are so absorbed in their activity that they do not think about themselves ("I" or "me") all the time (Nakamura & Csikszentmihalyi, 2002). This loss of self-awareness is another condition supporting the flow state.

2.5 The Loss of Self-Consciousness

Loss of self-control consists of intense focus on a particular activity to the extent that the sense of self-identity and worry about past and future events temporarily disappears, allowing one to perform at one's best without distraction. This state of not dwelling on past events or planning for future activities and being fully immersed in the activity does not equate to a pathological state of depersonalization. Depersonalization is a dissociative disorder in which a person feels detached from his or her own body or mind. In the flow state, individuals are fully present, not separated. The person is fully aware of their actions and can describe their movements and the circumstances of the activity. He does not dwell on self-doubt, self-image, or everyday problems. He or she does not dwell on how he or she appears to others or continuously evaluate his or her performance (Csikszentmihalyi, 2013; Jackson & Eklund, 2004).

Social pressure and external rewards can interfere with the flow state in sport. In sport, individuals often shift their attention from intrinsic rewards (enjoying the activity itself) to extrinsic rewards (winning or gaining recognition from peers). This shift can lead to a loss of flow state as the individual becomes more aware of external outcomes (Jackson & Eklund, 2004). The pursuit of success and recognition in sport can involve the ego and self-awareness. When athletes become preoccupied with these concerns, they may lose the sense of self that is often associated with the flow state.

Another point is the link between the flow state and mindfulness, a psychological concept inspired by Buddhism. Mindfulness is described as paying attention deliberately, in the present moment and without judgment (Kabat-Zinn, 1994, p. 23). It suggests that when a person's mind wanders to the past or future, he or she may miss the present moment, and therefore his or her own happiness. Several studies confirm a strong correlation between high scores in mindfulness and the occurrence of experiencing flow in sport and physical activity. This suggests that mindfulness and being fully present in the moment increases the likelihood of entering a state of flow during sport performance (Ahern, Moran, & Lonsdale, 2011; Bernier et al., 2009; Kee & Wang, 2008). Csikszentmihalyi's (2008) concept supports the idea that loss of self-consciousness can lead to an enhanced self.

Furthermore, connecting with the natural environment during an activity can lead to a state of flow, which is characterized by a sense of oneness with nature and a loss of self-awareness. In Csikszentmihalyi's (2008) studies, this experience is described by mountaineers as a "sense of union with the environment". In essence, engaging in outdoor activities can enhance the experience of flow by connecting the individual with nature. Talbot and Kaplan (1986) conducted research focusing on the wilderness experience. Participants in their study completed a survival course followed by a wilderness trip. During this trip, participants reported experiences similar to the flow condition. These included facing challenging activities that facilitated personal growth, losing track of time, experiencing joy, and feeling a sense of belonging to the natural environment.

2.6 The Merging of Action and Awareness

Flow is a state of deep immersion and concentration on an activity that requires a merging of awareness with the activity, sustained focus and the ability to handle unexpected distractions while maintaining full effort and discipline. Therefore, this state is also part of the nine-dimensional

model according to Csikszentmihalyi (2013). This means that in the flow state, a person is fully engaged in the activity they are performing, and their attention is completely focused on it. Flow is closely related to focus and attention. One of the main functions of attention is the control of our actions (Norman & Shallice, 1986). When we become highly skilled at a task, we may perform it automatically, but this is usually the case with basic movements in sports (Jackson & Eklund, 2004). To excel in activities that require a high level of skill and precision, such as sports, it is crucial to maintain concentration without lapses. Attention lapses often occur when something unexpected happens (Norman & Shallice, 1986). In the context of flow, it is important to maintain full effort and discipline to minimize the likelihood of attention lapses, especially in situations where unexpected events can disrupt the flow state (Csikszentmihalyi, 2008).

2.7 The Paradox of Control

This passage underscores the psychological aspect of control and how people's perceptions of control can greatly influence their reactions and emotional responses in different situations, whether in everyday life or leisure activities.

The condition of control is described as the absence of worry about losing control, which is typical in many normal life situations (Csikszentmihalyi, 2008, p. 59). In everyday life, people often have fears related to various situations, such as walking alone at night or experiencing a natural disaster. These fears are linked to a low level of perceived control. In other words, people are afraid when they have little control over a situation.

The feelings of losing control in extreme situations, such as when someone attacks you with a knife on your way home from a party can be similarly unsettling, as it makes individuals feel that something serious might happen to them while in leisure activities the fear of failure or loss of control is not as severe as in everyday life. People tend to perceive the threat of failure as less serious during leisure activities (Csikszentmihalyi, 2008).

Sidorova (2015) adds that the perceived control is not necessarily based on an actual threat of danger in given situation. Instead, it is influenced by an individual's assessment of the threat level, which can be subjective and based on their skills and personal characteristics. What might seem extremely dangerous and unimaginable to most people is viewed quite differently (as motivation and arousal) by those trained in extreme sports. Csikszentmihalyi (2013) mentions that the participants in extreme sports are not seeking danger for its own sake but are actually looking

for ways to minimize and control it. Extreme sports offer a unique opportunity for individuals to be in control of something as uncontrollable as nature, like the ocean. The extreme athletes experience a sense of control and a state of flow during these intense moments. Time appears to slow down, allowing them to perform at their best despite the apparent danger. This feeling of control and mastery is highly rewarding for them.

A sense of control can lead to a state of flow, where individuals are fully engaged and immersed in an activity, but it is also essential to experience moments where control is challenged. When the challenge surpasses an individual's abilities, it can lead to a state of flow as well. It is proved that prolonged periods of absolute control can eliminate the state of flow and result in boredom (Jackson and Eklund, 2004). This implies that too much control may lead to disengagement from an activity.

The general need for control is innate to humans and animals. It is seen as an adaptive trait, driven by the biological desire to ensure one's existence. Various theories and research findings are mentioned to support the idea that perceiving control over one's environment, oneself, and the world has a positive impact on performance. This includes concepts like self-efficacy, locus of control, and the illusion of control (Leotti, Iyengar, & Ochsner, 2010).

It is suggested that individuals who believe external factors or others control their actions may find it difficult to enter a state of flow. The need for control is not only essential for survival but also plays a role in reducing anxiety and facilitating the achievement of the optimal experience, which is likely referring to the state of flow (Keller and Blomann, 2008).

2.8 The Transformation of Time

Altered time perception is considered a common feature of flow states. This perception of time can vary significantly depending on the involvement in a particular activity. It is indeed an interesting aspect of flow states and the psychology of time perception.

Time alteration occurs when an individual becomes so immersed in an activity that they lose track of time. When they finally check the time, they find that more time has passed than they expected. This phenomenon is often associated with a state of flow, where people are fully immersed in their tasks or activities. Time may seem to pass much faster than it actually does (Csikszentmihalyi, 2008).

Time dilation is the opposite of time transformation. It occurs when people are so focused and concentrated on an activity that a short period of time subjectively feels much longer to them. This situation is less common, but it can still occur during flow experiences. Some individuals report that during the flow state they experience the feeling that time has completely stopped (Jackson & Eklund, 2004). They are so absorbed in the present moment that they cease to be aware of the passage of time. It is important to note that these experiences are subjective and may vary from person to person and from activity to activity.

Jackson (1996) conducted research on the experience of flow in athletes and found that time perception is a key factor in sport. Athletes often need a correct perception of time in order to perform well. In extreme sports such as surfing, time perception is closely linked to the feeling of freedom. Participants in extreme sports often engage in these activities to escape the constraints and pressures of real time (Brymer & Schweitzer, 2013).

2.9 Autotelic Personality and Autotelic Experience

This chapter describes what an autotelic experience is and what an autotelic personality should be. Both of these perceptions are important for the concept of flow and for staying in it. People's individual personalities and approach to flow can affect the quality and frequency of their experience. Although it is clear that people differ in the frequency and quality of experiences during flow, research has focused primarily on the phenomenology and the experience itself, not on the nature of people. However, basic information has been gathered about those who enter and remain in flow.

Csikszentmihalyi (1997, p. 117) characterizes an autotelic personality as someone who is intrinsically motivated and who does an activity or task for the sake of the activity itself, without expecting future benefits or outcomes. These people desire to relive the process of doing, their mind is usually positively set and they want to enjoy life. They are recognizable by some specific traits. Their metacapabilities include curiosity, perseverance, interest in life and they tend to be less self-centered.

Csikszentmihalyi, in his book *Flow, the Psychology of Optimal Experience* (p. 84), lists individuals who have difficulty getting into flow or who are unable to experience it. The first group are schizophrenics who are unable to keep things in or out of consciousness. They are diagnosed as suffering from "pleasure deficiency". The second group are self-conscious people who are afraid

of how other people perceive them or are afraid of voicing an inappropriate opinion or feeling. In contrast to the second group, the third group is made up of overly self-centered people who judge solely on their perceptions. They have been shown to be very strict and selfish. Both of these characters in their extreme form are unable to reach a state of flow and enjoy the experience because neither of them is able to control psychic energy. In education, the problem of trying to get pupils into a state of flow can occur with pupils who have some learning disabilities, which are usually related to attention disorders. These pupils have difficulty concentrating, which prevents them from getting more enjoyment.

In the next chapter, Csikszentmihalyi (2008, p. 90) summarizes that an autotelic person is one who is willing and optimistic enough to turn an unpleasant and agonizing situation into a manageable and even enjoyable one.

An autotelic experience is an activity that absorbs someone without expecting any external reward. This activity can take place by itself, involve a goal, and end by itself. An autotelic experience does not expect any future benefits and is only done because people enjoy the process of doing it (Csikszentmihalyi, 2008, p. 67). The journey itself is the goal.

Csikszentmihalyi (2008, p. 68) points out that most activities that people do are a combination of autotelic and exotelic experience. Many children and adults are pushed to do something, and if they are lucky, what they do becomes a passion. Of course, many people quit once they don't have to do it, and end up hating the activity forever, never regaining what they were passionate about. The autotelic experience includes involvement, joy, and control over the psychic energy invested.

3 Flow in Education

Most conditions that promote fluency are present or can be modified in the school environment. Therefore, it is not a problem to adapt them to the classroom.

According to J. A. Schmidt (2010), flow can occur in a variety of activities such as playing sports, surgery, working at a production line, reading or writing, and in any life stage and setting such as age, gender, social class, or cultural background. However, there are a number of conditions that are usually present when someone appears in flow. These are: engagement in an activity that one has chosen for its own sake, a perceived difficulty of the task that is relatively high and in balance with one's perceived abilities, clear goals that are considered important, immediate feedback indicating success in meeting those goals, and highly focused attention.

Although some topics and activities are fixed in the lesson, the teacher can provide a choice of topics and activities to learn. Evenness between tasks and skills should be maintained to maintain continuity in the learning process. Setting objectives and providing assessment is a regular part of the teacher's duties and the final task for the teacher to achieve fluency is to minimize obstacles on the way to full attention of the students. A school environment surrounded by some or even all of these conditions can cause students to perceive the learning process positively and most likely experience flow. And the circle of successful learning can spin. The condition of flow would motivate learners to work on their engagement in activities because they would want to persist in this enjoyment. Because flow is a dynamic model, it leads to ever-increasing challenges and skills. This whole process can cause long-term commitments to the topics of learning (J. A. Schmidt, 2010, p. 607). The condition regarding challenges and skills is usually present in traditional classrooms, but even so, it is often the case that students do not experience flow. The problem is that pupils have very limited choice in the classroom and the traditional teaching process is often focused on distant and long-term goals. Another problem is hidden in the classroom environment. The interior of the classroom should be designed to help students focus their attention on the task at hand and avoid potential distractions (J. A. Schmidt, 2010).

However, some research shows that students in traditional school classrooms are not as engaged, involved, and fully focused even though these two basic conditions are present (Schmidt, et. al., 2007).

Research has shown that inappropriately designed instruction can lead to frustration or boredom, and this causes an inability to learn smoothly because of the lack of engagement and the learning process (Pilke, 2004).

3.1 Positive Impact and Importance of Flow on Educational Process

In general, the flow is perceived positively. The following chapter will describe how the educational process can be positively influenced by this strong engagement.

Many researchers have confirmed that learners are more engaged in an activity if they find it interesting and attractive (Choi et al., 2007; Guo et al., 2016). Gamified learning activates flow by providing a challenging, goal-directed activity to learn new skills. It engages all students with autonomy and control over their learning experience (Michels, 2015).

Research testing the experience of flow in the educational sphere is important because it helps both teachers and students to know each other better and provides valuable information about the whole teaching and learning process. Children are naturally interested in new information and knowledge and are stopped by a non-adaptive school environment where they have limited choice and where most of the key flow conditions are missing.

Longitudinal studies conducted by Csikszentmihalyi and others (1993) and Heine (1996) show the importance of flow experiences in predicting achievement, commitment, and persistence in academic, occupational, or sport contexts over time. Flow can serve as a motivating and facilitating factor that enhances an individual's performance and commitment to their chosen activities or areas of interest.

Csikszentmihalyi et al. (1993) studied the development of talented teenagers during high school and found that these teenagers' commitment to their respective talent areas at age 17 could be predicted based on several factors: their identification of the talent area as a source of flow four years earlier when they were 13 years old; the amount of flow they experienced in the talent area; and the level of anxiety they experienced during initial data collection when they were 13 years old. This research suggests that adolescents who not only experienced flow in their chosen areas, but also identified those areas as a source of flow, were more likely to pursue and excel in their fields.

Heine's (1996) study focused on students talented in mathematics and their experiences with "flow". The study found that students who experienced a state of flow during the first part of

a mathematics course performed better in the second half, controlling for initial ability and grade point averages. This finding suggests that experiencing flow may have a positive effect on academic achievement and persistence, even after controlling for other factors such as initial ability and prior achievement.

According to Positive Psychology (2009), flow provides intrinsic rewards that encourage individuals to persist and return to the activity. This intrinsic reward can be a powerful motivator to continue the activity. Engaging in flow-inducing activities can lead to improved skills related to these activities over time. This is because individuals are more likely to invest time and effort in activities that make them feel flow. Researchers interested in the application of the concept of flow have sought to help people identify activities that lead to the experience of flow. They also try to encourage individuals to focus their attention and energy on these activities because they can lead to a more fulfilling and enjoyable life.

3.2 Paradox of Flow in Education and in Different Cultural Environments

It is assumed that when all the conditions listed as necessary for a state of fluency are present in the school environment, students are expected to be engaged in the learning process. However, this guidance is not so simple; there is some evidence of a counterproductive impact on pupils.

Research conducted in the USA has confirmed that even when the core conditions (challenges and skills in balance) are present, learners do not feel engaged in a particular activity (Schmidt, 2007).

In academic settings, there seems to be a special relationship between flow conditions and the experience of flow. While in other sectors the balance between challenges and skills is a key feature for flow, in academia it has little influence on learners' perceptions. Even if the activity itself is challenging and learners' skills are well developed to deal with these challenges, there is no guarantee that such activity will be sufficiently engaging for learners. Rather, it was found that despite the application of this very important condition for flow, learners did not feel engaged in the activity (Shernoff, et al., 2003).

Another case of flow conditions not matching the experience of flow is presented by Schweinle, et al. (2006). In his research, learners in primary school mathematics classes generally

perceived challenges positively, with fear, and did not see them as a chance to learn new knowledge. The author hypothesizes that first grade elementary school students may perceive challenges differently than older students. Unless they begin to see challenges as a great opportunity to learn interesting things, this path will not lead to a state of flow.

In addition to the USA, studies have been conducted that have compared flow in the classroom in other areas.

Andersen (2004, 2005a, 2005b, 2007) conducted research in Scandinavian countries, particularly Denmark and Finland. Compared to other countries, Danish primary school pupils experienced flow more often than similarly aged pupils in other countries. The author hypothesizes that this is due to the approach to teaching/learning with an emphasis on pupil autonomy, pupil interest and a balance between teacher-led and pupil-led activities. However, it has to be said that these Danish participants were far behind pupils from other countries (especially Finland) in terms of basic skills. This is a warning sign that care needs to be taken to set up the learning activities correctly. Experience and engagement must keep the challenges and skills at the right level.

Andersen (2005b) also conducted his research in elementary schools and afternoon clubs in Japan. These centers and programs are designed to promote a state of flow in the learning process. The environments are designed so that teachers and students learn and develop together through collaboration and problem-solving activities. Tasks were also computer-based, with activities varying frequently in type (discussions, practical tasks) and classroom location. In contrast to the Danish research, these Japanese participants, although experiencing high levels of flow, even maintained their learning outcomes at a high level.

Further research has yielded results on experiencing flow, focusing on Chinese and Japanese students in Hong Kong and Japan. These studies suggest that the experience of flow may differ in different cultural contexts. Moneta (2004b) found that Chinese students in Hong Kong do not experience flow according to Csikszentmihalyi's optimal challenge/skill conditions, as typically observed in Western populations. Instead, these Chinese students preferred a higher skill level than a challenge level and rated high challenge situations negatively. It has been suggested that this preference for higher skill levels in challenging situations may be related to cultural factors such as higher values of prudence and other characteristics in this culture.

Asakawa (2004) examined the autotelic personality and the experience of flow in Japanese college students. The research found that Csikszentmihalyi's model of flow fit these Japanese

students well. As with the Western samples, a high level of challenge combined with a high level of skill led to the experience of flow in this population. In his 2010 research, Asakawa found that Japanese college students who were more autotelic and had more flow experiences scored higher on measures of self-esteem. They also scored lower on scales measuring anxiety and had better coping strategies for difficult situations. Among the factors that contributed to flow experiences in Japanese college students was involvement in college life, which included academic work and college life in general. These factors were positively associated with higher frequency of flow experiences.

In summary, Chinese students preferred a higher level of skill in challenging situations, which was likely influenced by cultural values. In contrast, Japanese college students showed a pattern of flow experiences consistent with Csikszentmihalyi's model, and their flow experiences were associated with various psychological benefits. Involvement in college life also played a role in the frequency of flow experiences among Japanese students.

According to Schmidt (2010), it is also worth noting the paradox that some research has shown that the more a teacher is in a state of flow, the less students experience it. The moments and activities that teachers perceived as most engaging from their perspective were not considered engaging by students.

3.3 Flow Center

Many individual teachers and schools are trying to incorporate fluency conditions into their school environment. There are many ways to introduce these conditions into schools, to introduce them to pupils and to immerse them in them.

The Key Learning Community in Indianapolis, Indiana, United States, is cited as an example of the application of fluency principles. This is a school that allows its students to experience the state of flow in the school's Flow Center. In this school, they try to promote the state of flow by influencing the environment and the individual. The school's Flow Activity Center allows students to actively choose and engage in activities that are aligned with their interests without demands or distractions. The main goal of this center is that due to the addictive nature of the flow state, students who experience it will seek it out in other classes outside of the Flow Center. The classroom contains tools, games, puzzles, and other activities that allow students to develop their own flow. Students can choose a project based on their interests and needs, but it must be for

educational purposes. Students are excited and immersed in the activities and don't even realize they are learning. This approach is described as "serious play" that follows the principles of the flow curriculum. Teachers in the Key School play a key role in supporting students' absorption and flow efforts. They encourage students to push themselves while providing new challenges that support their personal growth (Schmidt, 2010, Csikszentmihalyi et al., 1993, Whalen, 1999).

3.4 Goals in Education

The proper setting and sharing of clear learning goals between teachers and students is one of the key elements that support a state of fluency.

Carol Dweck (1999) confirms in her pedagogical research that goals are an important tool for focusing students' efforts. They are even more useful if the teacher and pupils agree on them. It is important for pupils to feel that they are involved in decision-making, even if the setting of goals is chosen by the teacher. The ideal goal setting is to obtain 'stretch goals', where the task is moderately difficult and therefore pupils are pushed to learn more. When goals reflect the learners' experiences and needs, learners are more likely to engage and learn effectively.

In a traditional school setting, pupils usually have limited choices about what they want to learn and few choices about the topic of the lesson. These schools often pursue long-term goals (e.g. completing an assignment, getting a good grade, etc.) rather than short-term goals (e.g. completing one small step at a time). However, one of the conditions of flow is precisely the clear short-term goals and the feeling (attention) that the activity is chosen for its own sake (Shernoff et al., 2003; Schmidt et al., 2007).

3.5 Instruction in Education

There is research that shows that traditional middle and high school environments may lack some of the conditions for getting students to flow because of the instruction that is typically used there. Because of this, high school students tend to work individually or passively and are not sufficiently engaged during instruction even though the activities could provide them with challenges and skills in balance (Shernoff, et al., 2003).

Other research conducted by Turner and colleagues (1998) confirmed that specific types of instruction can promote flow. The preferred choice is scaffolded instruction, which incorporates intrinsic motivation, student choice, and supports student interests.

Scaffolded instruction accepts learners as collaborators in both the teaching and the learning process. It emphasizes never leaving a balance between challenges and skills and encourages complex interaction among learners (Turner et al., 1998).

Teachers' approach can be divided into two types:

- Provide instruction only to the extent necessary to meet the goal, and delegate shared responsibility to students to take control of the learning process.

- Teacher support is cognitive, motivational and affective (Turner et al., 1998).

Meyer (1993) and Turner et al. (1998) divides scaffolding into three groups to explain how teachers can engage students in the learning process. These groups are as follows:

- Negotiating meaningful learning - the teacher adapts instruction to match the skill level of the students and help them make sense of the meaning. This should capture the pupils' attention and increase their concentration, give them the opportunity to respond to the objectives and keep the difficulty of the activity at the right level with respect to their current knowledge and skills. This method is often supplemented with inquisitive questions or open-ended statements that await completion by the pupils. Example sentences: "Pupils can choose what they want and what they don't want: "I want to make sure everyone understands what you have done." Or "Where did they get the 17%? This is a very good question. Where did they get it, do you think?"

- Transferring responsibility for learning - the teacher focuses on guiding students to take control of their learning. Taking responsibility for learning means that pupils develop, demonstrate strategies and understanding. This method is also surrounded by questions to self-assess and support their thinking. Example sentences: pupils are taught how to learn, how to learn, how to learn: "How did you find out?" or "Your technique is very correct, but I want to know why?".

- Supporting Intrinsic Purposes and Tasks - the teacher modifies the learners' motivation for learning by focusing on their interest and curiosity, limiting frustration, fostering encouragement and risk taking, providing feedback on errors and progress. This method often contains of supportive and motivational statements such as: "What's a practical application of knowing this? When could you use it in real life?"

3.6 Attention and Involvement in Education

Attention is a very specific condition that is difficult to meet. It requires personal training to concentrate fully on the task at hand and not think about our individual needs regarding the past and the future. Being here and now, fully immersed in the activity. This condition, of course, must go hand in hand with the others. Each person's attention is occupied with something different according to individual life and experience.

Shernoff et al. (2003) and Schmidt et al. (2007) confirmed that the system of traditional schools surrounded by busy environments and classrooms, where students are forced to shift their attention from subject to subject after only 45 minutes, is not very supportive of optimal experience.

Engagement in activities implies a perfect match between cognition, motivation and affect. Many students who found themselves engaged in learning reported that they felt deeply focused attention on the task at hand, a clear understanding of the goals, and intrinsic motivation (Csikszentmihalyi, Rathunde, and Whalen, 1993). Studies of engagement typically consider individuals, but the learning process often takes place in groups, classes. Attention should therefore also be focused on how teachers can adapt the conditions of flow for a certain number of students to feel fully immersed in the program (Turner et al., 1998).

3.7 Alternative School Environment

Alternative school approaches have been studied in the context of flow, and much research has shown that alternative environments are more flow-friendly than traditional school environments. Students experience flow more often in non-traditional school concepts with active learning environments.

It has been shown that students are more likely to experience flow when they are engaged in more hands-on and collaborative activities in school (Shernoff et al., 2003).

According to research conducted in the USA that compared traditional public schools with alternative schools (e.g. Montessori school), students in alternative settings experienced flow much more often, even when the groups involved were the same in terms of initial setting (Rathunde and Csikszentmihalyi, 2005a, 2005b).

Observations of students in non-academic settings laced with flow conditions (self-selection, autonomy and attention) show that flow exists and it is possible to be in flow when the

whole environment is supportive. Observations also confirm that flow occurs most often in practical (hands-on) tasks. Alternative school environments and schools are based on adherence to many flow conditions and therefore many more students are surrounded by flow during learning. Certain aspects and approaches of non-traditional school and non-academic classrooms can be inspiring and supportive for teachers in traditional school settings if they are interested in their own professional development and student engagement (Schmidt, 2010).

4 Czech School Environment

In the following chapter there is a short summary of the system of traditional school learning environment in the Czech Republic. There are two main institutional division we can come across in the Czech Republic – the classical ones which are organized and directed by government and the alternative ones which are mostly private. These concepts use different ways of forwarding information, knowledges and skills and they apply different learning methods. Some of these are more flow-friendly then the others. Both of these concepts must follow “The Framework Education Programme for Basic Education” and from it developed the individual school program, called “School Education Programme” which set the minimal educational output. For language teaching department there is a guideline called Common European Framework of Reference for Language (CEFR), an international standard for describing language ability on a six-point scale, from A1 for beginners, up to C2 for those who have mastered a language (CambridgeEnglish.com).

4.1 Historical Changes and Current Setting in Czech School Environment

The education system in the Czech Republic is going through the ongoing curriculum reform with an emphasis on the goal of modernizing and upgrading the education system. It mainly goes after adaptation to societal changes and the need for flexibility and responsiveness in curriculum development.

The curriculum reform in the Czech Republic has been a continuous process that spans approximately 25 years. It is not a quick, one-time change but a gradual transformation of the educational system. The Framework Education Programme is a key component of the curriculum reform. It serves as a foundational document for shaping the curriculum. The education system aims to have a dynamic and adaptable curriculum. It should continuously evolve and adapt based on the changing needs of students, schools, and teachers. The primary goal of the current education concept is to create the best conditions for lifelong learning, which is seen as transformative for society (Provázková Stolinská, 2015). The idea of modern democratic education system that reflects progressively tendencies from Western European schools is flexible and responsive to current educational trends while preserving domestic traditions (Spilková, 2005).

The changes in school environment are characterized as internal and external transformation. On the one hand, the changes must reflect and fulfil external requirements and rules, and on the other hand they should develop the inner world and create a unique schema (Pol, 2007).

To closer introduce the external changes there is the concept stated by Grootings and Kalous (1997), emphasizes a comprehensive approach to reform possibilities. The main contributions include removing state directivism in the curriculum, addressing the needs of students and parents, democratizing school work and providing schools with the freedom to formulate their educational goals and needs.

Spilková (2005) states that one of the main elements of effective learning is the continuity of various levels of schools. Another change that indicates the improvement of the education system is the reduction of the number of pupils per class. This change allows teachers to personalize the approach to pupils.

Provazková Stolinská (2015) describes the next transformation that includes the integration of students with special educational needs, including those with disabilities and exceptional gifts, into mainstream schools. This shift from segregation to integration is based on the principles of inclusion and equity in education. This approach aims to provide a supportive and accessible learning environment for all students, regardless of their diverse needs. For students with special educational needs, Individual Education Plans are often developed to tailor instruction and support to their specific requirements. These plans help ensure that students receive the accommodations and modifications they need to succeed in a mainstream classroom.

The internal transformation consists of moving away from traditional theoretical knowledge and abstract thinking toward a more practical, experiential, and pupil-centred approach. This shift is a part of a broader education reform movement that encourages teachers to have more autonomy in designing their strategies and curriculum content. New concept should avoid overemphasising on theoretical knowledge, memorization and conceptual learning and should be focused on sensory knowledge, practical activities and real-life experiences as essential means of acquiring knowledge and developing skills. This suggests a more hands-on and experiential approach to learning.

The state level framework curriculum provides guidance, but it allows teachers to adapt and select strategies that align with specific educational context. The current curriculum is

characterized by decentralization, diversification and a focus on pupil participation. This means that teachers have more flexibility in choosing their teaching strategies and content to achieve specific educational goals. Although content tends to be structured into subjects, the specific details of how this is done can vary at the school level. This implies that there is room for customization and adaptation to local needs and preferences (Spilková, 2005).

Provázková Stolinská (2015) describes the changes in the school environment. Traditionally, education measured a child against standardized standards. However, the focus has shifted towards developing a child's full potential, with personal development as the primary educational goal. Education plays a crucial role in the socialization of children. It involves instilling values, attitudes, and helping them develop a coherent worldview. Various educational strategies, such as variable teaching methods and experiential learning (learning by doing), have been introduced to promote active learning and achieve educational objectives. The curriculum has transitioned from being a collection of isolated subjects to a means of developing key competencies in students, including learning, problem-solving, communication skills, social and personal skills, and civic and labor-related skills (Kasíková, 1994). Traditional passive learning has been replaced by active participation in the learning process, where students are encouraged to engage with the material actively. The current curriculum reform recognizes the importance of teachers in the socialization process. Social learning (term taken from Ondřejkovič (Wiegerová, 2007)) methods emphasize group and social forms of teaching, cooperation, and the integration of all students, respecting their individualities. Social learning aims to help students develop problem-solving skills within a group setting and improve their ability to impart and receive information (Provázková Stolinská, 2015).

4.2 Environmental Obstacles

Csikszentmihalyi (2008, p. 85) mentions that there are obstacles, which encumber reaching flow state, connected to environment. He divides them on natural ones and social ones according to their origin. The environmental impediments are introduced, in many cases, as the fundamental for surviving (individuals or whole cultures).

Positive psychology researchers (2009), including Csikszentmihalyi, have outlined two ways in which individuals can become more immersed in everyday life. The first path involves finding and shaping activities and environments that promote the experience of flow. The second

path involves identifying personal characteristics and mindfulness skills that can be modified to increase the likelihood of experiencing flow. Csikszentmihalyi was concerned with modifying various work environments to increase the likelihood of experiencing flow.

4.3 Flow in Czech School Environment

Several research confirm that even though the challenges and skills are often part of the school environment the other conditions are missing. The students who are attending the traditional classrooms have very limited options to choose the topic they would like to learn and also their objectives are often longer-term. The other negative aspect of traditional education is a buzzing classroom with short learning blocks (one subject is shifting another and the learners must change their attention frequently) (Shernoff et al., 2003, Schmidt et al., 2007).

There is evidence that the lessons where more hands-on, collaborative work is present, used to have higher probability to experience flow. This kind of activities tend to be more enjoyable and involving for learners. Nontraditional environment where the students are actively engaged in tasks are more flow friendly (Shernoff et al., 2003).

4.3.1 The Kellner Family Foundation

In Czech Republic there has been found an educational program “Helping Schools Succeed” led by The Kellner Family Foundation which supports public primary schools in their development. The aim of their work is to create encouraging school environments and inspire pupils to enjoy learning process with enthusiasm and commitment and help them to reach their individual personal success. The plan of action focuses on pupils’ practical development and social communication. It also helps learners to understand the world we live in and to care for it. The successful results of their work are people (pupils and teachers) who enjoy learning process and live satisfied lives. Their effort is to improve quality of educational process across the Czech Republic.

During the projects’ training the teachers are introduced with many inspiring approached to teaching process. They emphasis the classroom climate and mutual relationships in the classroom. The educational projects provide long-term support, and they try to change old-fashioned practices in order to change Czech society through education. The founders believe that educated people are a promise of a brighter future for everyone.

Except of these activities, the association helps academically gifted and motivated children from disadvantaged social backgrounds get the scholarship or financial support by donation to study abroad or they provide opportunity to study at Open Gate's eight-year grammar school (The Kellner Family Foundation, Helping Schools Succeed).

PRACTICAL PART

5 Introduction to the Research

5.1 Hypothesis and Research Questions

Hypothesis:

- I. The teacher in a traditional Czech school environment is able to provide all the flow conditions within one lesson.
- II. In a lesson where all possible flow conditions are present, the learning process is more effective and more enjoyable for the students.

Research questions:

- I.
 - A) How can the traditional Czech school environment be modified to increase the possibility of getting students to flow?
 - B) How can flow conditions be applied to the traditional Czech school environment?
 - C) Is it possible to modify the traditional Czech school environment by applying flow conditions so that students perceive learning in a more positive way than learning taught by traditional methods?
- II.
 - A) Is the learning process more effective when flow conditions occur?
 - B) Is learning more enjoyable when flow conditions occur?

Aims:

- to provide a sample lesson plan that includes all possible flow conditions
- teach two parallel groups of 9th graders, but using two approaches - one is a traditional teaching approach and the other is an approach where all conditions that support a flow condition are present
- provide an immediate post-experiment evaluation to determine whether (and how many) Year 7 pupils perceived the teaching positively, whether teaching under flow conditions

was more effective than traditional teaching/learning approaches, and whether they met the objectives at the end of the lesson

5.2 Research Group, Participants, Environment

5.2.1 Characteristic of the Research School

Primary school Vidnava, district Jeseník - contributory organization is a typical organized village school. Its building was originally built for a grammar school. It provides education to approximately 190 pupils of the first and second primary school, aged from six to fifteen years. The school is located in the centre of the town. The pupils who attend the school live either in the town or in the surrounding villages. They commute to school by bus or car with their parents, or they walk. 0-5% of pupils of foreign nationality attend the school. The school follows the School Education Programm called "School for Life", which is based on the Framework Education Programm. The school is run by the headmistress, who is represented by her deputy. They regularly discuss their actions, ideas and suggestions with the founder, the town of Vidnava.

The school was deliberately chosen for the research due to its location and accessibility. Another reason for choosing this school was that my friend teaches English there and it was supposed that this fact would be beneficial and supportive for this research. The last and main reason was that this school provided background for my teaching practice and therefore the school environment, the students, the climate of the research classroom, the school rules, the policies and the approach to students and teaching were more familiar to me than they would have been at another school.

5.2.2 Characteristic of the Research Groups

As already mentioned, the participants of the research experiment will be pupils of the Vidnava Primary School. The participants are 9th grade students aged between fourteen and fifteen years old.

The research class consists of 27 pupils who are divided into two groups - A and B. The class is regularly taught in parallel mode, so the groups are used to working in this composition. Both groups are taught by the same teacher at approximately the same pace. In group A, the flow conditions will be applied in the lesson plan and the findings of the questionnaires will be taken

into account. Group B will be taught according to traditional teaching methods using textbooks, workbooks, activities, explanatory methods, etc.

The groups are roughly equal in terms of number of students, gender representation and level of language proficiency. Group A consists of 14 students, 4 girls and 10 boys. Group B consists of 13 students, 4 girls and 9 boys. The level of language proficiency was determined by their grades in the last year and the equality of language proficiency of each group was also discussed with the teacher who has been teaching this class English for 4 years. The average grade of Group A in the last year (2022-2023) is 1.5 points. The average grade of Group B in the last school year (2022-2023) is 1.62.

A final year evaluation of the students of 8th grade (2022-2023)		
	A (gender)*	B (gender)*
1	2 (G)	2 (B)
2	1 (B)	1 (G)
3	1 (B)	2 (B)
4	1 (B)	2 (B)
5	2 (B)	1 (B)
6	1 (B)	2 (B)
7	3 (B)	1 (B)
8	1 (G)	3 (B)
9	1 (G)	1 (G)
10	3 (B)	1 (G)
11	1 (B)	1 (B)
12	2 (B)	2 (G)
13	1 (G)	2 (B)
14	1 (B)	
Average mark	1,5	1,62

Table 1 – A final year evaluation of the students of 8th grade (2022-2023)

*Gender; G = girl; B = boy

5.3 Research Plan

Gavora (2000, p. 130) described three basic models of experimental model. One of them, which is close to the one used in this thesis, is the so-called: Experimental model using pretest and posttest. It is recommended to be used when the author needs to find out some properties that should change during the experiment. This plan looks as follows:

	Pretest	Operation	Posttest
Group A	Yes	Yes	Yes
Group B	Yes	Yes	Yes

Table 2 – Experimental model, sample

However, for the purposes of this thesis we have opted for a very similar plan with one exception - omitting the pre-test for Group B. In this case, the pretest is presented with an opening questionnaire and observations to determine student interests relevant to the application of the flow conditions. Since Group B will be taught in the traditional way, there was no need to explicitly elicit students' interests.

	Pretest	Operation	Posttest
Group A	Yes	Yes	Yes
Group B	No	Yes	Yes

Table 3 – Experimental model, used

1. Questionnaire and observation

In order to conduct a good research, we first had to learn about the students' interests, needs, requirements, their attitudes towards English language teaching and the teacher, their favorite activities, the ways they acquire/learn new knowledge/information, and the general climate and atmosphere of the classroom. Therefore, the pre-research part includes the collection of questionnaires and observations.

2. Creating a lesson plan with conditions of flow, flow questionnaire and knowledge questionnaire

According to these results, deep study of the concept of flow and with the cooperation of the supervising teacher, it was created a lesson plan with all the flow conditions that we can put in.

Also, the flow questionnaire had to be adapted to the knowledge, age and language of the students and shortened.

3. Creating a lesson plan with traditional teaching methods

4. Lesson (45 min) taught with flow conditions, flow questionnaire and knowledge questionnaire

The first lesson will take place in group A and will be taught according to the lesson plan with flow conditions. Immediately after the lesson, students will be given flow questionnaires to complete to verify the level of flow experienced, as well as a short knowledge questionnaire to map whether the lesson objectives have been met.

5. Lesson (45 min) conducted in the traditional way, flow questionnaire and knowledge questionnaire

The second lesson will be attended by Group B and will be taught in the traditional way. Immediately after the lesson, students will be given a flow questionnaire to complete so that we can compare their state of mind after the lesson with Group A, and a short knowledge questionnaire to see if the objectives have been met.

6. Evaluation of the lesson, comparison, confirmation or rejection of the hypothesis, answers to the research questions

After the final collection of questionnaires, it will be possible to evaluate the state of mind of all participants, confirm or reject the hypotheses and answer the final research questions.

5.4 Characteristic of Research Methods

The main research method is experiment. According to Gavora (2000, p. 125), this method works closely with other methods such as questionnaire, scaling, etc. This research uses multiple methods to help collect important data for the purpose of the experiment.

5.4.1 The Opening Questionnaire

At the beginning of the school year 2022/2023, 9th grade students (Group A) were given a questionnaire to complete. The purpose of the questionnaire was to map the students' needs, their interests and how they perceived teaching and learning English and the nature of their ideal teacher. The questionnaire consists of thirteen questions which were partly closed or semi-closed, partly yes/no questions, for some questions pupils were asked to choose from several options or write

their own answer, and for some questions pupils were asked to rank the options from 1 (best option) to 3 or 4 (worst option). The questions were structured after a thorough study of Babbie's (1983) ground rules (as cited in J. H. McMillan and S. Schumacher, 1989, pp. 255-257). The questionnaires were handed to the students in person, so they were formally requested, thanked, and told face-to-face why they were asked to complete them. For this reason, the questionnaire did not include a letter of introduction. Another advantage of the face-to-face presentation was that there was full control over the questionnaire process. We could help students immediately if they were unsure about something on the questionnaire, we could make sure they were all completely filled out, and we could ensure that they were all back. The form of the questions, their order and language were consulted with the teacher, who knew the students personally, so she provided recommendations for corrections and confirmed that the final form was understandable to the students. The questionnaire took approximately 15 minutes to complete. The questions were created based on our experience as a teacher, our personal perception of the teaching and learning process, and in consultation with a teacher with long experience of teaching English. The instructions on how to work with the questionnaire were taken from Gavora (2000).

5.4.2 Observation

The structural observation is another part of the pre-survey and was conducted following Gavora (2000, pp. 76-86). This method was used after the collection of the questionnaires and helped me to better understand the classroom climate, individual preferences, and overall atmosphere. Three classes of 9th grade (Group A) that were taught in a traditional way were directly observed. To record the observations, we used a classroom schema (see appendix) that was created for this purpose. This consists of a map of the classroom where the desks are divided into plus (positive feedback) and minus (negative feedback) boxes according to how many pupils are sitting in that desk. Before the lesson, it was discussed in detail with the teacher and numbered the specific activities that were planned for the lesson and recorded them in the protocol. This allowed us to be prepared for what activities the pupils would be going through, and later in the lesson the observation process could be fully focused on the pupils' reactions, which were divided into two parts - positive pupil feedback and negative pupil feedback. Throughout the lesson, it was marked whether the students were reacting positively or negatively to the activities, the teacher's approach, and other aspects of teaching/learning that spontaneously emerged as part of the lesson. Positive feedback was considered as spontaneous laughter, joy, pleasure, smiling, willingness to respond,

cooperation with the teacher and classmates, and wanting to express one's own opinion. As negative feedback it was noted boredom, unwillingness to engage in the activity, not cooperating with classmates and teacher, yawning, sleeping, inattentiveness to the task, etc. It was also recorded whether there were any specifications such as special educational needs or behavioral disorders and their manifestations. This method was very valuable for this research because it helped us to understand what the pupils really like and dislike, how the teacher handles discipline, how the pupils work as a team and what personalities and interactions are present in the classroom during the lesson.

5.4.3 Experiment

The main part of the research part of this thesis is an experiment. As Gavora states in his work (2000, p. 125), one of the conditions of the experiment is that there must be at least two very similar groups working under different conditions. This experiment involved teaching two lessons, each traditionally 45 minutes long, to two very similar groups of students in the same year group from the same school, usually led by the same teacher. The groups were very similar in terms of number of pupils, gender, age, and level of English proficiency. The first lesson was taught in the experimental group, Group A, using the flow condition and the second lesson was taught in the other part of 9th grade, Group B, the control group, using the traditional approach. Very similar topics were taught in both lessons. The difference, the variable, was in the way of teaching (teachers' approach). In group A, flow conditions will be applied, while the teaching in group B will follow the traditional teaching method.

5.4.4 Final Questionnaire

After each lesson, students in both groups were given final questionnaires to investigate their emotional state during the lessons, and several questions were also devoted to the goals and evaluation of the lessons to measure the effectiveness of the different approaches. The questionnaires consisted of 20 items. Seventeen items consisted of statements, and students' responses were recorded (except for item 17) on a Likert scale (according to their intensity of agreement). There were five options - strongly agree, agree, don't know, disagree, strongly disagree. These were formed to ascertain students' feelings during the teaching. Two items were related to finding out whether students met the goals, and the last item gave students the opportunity to evaluate the lesson. For the purpose of this thesis we did not use a standardized flow

questionnaire, but we were inspired in many points by The Flow State Scale by Jackson and Marsh (1996). The reason we did not use a standardized questionnaire was because we wanted the items to be understandable to the target group of students and their language, and we also tried to make the number of items and the length of the questionnaire appropriate to the time left at the end of the lesson. Students tend to be tired and exhausted at the end of the lesson. Another thing is that with long questionnaires, students usually lose their attention and their answers tend to be less truthful and biased. A very important factor is that these final questionnaires are given to the students immediately after the class.

6 Research and its Parts

6.1 Questionnaire and Observation Evaluation

6.1.1 Group A

Out of 14 students, 13 initial questionnaires were returned . One student from Group A was absent on the day of the questionnaires.



Figure 2 – What activities do you like to do outside of school? What are your hobbies?

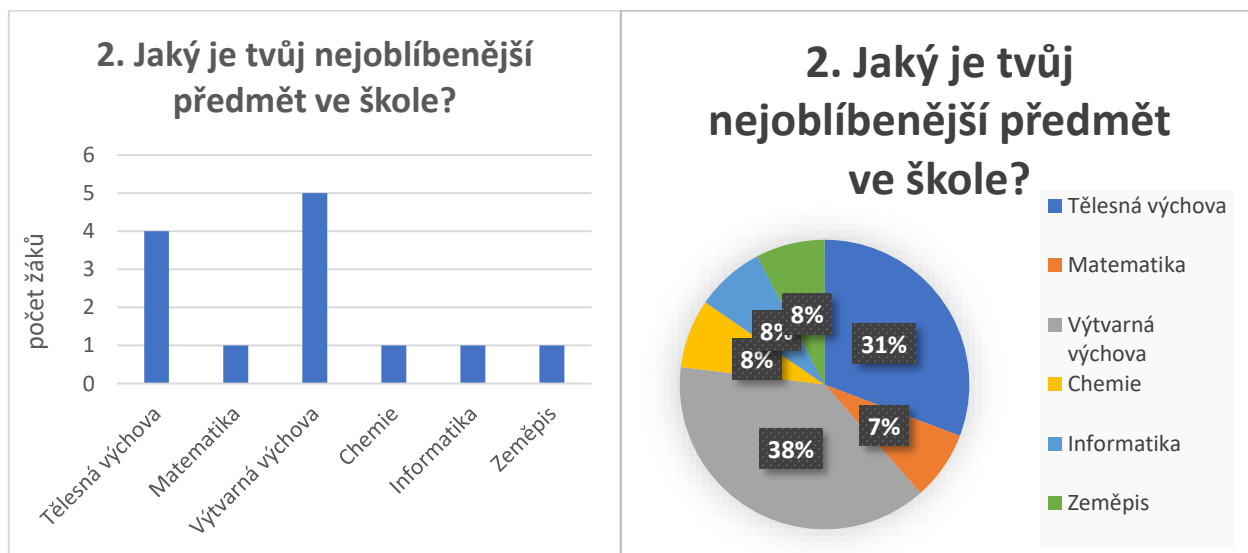


Figure 3 – What is your favorite subject at school?

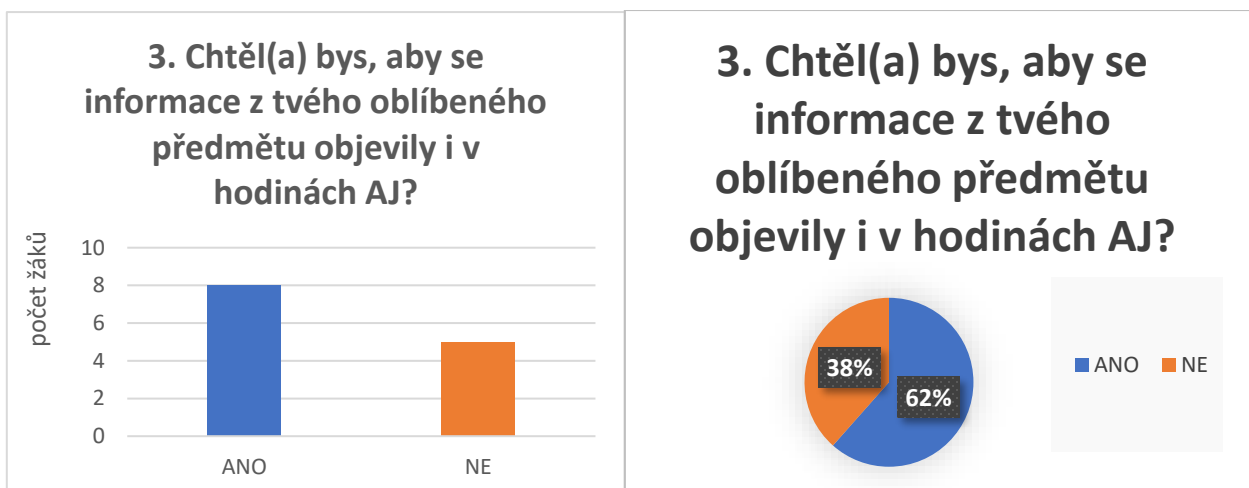


Figure 4 – Would you like information from your favorite subject to appear in English lessons?

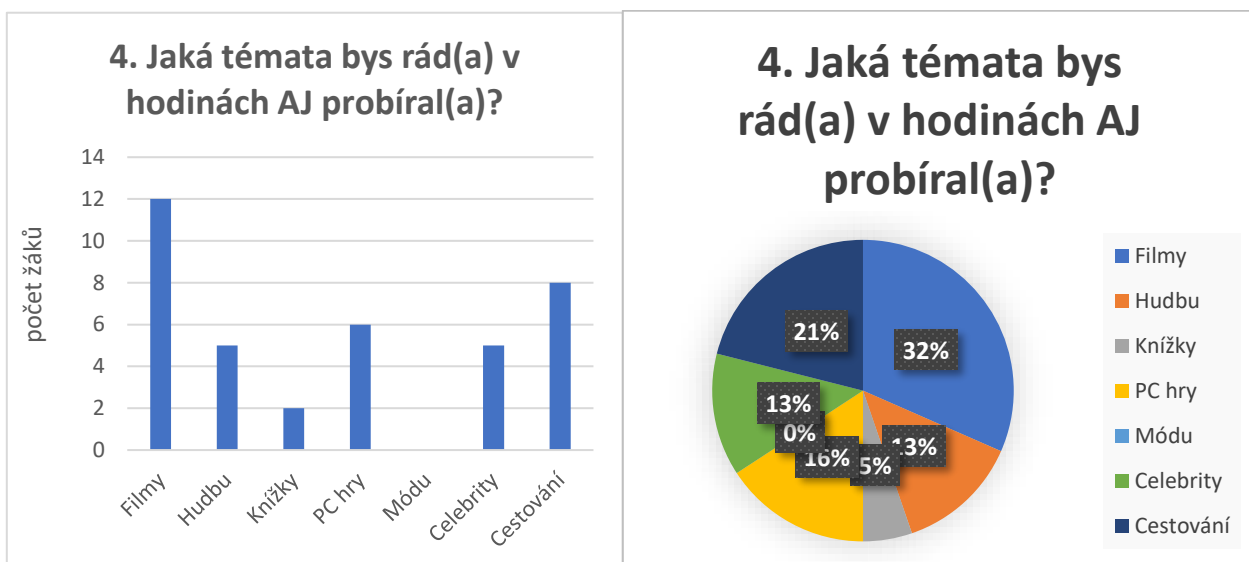


Figure 5 – What topics would you like to discuss in English lessons?

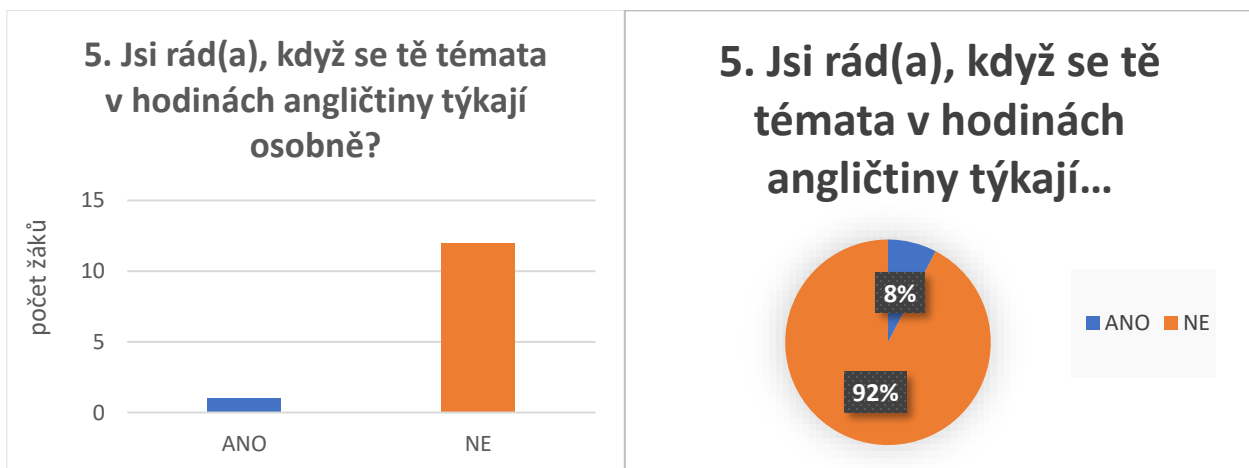


Figure 6 – Are you happy when the topics in your English lessons concern you?

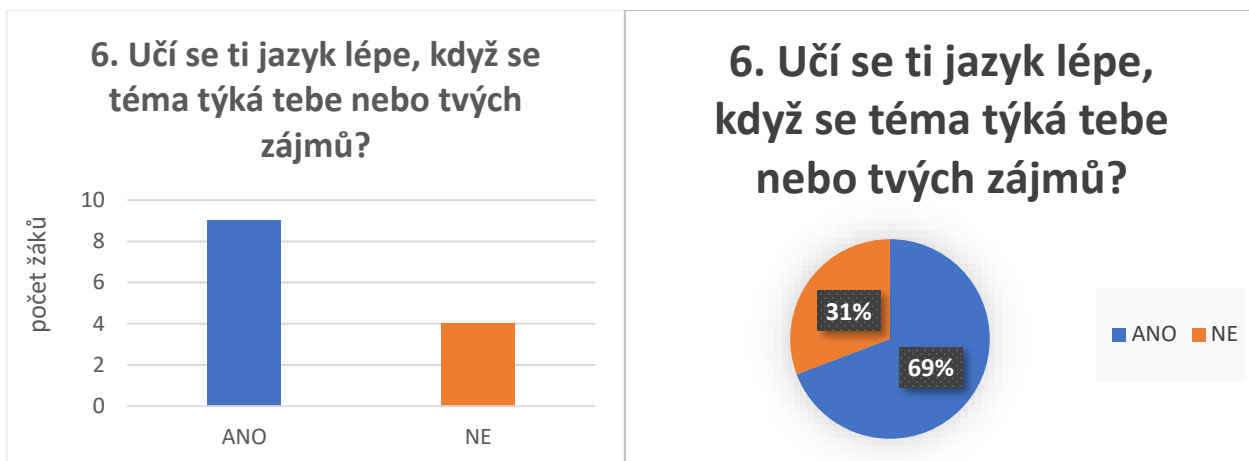


Figure 7 – Do you learn language better when the topic is related to you or your interests?

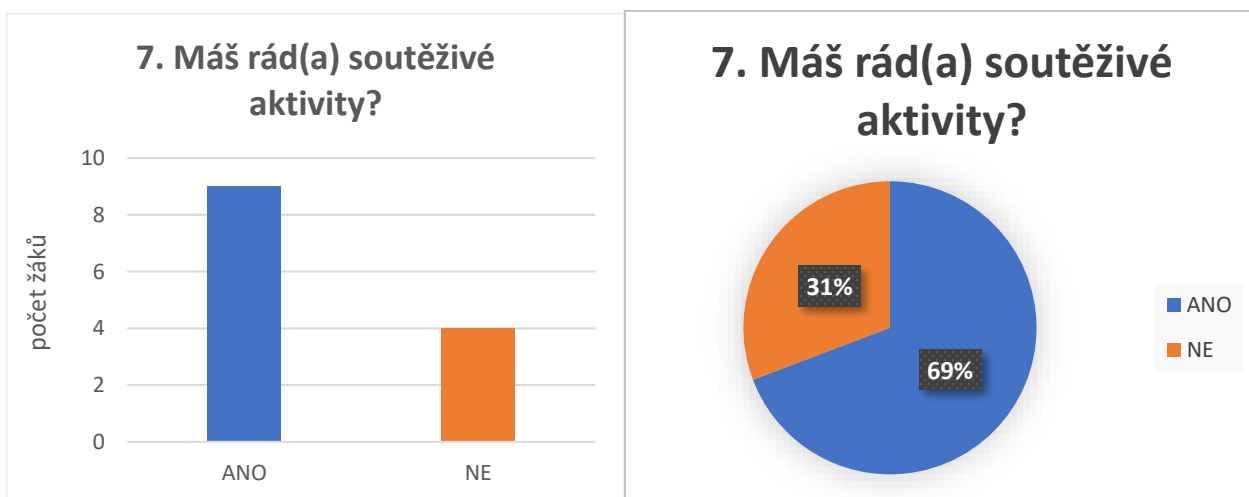


Figure 8 – Do you like competitive activities?

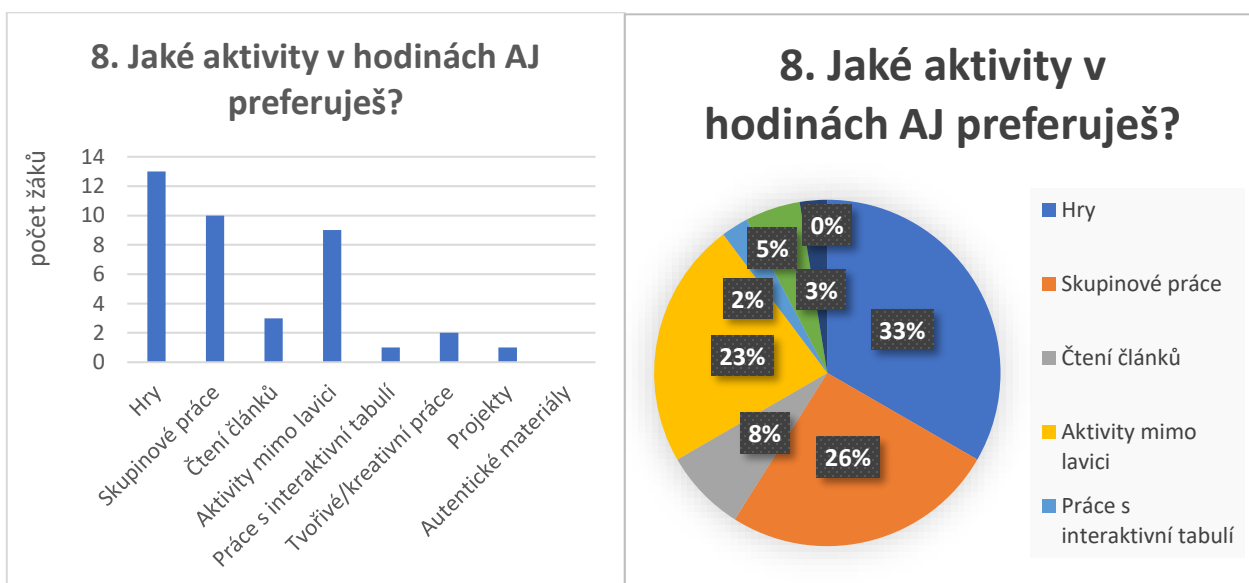


Figure 9 – What activities do you prefer in English lessons?

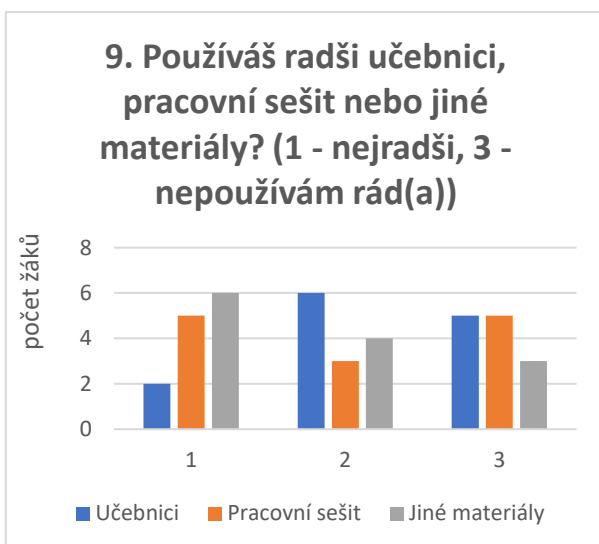


Figure 10 - What do you prefer to use in English lessons?

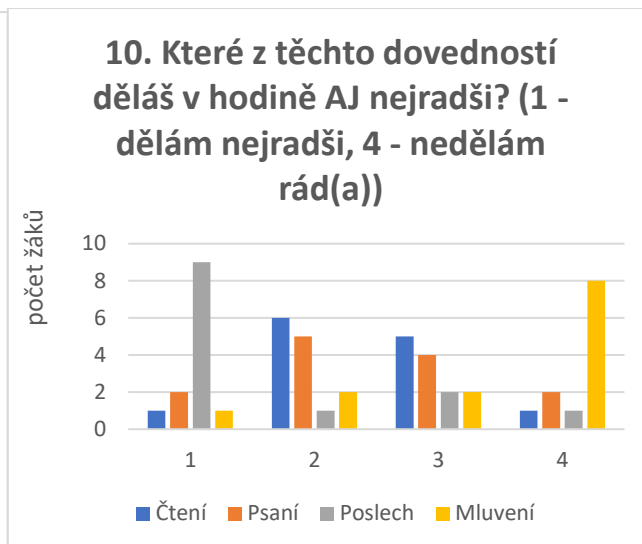


Figure 11 – What skills do you prefer in English lessons?

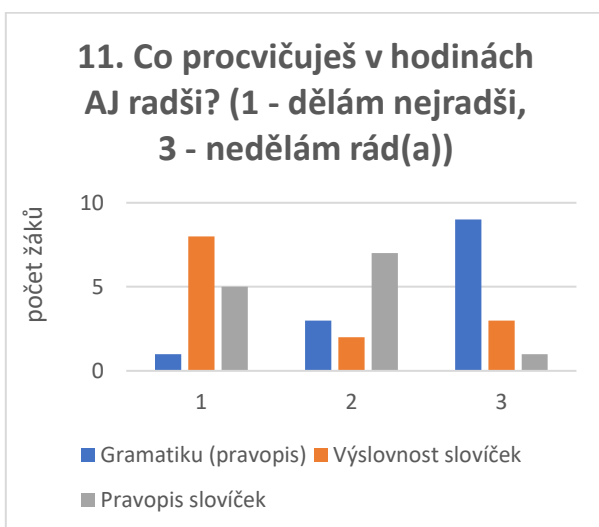


Figure 12 - What do you like to practice in English lessons?

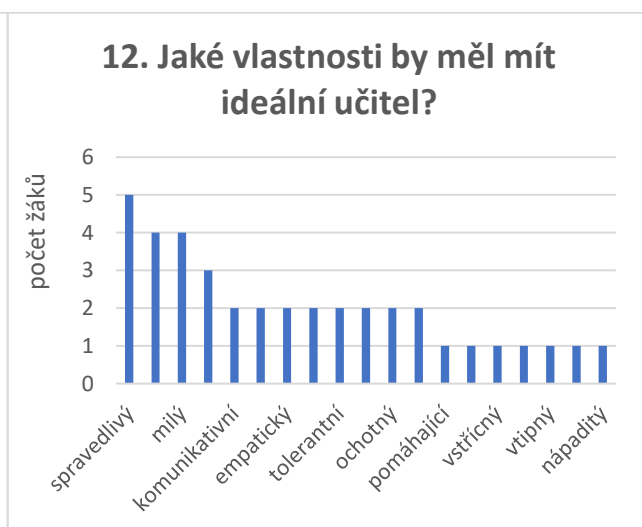


Figure 13 – What qualities should an ideal teacher have?

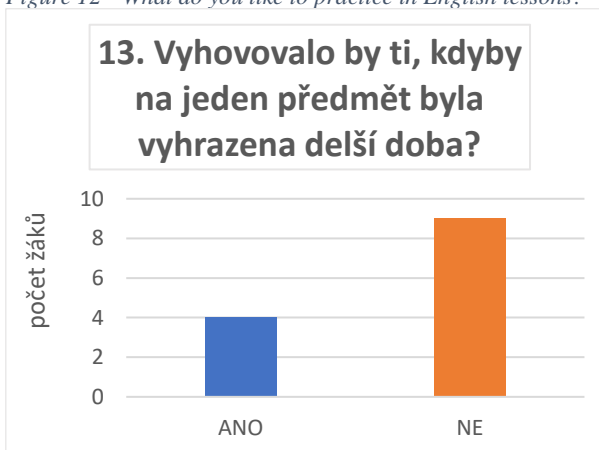
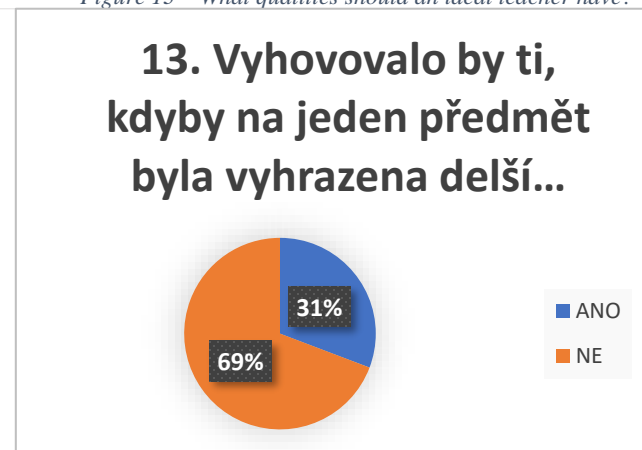


Figure 14 – Would you like to have more time for one subject?



Observation opened up a several details concerning the students' behavior changes, their approach and their interests. The positive feedback by most of the students was found when:

- the activity consists of game and competition features
- the activity taken part out of the desks and traditional seating order
- the students felt chance to be funny for others
- the topic passed them a chance to be funny or attractive

The negative feedback by most of the students was noticed when:

- the activity lasted longer than needed
- the students' skills were lower than challenges (e.g. asked question)
- the teacher provided detailed instruction
- when the group consists of too advanced and wispy students

6.1.2 Group B

Group B was not knuckled under the questionnaire survey and neither the observation. Because of nature of the research there was no need to collect data regarding the students needs, interests and classroom atmosphere.

6.2 Experiment

6.2.1 Topic of the Lesson

The topic of the lesson was deliberately chosen according to the questionnaire results. The topic was aimed to be attractive, enough motivating and challenging for students and the opportunity to choose the topic was emphasized. Each student or team could choose what topic will suit them the most. As the most famous interests and requested topics of the students came out PC games, TV, movies and travelling. Due to heterogeneity and different individualities in the classroom the students were let to choose what department they would like to work on.

6.2.2 Group A – Lesson Plan

Lesson: English
Teaching time: 45 min
Topic: - Presenting your interests, Present simple

Aim: Students will learn five new vocabulary words, be confident in forming questions and announcement sentences in the present simple tense and be clear about what their interests are and why they do them.

Students: 9th grade (14-15 years old)

No.	activity	Time	Task	materials	Aim
1.	Introduction	5 min	The T evaluates the questionnaires and explains to the Ss the general aim of today's lesson		To provide reason for doing following activity, motivate the Ss
2.	Choice of topic, cooperation, goals and conditions setting	5 min	The T introduces the topic, conditions and goals of the lesson and lets the Ss choose about their topic and teamwork. The T makes sure everyone understands the individual and collective goals and assignment. The T lets the Ss choose the questions as a basis for tracking their work and provides them with materials and dictionaries. The T writes the important points on the blackboard.	Questions, A3 papers, tablets, dictionaries, self-evaluation tools	To provide choices and organize the class
3.	Poster/ Advertisement	25 min	The Ss work on their posters/advertisements. The T monitors their work and provides feedback where appropriate and possible.	Background music?	To provide opportunity to get into the flow
4.	Present your project	5 min	The Ss hand in their projects/posters/adverts and introduce them in a few sentences.		The Ss clarify their interests and reasons why they do them
5.	Evaluation	5 min	The Ss fill in the questionnaires that evaluate their mind-set	Questionnaires	To evaluate the lesson

			during the lesson and that assess the goals fulfilling		and the Ss mind-set
--	--	--	--	--	---------------------

Table 4 – Lesson plan with the conditions of flow

Ad 1. Introduction:

Good morning! From your questionnaires, I found that your interests are mainly PC games, movies or TV and travelling. I don't understand PC games and I am also not much involved in what 15-year-olds watch on TV or where they would like to travel. Therefore, I would like to ask you to tell me more about your interests in this lesson. Your task, then, is to create a poster or advertisement that introduces your interests and possibly convinces me to try them out. Imagine that you are the promoters, and you must convince me to play, watch, or travel to what or where you want.

Ad 2. Choice of topic, cooperation, goals and conditions setting:

You can choose whether you want to work alone/individually or whether you want to make teams, but the team will have a maximum of 4 people. You can choose the topic you will promote – PC game, movie or country. There are general/team goals which are to present your interests and answer the questions that I will give you later. There are also individual goals. Each person will write 5 new words they don't know yet and 2 sentences related to your poster. You will be given 9 questions that you will have to answer in 25 minutes to create a poster that briefly includes those answers. There are tablets, dictionaries, self-assessment tools and me helping you too. Each working group can ask me three questions during their work. You can use colours, pictures, different writing styles, etc. Do you have any questions? Go ahead... make a teams or find your workplace and choose a topic.

Ad 4. Present your projects:

Your time is over. Please, hand me in your posters, lists of the words you have written, and questions with your answers. Please be prepared to tell me some information about your interests.

Ad 5. Evaluation:

The last thing I would like to ask you to do is to fill in these questionnaires about your feelings during this lesson. There is also a final part where, please, write down what you remember from this lesson.

Thank you for your cooperation.

***Attachment:**

The questions that help the Ss organize and monitor their work.

	PC GAME	MOVIE	COUNTRY
WHAT	What is the name of the game?	What is the name of the movie?	What is the name of the country?
WHAT	What is the game about?	What is the movie about?	What activities can I do there?
WHAT	What characters are in it?	What genre is it?	What interesting things can I find/see there?
WHO	Who made the game?	Who is the director/writer of the movie?	Who is the travel agency/guide?
WHO	Who is the game for? (gender, age)	Who is the movie for? (gender, age)	Who is the destination suitable for? (age, families, etc.)
WHERE	Where is the game set?	Where is the movie set?	Where is the country located? (continent)
WHEN	Since when is the game on?	Since when is the movie on?	When is the best time to visit?
HOW	How can I play/get it?	How/Where can I watch it?	How can I get there?
WHY	Why should I play it?	Why should I watch it?	Why should I go there?

Table 5 – Questions

6.2.3 Application of conditions of flow in lesson plan

1. Challenge-skill Balance

In order to set this condition correctly, Common European Framework of Reference (CEFR), The Framework Education Programme for Primary Education and The School Educational Programme of Vidnava Primary School were deeply studied. According to these documents, pupils in 9th grade should reach the A2 language level. In The School Educational Programme of Vidnava Primary School it is written that pupils who finish 8th grade are, among other things, at least able to:

- understand the content of simple and clear speeches or conversations related to the topics to be covered – *this means that pupils should be able to understand my simple instructions given in English in class, usually at the beginning of the task*
- ask for basic information
- talk about their family, friends, school, leisure and other topics
- tell a simple story or event; describe a person, place or thing in their everyday life - *students should be able to present their interests in a few sentences at the end of the lesson*
- find the required information in simple everyday authentic materials
- understand short and simple texts and find the information required in them - *students should be able to understand and answer questions*
- write simple texts about themselves, their family, school, leisure and other topics to be learned - *pupils should be able to produce a poster representing their interests with answers to the questions asked*
- respond to simple written messages

(The School Educational Framework of Primary School Vidnava, "School for Life", translated by the author)

In order to ensure that the level of the tasks was well matched to the pupils' skills, this was also carefully discussed with the teacher, who has taught the class for many years and knows the pupils' current level of English, their knowledge and skills.

2. Clear Goals

At the beginning of the lesson, the goals will be introduced to the students, the goals will also be written on the blackboard, make sure that all students understand them and have them translated orally into Czech. The goals are as follows:

- *general/team goals - introduce your interests (topic) and answer the questions (9).*
- *individual goals - each person writes 5 new words they did not know before and 2 sentences related to their posters.*

After discussion with the teacher, we agreed that the goals were realistic given the time provided and the type of activity. Given the nature of the task (to make something creative based on the sample questions), the objectives are both explicit (answer all the questions, write the words and sentences) and implicit (the appearance of the poster and its presentation). Written questions should

provide structural guidance that can help students follow the path to the goals and often see steps forward. Each question is a small target. This method should maintain motivation.

3. Immediate Feedback

Many tools provide feedback during the task. One of them are dictionaries and tablets, which are available to individuals or groups, where students can find translations of words or information they need for their assignment. The second tool is inspired by the tools used in Montessori schools and is home-made. It is a self-assessment tool that provides students with grammatical information on the present simple tense. This tool consists of grammar explanations and examples (including Czech translation) of affirmative sentences, questions and negative sentences. These types of feedback provide clear and unambiguous assessment. Another kind of feedback is also provided by the questions that students are given to answer. Students can find out how far they are on the way to their goal by checking how many questions they have already answered. The last feedback is personal and is provided by the teacher (me). Each group can ask me three questions during their work.

This feedback comes from two main sources - internal and external. The external feedback comes from me and from the support tools (dictionaries, tablets and self-assessment tools) and provides assessments on grammatical corrections and information about the topic. While internal feedback comes from the students and includes their personal evaluations, feelings and emotions regarding their (dis)satisfaction with the posters and their presentations.

4. Attention on the Task at Hand

This condition was perceived as difficult to incorporate into the lesson plan because we felt it depends on the nature of the students, their approach to the task and their current state of mind. Also, controlling and working with one's own mind is a very demanding process that requires practice and patience. However, attention to the task at hand can also be supported by the nature of the task. Therefore, we tried to observe the students' requirements in the questionnaires. These revealed that students prefer group work, games, working outside their desks, competitions and when the topics are related to them or their interests and some other aspects. Unfortunately, we were not able to implement all the requirements in the lesson plan, but the ones mentioned are there. The point is that when someone is doing what they enjoy, their attention tends to be on that

activity, and they don't tend to run away from it. We have also tried to ensure that stress, boredom and anxiety are not induced in the pupils by giving them personal attention and feedback on their work.

5. The Loss of Self-Consciousness

The loss of self-consciousness stems from a previous condition. When students are fully immersed in an activity, they are less easily distracted. The efforts to make the task attractive, avoid stress, anxiety and boredom, and create a friendly environment with a minimum of distractions and chaos applied in the previous condition are closely related to this condition. However, it is not entirely possible to interfere with someone's consciousness if they are not open to it.

6. The Merging of Action and Awareness

This condition is again closely related to the previous two conditions. We were very limited in our ability to modify the environment of the inner classes to limit any distractions. The mental state can easily be disturbed by unexpected situations. However, setting challenges and skills to the right level and providing clear goals and immediate feedback can be very supportive factors to help meet this condition as well.

7. The Paradox of Control

In a traditional school environment, students are used to having their work evaluated by the school marks and therefore lose their intrinsic motivation. This habit is difficult to break. We have tried to prevent it by telling students that the main goal is to make me more familiar with their interests and that their work will not be graded by school grades. This step could reduce the potential threat posed by the assessment. Feedback tools can give students a tool to check their work. The transition of learners from a traditional school environment to taking responsibility for their learning and being able to manage their learning is a long process.

8. The Transformation of Time

This condition is very subjective, and we were not able to affect it.

9. Autotelic Experience

This condition depends on the individual, on their attitude to life, education and school, on their intrinsic motivation and character. There are some people who find it difficult or impossible to be in the flow, and we have not been able to ascertain whether there are such people in my research sample. On the other hand, it is not realistic to isolate these people in a traditional school setting.

6.2.4 Summary

The conditions associated with challenges, skills, goals and feedback are completely under the teacher's control. The teacher can fully influence, control and set them. The teacher can change his/her approach and behaviour towards the pupils. It depends on personal and professional observation and perception of individuals. Other conditions are largely influenced by the nature of the activity, the environment and the general atmosphere of the classroom, but in many cases, it depends very much on the individual mind-set, character and attitude of the students. It must also be taken into account that the students for many years follow a certain system in their learning, and it is impossible to expect a complete change from lesson to lesson.

6.2.5 Group B – Lesson Plan

Lesson:	English
Teaching time:	45 min
Topic:	Favourite Characters, Present simple
Aim:	Students will learn five new vocabulary words, be confident in forming questions and announcement sentences in the present simple tense and be clear about their favourite characters.
Students:	9 th grade (14-15 years old)

No.	Activity	Time	Task	materials	aim
1.	Introduction	5 min	The T asks the Ss about their favourite movie/book, favourite character and favourite genre.		To start the lesson, introduce the topic, motivate the Ss
2.	Reading	10 min	The T divides the class into three groups and let each group read one article (SB p. 6). The Ss should write down the verbs they found in the articles and then compare them with other classmates who have read the same article. The Ss should find out what tense most of the verbs are in.	Student's Book	To look for the present simple
3.	Present Simple	8 min	The T will summarize the Ss' answers and review the basic rules about Present Simple.	Blackboard	To summarize the grammar rule
4.	Answer the questions	7 min	The Ss work with ex. 2b on p. 7. Each pair looks for the answers on two questions according to the article.	Student's Book	To be able to find the answers on questions
5.	Speaking	10 min	One S asks the S from another group any question from SB ex. 2b, p. 7. One of the Ss who looked for the answer answers (orally). The chain continues until all questions are answered for all groups.	Student's Book	The Ss repeat how to make sentence in Present Simple

6.	Evaluation	5 min	The Ss write one sentence about their favourite character.		To make sentence in Present Simple
----	------------	-------	--	--	------------------------------------

Table 6 – Traditional lesson plan

Ad 1. Introduction:

Good morning! Today's topic is favourite characters. What is your favorite movie/book? Do you have a favorite movie character? What movie genre do you like?

Ad 2. Reading:

Please, open your Student's Book on page 6. There are three articles. This group (A) will read about Katniss Everdeen, this group (B) will read about Christopher and this group (C) will read about Ron Weasley. Please, read the article and write down all the verbs you will find there.

Correct answers:

Group A – is, takes place, is, are, have to send, participate, is, could say, 2x are, 2x is, ready to fight, is, 2x become, plays, want, win, don't want, kill, is, leads

Group B – like, 2x is, investigates, happened, takes place, lives, 2x is, has, tells, died, discovers, isn't, tries, goes, becomes, admire, is determined to find, finds, has, helps

Group C – is, take place, have, are, is, are, connected, solve, need, do, think, like, are, would like, have, feels, is, fall out, isn't, make up Please open your Student's Book on page 6. There are three articles. This group (A) will read about Katniss Everdeen, this group (B) will read about Christopher, and this group (C) will read about Ron Weasley. Please read the article and write down all the verbs you find in it.

Ad 3. Present Simple:

Can you tell me what tense most of these verbs are in? Okay, present simple tense. Can you give some examples of questions in Present Simple. Can we summarize the rules about Present Simple?

Ad 4. Answer the questions:

Please look at Exercise 2b on page 7. There are questions there. Each pair gets two questions, and your task is to find the answers in the article.

Ad 5. Speaking:

Is there anyone here now who wants to start? Okay, please choose a question and ask another group. The person from that group who addressed the question will answer.

Ad 6. Evaluation:

It is time for your own answers. Please write one sentence about your favourite character.

Thank you for your cooperation.

6.3 Final Questionnaire

During the day of the experiment, 5 students were absent due to illness. Therefore, the students who participated in the experiment and completed the final questionnaire were 12 students from group A (experimental) and 10 students from group B (control). A total of 22 completed questionnaires were returned. The purpose of the questionnaire was to find out how students emotionally perceived the lesson where the flow conditions were applied and how they perceived the lesson taught in the traditional way. The final questionnaires mapped how effectively the flow conditions were applied from the students' perspective and the differences in their mind-set during these lessons. Another perspective that the results of the questionnaires provided was whether the learning goals that were set were met, and the questionnaire also offered a space to express their personal opinion about the lessons.

Specifically, the first three items charted the balance between the challenge and skill, the fourth and the fifth items tracked goals setting, the sixth and the seventh items tracked immediate feedback, from the eighth to the eleventh items tracked attention, loss of self-awareness, and the merging of action and consciousness, the twelfth item explored the paradox of control, the thirteenth and the fourteenth items tracked the transformation of time, and the last two items tracked the autotelic experience. These items were answered using a Likert scale with the options of strongly agree, agree, don't know, disagree, strongly disagree. The seventeenth item tracked the students' emotions during the lesson, whether they were stressed, bored, anxious, tense, or at ease. The eighteenth and the nineteenth items checked whether the stated goals were met, and the last item provided opportunities for individual evaluation of the lesson.

7 Research Evaluation and Results

I. *A) How can the traditional Czech school environment be modified to increase the possibility of bringing students into flow?*

B) How can the conditions of flow be applied to the traditional Czech school environment?

The first part of the research questions deals with the conditions of flow and their application in the traditional Czech school environment. The theoretical part mentions the importance of flow conditions for achieving a flow state in learning. Therefore, the first part of the research was the development of a lesson plan that supports these conditions.

The research shows that the conditions are partially applicable in a traditional Czech school environment, but some individual characteristics and attitudes of the students and their current mind-set need to be taken into account. The topic of flow is closely related to positive psychology. Psychological changes (attention, self-awareness, etc.) take time to work on. Although the lesson plan consists of important flow conditions, for the pupils it meant a change in their stabilized learning system and it is difficult to understand and deal with this change and its benefits.

C) Is it possible to modify the traditional Czech school environment by applying flow conditions so that pupils perceive learning more positively than learning taught by traditional methods? (Figure 2, 3, 4, 5)

Items 1 to 3: Challenge-skill balance

The first three items were related to the balance of challenge and skill. In all three questions, there were more positive responses in Group A, confirming that this condition was set well in the lesson plan for Group A, and the tasks were designed with the students' abilities in mind, while at the same time making them learn new things.

Items 4 and 5: Clear goals

Items four and five showed that there was slightly more positive feedback for Group B. Group A's results were also rather positive, but not as much as Group B. One possible reason for these results is the forwarding of information and instruction. The students are not used to the new way of setting goals, and therefore some of them may have found this way confusing or chaotic.

Items 6 and 7: Immediate Feedback

Item 6 described whether students were able to monitor their work during the activity and whether they knew how far they were in completing the task. This item was better rated by Group B. Group A rated this type of feedback less positively. However, item 7 was rated better by group A, indicating that they were more confident about where they could find help if needed.

Items 8 to 11: Attention to task at hand, Loss of self-consciousness, Merging of action and awareness

Items 8 and 9 were perceived more positively by Group A, meaning that their attention was more focused on the task at hand and they may have lost self-awareness due to immersion in the activity. However, the results of items 10 and 11 were more positive for group B, indicating that this group was better able to detach from their needs and thoughts and did not pay much attention to others' reactions to their work.

Item 12: The paradox of control

This item was better rated in group B. They felt more confident in controlling their work than Group A.

Items 13 and 14: Time transformation

Group A had more distorted ideas about time than Group B. Also, Group A completed tasks more automatically than Group B.

Items 15 and 16: Autotelic experience

More autotelic learners and experiences were recorded for Group A. However, they too were more likely to not share their lesson experiences with others.

Item 17: Students' feelings during the lesson

In Group A, 83% of the students felt at ease, one student felt stressed, and one student felt bored during the lesson. In group B, 70% of the students felt at ease and three students felt bored during the lesson.

Summary:

In the students' questionnaires, it was measured that in 10 items out of 16, students from group A were more positive after the lesson with applied flow conditions. However, the difference was not large. In most of the items, the difference was only in tenths. In general, students responded rather positively to both lessons. There was one item (nr. 10) where students on average expressed themselves negatively. The negative result for item 10 indicates that students were unable to avoid thinking about their after-school life and their biological needs.

The hypothesis was confirmed. The environment of a traditional Czech school can be modified so that pupils feel more positive when they learn with conditions for flow.

LESSON WITH THE CONDITIONS OF FLOW - GROUP A											
Items	Strongly agree		Agree		I don't know		Disagree		Strongly disagree		
	Nr.	%	Nr.	%	Nr.	%	Nr.	%	Nr.	%	
CHALLENGE-SKILL BALANCE	1.	6	50,00	5	41,67	0	0,00	1	8,33	0	0,00
	2.	4	33,33	6	50,00	0	0,00	2	16,67	0	0,00
	3.	8	66,67	4	33,33	0	0,00	0	0,00	0	0,00
CLEAR GOALS	4.	3	25,00	6	50,00	3	25,00	0	0,00	0	0,00
	5.	4	33,33	3	25,00	1	8,33	4	33,33	0	0,00
IMMEDIATE FEEDBACK	6.	2	16,67	6	50,00	3	25,00	1	8,33	0	0,00
	7.	10	83,33	2	16,67	0	0,00	0	0,00	0	0,00
ATTENTION, LOSS OF SELF-CONSCIOUSNESS, MERGING OF ACTION AND AWARENESS	8.	5	41,67	2	16,67	2	16,67	3	25,00	0	0,00
	9.	1	8,33	3	25,00	1	8,33	4	33,33	3	25,00
	10.	0	0,00	1	8,33	1	8,33	5	41,67	5	41,67
	11.	1	8,33	6	50,00	3	25,00	1	8,33	1	8,33
CONTROL	12.	2	16,67	4	33,33	5	41,67	1	8,33	0	0,00
TRANSFORM. OF TIME	13.	7	58,33	2	16,67	1	8,33	2	16,67	0	0,00
	14.	2	16,67	7	58,33	2	16,67	1	8,33	0	0,00
AUTOTELIC EXPERIENCE	15.	3	25,00	5	41,67	3	25,00	1	8,33	0	0,00
	16.	4	33,33	0	0,00	2	16,67	3	25,00	3	25,00
Total	62	X	62	X	27	X	29	X	12	X	

Table 7 – Final questionnaire evaluation – Group A

TRADITIONAL LESSON - GROUP B											
Items	Strongly agree		Agree		I don't know		Disagree		Strongly disagree		
	Nr.	%	Nr.	%	Nr.	%	Nr.	%	Nr.	%	
CHALLENGE-SKILL BALANCE	1.	1	10,00	7	70,00	2	20,00	0	0,00	0	0,00
	2.	4	40,00	2	20,00	3	30,00	1	10,00	0	0,00
	3.	2	20,00	7	70,00	1	10,00	0	0,00	0	0,00
CLEAR GOAL	4.	5	50,00	3	30,00	2	20,00	0	0,00	0	0,00
	5.	3	30,00	4	40,00	2	20,00	1	10,00	0	0,00
IMMEDIATE FEEDBACK	6.	3	30,00	6	60,00	1	10,00	0	0,00	0	0,00
	7.	5	50,00	5	50,00	0	0,00	0	0,00	0	0,00
ATTENTION, LOSS OF SELF-CONSCIOUSNESS, MERGING OF ACTION AND AWARENESS	8.	2	20,00	4	40,00	1	10,00	1	10,00	2	20,00
	9.	0	0,00	1	10,00	4	40,00	2	20,00	3	30,00
	10.	0	0,00	1	10,00	2	20,00	6	60,00	1	10,00
	11.	1	10,00	6	60,00	2	20,00	1	10,00	0	0,00
CONTROL	12.	2	20,00	5	50,00	3	30,00	0	0,00	0	0,00
TRANSFORM. OF TIME	13.	2	20,00	3	30,00	2	20,00	0	0,00	3	30,00
	14.	1	10,00	4	40,00	5	50,00	0	0,00	0	0,00
AUTOTELIC EXPERIENCE	15.	0	0,00	3	30,00	5	50,00	2	20,00	0	0,00
	16.	1	10,00	0	0,00	3	30,00	2	20,00	4	40,00
Total	32		61		38		16		13		

Table 8 – Final questionnaire evaluation – Group B

COMPARISON WITH COEFFICIENT AND AVERAGE												
	Strongly agree		Agree		I don't know		Disagree		Strongly disagree		Average	
Coeff.	5		4		3		2		1			
Group	A	B	A	B	A	B	A	B	A	B	A	B
1.	30	5	20	28	0	6	2	0	0	0	4,33	3,90
2.	20	20	24	8	0	9	4	2	0	0	4,00	3,90
3.	40	10	16	28	0	3	0	0	0	0	4,67	4,10
4.	15	25	24	12	9	6	0	0	0	0	4,00	4,30
5.	20	15	12	16	3	6	8	2	0	0	3,58	3,90
6.	10	15	24	24	9	3	2	0	0	0	3,75	4,20
7.	50	25	8	20	0	0	0	0	0	0	4,83	4,50
8.	25	10	8	16	6	3	6	2	0	2	3,75	3,30
9.	5	0	12	4	3	12	8	4	3	3	2,58	2,30
10.	0	0	4	4	3	6	10	12	5	1	1,83	2,30
11.	5	5	24	24	9	6	2	2	1	0	3,42	3,70
12.	10	10	16	20	15	9	2	0	0	0	3,58	3,90
13.	35	10	8	12	3	6	4	0	0	3	4,17	3,10
14.	10	5	28	16	6	15	2	0	0	0	3,83	3,60
15.	15	0	20	12	9	15	2	4	0	0	3,83	3,10
16.	20	5	0	0	6	9	6	4	3	4	2,92	2,20

Table 9 – Comparison with coefficient and average

	BORED		STRESSED		AT EASE		ANXIOUS		TENSE	
Group	A	B	A	B	A	B	A	B	A	B
17.	1	3	1	0	10	7	0	0	0	0

Table 10 – Final questionnaire evaluation – item 17

II. A) Is the learning process more effective when flow conditions occur in the learning process? (For more details see Table 11)

In addition to whether flow conditions occurred in the lesson, the final questionnaire also tested what students remembered from the lesson and thus which lesson plan was more effective. During the lesson, individuals were asked to write 5 new words and 2 sentences about their project. The questionnaire items that measured knowledge learned were the same as the stated goals: write 5 new words learned during the lesson (item 18) and write 2 sentences about your project or topic or favorite character (item 19).

The research found that 41.67% of Group A were able to meet the first goal, which was to write down 5 new words. None of the students from Group B could remember 5 new vocabulary words, nor 4 or 3. From group B, 30% of the students were able to memorize 2 new words. The second objective was completely met by 33.33% of the students in group A and 30% of the students in group B successfully remembered 2 sentences. This means that group A was also more successful in this task.

The research confirmed the theory that learning with flow conditions is more effective.

GOALS' FULFILLMENT IN PERCENTAGES												
Number	0		1		2		3		4		5	
Group	A	B	A	B	A	B	A	B	A	B	A	B
18.	25,00	30,00	16,67	40,00	16,67	30,00	0,00	0,00	0,00	0,00	41,67	0,00
19.	58,33	70,00	8,33	0,00	33,33	30,00	X	X	X	X	X	X

Table 11 – Goals' fulfillment in percentages

B) Is learning more enjoyable when flow conditions are present? (For more details see Table 12)

At the end of the final questionnaire, students were given the opportunity to evaluate the lessons. According to the students' evaluation of the lessons, the feedback was divided into three groups - positive feedback, negative feedback and no or neutral feedback. It is noteworthy that none of the students expressed negative feedback on either of the two lessons. In Group A, 66.67% of the students gave positive feedback while 90% of the students in Group B did not take the opportunity to express themselves or give their opinion.

This hypothesis was also confirmed. Learning with flow conditions was more enjoyable for the students.

OVERALL LESSON EVALUATION IN PERCENTAGES						
Feedback	Positive		None/Neutral		Negative	
Group	A	B	A	B	A	B
20.	66,67	10,00	33,33	90,00	0,00	0,00

Table 12 – Overall lesson evaluation in percentages

Conclusion

This thesis has focused primarily on flow, a state of mind where individuals are fully immersed in an activity, and its use in education. The theoretical part dealt with the introduction of flow, its positive and negative aspects and especially the conditions of flow. The following chapters further described the role of flow in education and some principles that help to bring flow into learning. It also included chapters on the traditional Czech school environment its historical changes and the current settings and barriers of the environment. Last but not least, the theoretical part dealt with previous research on the application of flow in education and its success or failure.

The main part of the research was an experiment that compared two equivalent classes of 9th graders from a junior high school. However, in order to carry out the experiment, questionnaires had to be developed to observe the interests and needs of the students, and structural observations had to be made to learn about the classroom climate. After this "getting to know" part, two lesson plans were developed - one with flow conditions and the other using traditional teaching methods. According to these plans, two lessons were taught and after each lesson students were given final questionnaires to check their mind-set and feelings during each lesson. Based on the research, the following conclusions can be drawn:

How can the traditional Czech school setting be modified to increase the possibility of bringing students into flow?

The traditional Czech school environment can be modified by the flow conditions applied to lesson plans and the teachers' approach to students and teaching.

How can flow conditions be applied to the traditional Czech school environment?

First of all, attention should be paid to the balance between challenge and skill. The teacher should be aware of the students' abilities and assign tasks accordingly. The task must be sufficiently challenging so that it does not create a feeling of boredom, anxiety or apathy in the students. The students must be clear about what the aim of the lesson is and what their goals are. It is best if the teacher and students find common ground on the goals, but in a traditional school setting with a lesson length of 45 minutes, this possibility is very limited. Another important requirement is immediate feedback. Students need to be aware of their successes and failures as they work through the task and should be able to keep track of how far they are with their work. The teacher should be able to provide students with these tools of immediate feedback. The other conditions were

found to be related to the nature of the individual students and their current mind-set or closely related to the correct setting of the previous conditions.

Is it possible to modify the traditional Czech school environment by applying flow conditions so that students perceive learning more positively than learning taught by traditional methods?

Students' responses expressed that learning with flow conditions is perceived more positively by students than by students who learned in traditional ways.

Is the learning process more effective when flow conditions are present?

Is learning more enjoyable when flow conditions are present?

Research has shown that learning with the application of flow conditions is more effective and enjoyable for students than learning in the traditional way.

In general, research has supported the statement that flow in education has a positive impact on students. However, this research has some limitations. The first is the length of the experiment. Teaching with flow conditions should be done regularly in classes to see if the change is permanent. Some of the individual students' responses indicated that students were grateful for any change in attitude and did not seem to care about the change. The second problem may be the very small number of representatives and the direct selection of the school, therefore the results cannot be generalised. Another limitation that should be mentioned is that the experimental and control lessons were conducted by me and the students were aware that they were part of an experiment, therefore their answers may have been biased.

Further research should definitely pay attention to the needs of the students and observe their feelings and attitudes towards their own learning after multiple lessons taught under flow conditions. It would also be beneficial to conduct similar research with more participants and compare students' attitudes to learning and any changes at different schools, and also for younger students to track changes in their attitudes over the years of study.

Bibliography

ANDERSEN, F. O., 2007. *Creativity – and Creative Thinking – as an Integrated Part of Optimal Learning Environments*. Copenhagen: The Danish University of Education.

ANDERSEN, F. O., 2004. *Exploring the Roots of Optimal Learning: A Story of Successful Primary and Special Needs Education in Finland*. Bilund: Lego Learning Institute.

ANDERSEN, F. O., 2005. “*Kids on Campus*” – *an Optimal Japanese Concept for Learning*. Copenhagen: The Danish University of Education.

CSIKSZENTMIHALYI, Mihaly, 2014. *Applications of Flow in Human Developments and Education*. Claremont: Springer. ISBN 978-94-017-9093-2.

CSIKSZENTMIHALYI, Mihaly, 1975. *Beyond Boredom and Anxiety*. San Francisco, CA: Jossey-Bass. ISBN 9780875892610.

CSIKSZENTMIHALYI, Mihaly, 1997. *Creativity: Flow and the Psychology of Discovery and Invention*. New York: HarperCollins. ISBN 9780062283252.

CSIKSZENTMIHALYI, Mihaly, 2014. *Flow and the Foundations of Positive Psychology*. Springer. ISBN 978-94-017-9087-1

CSIKSZENTMIHALYI, Mihaly, 1997. *Finding Flow: The Psychology of Engagement with Everyday Life*. New York: Basic Books. ISBN 0-465-04513-8.

CSIKSZENTMIHALYI, Mihaly, 2008. *Flow: The Psychology of Optimal Experience*. New York: Harper Perennial Modern Classics. ISBN 978-0-06-133920-2

CSIKSZENTMIHALYI, Mihaly and CSIKSZENTMIHALYI, Isabella Selega, (eds.), 2012. *Optimal Experience: Psychological Studies of Flow in Consciousness*, pp 266–318. New York: Cambridge University Press. ISBN 978-0-521-43809-4.

CSIKSZENTMIHALYI, Mihaly, 2013. *Flow: The psychology of happiness*. London: Rider. ISBN 0712654771.

CSIKSZENTMIHALYI, Mihaly; RATHUNDE, Kevin and WHALEN, Samuel, 1993. *Talented teenagers: The roots of success and failure*. Cambridge, England: Cambridge University Press. ISBN 0-521-57463-3.

- CSIKSZENTMIHALYI, Mihaly and SCHNEIDER, Barbara, 2000. *Becoming Adult: How Teenagers Prepare for the World of Work*. New York: Basic Books. ISBN-0-465-01540-9
- GAVORA, Peter, 2010. *Úvod do pedagogického výzkumu*. Brno: Paido. ISBN 978-80-7315-185-0.
- HEINE, C., 1996. *Flow and achievement in mathematics*. (Unpublished doctoral dissertation). University of Chicago.
- JACKSON, Susan A.; EKLUND, Robert C. and LEATHERMAN, Greg, 2004. *The Flow Scales Manual*. USA: Publishers Graphics. ISBN 1885693516
- KABAT-ZINN, Jon, 1994. *Wherever You Go, There You Are: Mindfulness Meditation in Everyday Life*. USA: Hyperion. ISBN 9781562827694.
- MONETA, Giovanni B., 2012. *On the measurement and conceptualization of flow*. In ENGESER, S. *Advances in flow research*. p. 23-50. New York: Springer. ISBN 978-1-4614-2358-4.
- NAKAMURA, Jeanne and CSIKSZENTMIHALYI, Mihaly. (2021). *The Experience of Flow: Theory and Research*. In SNYDER, C. R. and LOPEZ, S. J. (eds.) *Oxford handbook of Positive Psychology*, 3rd ed., pp 279–296. Oxford: Oxford University Press. ISBN 9780199396511.
- NAKAMURA, Jeanne and CSIKSZENTMIHALYI, Mihaly. (2002). *The concept of flow*. In SNYDER, C. R. and LOPEZ, S. J. (eds.) *Handbook of Positive Psychology*, pp 89–105. Oxford: Oxford University Press. ISBN 0-19-513533-4
- NORMAN, Donald A. and SHALLICE, Tim, 1980. *Attention to action: Willed and Automatic Control of Behavior*. In DAVIDSON, R. J.; SCHWARTZ, G. E. and SHAPIRO, D. (eds.). *Consciousness and Self-Regulation*. Boston: Springer. ISBN 978-1-4757-0631-4.
- ONG, Anthony D. and VAN DULMAN, Manfred HM (eds.), 2006. *The Handbook of Methods in Positive Psychology*, pp 542–558. Oxford: Oxford University Press. ISBN 0-19-517218-3.
- PEARCE, Jon M., 2005. *Engaging the learner: How can the flow experience support e-learning?* In *E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education*. San Diego: Association for the Advancement of Computing in Education. ISBN 978-1-880094-57-0.

PERRY, Susan K., 2010. *Writing in Flow*. In Kaufman B. S. and Kaufman C. J. (Eds.), *The Psychology of Creative Writing*. Cambridge: Cambridge University Press. ISBN 9780521707824.

PROVÁZKOVÁ STOLINSKÁ, Dominika, 2015. *Changes in the Czech School Environment*. IAC-TLEI. Vienna. ISBN 978-80-9057-916-3.

SIDOROVA, Dana, 2015. *Well-being, flow experience and personal characteristics of individuals who do extreme sports as serious leisure*. Brno: Masaryk University.

SPIPKOVÁ, Vladimíra., et al., 2005. *Proměny primárního vzdělávání v ČR*. Praha: Portál. ISBN 80-7178-942-9.

VYGOTSKY, Lev Semenovich, 1986. *Thought and Language*. Cambridge, Massachusetts: The Massachusetts Institute of Technology Press. ISBN 0-262-72010-8.

Online sources

AHERNE, Cian; MORAN, Aidan. P. and LONDSDALE, Chris, 2011. *The Effect of Mindfulness Training on Athletes' Flow: An Initial Investigation*. [online]. ©2023 Human Kinetics. Sport Psychologist, vol. 25, iss. 2, p. 177-178. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1123/tsp.25.2.177>

ASAKAWA, Kiyoshi, 2004. *Flow Experience and Autotelic Personality in Japanese College Students: How do they Experience Challenges in Daily Life?*. [online]. ©2023 Springer Nature. Journal of Happiness Studies, vol. 5, p. 123-154. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1023/B:JOHS.0000035915.97836.89>

ASAKAWA, Kiyoshi, 2010. *Flow experience, culture, and well-being: How do autotelic Japanese college students feel, behave, and think in their daily lives?*. [online]. © Springer Nature. Journal of Happiness Studies, vol. 11, p. 205-223. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1007/s10902-008-9132-3>

BADDELEY, Alan, 1994. *The magical number seven: Still magic after all these years?*. [online]. ©2023 American Psychological Association. Psychological Review, vol. 101, iss. 2, p. 353-356. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1037/0033-295X.101.2.353>

BANGERT-DROWNS, Robert L.; KULIK, Chen-Lin C.; KULIK, James A. and MORGAN, MaryTeresa, 1991. *The Instructional Effect of Feedback in Test-Like Events*. [online]. ©2023 American Educational Research Association. Sage Journals, vol 61, iss. 2. [Accessed 10 September 2023]. Available from: <https://doi.org/10.3102/00346543061002213>

BASSI, Marta and DELLE FAVE, Antonella, 2004. *Adolescence and the Changing Context of Optimal Experience in Time: Italy 1986–2000*. [online]. © Springer Nature. Journal of Happiness Studies, vol. 5, p. 155-179. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1023/B:JOHS.0000035914.66037.b5>

BERNIER, Marjorie; THIENOT, Emilie; CODRON, Romain and FOURNIER, Jean F., 2009. *Mindfulness and Acceptance Approaches in Sport Performance*. [online]. ©2023 Human Kinetics. Journal of Clinical Sport Psychology, vol. 3, iss. 4, p. 320-333. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1123/jcsp.3.4.320>

BONAIUTO, Marino; MAO, Yanhui; ROBERTS, Scott; PSALTI, Anastasia; ARICCO, Silvia; GANUCCI CANCELLIERI, Uberta and CSIKSZENTMIHALYI, Mihaly. *Optimal Experience and Personal Growth: Flow and the Consolidation of Place Identity* [online]. ©2023 Frontiers Media S.A. [Accessed 10 September 2023]. Available from: <https://doi.org/10.3389/fpsyg.2016.01654>

BOYLE, Elizabeth A.; CONNOLLY, Thomas M.; HAINEY, Thomas and BOYLE, James M., 2012. *Engagement in digital entertainment games: A systematic review*. [online]. ©2023 Elsevier Ltd. Computers in Human Behavior, vol. 28, iss. 3, p. 771-780. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1016/j.chb.2011.11.020>

BRYMER, Eric and SCHWEITZER, Robert, 2013. *The search for freedom in extreme sports: A phenomenological exploration*. [online]. ©2023 Elsevier Ltd. Psychology of Sport and Exercise, vol. 14, iss. 6, p. 865-873. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1016/j.psychsport.2013.07.004>

CHAMBERS, Kristine L. and VICKERS, Joan N., 2006. *Effects of Bandwidth Feedback and Questioning on the Performance of Competitive Swimmers*. [online]. ©2023 Human Kinetics. The Sport Psychologist, vol. 20, iss. 2, p. 184-197. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1123/tsp.20.2.184>

CHOI, Duke Hyun; KIM, Jeoungkun and KIM, Soung Hie, 2007. *ERP training with a web-based electronic learning system: The flow theory perspective*. [online]. ©2023 Elsevier Ltd. International Journal of Human-Computer Studies, vol. 65, iss. 3, p. 223-243. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1016/j.ijhcs.2006.10.002>

COLLER, B. D., 2009. *Teaching Dynamic Systems and Control with a Video Game to Mechanical Engineering Undergraduates: A Proposal to the Course, Curriculum and Laboratory Improvement Program of the National Science Foundation*. [online]. ©2023 Informit. Engineering the Curriculum. [Accessed 20 April 2023]. Available from: <https://search.informit.org/doi/10.3316/informit.905663809744160>

COWAN, Nelson, 2010. *The Magical Mystery Four: How Is Working Memory Capacity Limited, and Why?*. [online]. ©2023 Association for Psychological Science. Journal indexing and metrics, vol. 19, iss. 1, p. 51-57. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1177/0963721409359277>

DELLE FAVE, Antonella; BASSI, Marta and MASSIMINI, Fausto, 2002. *Quality of experience and daily social context of Italian adolescents*. [online]. In Comunian, A. L. and Gielen, U. P. (eds.). *It's All About Relationships*, p. 159–172. Lengerich: Pabst Science Publishers. [Accessed 10 September 2023]. Available from: <https://hdl.handle.net/2434/313756>

DEMETRIOU, Constantina; OZER, Bilge Uzun and ESSAU, Cecilia A., *Self-Report Questionnaires*. In CAUTIN, Robin L.; LILIENFELD, Scott O., *The Encyclopedia of Clinical Psychology* [online]. ©2015 John Wiley and Sons, Inc. [Accessed 10 September 2023]. DOI: 10.1002/9781118625392.wbecp507 Available from: https://www.researchgate.net/publication/313966621_Self-Report_Questionnaires

EPSTEIN, Michael L.; LAZARUS, Amber D.; CALVANO, Tammy B.; MATTHEWS, Kelly A.; HENDEL, Rachel A.; EPSTEIN, Beth B. and BROSVIC, Gary M., 2002. *Immediate Feedback Assessment Technique Promotes Learning and Corrects Inaccurate first Responses*. [online]. ©2023 Springer Nature. The Psychological Record, vol. 52, p. 187-201. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1007/BF03395423>

GARDNER, Howard, 2011. *Frames of Mind: The Theory of Multiple Intelligences*. [online]. ©2023 National Association for Gifted Children, vol. 29, iss. 2. New York: Basic Books. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1177/001698628502900212>

- GRAY, Peter and FELDMAN, Jay, 2004. *Playing in the Zone of Proximal Development: Qualities of Self-Directed Age-Mixing between Adolescents and Young Children at a Democratic School*. [online]. American Journal of Education vol. 110, iss. 2, p. 108–143. [Accessed 10 September 2023]. Available from: <https://www.journals.uchicago.edu/doi/epdf/10.1086/380572>
- GUO, Zixiu; XIAO, Lin; VAN TOORN, Christine; LAI, Yihong and SEO, Chanyoung, 2016. *Promoting online learners' continuance intention: An integrated flow framework*. [online]. ©2023 Elsevier Ltd. Information and Management, vol. 53, iss. 2, p. 279-295. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1016/j.im.2015.10.010>
- HSU, Chia-Lin; CHANG, Kuo-Chien and CHEN, Mu-Chen, 2012. *Flow experience and internet shopping behavior: Investigating the moderating effect of consumer characteristics*. [online]. ©1999-2023 John Wiley and Sons, Inc. Systems Research and Behavioral Science, vol. 29, iss. 3, p. 317-332. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1002/sres.1101>
- HEUTTE, Jean; FENOUILLET, Fabien; BONIWELL, Ilona; MARTIN-KRUMM, Charles and CSIKSZENTMIHALYI Mihaly. *EduFlow: Proposal for a new measure of flow in education* [online]. ©2014 ResearchGate [Accessed 20 August 2023]. Available from: https://www.researchgate.net/publication/259592370_EduFlow_Proposal_for_a_new_measure_of_flow_in_education
- HUNTER, Jeremy and CSIKSZENTMIHALYI, Mihaly, 2000. *The Phenomenology of Body-Mind: The Contrasting Cases of Flow in Sports and Contemplation*. [online]. ©2023 American Anthropological Association. Anthropology of Consciousness, vol. 11, iss. 3-4, p. 5-24. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1525/ac.2000.11.3-4.5>
- JACKSON, Susan A., 1995. *Factors influencing the occurrence of flow state in elite athletes*. [online]. ©2023 Informa UK Limited. Journal of Applied Sport Psychology, vol. 7, iss. 2, p. 138-166. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1080/10413209508406962>
- JACKSON, Susan A.; MARTIN, Andrew J. and EKLUND, Robert C., 2008. *Long and Short Measures of Flow: The Construct Validity of the FSS-2, DFS-2, and New Brief Counterparts*. [online]. ©2023 Human Kinetics. Journal of Sport and Exercise Psychology, vol. 30, iss. 5, p. 561-587. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1123/jsep.30.5.561>

JACKSON, Susan A., 1996. *Toward a Conceptual Understanding of the Flow Experience in Elite Athletes*. [online]. ©2023 Informa UK Limited. Research Quarterly for Exercise and Sport, vol. 67, iss. 1, p. 76-90. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1080/02701367.1996.10607928>

KEE, Ying Hwa and WANG, John C. K., 2008. *Relationships between mindfulness, flow dispositions and mental skills adoption: A cluster analytic approach*. [online]. ©2023 Elsevier Inc. Psychology of Sport and Exercise, vol. 9, iss. 4, p. 393-411. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1016/j.psychsport.2007.07.001>

KELLER, Johannes and BLOMANN, Frederik, 2008. *Locus of control and the flow experience: An experimental analysis*. [online]. ©2023 European Association of Personality Psychology. European Journal of Personality, vol. 22, iss. 7, p. 589–607. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1002/per.69>

KLUGER, Avraham N. and DENISI, Angelo, 1996. *The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory*. [online]. ©2023 American Psychological Association. Psychological bulletin, vol. 119, iss. 2, 254-284. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1037/0033-2909.119.2.254>

LEOTTI, Lauren A.; IYENGAR, Sheena S. and OCHSNER, Kevin N., 2010. *Born to choose: The origins and value of the need for control*. [online]. ©2023 Elsevier Inc. Trends in Cognitive Sciences, vol. 14, iss. 10, p. 457–463. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1016/j.tics.2010.08.001>

LOGAN, Richard D., 1985. *The “Flow Experience” in Solitary Ordeals*. [online]. ©2023 SAGE Publications. Journal of Humanistic Psychology, vol. 25, iss. 4, p. 79–89. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1177/0022167885254010>

LONCZAK, Heather. *How to Measure Flow with Scales and Questionnaires* [online]. ©2023 PositivePsychology [Accessed 10 September 2023]. Available from: https://positivepsychology.com/how-to-measure-flow-scales-questionnaires/#google_vignette

MEYER, Debra K., 1993. *What is scaffolded instruction? Definitions, distinguishing features, and misnomers*. In LEU, J. D. and KINZER, K. C. (Eds.), *Examining central issues in literacy research, theory, and practice* (Forty-second yearbook of the National Reading Conference, pp. 41-53).

[online]. ©2023 American Psychological Association. Chicago: National Reading Conference [Accessed 10 September 2023]. Available from: <https://psycnet.apa.org/record/1995-15180-001>

MICHELS, Logan, 2015. *The Relationship Between Achievement Goals and Psychological Flow*. [online]. Journal Student Research, 174-190. [Accessed 10 September 2023]. Available from: <https://minds.wisconsin.edu/bitstream/handle/1793/77545/Achievment%20Goals%20and%20Psychoogical%20Flow.pdf?sequence=1&isAllowed=y>

MILLER, George A., 1956. *The magical number seven, plus or minus two: some limits on our capacity for processing information*. [online]. ©2023 American Psychological Association. Psychological review, vol. 63, iss. 2, p. 81-97. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1037/h0043158>

MONETA, Giovanni B., 2004. *The flow experience across cultures*. [online]. ©2023 American Psychological Association. Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being, vol. 5, iss. 2, p. 115-121. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1023/B:JOHS.0000035913.65762.b5>

MONETA, Giovanni B., 2004. *The Flow Model of Intrinsic Motivation in Chinese: Cultural and Personal Moderators*. [online]. © Springer Nature. Journal of Happiness Studies, vol. 5, p. 181-217. [Accessed 10 September 2023]. Available from: <https://doi.org/10.1023/B:JOHS.0000035916.27782.e4>

NASH, Jo. *6 Flow Activities & Training: How to Achieve a Flow State*. [online]. ©2023 PositivePsychology. [Accessed 10 September 2023]. Available from: <https://positivepsychology.com/flow-activities/#flow-activities-how-to-get-into-a-flow-state>

Oxford English Dictionaries. [online]. ©2023 Oxford University Press [Accessed 20 April 2023]. Available from: <https://www.oxfordlearnersdictionaries.com/>

PILKE, Eeva M., 2004. *Flow experiences in information technology use*. [online]. ©2023 Elsevier Ltd. International Journal of Human-Computer Studies, vol. 61, iss. 3, p. 347-357. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1016/j.ijhcs.2004.01.004>

PROCCI, Katelyn; SINGER, Allysa R.; LEVY, Katherine R. and BOWERS, Clint, 2012. *Measuring the flow experience of gamers: An evaluation of the DFS-2*. [online]. ©2023 Elsevier

Ltd. *Computers in Human Behavior*, vol. 28, iss. 6, p. 2306-2312. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1016/j.chb.2012.06.039>

SCHWEINLE, Amy; MEYER, Debra. K. and TURNER, Jullianne C., 2006. *Striking the Right Balance: Students' Motivation and Affect in Elementary Mathematics*. [online]. ©2023 Informa UK Limited. *The Journal of Educational Research*, vol. 99, p. 271–294. [Accessed 20 April 2023]. Available from: <https://doi.org/10.3200/JOER.99.5.271-294>

SCORESBY, Jon and SHELTON, Brett E., 2010. *Visual perspectives within educational computer games: Effects on presence and flow within virtual learning environments*. [online]. ©2023 Springer Nature. *Instructional Science*, vol. 39, iss. 3, p. 227-254. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1007/s11251-010-9126-5>

SHERNOFF, David. J.; CSIKSZENTMIHALYI, Mihaly; SCHNEIDER, Barbara and SHERNOFF, Elisa Steele, 2003. *Student Engagement in High School Classrooms from the Perspective of Flow Theory*. [online]. *School Psychology Quarterly* vol. 18, p. 158–176. [Accessed 20 April 2023]. Available from:

<https://static1.squarespace.com/static/57309137ab48de6f423b3eec/t/623df2bd74b0626675dfa6cc/1648227005337/Shernoff+et+al+2003+on+flow.pdf>

SHERRY, John L., 2004. *Flow and media enjoyment*. [online]. *Communication Theory*, vol. 14, p. 328–347. [Accessed 20 April 2023]. Available from: https://www.academia.edu/1410658/Flow_and_media_enjoyment

TALBOT, Janet, Frey and KAPLAN, Stephen, 1986. *Perspectives on wilderness: Re-examining the value of extended wilderness experiences*. [online]. ©2023 Elsevier Ltd. *Journal of environmental psychology*, vol. 6, iss. 3, p. 177-188. [Accessed 20 April 2023]. Available from: [https://doi.org/10.1016/S0272-4944\(86\)80021-4](https://doi.org/10.1016/S0272-4944(86)80021-4)

THATCHER, Andrew; WRETSCHKO, Gisela and FRIDJHON, Peter, 2008. *Online flow experiences, problematic internet use and internet procrastination*. [online]. ©2023 Elsevier Ltd. *Computers in Human Behavior*, vol. 24, p. 2236–2254. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1016/j.chb.2007.10.008>

The Kellner Family Foundation, *Pomáháme školám k úspěchu* [online]. ©2023 THE KELLNER FAMILY FOUNDATION [Accessed 10 September 2023]. Available from: <https://www.kellnerfoundation.cz/en/helping-schools-succeed>

SCHMIDT, Jennifer A., 2010. *Flow in Education*. [online]. ©2010 Elsevier Ltd. Northern Illinois University, DeKalb, IL, USA [Accessed 20 April 2023]. Available from: https://edwp.educ.msu.edu/research/wp-content/uploads/sites/10/2020/06/CHALLENGE_FlowEducation.pdf

The quadrant model of flow. Challenge and skill scores represent within-person z-scores. [online]. ©2008-2023 ResearchGate GmbH. [Accessed 20 April 2023]. Available from: https://www.researchgate.net/figure/The-quadrant-model-of-flow-Challenge-and-skill-scores-represent-within-person-z-scores_fig1_339236395

TURNER, Julianne C., MEYER, Debra K., COX, Kathleen E., et al., 1998. *Creating Contexts for Involvement in Mathematics*. [online]. ©2008-2023 ResearchGate GmbH. Journal of Educational Psychology, vol. 90, iss. 4, p. 730–745. [Accessed 20 April 2023]. DOI: 10.1037/0022-0663.90.4.730. Available from: https://www.researchgate.net/publication/232541474_Creating_Contexts_for_Involvement_in_Mathematics

VOISKOUNSKY, Alexander E., 2010. *Internet Addiction in the Context of Positive Psychology*. [online]. Moscow: Psychology in Russia: State of the Art, vol. 35, p. 541–549. [Accessed 20 September 2023]. Available from: https://psychologyinrussia.com/volumes/pdf/2010/26_2010_voiskounsky.pdf

WHALEN, Samuel P. and CSIKSZENTMIHALYI, Mihaly, 1991. *Putting Flow Theory into Educational Practice: The Key School's Flow Activities Room. Report to the Benton Center for Curriculum and Instruction*. [online]. Chicago, IL: University of Chicago. [Accessed 20 April 2023]. Available from: <https://eric.ed.gov/?id=ED338381>

WILCOX, Keith and STEPHEN, Andrew T., 2013. *Are Close Friends the Enemy? Online Social Networks, Self-Esteem, and Self-Control*. [online]. ©2023 Journal of Consumer Research Inc., vol. 40, iss. 1, p. 90-103. [Accessed 20 April 2023]. Available from: <https://doi.org/10.1086/668794>

ZATON, Krystyna and SZCZEPAN, Stefan., 2014. *The Impact of Immediate Verbal Feedback on the Improvement of Swimming Technique*. [online]. Journal of Human Kinetics, vol. 41, iss. 1, p.

143-154. [Accessed 20 September 2023]. DOI: 10.2478/hukin-2014-0042. Available from:
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4120447/>

Appendix 1: The Opening Questionnaire

DOTAZNÍK

Cíle: Zjistit, jak žáci přistupují k výuce angličtiny, jejich možnosti, schopnosti a potřeby, aby jim výuka co nejvíce vyhovovala, bavila je a zároveň byla co nejvíce efektivní.

Správnou odpověď označ takto:

Zájmy:

1. **Co rád(a) děláš mimo školu? Jaké máš zájmy?** (Vyber max. 3 možnosti nebo napiš co tě baví do kolonky „jiné“)

- Čtu (knihy, časopisy, články, atd.)
- Hraji hry na počítači
- Hraji kolektivní sporty (volejbal, fotbal, basketbal, skupinový tanec, atd.)
- Děláním individuálních sportů (tenis, šachy, tanec, bojové umění, golf, atletika, gymnastika, atd.)
- Hraji na hudební nástroj(e), poslouchám hudbu
- Sleduji televizi (seriály, filmy)
- Turistika
- Cestování
- Jiné

2. **Jaký je tvůj nejoblíbenější předmět ve škole?**

.....

3. **Chtěl(a) bys, aby se informace z tvého oblíbeného předmětu objevily i v hodinách AJ?**

ANO

NE

4. **Jaká témata bys rád(a) v hodinách AJ probíral(a)?** (Vyber, max. 3, popřípadě doplň vlastní nápad)

- Filmy
- Hudba
- Knížky
- PC hry
- Módu (např. oblečení)
- Celebrity

- Cestování
- Jiné

5. Jsi rád(a), když se tě témata v hodinách angličtiny týkají osobně? Např. mluvit o svých zájmech, zážitcích, o tématech tobě blízkých, o své rodině, atd...

- ANO NE

6. Učí se ti jazyk lépe, když se téma týká tebe nebo tvých zájmů?

- ANO NE

7. Máš rád(a) soutěživé aktivity? (Takové, kde někdo – skupina nebo jednotlivec – vyhrává/prohrává)

- ANO NE

8. Jaké aktivity v hodinách AJ preferuješ? (Vyber max. 3 možnosti, popř. dopiš vlastní)

- Hry
- Skupinové práce
- Čtení článků
- Aktivity mimo lavici (na koberci, u tabule, chodit po třídě, protáhnout se, atd.)
- Práce s interaktivní tabulí
- Tvořivé/kreativní práce (kdy si můžeš něco vyrobit, uplatnit vlastní nápady, atd.)
- Projekty (dílčí úkoly na delší časový úsek)
- Autentické materiály (využití takových materiálů, na které narazíme v běžném životě, např. reklamní nápisy, písničky, návody na použití, nápisy na oblečení, atd.)
- Jiné

9. Používáš radši učebnici, pracovní sešit nebo jiné materiály (např. pracovní listy), které nabídne vyučující? (Do každého čtverečku vepiš číslo 1-3 podle toho, co používáš raději; 1 – používám nejradši, 3 – nepoužívám moc rád(a))

- učebnici pracovní sešit jiné materiály

10. Které z těchto dovedností děláš v hodině AJ nejradši? (Do každého čtverečku vepiš číslo 1-4 podle toho, co děláš nejradši; 1 – dělám nejradši, 4 – nedělám moc rád(a))

- čtení psaní poslech mluvení

11. Co procvičuješ v hodinách AJ radši? (Do každého čtverečku vepiš číslo 1-3 podle toho, co procvičuješ nejradši; 1 – dělám nejradši, 3 – nedělám moc rád(a))

gramatiku (pravopis)

výslovnost slovíček

pravopis slovíček

Přístup učitele:

12. Jaké vlastnosti by měl mít ideální učitel? (Napiš 3 pro tebe nejdůležitější)

.....

Vyučování:

13. Vyhovovalo by ti, kdyby na jeden předmět byla vyhrazena delší doba, např. dvě spojené hodiny nebo během jednoho vyučovacího dne mít jen češtinu a angličtinu?

ANO

NE

Appendix 2: Classroom schema

Activities:

1.
2.
3.
4.
5.
6.

Explanation:

- + positive feedback, learners enjoy the activity, they are active
- negative feedback, learners are bored and express negative emotions

TEACHER

+ -

+ -

+ -

+	-
---	---

+	-
---	---

+	-
---	---

+	-
---	---

+	-
---	---

+	-
---	---

+	-
---	---

+	-
---	---

+	-
---	---

+	-
---	---

+	-
---	---

+	-
---	---

Appendix 3: The Final Questionnaire

DOTAZNÍK FLOW

Prosím vyplňte ihned po skončení hodiny. Informace a Vaše pocity se vztahují pouze k této právě proběhlé hodině. Neexistuje správná ani špatná odpověď a Vaše odpovědi žádným způsobem neovlivní Vaše školní hodnocení, proto prosím o maximální upřímnost. Tyto dotazníky slouží pouze jako podklad pro mou diplomovou práci. Děkuji za spolupráci a pochopení.

Prosím zaznačte dle vzoru tu odpověď, která nejvíce vystihuje to, jak jste se během vyučování cítili. Vzor:

	Položka	Naprostou souhlasím	Spíše souhlasím	Nevím	Spíše nesouhlasím	Naprostou nesouhlasím
1.	Úkoly byly nastavené tak, abych se naučil(a) nové věci, ale abych je zároveň byl(a) schopna zvládnout.					
2.	Cítil(a) jsem se, že jsem schopna zvládnout všechny úkoly.					
3.	Byl(a) jsem ráda, že můžu během hodiny použít to, co umím.					
4.	Když jsem začal(a) plnit úkol, věděl(a) jsem, jakých cílů mám dosáhnout.					
5.	U každého úkolu jsem věděl(a), co mám dělat.					
6.	Během aktivit/úkolů jsem průběžně věděl(a), jak si vedu, kolik činností mě ještě čeká, než budu mít hotovo a jestli mé odpovědi jsou správné.					
7.	Když jsem si s něčím nevěděl(a) rady, věděl(a) jsem, kde najdu pomoc.					
8.	Moje pozornost byla zaměřena pouze na zadaný úkol.					
9.	Byl(a) jsem do činnosti tak ponořen(a), že jsem nevnímal(a) sam(a) sebe.					
10.	Během činnosti jsem nemyslel(a) na jiné věci než jen na úkol (např. co jsem dělal(a) včera, co budu dělat po škole, že mám hlad/žízeň, že potřebuji jít na záchod, atd.)					
11.	Nepřišlo mi důležité, co si ostatní myslí o tom, co říkám a dělám.					
12.	Cítil(a) jsem, že mám plnění úkolu pod kontrolou.					
13.	Přišlo mi, že čas utekl moc rychle.					

14.	Činnost jsem prováděl(a) automaticky.					
15.	Úkoly jsem si užíval(a).					
16.	Když vzpomenu na ty úkoly a aktivity, chtěl(a) bych tyto zážitky sdílet a vyprávět o nich.					

17. Cítil(a) ses během hodiny nejmíc: (zakroužkuj):

znuděná/ znuděný ve stresu v pohodě ve strachu v napětí

18. Napiš 5 nových slovíček (v angličtině), která ses během hodiny naučil:

.....

19. Napiš 2 věty (v angličtině) týkající se tvého tématu/oblíbené postavy:

.....

.....

20. Zhodnot' jednou větou hodinu. Např. co se ti líbilo/nelíbilo, co bylo jinak a co na to říkáš atd.

.....

.....

Anotace

Jméno a příjmení:	Bc. Radka Burdřáková
Katedra:	Ústav cizích jazyků
Vedoucí práce:	doc. PhDr. Václav Řeřicha, CSc.
Rok obhajoby:	2024
Název práce:	Flow ve vzdělávání: Podmínky Flow v tradičním českém školním prostředí
Název v angličtině:	Flow in Education: The Conditions of Flow in the Traditional Czech School Environment
Anotace práce:	<p>Tato diplomová práce se zaměřuje na flow ve vzdělávání, konkrétně v tradičním českém školním prostředí. Teoretická část se zabývá podmínkami pro flow, jejich vlivem na žáky, podmínkami a možnostmi tradiční české školy. Praktická část porovnává dvě rovnocenné třídy během vyučovací hodiny na druhém stupni základní školy - jedna hodina je vyučována pomocí aplikace podmínek pro flow a druhá bude vyučována tradičně. Výzkum poskytuje informace o tom, která skupina se bude učit efektivněji a s větší radostí, a jak podmínky pro flow vnímali žáci. Tato studie si také klade za cíl shromáždit hlavní body, které mohou vést ke stavu flow ve vzdělávání.</p>
Klíčová slova:	Flow, pozitivní psychologie, podmínky flow, flow ve vzdělávání

<p>Anotace v angličtině:</p>	<p>The thesis deals with the flow in education, specifically in the environment of a traditional Czech school. The theoretical part deals with the conditions of flow and their influence on the students and the conditions and possibilities of the traditional Czech school environment. The practical part compares two equivalent classes at the lower secondary school - one will be taught with the application of flow conditions and the other will be taught traditionally. The research will provide information about which group learned more effectively and with more enjoyment and how the applied flow conditions were perceived by the students. The study also aims to summarize the main points that can lead to flow in education.</p>
<p>Klíčová slova v angličtině:</p>	<p>flow, positive psychology, conditions of flow, flow in education</p>
<p>Přílohy vázané v práci:</p>	<p>3</p>
<p>Rozsah práce:</p>	<p>93</p>
<p>Jazyk práce:</p>	<p>Angličtina</p>