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**PROJEKT JAKOŽTO REALIZACE  
INTERDISCIPLINARITY VE VÝUCE: POHLEDEM  
UČITELŮ ANGLICKÉHO JAZYKA A VYBRANÝCH  
ŠKOLNÍCH VZDĚLÁVACÍCH PROGRAMŮ**

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**Thesis**

**PROJECT AS INTERDISCIPLINARY  
EDUCATION REALISATION: EFL TEACHERS'  
PERSPECTIVE AND CONCRETE SCHOOL  
EDUCATIONAL PROGRAMMES IN FOCUS**

**Bc. Kristýna Šimková**

**Plzeň 2023**

Prohlašuji, že jsem práci vypracoval/a samostatně s použitím uvedené literatury a zdrojů informací.

*V Plzni 29. června 2023*

.....  
Kristýna Šimková

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## ABSTRACT

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This thesis deals with the topic of interdisciplinary approach and its realisation in education through projects. Interdisciplinarity allows to combine approaches and methods of multiple disciplines and enables to create new outcomes, therefore, its application in education can be beneficial. The theoretical background of this thesis introduces the topic of interdisciplinarity, and since the main focus is on the project method, it is then explored in detail – its history, principles, benefits and limitations, and its connection to interdisciplinarity. The occurrence of projects and interdisciplinarity at the national level of Czech curricular documents is also included to provide context for the practical part. The second part of the thesis describes the research focused on the occurrence of projects as samples of interdisciplinarity in the curricular documents of the school level (School Educational Programmes) and on realisation of such projects regarding English language teachers' perspective. The research was conducted through the analysis of selected School Educational Programmes and a questionnaire survey, which explored the teachers' perspective. The results showed that projects occur in the documents quite frequently, but their interdisciplinarity could not be fully assessed based on the data provided. However, some of the occurrences showed markers of interdisciplinarity, and the responses also indicated that some of the projects realised in English language classes are interdisciplinary, according to the teachers.

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## I. INTRODUCTION

This thesis explores the topic of projects in education as samples of an interdisciplinary approach. The topic of interdisciplinarity is a complex issue, as it tries to bridge the divide between disciplines through their cooperation and complex approach to the issues. On the other hand traditional school education is usually based on a strict division of knowledge into individual fields (in this case, school subjects) and its isolated presentation within the subjects. Interdisciplinarity offers an alternative approach to this issue and can be implemented in education in several ways. One such implementation is represented by project teaching, which, as a notion, tends to be regarded as a relatively well-known method and therefore was selected to be the main focus of this thesis.

At school, teachers may encounter many interdisciplinary topics that do not fit into their subject specialization since real life does not follow the division of school subjects. The author, as a future teacher of two very different subjects, perceives this issue strongly and therefore has decided to focus on this topic. The project method offers a solution to this issue. However, it is a complex method, and although it has many benefits, there are also some limitations. For successful implementation, it is essential to understand the method properly – including its interdisciplinary dimension. The theoretical background of this thesis provides a description of a proper project and an overview of all the steps of this method.

To see what the current situation of project teaching is and to explore its concrete realisation possibilities and challenges, two research questions were formulated. The first one seeks to answer to what extent do projects occur in concrete curricular documents of selected schools – the School Educational Programmes (SEPs) – as samples of interdisciplinarity in education. To further specify the explored topic of the present thesis, a sub-question focusing on English language teaching in selected Czech schools was created. The second research question asks to what extent are the projects realised in English lessons interdisciplinary regarding the teachers' perspective.

The theoretical part of this thesis first introduces the topic of interdisciplinarity in general. At the beginning of this work, the issue of terminology in Czech and English context is discussed, and then the wider context of interdisciplinary approach in education is outlined. Projects, as samples of interdisciplinarity, are then presented in detail. The history of this method is briefly summarised since the project teaching has been used for

some time already. To address any possible misconceptions, the next part discusses the question of what a proper project is and provides a definition of the notion. An overview of the main benefits and limitations of project teaching is also included. Lastly, the topic of projects and interdisciplinarity in the context of the Czech curricular document at the national level corresponding to the selected level of education is presented to provide context for the practical part of this thesis.

The practical part of this thesis aims to answer the research questions. The research is divided into two parts. The first one is the content analysis of several School Educational Programmes of selected lower secondary schools in Pilsen, which has been selected as an appropriate method to evaluate the occurrence of projects in the school curriculum. To compare the occurrence in official documentation with the reality at schools, the second part of the research attempted to view the issue from the teachers' perspective. This part of the research consists of an analysis of the answers provided by teachers from the selected schools through an anonymous questionnaire survey. The description of selected tools and the methods of this research are described in detail in the Methods chapter. The results of the analyses are then presented in the chapter Results and Commentaries, where a detailed commentary is provided alongside the answers to the research questions. The last chapter discusses the possible implementations of this research for teachers, describes the limitations of this research, and suggests possible improvements and expansion of this work.

## II. THEORETICAL BACKGROUND

This chapter will briefly introduce the topic of interdisciplinarity. The issue of terminology will be discussed, as well as several interpretations of interdisciplinarity. Then, the context of its use in education will be explored through the introduction of several methods which use the interdisciplinary approach. Further, projects as sample formats of interdisciplinarity in education will be introduced. The history of the project method will be covered, as well as the definition of projects, their principles, the process of planning, and their benefits and limitations. Finally, the occurrence of projects and interdisciplinarity in the Czech curricular documents will be presented.

### **The Issue of Terminology**

The term interdisciplinarity is defined in the *Cambridge dictionary* (2023) as follows: “the fact of involving two or more different subjects or areas of knowledge.” Within the area of teaching, the term interdisciplinarity has not yet been clearly defined, or to be more specific, the definition is still evolving and, therefore, can be understood in more than one way. Various points of view will be introduced first, and then the topic of the interdisciplinary approach in teaching will be explored further to provide context for this thesis.

Interdisciplinarity is often considered a synonym to inter-subject relationships (*mezipředmětové vztahy* in Czech). Hudecová (2010) suggests that the newly used term interdisciplinary relations replaced the previously used term inter-subject relations, as it has become insufficient to describe the multi-layered nature of the subject. She also warns about the issue of unclear terminology and raises the question of what is meant by a discipline – whether the scientific field or the school subject. This question further leads to the question of the relationship between the scientific field and the school subject. She points out that unifying the terminology would help the development of this topic. Klinka (2021) supports this by mentioning the importance of the term interdisciplinarity in current education, as well as its history and recent more frequent occurrence. He also observes that a clear definition is still missing, and this term usually cannot be found in methodology dictionaries or academic publications.

One of the exceptions is Průcha et al. (2003), who include the term interdisciplinary approach in their dictionary of pedagogical terms. Their definition differentiates between the scientific and the educational approach to this term. For use in scientific work, it is

defined as a method of clarification that combines the knowledge and methods of several scientific disciplines, while in education, the definition is as follows: a didactic approach promoting inter-subject relationships in teaching, assigning special tasks forcing pupils to integrate knowledge from different subjects, team teaching, creation of so-called integrated teaching subjects, creation of integrated textbooks, and others. Klinka (2021) used this definition in his work and highlighted the importance of differentiating between the two approaches since these two definitions will complete as well as contradict each other when dealing with the topic of interdisciplinary approach in education.

Novák (2019) also works with the term interdisciplinarity in his article. He mentions that it is often used as a synonym to inter-subject relations in the area of education, but it can also be used in the context of science. This view corresponds with other authors mentioned above and explains why interdisciplinarity and inter-subject relations are not always the same. Novák defines interdisciplinarity for his work in a communicative way since he views it as a way of communication in the educational process, during which the knowledge from various subjects is used in the process of learning to see the connections, principles, and relationships between individual pieces of information, which complete each other and provide context for each other. It is not only a way of communicating, learning, or teaching but also a way of thinking.

The selected authors mostly agree on the main issues: a clear definition of interdisciplinary approach in education is still missing, especially in the Czech context, and the terms interdisciplinarity and inter-subject relations are not the same but mostly overlap. There is an increase in the use of the terms interdisciplinary and interdisciplinarity; therefore, unified terminology and definitions would be helpful for further research and development. In this thesis, the term interdisciplinarity will be used over the term inter-subject relations, although some of the used resources might still be using it. The definitions provided by Průcha et al. (2003) and Novák (2019) are sufficient for the purpose of this work. Therefore, interdisciplinarity will be viewed as an approach to teaching which includes integrated knowledge and methods from more than one subject when dealing with a certain topic or issue.

Texts that address the topic of interdisciplinarity often mention other related terms, such as pluridisciplinary and transdisciplinary. Klinka (2021) describes the pluridisciplinary (or multidisciplinary) approach as approaching the topic or issue from the point of view of multiple disciplines but without any cooperation among the individual

disciplines or synthesis of the results. This is the main difference from the interdisciplinary approach, which is defined by the cooperation of disciplines. The term transdisciplinary is described by Klinka (2021, p. 15) as not clearly defined and several definitions are introduced. Jacobs (1989, p. 8) used the definition provided by Meeth (1978): “Beyond the scope of the disciplines; that is, to start with a problem and bring to bear knowledge from the disciplines.” Compared to interdisciplinarity, the transdisciplinary approach includes a higher level of cooperation among the disciplines, reaching beyond the definition of individual subjects or disciplines. Klinka (2021) suggests that in practice, the interdisciplinary approach might include all of the above definitions since the terms pluridisciplinary, interdisciplinary, and transdisciplinary differ mostly by the extent of cooperation. He also emphasizes that the cooperation should be intentional and bring new findings to be considered interdisciplinary.

### **Interdisciplinary Approach in Education**

Although the term is relatively new, we can find an interdisciplinary approach within some already established methods and approaches in education. Klinka (2021) provided the following examples: integrated curriculum, cross-curricular subjects, project teaching, CLIL (Content and Language Integrated Learning), and authenticity. Each of these terms will be briefly introduced alongside its connection to interdisciplinarity.

The integrated curriculum is often presented as a solution to the growing amount of knowledge taught in school, it goes beyond the traditional subject areas and can lead to the creation of integrated subjects. Jacobs (1989) adds that it does not have to be either traditional disciplines or interdisciplinary integrated subjects, but that a continuum of options can be used to design the curriculum. The possibilities range from discipline-based content design to a complete integrated program. Options such as interdisciplinary units/courses and an integrated day are included alongside each design option's characteristics, advantages, and disadvantages.

Cross-curricular subjects are undoubtedly connected to interdisciplinarity. Although these topics can be taught as individual subjects (for example, Environmental Education in some schools), they are usually taught in multiple subjects or covered through a project. The Czech curriculum includes several cross-curricular subjects – they are described as topics that cut across the educational areas and allow a connection of the disciplines

(Ministerstvo školství, mládeže a tělovýchovy [MŠMT], 2021). This topic will be discussed in more detail in the next section of this thesis.

Project teaching could not fully work without an interdisciplinary approach. This method is based on approaching the topic from multiple points of view and allows to combine information from various sources and areas, which is an important skill at the present time. It also helps students to understand the context better and bridges the gap between individual school subjects (Dvořáková, 2009).

Another method using an interdisciplinary approach is CLIL. This method integrates two subjects – a certain school subject (for example, History or Information and Communication Technologies) and a foreign language, which is used as a medium for teaching the selected subject. Students practice the foreign language in naturally occurring situations and might be more motivated to use the foreign language while also gaining new knowledge in the taught subject (Baladová & Sladkovská, 2009).

The last term mentioned by Klinka (2021) is authenticity, in the sense of an authentic environment or authentic materials. The provided interdisciplinary examples were related to foreign language teaching, for example, using original texts, teaching the geography, history and culture of the countries using the foreign language, or using various approaches and methods that support different styles and strategies of learning.

All of the above-mentioned methods are by their nature connected to interdisciplinarity and can help bring this approach to schools. This is only a basic overview, there are other methods that have not been mentioned, for example, team teaching or tandem teaching. This method combines the knowledge and approaches of multiple teachers, who often teach different subjects. Therefore this form of cooperation also could be considered interdisciplinary.

There are many reasons for using the interdisciplinary approach since it can have many advantages, but there are also some limitations and obstacles. Klinka (2021) mentions, for example, the division into individual subjects at lower secondary schools and teachers being experts only in several subjects that they studied and are teaching, both of these are limitations for the interdisciplinary approach. The school subjects are also often not equal, some are considered more important than others, for example, in the context of entrance exams and future studies. This interferes with one of the requirements of interdisciplinarity – complete equality between the subjects or disciplines. Another

important part is to choose suitable topics which are going to be viewed from the points of view of multiple disciplines while interconnecting the gained knowledge. Probably the most important part for teachers is to realise that the interdisciplinary approach focuses mainly on students' learning. Therefore, students should be active, while the teachers need to abandon their leading role and become guides or advisors. Teachers also need to accept a certain level of uncertainty concerning their knowledge of the selected interdisciplinary topics, which might occur due to their specific subject specialization.

Jacobs (1989) provides an overview of beliefs and assumptions which should be kept in mind while creating an interdisciplinary curriculum or other interdisciplinary projects. It could be useful to remember these points when discussing the interdisciplinary approach and its advantages, disadvantages, and possible limitations. According to Jacobs, it is important that students experience both a discipline-oriented and an interdisciplinary approach to truly benefit from bridging the disciplines. Teachers should be active creators of the interdisciplinary curriculum; they need to create a structure, define the scope, and choose an appropriate level of integration in order to avoid the issue of the superficial combination of information from each discipline. Another important point is to use the interdisciplinary approach only when the topic or issue requires a combination of knowledge from various disciplines. Therefore, students can benefit from a more unified and stimulating experience. Finally, it is suggested that the process of creating an interdisciplinary unit or project should be transparent and introduced to the school community since the interdisciplinary approach is not known very well. It is also recommended that the students are included in the process of creating the interdisciplinary units.

To sum up, the interdisciplinary approach in education may occur in many forms. Examples of some of the methods or approaches were already provided in this thesis as well as their connection to interdisciplinarity. This connection is, in some cases, more evident than in others. The term interdisciplinary is not always used in the descriptions of the methods, that is why it is important to know the definition of the term and to be able to search for the signs of interdisciplinarity.

### **Interdisciplinary Approach in the Czech Curriculum**

There are two levels of curricular documents in the Czech Republic – the national level and the school level. The national level consists of Framework Educational



Programmes (FEPs), which provide educational norms for various levels of Czech education, starting from pre-school up to secondary education. The FEP is based on the current educational strategies, it focuses on key competencies and their connection to educational contents and real life, it supports life-long learning, and it also grants a certain level of autonomy to individual schools and teachers. The FEP also provides a description of the expected level of education that should be reached by all students upon the completion of certain parts of the education. The school level includes School Educational Programmes (SEPs). SEPs are based on the Framework Educational Programmes of a respective level and are created by each school individually. Both FEPs and SEPs are public documents and should be available to the public (MŠMT, 2021).

The School Educational Programmes are different for each school, but the Framework Educational Programmes are the same for the whole country and serve, as the name suggests, as a framework for the SEPs. Therefore, for the overview of the interdisciplinary approach in the Czech curriculum, the FEP, as the main curricular document, will be used. Since this thesis focuses on basic education, only the *Framework Educational Programme for Basic Education* (FEP BE) (MŠMT, 2021) will be analysed. Currently, the FEP BE is in the process of revision, the newest available version is from the year 2021. Since the English translation of FEP BE is from the year 2007, both versions will be taken into consideration.

The term interdisciplinary appears in total three times in the English version of FEP BE, the Czech version uses other terms of similar meaning, such as *mezioborový* and *nadpředmětový*. The first appearance of this expression is in the chapter focusing on key competencies:

Key competencies are not isolated phenomena, they are mutually linked and intertwined, multifunctional, have an interdisciplinary nature and can only be acquired as a result of a comprehensive education process. Therefore, their forming, shaping and development must be the ultimate aim of the entire educational content and of all of the activities taking place at school. (MŠMT, 2007, p. 12)

For basic education, there are the following key competencies: learning, problem-solving, communication, social and personal, civil, working, and digital. There were originally six competencies, the digital competence has been added recently in the new version. Key competencies, as defined by FEP BE (2007, p. 12), “represent the system of knowledge, skills, abilities, attitudes and values that are important to the individual’s personal

development and to the individual's role in society." All students should acquire these competencies throughout the whole education process, starting in pre-school and continuing into life-long learning. The competencies should be developed in all subjects long-term through the cooperation of all parts of the education system, which is what makes them interdisciplinary.

Another mention of interdisciplinarity is in the chapter on educational areas. The FEP BE divides the educational content into nine educational areas, which include individual educational fields. For example, the educational area Language and Language Communication contains the fields of Czech Language and Literature and Foreign Languages, and the area Humans and Nature contains Physics, Chemistry, Natural Sciences, and Geography. As the examples show, each educational area consists of interlinked educational fields. The schools divide the educational content into individual subjects by themselves – each educational field can be represented by one or more subjects, and one subject can also cover multiple educational fields. Integration and interlinking of educational content are supported (in this part of the document) under the condition that the logical structure of the individual educational fields is followed. The chapter is concluded by the following sentence: "The system is conceived so as to achieve a situation where the teachers would *cooperate* when setting up the School Educational Programmes, *interlink* suitable themes which are common to the individual educational fields and *strengthen the interdisciplinary approach to education*" (MŠMT, 2007, p. 17).

The last mention of interdisciplinarity is in the chapter on cross-curricular subjects or thematic areas since the name might be misleading. They are a mandatory part of basic education, and schools must integrate all of the cross-curricular subjects into their curriculum either as part of already existing subjects or in the form of individual subjects, projects, seminars, and others. Currently, there are six cross-curricular subjects for basic education: Personal and Social Education, Democratic Citizenship, Education towards Thinking in European and Global Contexts, Multicultural Education, Environmental Education, and Media Education. All of these topics are, in their essence, interdisciplinary, but the word itself is mentioned in the description of only one of the subjects: "The cross-curricular subject Democratic Citizenship is of an interdisciplinary and multicultural character" (MŠMT, 2007, p. 97). The interdisciplinarity of cross-curricular subjects can be supported by the form of their realisation as well as by the cooperation of teachers – it can

be assumed that the level of interdisciplinarity will differ should the subject be realised within an already existing subject as compared to a creation of a new subject or project.

Aside from the provided examples, there are no direct mentions of interdisciplinarity in the Framework Educational Programme for Basic Education. There are some mentions of integration and interlinking, mostly in the chapters on key competencies and cross-curricular subjects. There are also recommendations to include so-called inter-subject relationships in the syllabus of the school subjects, which is part of the SEPs. The inter-subject relationships represent the connections between individual subjects and also the areas where these subjects overlap. Klinka (2021) views the Framework Educational Programme as interdisciplinary, partially due to the existence of the individual educational areas, which are comprised of multiple educational fields. While the key competencies are considered to be above the individual educational fields, the cross-curricular subjects (or themes) and inter-subject relationships have the potential to be interdisciplinary. Klinka also mentions that not all cross-curricular subjects and inter-subject relationships are automatically interdisciplinary, it depends on the way of their realisation – the individual subjects should be interlinked and interconnected to form a new complex unit. The whole chapter on the interdisciplinary approach in the context of curricular documents is summarized by Klinka followingly – the interdisciplinary approach is neither forbidden nor supported, it appears mainly in the form of suggestions and isolated mentions without further integration.

Due to the autonomy of schools in the process of creating their SEPs, there can be various levels of interdisciplinarity in each school's educational programme. Poesová et al. (2021) analysed twenty SEPs of lower secondary schools in Prague. The study was aimed at the amount and quality of the inter-subject relationships between English and other subjects and also at the connections between English and cross-curricular subjects in the individual SEPs. The study found that the amount, as well as the quality, have varied significantly among the schools, and sometimes schools with a lower number of inter-subject relationships have shown a higher quality of these relationships. This study provides an interesting example of how each school can interpret the FEP BE differently and create the SEP to fit their needs and preferences. Schools and teachers are presented with a certain level of freedom, but they do not always use it, and therefore some of the SEPs are very similar to the FEP and to each other.

## **Projects as a Part of the Interdisciplinary Approach**

Multiple options for implementing the interdisciplinary approach into education were already introduced in the previous section. From the presented possibilities, we decided to focus on projects as one of the representatives of interdisciplinarity in education since they seem to occur as a relatively frequent phenomenon in SEPs of Czech lower secondary schools (Poesová et al., 2021). Although project teaching has recently gained popularity and has been much discussed, it is not a new method. To provide context for the rest of this thesis, this part of the theoretical background will briefly present the theory behind projects, their history, their role in the curricular documents, the requirements of a proper project, its benefits, and possible limitations.

### **History of Projects**

Although the terms project, project method, project-based learning, or project teaching have gained popularity in recent years, teaching through projects is not a new method. The first attempts can be found in the works of the leading pedagogical theoreticians of the 18<sup>th</sup> and 19<sup>th</sup> century. Authors such as J. J. Rousseau, J. H. Pestalozzi, and F. Fröbel focused on the independent work of children, their personal experiences and interests, and them being active in the learning process (Kratochvílová, 2016). Such thoughts and ideas were in opposition to the traditional approach of J. F. Herbart, where students were supposed to be passive, silent, and accept everything the teachers say, they would only take notes and memorise them, and critical or creative thinking was not supported. As a result, in the early 20<sup>th</sup> century, the New Education movement, which was inspired by the works of Rousseau and others, was founded (Tomková et al., 2009).

At the same time, pragmatism in the USA led to the creation of pragmatic pedagogy. The main representatives of pragmatic pedagogy were John Dewey and his student William H. Kilpatrick, who are considered to be the founders of the project method. Dewey focused on forming a connection between schools and life, schools should be part of real life and provide experience through problem-solving and meaningful activities – his motto was “learning by doing”. He respected students’ personalities and individuality and used various methods to reach educational goals. Although there is no mention of the word project in Dewey’s work, his approach and ideas directly led to the creation of the project method by W. H. Kilpatrick. He focused on implementing the main thoughts of pragmatic pedagogy into education – the main one being the project method

which was based on the activization of students and Dewey's problem-solving. Kilpatrick also created the schema of the project: goal setting, planning, realisation, evaluation (Kratochvílová, 2016). In American schools, subjects were replaced by projects, thematic units, and problem-oriented tasks (Tomková et al., 2009). Although projects offered an alternative to traditional way of teaching and were viewed mostly positively, excessive focus on practical experience over theoretical knowledge and teaching solely through projects while neglecting systematic learning also had its disadvantages (Kratochvílová, 2016).

The ideas of pragmatic pedagogy spread to Europe and influenced the education system there. Unlike in the USA, European teachers searched for a compromise between subjects and projects which led to a realisation of projects within individual subjects or groups of subjects (Tomková et al., 2009). There have been attempts to change the education system in the Czech Republic since the beginning of the 20<sup>th</sup> century, but the real reform came with Václav Příhoda, who studied in the USA and was strongly affected by J. Dewey and the thoughts of pragmatic pedagogy. He focused on children's individuality, interests, and activity, and also founded experimental schools, where the project and problem-solving methods were mainly used. Other important figures of Czech reform pedagogy were Stanislav Vrána and Rudolf Žanta. The reformation process was interrupted for almost 50 years by the events of the second world war and the rise of the communist regime. Return to the ideas of reformers and the project method was possible only after the political change of 1989 and the restoration of democracy. One of the first works focused on project teaching was published in 1993 and has been followed by many others since. Due to the changes in the education system, it was possible to use various methods, including project teaching (Kratochvílová, 2016).

### **What Is a Project?**

There is not only one definition or one term for projects in education. Project teaching, the project method, teaching through projects, or project-based learning are some of the notions used for projects in education. The definitions vary based on the approach of the authors – some return to the ideas of pragmatic pedagogy, while others present different points of view.

As for the English context, Kilpatrick (1929) described the word project in his work *The Project Method* as follows: "...the conception of wholehearted purposeful activity

proceeding in a social environment, [. . .] It is to this purposeful act with the emphasis on the word purpose that I myself apply the term ‘project’“ (p. 4). Although the author noted that he did not invent the word project and was not the first one to use it in the context of education, he definitely created a framework for the project method in education. In his work, the word project marks a “unit of the worthy life” since projects should be connected to real life and be as close to it as possible. Another definition is provided in *Teaching Today* – Petty (2009) describes a project as a set of tasks that are completed individually or in groups, and students are provided with autonomy over various decisions. More importantly, Petty also provides an overview of terminology based on the amount of time, where a project is assigned eight to fifty hours, a task lasting less than eight hours is considered an assignment, which is usually less open-ended than a project. As for the most current view, according to the website *PBLWorks* (2023), Project Based Learning (PBL) is defined as “a teaching method in which students learn by actively engaging in real-world and personally meaningful projects.” This definition is quite similar to the ideas of Kilpatrick, who emphasised the real life experience and students’ interest in the project.

In the Czech context, the issue of terminology arises once again. Tomková et al. (2009) explain that projects are considered to be a complex teaching method, as well as a form of organization, a certain way of concentrating the subject matter, or an educational strategy. No matter which terms the authors choose, they are all focusing on the same topic of projects in education. For the purpose of this thesis, the word method will be used. In Tomková et al., the definition by Vrána (1934) is used for describing projects – a project is an activity for which students have accepted responsibility, it combines the theory and its practical application, it is a “students’ own enterprise.” Other main features of the project are the responsibility for one’s own learning, independent exploration, and students’ effort to achieve the goal or final product of the project. Tomková et al. add that the final product or goal provides meaning to the project and motivates the students. The project’s topic should be connected to real life, which often requires knowledge from multiple subject areas and results in an interdisciplinary approach. Projects can be done individually by each student or in groups, and it usually takes a longer period of time, for example, in the form of a project day or week, but it could also last the whole school year, however, no specific timeframe is provided. The term “students’ own enterprise” is also emphasized by Kratochvílová (2016), along with the importance of including topics close to students’ lives and addressing their needs. She also observes that there is currently a partial deviation

from the requirement of students taking responsibility for their projects since what is often being presented as a project is actually a teacher's own enterprise instead of students'. This leads to an important question of what should be considered a proper project since the definitions can vary a lot, and the theoretical background does not necessarily reflect the reality in schools.

For the purpose of this thesis, we define the term project by the following keywords that occurred in the definitions from both contexts – a project is a complex task, which takes a longer period of time, it is connected to real life context, and combines theory and practice; it is a meaningful activity – there is a goal and some kind of final product or public presentation, students fully participate in all steps of the project, and accept responsibility for it, while they are given considerable autonomy. Ideally, the project should be personally meaningful to students, which could be achieved by including topics close to students' lives or even letting the students to propose the topics, but since this is quite difficult to achieve and to assess this criterion, including students in all the phases of project and giving them autonomy over some of the decisions is considered sufficient.

### **Principles of a Proper Project**

Larmer and Mergendoller (2010) introduce seven essentials for project-based learning, which they use to distinguish proper projects from what they call a busywork. The seven essentials are a need to know, a driving question, students voice and choice, 21<sup>st</sup> century skills, inquiry and innovation, feedback and revision, and a publicly presented product. A need to know stands for an entry event, for example, a video or a discussion, which should activate and motivate students, it should help them to understand why they are doing the project and how it is beneficial. Then the driving question should be formed, it should capture the meaning of the project and help to focus students' efforts. Students voice and choice suggests that students are allowed to choose as often as possible, they should be given more options and allowed to express themselves. The project should also provide opportunities for learning and improving various skills, such as communication, cooperation, or effective use of technology. Students should work with questions and search for answers, which can lead to more questions and new ideas. According to the authors, the inquiry leads to innovation. To create a meaningful and high-quality final product the learning process should also include direct feedback and use criteria rubrics in the process of revision. The whole project should then be presented to a real audience for an authentic experience. The authors also mention two criteria of a meaningful project.

First, the students should view the task as meaningful in order to want to perform well and to care about it, and second, the project should aim to fulfil an educational purpose.

A similar list is provided in a book by Larmer et al. (2015), who are also behind the website PBLWorks. They present a Gold Standard PBL, where the seven essential project design elements are: a challenging problem or question, sustained inquiry, authenticity, students voice & choice, reflection, critique & revision, and public product. Compared with the list of essentials for PBL by Larmer and Mergendoller (2010), the 21<sup>st</sup> century skills are missing, and there is a newly added element of authenticity, the rest is similar or the same.

Such lists and examples can serve as an ideal and an inspiration for meaningful project-based learning practice. In these works, the authors further define proper meaningful projects through the listed criteria in order to differentiate them from the wide range of various activities which are often incorrectly labelled as projects. These lists of PBL essentials are in accordance with the definition of the word project and further develop some of the main ideas. In addition, they also highlight the importance of motivation and the development of skills. As the definitions and description of a meaningful PBL practice demonstrate, teaching through projects is a complex method that requires preparation and planning.

### **Project Planning: Individual Steps of a Project**

Teaching through projects can be quite challenging, and since projects usually span for longer periods of time, planning is the key part. Proper preparation can help with possible issues or challenges of project teaching and with a successful implementation of projects into the lessons. There are multiple approaches to project planning, in this work we will introduce the approach of Kratochvílová (2016).

Kratochvílová (2016) provided her own version of project planning, which is based on the original schema of Kilpatrick. The first step is planning, which also includes the category of goal setting. This first step consists of setting a topic of the project – the questions of what we are going to do and why should be answered in this process. This is essential for motivating the students, realising the intention and purpose of the project, and setting goals. The goal is also connected to the project's final product or outcome, which needs to be decided as well. Then there are also the questions of time and timeline, place, material equipment, participants, organization, and feedback and evaluation of the project,



which should all be answered during the planning stage. All this work should not be done only by teachers, students should be included in the whole process and encouraged to be the main creators of the project. Activities such as brainstorming and idea-sharing are recommended, teachers should mainly help organize the ideas, give advice when required, and provide support. However, in some cases, the teacher's intervention is required to avoid possible issues and to plan a successful project.

The realisation of the project is heavily based on the created plan – everybody should know their role and the project's goal. Teachers are mostly observing, supporting, and motivating the students, they also help students not to deviate from the plan and the set goal. Students are working on the project, if it is a group project, they collaborate with their teammates and have an assigned role, they collect data and information, analyse and organize them, and create the final product. The presentation of the project is listed as the third step. It involves any kind of presentation of the final product – for example, in the form of a video, a website, a model, or a lecture. The audience could be parents, classmates, the public (possibly somehow connected to the project), or other institutions (Kratochvílová, 2016). This is an important step that gives meaning to the project and also helps to communicate project-based learning to the parents, who might be concerned about this method.

The whole process does not end with the presentation, but the final step is the evaluation of the project and providing feedback. The evaluation should be thought through and already planned during the planning period. Ideally, there should be a criteria checklist, which has been co-created by teachers and students, who both should also participate in the process of final evaluation (Kratochvílová, 2016).

Although there are multiple approaches to project planning and the names and number of individual steps differ author by author, in the end, they describe the same process. It is mainly important to include all of the following steps and sub-steps: goal setting, planning, realisation, presentation, and evaluation. These are the main steps of a project – they further develop the idea of a proper meaningful project, and each such project should follow them.

### **Limitations and Benefits of Projects**

Although projects are currently considered a popular method, and they are mentioned a lot, they do not occur frequently in mainstream schools and are often

associated with more alternative approaches. When projects do occur, it is not always the proper projects as per the provided definitions but rather additional activity. According to Larmer et al. (2015), true project-based learning occurs only when the project is the main course as compared to being just a dessert or a side dish, which is what differentiates project-based learning from simply doing projects. Kilpatrick (1929) also proposed that projects should be the main source of learning as opposed to the traditional way of learning, while in the European context, there has been a focus on finding a compromise and combining the traditional way with projects. There are many advantages as well as disadvantages; projects can be very beneficial, but their correct implementation is not easy. Therefore, the combination of multiple approaches and methods could be a good choice. The following summary of the benefits and limitations of projects in education is based on studied literature (Kilpatrick, 1929; Kratochvílová, 2016; Larmer et al., 2015; Tomková et al., 2009 and others).

There are many benefits of using projects in education, some can be derived from the definitions – for example, projects should be “students’ own enterprise”, which helps students to take responsibility for their own work, develops their independence, and also motivates them. Projects should be connected to real life, which helps to show the practicality of what is being taught and provides life experience to students. They also provide opportunities for connecting with parents, local communities, and the nearby surroundings of the school. Projects help to develop various essential skills (such as problem-solving, critical thinking, cooperation, independence, confidence, organization, time management, communication, and so on), which are helpful for future studies and professional life and enable one to develop higher cognitive skills. This method allows to cover complex topics and works well with the interdisciplinary approach. For teachers, projects represent a new, and possibly more satisfying, way of teaching and assessing; they provide an opportunity to grow as teachers and to establish a teacher-student relationship based on cooperation and mutual trust.

The main disadvantages of the project method are its requirements and risks. The project method is challenging – it requires a lot of planning and organization skills and is time-consuming. Although the main part is the planning, the realisation, and reflection also take time, at least several lessons are required for the whole project – Petty (2009) set a minimum of eight hours – and teachers might argue they do not have time for this within the curriculum. Students should have at least a basic level of some of the skills that are

developed through projects; they have to be able to work independently, cooperate, be creative, and so on – lack of such skills could cause issues when doing a project and might result in its failure. Materials and equipment might be needed, which could financially burden the school or parents. Projects do not respect the traditional system of education, which may lead to misunderstanding of this method, however, the support of colleagues, school management, and parents is vital for its success. In the case of interdisciplinary projects, teachers also have to be able to cooperate effectively since knowledge outside of their specialization might be needed.

To sum up, projects have many requirements and are not an easy method, however, when done properly, the benefits outbalance the limitations. Through thorough preparation, education, and planning, many possible disadvantages can be avoided or at least addressed. It is necessary to learn about the project method and fully understand it prior to its use in the classroom. The project method can be very beneficial, especially when effectively combined with other methods and approaches to compensate for the possible negatives.

### **Projects and Interdisciplinarity**

Although projects are part of the interdisciplinary approach in education, not every project is automatically interdisciplinary, there can be interdisciplinary projects as well as projects focusing on a single topic within one subject. In order to be considered interdisciplinary, projects must meet the conditions given by the definitions of interdisciplinarity – it is not enough to combine two or more school subjects and claim the project to be interdisciplinary. The interdisciplinary approach “consciously applies methodology and language from more than one discipline to examine a central theme, issue, problem, topic or experience” (Jacobs, 1989, p. 8). Interdisciplinary projects should integrate the methodology and language of multiple subjects, but the integration must be intentional and also meaningful.

Klinka (2021) further mentions a few requirements of interdisciplinarity. The first one is that the cooperation of the subjects has to be deliberate and planned, this has already been covered, but the main part is that all the included subjects have to be equal. The inclusion of individual subjects should also be meaningful – one subject can provide terminology, and the other one methodology, but their involvement should be in balance. Another requirement is that the whole subjects are not included (that would be the pluridisciplinary approach), only the parts which are necessary for the project. These parts

complete each other and provide context for each other. Finally, as a result of the interdisciplinary approach, there should be something new and unique that could not exist without the cooperation of subjects. The integration of the subjects should help students with the completion of the project and accomplishment of the learning goals as compared to working within a single subject.

For this thesis, we define an interdisciplinary project as a project which combines at least two school subjects or educational areas in a meaningful way (there is a reason for combining the subjects, for example, the topic is of an interdisciplinary nature), the selected subjects should be included equally, and the final product should be something new, which could not be achieved without the interdisciplinary approach.

### **Projects in the Czech Curriculum**

As with the term interdisciplinarity, the occurrence of the word project in curricular documents has been analysed. There are several mentions of projects in the documents, whether it is due to the interdisciplinary nature of the project method, the amount of time required, or its benefits and importance.

The *Framework Educational Programme for Basic Education* (MŠMT, 2021) mentions projects as an example of a method that could be used to challenge students, give them more responsibility, and cover complex topics, it is also suggested as a way of working with exceptionally gifted pupils. The project method is recommended in the educational area Arts and Culture as a way of exploring relationships between individual types of art. Lastly, it is included in the chapter on cross-curricular subjects, as projects represent one of the possibilities to realise these topics alongside individual subjects, seminars, or courses. The occurrence is not frequent, yet it might be viewed positively since the FEP BE is a general document on the national level.

As for other curricular documents, the School Educational Programmes differ from school to school. Since the realisation of projects depends on individual schools and teachers, examples of SEPs will be analysed in the practical part of this thesis to determine to what extent projects, as a means of realisation of the interdisciplinary approach, occur in the SEPs of selected schools. In order to outline all possible project realisations, various parts of the documents will be analysed. Since interdisciplinary is a complex topic, it can occur in many forms. Projects can be included within individual subjects, but such

inclusion might not fully express their interdisciplinary nature. Possible other sources of projects might be inter-subject relationships and cross-curricular subjects.

Aside from the selected areas with the possible occurrence of interdisciplinarity, the practical part will also focus on projects regarding English Foreign Language (EFL) classes. English specifically is not included in FEP BE, but it is represented by the educational field of foreign language. Students should be able to communicate in the selected foreign language on a basic level, which is related to the development of communication competencies. In the theme areas which should be covered in the subject, there are various general topics from daily life included, such as sport, nature, people and society, or the socio-cultural environment of relevant language areas and the Czech Republic (MŠMT, 2021). The inclusion of these general topics connected to real life and the focus on the development of communication skills present an opportunity for the interdisciplinary approach. The project implementation might help to develop language skills and cover the theme areas. Since the interdisciplinary approach is based on the cooperation of multiple subjects, the focus will not be solely on EFL but rather on the interdisciplinary aspect of projects and their realisation as a part of English Language Teaching (ELT). However, the benefits of the interdisciplinary approach depend on its realisation and might differ teacher by teacher. For this reason, the perspective of EFL teachers from selected schools will also be included in the research.

This chapter serves as the theoretical background of this work. The complex topic of interdisciplinarity and its implementations in education were presented. Project teaching, as a widespread method, was selected a sample of an interdisciplinary approach in education which would be further explored in this thesis. The chapter describes the elements of proper projects, the individual steps of this method, its history, benefits and limitations, and also its connection to interdisciplinarity. The occurrence of interdisciplinarity and projects in the curricular documents at the national level was also covered in this part of the thesis. The next chapter will provide a detailed description of the research, which focuses on the occurrence of projects in the School Educational Programmes and the realisation of such projects regarding teachers' perspective. Due to the nature and extent of this thesis, the general occurrence of projects and aspects of interdisciplinarity will be provided, followed by a focus on the educational field of Foreign Language – English.

### III. METHODS

After the theoretical introduction of the topic of interdisciplinarity and projects in education, the practical part of this thesis follows. A research focused on the interdisciplinary approach in education in the form of projects was conducted to answer the research questions. A content analysis of selected School Educational Programmes and a questionnaire survey were selected as the main research tools. This chapter will introduce this thesis's methods and research design and provide further context for the next chapter.

The research explores projects in concrete educational context as sample formats of interdisciplinarity in education. In particular, we focus on the lower secondary school context represented by selected SEPs of thirteen basic schools in Pilsen, which are to be compared with corresponding lower secondary teachers' opinion survey. A mixed research design of qualitative-quantitative methods has been selected in the form of data collection and analysis. Based on the studied literature, two research questions (RQs) will be addressed:

RQ1: To what extent do projects occur in selected SEPs as samples of interdisciplinarity in education?

SQ1: To what extent are projects occurring in selected SEPs in the educational field of Foreign Language, which is English, interdisciplinary?

RQ2: To what extent are the projects realised in ELT interdisciplinary regarding teachers' perspective?

The first part of the research aims to answer the first research question, it is based on the school level of the curricular documents – the School Educational Programmes. To find out to what extent are projects included in the documents interdisciplinary, thirteen SEPs were gathered and analysed. The research was limited to lower secondary education, specifically to basic schools in Pilsen. Only regular public schools were included in the sample. Even though the SEP is a public document and should be accessible, only some schools have it on their website in full form, others have it available in printed form in the school building or upon request. Due to the nature of this research, the electronic format of the documents was favoured. A convenient sample of thirteen lower secondary schools that have their SEPs available online has been selected for this research. The School Educational Programmes of following Pilsner schools have been analysed: 1<sup>st</sup> Basic School, 10<sup>th</sup> Basic School, 11<sup>th</sup> Basic School, 13<sup>th</sup> Basic School, 14<sup>th</sup> Basic School, 20<sup>th</sup>

Basic School, 21<sup>st</sup> Basic School, 22<sup>nd</sup> Basic School, 26<sup>th</sup> Basic School, 28<sup>th</sup> Basic School, 31<sup>st</sup> Basic School, 34<sup>th</sup> Basic School, and Masaryk's Basic School.

Since the analysis of curricular documents is based on publicly available information and might not reflect the reality in schools, the second part of the research consists of data collection through a questionnaire survey and analysis of the collected data. The questionnaire has been selected as an appropriate tool to answer the second research question, which is: To what extent are the projects realised in ELT interdisciplinary regarding teachers' perspective? It allows teachers to express themselves and provides the context of school reality in contrast to the statements in the SEPs.

The questionnaire survey was limited to the same selected schools whose SEPs were analysed, in hopes to connect the findings of both parts of this research. Due to the focus on interdisciplinary projects in EFL classes, the research was aimed at English teachers of lower secondary education. To provide enough time, the collection of answers was planned for two weeks, it started on 25<sup>th</sup> May and ended by 4<sup>th</sup> June 2023. The questionnaire survey was distributed to the schools through an email addressed to the school's headteachers or directly to the English teachers when possible. As there was a possibility that the questionnaire did not reach the teachers, schools with no response after a week were contacted once more – this time through an email directed to the deputy headteacher or through acquaintances at individual schools.

After the two weeks, there were 11 replies in total from six schools. Although the number of responses is not high, the goal of connecting at least some of the SEPs with EFL teachers' perspective was met. The overall return rate is unknown due to the fact that individual schools do not share their timetables or the teachers' subject specializations, so the total number of possible respondents is not known. Out of the 11 responses, four were from 31<sup>st</sup> Basic School, two responses were both from the 28<sup>th</sup> Basic School and the 13<sup>th</sup> Basic School, and one response each was from the 11<sup>th</sup> Basic School, 20<sup>th</sup> Basic School, and 21<sup>st</sup> Basic School. The higher number of responses from the 31<sup>st</sup> Basic School is caused by a personal connection to the school. All respondents were women.

As a part of the preliminary research, the first version was distributed to a few experienced colleagues, and based on their feedback, the final version was created. The survey was conducted in Czech since teachers might be less willing to answer if it was in English. The Czech version of the questionnaire and its English translation are both

included in the appendices (see Appendix A and B). The questionnaire has 19 items in total, there are seven items focused on the identification of the respondent, and twelve are dedicated to project teaching. Both the open-ended and closed-ended questions are used. The questionnaire was anonymous. The questions focused on the identification of the respondents asked about respondents' gender, age, anonymous identification number, school where they work, length of experience, their subject specialization, and other subjects they teach. The main questions were focused on teachers' perspective on projects in education – their inclusion in SEP, benefits and limitations, realisation in ELT, and possible interdisciplinarity.

The whole sample of SEPs has been analysed twice, the first time to map the situation and to create categories and the second time to collect all relevant data. To answer the first research question and its sub-question, the main focus was on the occurrence of projects in general and in the context of ELT and the signs of interdisciplinarity of these projects (English in primary education was not included due to the limitation of the research to lower secondary education). The following parts of the documents were analysed in detail – the English language section in the educational field of Foreign Language, the general parts discussing the teaching methods and approaches used in the given school, and chapters on cross-curricular subjects and inter-subject relations, if included. To find all possible markers of the interdisciplinary approach, specific keywords were also searched for in the documents, for example, the words project, interdisciplinarity, cross-curricular, and inter-subject.

The data, observations, and examples were collected into a chart, where a system of categories was created. The data were analysed through deductive content analysis in a qualitative-quantitative manner. Based on the qualitative analysis, the data were coded and divided into the relevant categories, which will be presented in the next chapter. Some of the data related to the amount of occurrence has also been quantified. The first group of categories focuses on the occurrence of the word project in general, whether it occurs in the document at all, and if so, then how frequently and what kind of description is provided. This description is then compared to the definition of a proper project that has been provided in the previous chapter of this thesis. The exact process is repeated for the English section of the SEPs. There are two more categories included as possible representatives of the interdisciplinary approach – the inter-subject relations and the cross-curricular subjects. Again, their occurrence, form of inclusion, and the depth of the



provided description are followed. Possible other occurrences of interdisciplinarity and examples of good practice are also included.

The questionnaire survey data were collected through Google Forms into a chart and analysed. The open-ended and partially closed questions were analysed qualitatively – the answers were coded and categorised accordingly. The closed-ended questions were analysed quantitatively. The results will be introduced through a qualitative-quantitative analysis in the next chapter.

This chapter describes the methods of this research – it introduces the research questions, the selected research design, which is in this case mixed, the sample of selected Pilsner schools and English teachers, the data collection tools, and the analysis procedure. The next chapter will introduce the results of both parts of the research, the content analysis of SEPs and analysis of questionnaire survey answers, and accompanying commentary. Both parts of the research will be compared and connected to the theoretical part of this thesis to answer the research questions.

#### IV. RESULTS AND COMMENTARIES

This chapter will introduce the results of the research – first, the results of the analysis of the selected School educational programmes and then the results of the questionnaire survey. It will also include commentary and connection to the theoretical part and possible implications of this research. The results will be then summarised, and the research questions will be answered.

##### **The Analysis of School Educational Programmes for Basic Education**

**Table 1**

*A Simplified Table of The Results of the School Educational Programmes Analysis*

School:	Occurrence of projects in the SEPs:	Occurrence of projects in EFL:	Occurrence of inter-subject relations:	Occurrence of cross-curricular subjects in EFL classes:
1 <sup>st</sup> Basic School	very frequently	Yes	Yes, mentioned	Yes, multiple
10 <sup>th</sup> Basic School	less frequently	No	No	Yes, less frequently
11 <sup>th</sup> Basic School	frequently	Yes	Yes, in detail	Yes, multiple
13 <sup>th</sup> Basic School	less frequently	Yes	Yes, mentioned	Yes, multiple
14 <sup>th</sup> Basic School	less frequently	Yes	Yes, mentioned	Yes, multiple
20 <sup>th</sup> Basic School	less frequently	No	Yes, in detail	Yes, multiple
21 <sup>st</sup> Basic School	less frequently	Yes	No	Yes, multiple
22 <sup>nd</sup> Basic School	very frequently	Yes	Yes, mentioned	Yes, less frequently
26 <sup>th</sup> Basic School	frequently	Yes	Yes, in detail	Yes, multiple
28 <sup>th</sup> Basic School	frequently	Yes	No	Yes, less frequently
31 <sup>st</sup> Basic School	frequently	No	Yes, mentioned	Yes, less frequently
34 <sup>th</sup> Basic School	less frequently	Yes	Yes, in detail	Yes, multiple
Masaryk's Basic School	less frequently	Yes	Yes, in detail	Yes, multiple

## **Occurrence of Projects in the School Educational Programmes**

Each of the analysed SEPs contained the word project at least several times. Three categories were created to describe the frequency of the word project and other related forms of this word. The category of “less frequently” contains seven SEPs with up to 40 occurrences of the word, the second category marked as “frequently” contains four SEPs with up to 80 occurrences, and the last category is “very frequently”, and it contains two SEPs with occurrence above 80. The mere number of uses of this word does not have much informative value. However, when compared with the rest of the data, it turned out that schools with a higher number of occurrences usually have projects included more often and, in some cases, are described in more detail. The most occurrences were in the SEPs of the 1<sup>st</sup> Basic School, 11<sup>th</sup> Basic School, and 22<sup>nd</sup> Basic School.

The word project mostly occurred throughout the whole document, in the general parts as well as the individual educational fields and subjects. The terms project, project teaching, project day, and short-term projects were all used, most frequently in the form of a mention and without further detail. Such occurrences do not provide any detailed information about the projects. Therefore, it cannot be decided whether these projects are in accordance with the definition of a proper project and whether they are interdisciplinary. Sometimes, the adjective short-term was used with the word project, but without further specification of the time allocated to these projects. In some of the other occurrences, more details were provided. Both 13<sup>th</sup> Basic School (2007) and 26<sup>th</sup> Basic School (2007) state that they include project teaching with the use of inter-subject relations. Since the involvement of multiple subjects is one of the markers of interdisciplinarity, projects based on inter-subject relations might be, at least to some extent, interdisciplinary. The 1<sup>st</sup> Basic School (2017) includes elements of the Dalton Plan (an educational concept by Helen Parkhurst), which are realised in the form of a project. According to the provided description, such projects should help to develop students’ freedom, independence, and responsibility, as well as cooperation and self-evaluation (1<sup>st</sup> Basic School, 2017). The 10<sup>th</sup> Basic School (2022) provided the following context for the school project days – they are focused on problem-solving, logical thinking, cooperation, and teamwork; students are involved in all the phases of the activity (planning, preparation, realisation, evaluation), the projects are then presented, and students are led to self-evaluation. These general descriptions of projects include some of the requirements of proper projects, as defined earlier in this work. Although the descriptions included some elements of

interdisciplinarity, it is not possible to decide whether these projects are truly interdisciplinary due to the lack of provided context.

Considering the several specific examples of projects, there are three examples of good practice worth mentioning. Although these examples might not fully meet the definition of a proper interdisciplinary project or fit the main focus of this research, they represent a unique approach within the examined sample of SEPs. The three schools in question are the ones with the highest occurrence of the word project (1<sup>st</sup> Basic School, 11<sup>th</sup> Basic School, and 22<sup>nd</sup> Basic School). The 1<sup>st</sup> Basic School (2017) has a special subject called Projects in their fourth and fifth year of primary education. This subject covers the cross-curricular subjects and there are usually two projects per school year. Students are included in the whole process of planning and goal setting; teamwork, communication, independence, responsibility, creativity, and problem-solving are supported and further developed. The projects are presented and then evaluated based on a criteria list created by students as well as teachers, and the final assessment is verbal. At the 11<sup>th</sup> Basic School (2017), the cross-curricular subjects are included in the form of project days. There are four such days each school year, so each student participates in sixteen projects in total over the four years of lower secondary education. The project day lasts the whole school day, which is six lessons. Students can choose from a selection of topics, but by the end of their studies, they should cover all of the themes of the cross-curricular subjects. The planning is in the competence of teachers. The provided example of a form for the projects includes, among other things, the project goal and inter-subject relations. Lastly, at the 22<sup>nd</sup> Basic School (2022), the cross-curricular topic of multicultural education is realised as a whole school project in the form of project days, excursions, and lectures with special guests. The topic of ethnic minorities in the Czech Republic is approached from multiple points of view and, therefore, might be another example of an interdisciplinary project.

### **Occurrence of Projects in EFL**

Aside from the general mentions and examples of specific projects, the inclusion of projects as samples of interdisciplinarity in the subject of English is one of the main foci of this thesis. Three SEPs have no occurrence of projects in the part of the document focused on the English language (see Table 1), the other ten SEPs mention projects at least once. In the cases where projects were mentioned, the provided context was analysed in order to find out whether the description fits at least partially the definition of interdisciplinarity and proper projects.

Most schools provide little to no information about the projects, there are usually simple sentences informing that the schools include projects or that the project method is used. Some schools provided at least some context – the 26<sup>th</sup> Basic School (2007) and 28<sup>th</sup> Basic Schools (2022) mention international or European projects, where English is used as a means of communication and students learn about other cultures. According to the SEP of 14<sup>th</sup> Basic School (2022), students work independently on a final product. The English projects at the 22<sup>nd</sup> Basic School (2022) focus on real life problems, students work independently or in groups and compare the results with students from other countries, the language is again used mainly for communication. The 11<sup>th</sup> Basic School (2017) mentions that students work on a specific project and present it to their classmates. These are all descriptions that could be found in the SEPs. The data do not provide enough detail to compare it with the definitions. However, the presentation of a final product, real life problems, independent work of students, and responsibility for the project, might all be considered markers of a proper project, and the use of language as a means of communication in an international project could mark interdisciplinary approach.

Only one SEP provided specific examples of projects in English. It was the 11<sup>th</sup> Basic School, where there are included at least two projects each year, for example, “My Pet” and “Recipe for my favourite meal” in grade six, or “Fashion show”, “Basic information about my country” and “Healthy and unhealthy meals for teenagers” in grade eight (11<sup>th</sup> Basic School, 2017). Due to the lack of further context, it is impossible to decide whether they are proper interdisciplinary projects or not. Nevertheless, the topics indicate that these are mini-projects or simply assignments rather than proper projects.

### **Occurrence of Inter-Subject Relations as Markers of Interdisciplinarity**

To describe the occurrence of inter-subject relations in individual SEPs, three categories were created. Three documents had no mention of them whatsoever, the word inter-subject has not occurred even once. Five documents had at least one mention of inter-subject relations, mainly in the form of simple sentences informing that the schools include inter-subject relations or that they teach in an inter-subject way, but no further details were provided. Finally, five SEPs included inter-subject relations in detail – usually in the form of a general chart with an overview of all inter-subject relations and then specific examples within each subject, either included in a chart by grade or in the form of a general list, which is the case of the 34<sup>th</sup> Basic School.

Due to the focus on English, here are some examples of inter-subject relations for this subject. The 11<sup>th</sup> Basic School (2017) includes the following relations in sixth grade English: Biology – need of animals; Geography – regional geography of the United Kingdom; Czech – sentence structure, grammar, and oral presentation skills. The 26<sup>th</sup> Basic School (2007) includes the following relations with other subjects in seventh grade English: Biology – ecology; Geography – our planet Earth, Czech Republic; Czech – sentence structure, parts of speech; Information technology – computer programmes, internet; History – Realia. The eighth grade English at the 20<sup>th</sup> Basic School (2022) contains ensuing relations: Family education – conflict-solving; Geography – travelling, natural disasters; Civics – rules of behaviour. The included relations in ninth grade English at Masaryk’s Basic School (2021) were: Information technology – principles of writing emails; Geography – world map. The 34<sup>th</sup> Basic School provided a list of inter-subject relations for all the grades of lower secondary education, aside from already mentioned subjects, there were also included topics from Math – numbers and Physics – the universe. In total, among the most common subjects were Geography, Civics/Health education, Czech, and History. Subjects such as Art, Music, and Physical education were mentioned only once or twice, and subjects such as Chemistry and other foreign languages were not included at all in connection with English.

As with projects, some school expressed their wish to include such relationships in their teaching, but no further details of the execution of these relations among subjects were provided. Inter-subject relations have the potential to be interdisciplinary when executed successfully.

### **Occurrence of Cross-Curricular Subjects as Markers of Interdisciplinarity**

The last part of the SEPs analysis was focused on cross-curricular subjects. As mentioned earlier, there are six cross-curricular subjects for basic education: Personal and Social Education, Democratic Citizenship, Education towards Thinking in European and Global Contexts, Multicultural Education, Environmental Education, and Media Education. These topics must be included in SEPs since they are mandatory. Both primary and lower secondary education need to cover all topics during the given time (five and four years). The way and extent of their implementation are in the individual schools’ competence (MŠMT, 2021).

Since it is mandatory, all of the selected SEPs included cross-curricular subjects. However, the form of inclusion differed. Ten of the SEPs provided an overview in the form of a chart that included all cross-curricular subjects, their subtopics, and their occurrence in individual school subjects by grades, with further details provided within the parts dedicated to the individual subjects. Two SEPs had only a short text description of how the cross-curricular subjects are included – as a part of subjects or as projects – and then further details were provided within the individual subjects. The SEP of 11<sup>th</sup> Basic School differed from the other SEPs, all cross-curricular subjects are implemented in the form of four project days per school year, as described in the section covering projects.

The number of cross-curricular subjects included in the individual subject differed school by school. Once again, examples from the subject of English will be provided. Since the requirement is for each topic to be included once during the whole four years of lower secondary education, not every individual subject necessarily has to include these themes. Nevertheless, each school included at least one such theme in English. Four SEPs had six or fewer occurrences in total over the four grades of English, while the other SEPs had several occurrences in each grade of English. Not only the number of occurrences but also their quality is an important factor – most of the occurrences were only in the form of a name of the cross-curricular theme and its specific sub-theme included within a certain grade, while some of the other SEPs offered more details about the topic or the activity, through which it will be realised.

Here are some examples of the more detailed occurrences: the theme Education towards Thinking in European and Global Contexts and the subtheme We are interested in Europe and the world were realised in the form of learning about customs and traditions of English-speaking countries (1<sup>st</sup> Basic School, 2017); and the theme Personal and Social Education and its subtheme Self-awareness and self-conception were realised through writing and speaking activities (21<sup>st</sup> Basic School, 2020). An example of a higher quality occurrence from a school where the cross-curricular themes were less frequent is in the form of a project – students learn about the subtheme We Are Europeans through learning about the richness of European languages while working on a project dedicated to the Europe Day (22<sup>nd</sup> Basic School, 2022).

As stated by the FEP BE (MŠMT, 2007): “Cross-curricular subjects may be used as an integrated part of the educational content of a subject of instruction in the form of individual subjects, projects, seminars, courses, etc.” The most frequent way of integration

was in the form of inclusion within already existing subjects and, in two cases, in the form of projects, both of which have already been described above.

### **Commentary**

Although there are only a few mentions of projects in the FEP BE, and their inclusion in SEPs is not mandatory, all selected schools included projects in their curricular documents to some extent. By this inclusion into the school curricular documents, projects become obligatory and should therefore be realised. This might be viewed as restricting, as each teacher has a different learning style and preferences, and also, every class is different, which might be why there are mostly general mentions of projects and rarely any specifics. On the other hand, the inclusion of projects and the way they were described (as modern methods which schools wish to include more) is a good sign because it shows that schools know about projects and try to include them in their curriculum. Another important factor is also the quality of projects. It was not possible to objectively decide whether the mentioned projects are proper projects and serve as a realisation of interdisciplinarity due to the lack of detailed description. To provide at least some context, projects from all parts of SEPs have been included. Overall, there were some signs of interdisciplinary and some indicators of proper projects, as defined earlier in this thesis, as well as examples of good practice.

The SEPs serve as a baseline for what happens throughout the school year. They are prescriptive, so whatever is included should be realised during the school year. However, it is not possible to cover everything that actually occurs. The SEP of Masaryk's Basic School (2021) even mentioned that it is not possible to fully describe the time spent on the project days and all the inter-subject relations that occur during such days – so, although they have two project days per school year, there are no further details provided in the document. This applies to other aspects of interdisciplinarity and its implementation in SEPs – the fact that it is included in the curricular documents does not necessarily mean that it is truly realised (although it should be), and the fact that it is not included in the curricular documents does not mean that it does not occur at schools at all.

In contrast to projects, inter-subject relations were not included in all of the SEPs. Both are not mandatory, so seeing such a difference in their occurrence is interesting. On the other hand, in cases where inter-subject relations were included, more specific details were provided. It is not possible to include all such relations among subjects, but the



inclusion of at least some of them can be viewed as a positive sign since it can lead to the application of the interdisciplinary approach, and it might also show the vision and overall philosophy of the school. Although the SEPs are based on the same document – the FEP BE – the differences between the individual schools are shown through their SEPs, which also serves as proof of the freedom which is given to schools.

The cross-curricular subjects are themes that cut through the curriculum and traditional division into subjects – their inclusion is mandatory, therefore all SEPs included them. However, the form of inclusion and realisation is in the competence of individual schools. Interestingly, most schools decided to include cross-curricular themes within already existing subjects to a greater or lesser extent. One of the exceptions is the approach of 11<sup>th</sup> Basic School, where the cross-curricular themes are realised through project days with some signs of interdisciplinarity – such an approach might serve as an inspiration to other schools and schools that do not implement projects at all.

### **The results of the questionnaire survey**

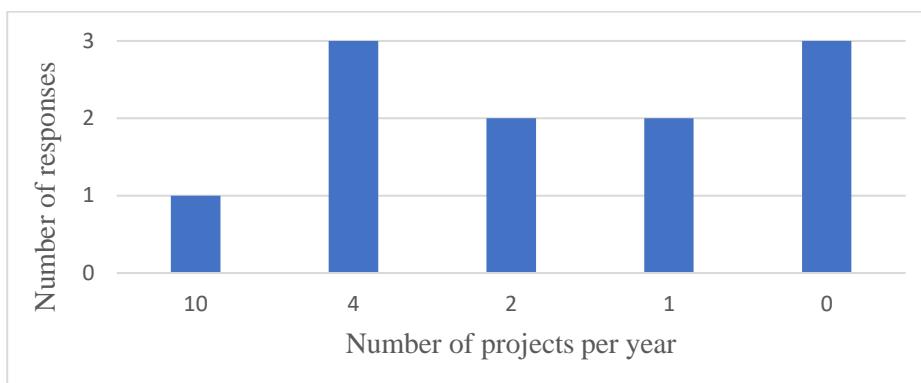
The main part of the questionnaire focused on the topic of projects as representatives of interdisciplinarity. The first question was: *Do you think that your SEP includes projects/project teaching? (To answer this question, it is not necessary to look into the SEP of your school.)*. It was a closed question with three options – seven teachers replied “yes,” three teachers “no,” and one teacher “I do not know.” The SEPs analysis showed that all the selected schools included projects to some extent. Although this question was general and not specifically focused on English, the teachers that replied “no” or “I do not know” were from schools that did not mention projects in English.

The second question was open-ended and asked the respondents about the possible benefits of including projects in teaching. Two teachers replied that they do not see any advantages in including projects, one included the current conditions and traditional way of teaching as a reason for this answer. The other answers included often multiple points, the most frequent ones were that projects are interesting for students and that they help to develop cooperation and communication skills. Three answers also included interdisciplinarity of projects. Among other less frequent answers were students’ independence and responsibility, connection to practical life, technology skills, creativity, and inclusion of students of different levels.

The third question asked whether teachers include projects in their English lessons, this question was partially closed with the options of “yes,” “no,” and “other.” The respondents were also asked to provide reasons if their answer was “no”. Seven replies were “yes,” and four were “no.” Not all teachers provided the reasoning as to why they do not include projects. Among the provided answers were reasons such as lack of time, too many students in a class, and that students do not have the skills necessary for project work. Interestingly, the teachers who do not include projects were the same teachers who replied that they think their SEPs do not include projects or that they do not know, their schools’ SEPs are the ones that actually do not include any mentions of projects in EFL classes. The reasons why they do not include projects are connected to question number nine – *What would help you to include more projects into your lessons?* The most frequent answer was “more time/lessons” (seven replies), on the other hand, two teachers replied that they are happy with the current state and do not need anything else. Among other answers were: if students were more interested, smaller groups, help from my colleagues, if students had the skills necessary for projects, and if projects were mandatory.

**Figure 1**

*Average Number of Projects per Class per Year*



The next question asked about the average number of projects per English class per year. The offered answers were “1”, “2”, “4”, and “other.” The exact results are shown above (see Figure 1). On average, it is two to three projects when all the answers are considered, and three to four projects if only answers above zero are taken into account.

The fifth question asked about how many lessons are needed per one project (from planning to realisation and evaluation) according to the respondents. The answers varied, with the minimum being one lesson and the maximum six lessons, the average being three lessons.

In the sixth question, the respondents were asked to define projects in their own words. This open-ended question has been included in order to see how teachers understand projects. The answers were coded and divided into several categories. One of the most frequent responses was that it is a students’ activity, which leads to a final product, they work with a certain topic, and usually in groups. The other less frequented answers were that it is an activity with a goal, students work independently on their teacher, there are given criteria of the work, students are given autonomy to make decisions and also responsibility for their work, they apply and combine the knowledge and skills that they already have, and they delve deeper into the topic.

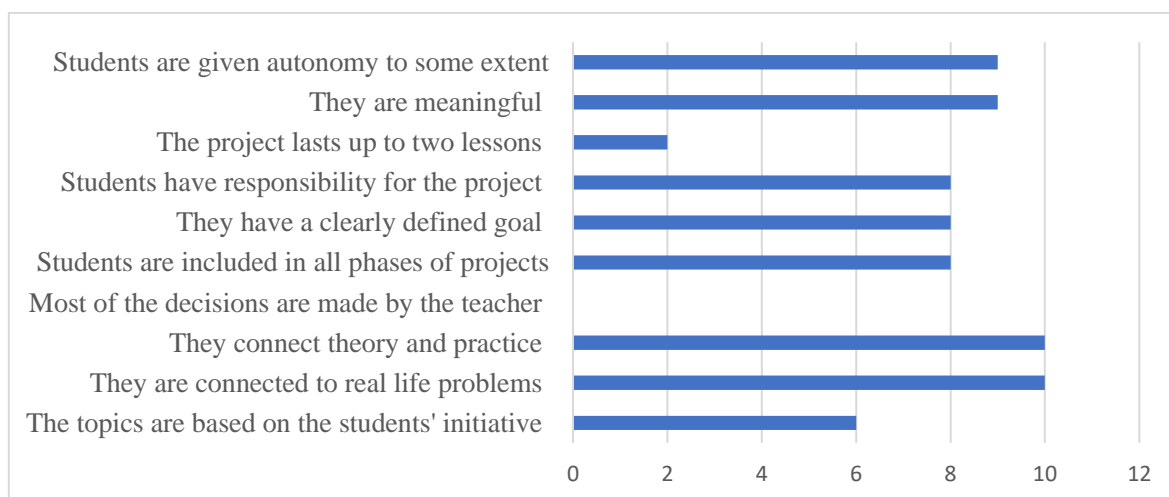
The next questions focused on the aspect of interdisciplinarity of the projects. Question number seven asked the respondents whether they ever include more subjects into their English projects. It was a closed question with three options – four responses were “yes,” and the same number of responses was “no,” three people selected “I do not include projects at all.” The teachers who include more subjects in their English language projects were asked to describe an example of such cooperation – which subjects were

included, in which form, to what extent, and how the cooperation among teachers work. Out of the four responses, two provided only a list of subjects that are included, and the other two answers responded partially to the question. Civics and Geography were mentioned the most as subjects that are combined with English. There was no mention of cooperation among teachers. According to one of the answers, the realised projects are usually in the form of an inter-subject relationship, therefore, included in multiple subjects individually. The other answer provided an example of a project where English and German were combined with History through the topic of Pilsen liberation.

Out of the respondents who do realise projects in their lessons, only half responded that they include more subjects, however, this result is not consistent with the following question. Question number ten asked the respondents whether they think that at least some of their projects in English are interdisciplinary (a definition of interdisciplinarity had been provided). It was a closed question with four options – six people responded “yes,” three people responded “I do not include projects at all,” one response was “no” and one “I do not know.”

**Figure 2**

*Selected Statements That Apply to Projects in General Regarding Teacher's Perspective*



To see how teachers understand projects, the respondents were asked to select all statements that apply to projects in general in question number eleven. The options were based on the keywords from definitions of proper projects, and two options were deliberately incorrect. As shown in Figure 2, nobody selected the first one – “most of the decisions are made by the teachers,” however, two respondents selected the second one, which was “the project lasts up to two lessons.”

The last question focused on what the respondents consider the best source of inspiration and information for project teaching. The respondents could choose multiple answers and also add their own answers. The most frequent answers were “seminars and webinars”, and “colleagues' experiences”, both were selected seven times. On the other hand, the option of “university education” was not selected once.

### **Commentary**

The results include an interesting insight into the issue of interdisciplinarity and projects on a sample of selected Pilsner schools. The questionnaire survey results cannot be generalised due to the lower number of responses. However, they provide context for the SEPs analysis and allow to present the teachers' point of view.

The results showed that teachers mostly know that projects are included in the SEPs of their schools and that most teachers do include projects in their lessons. The overall view of the projects is rather positive. This was also shown in the answers about the benefits of projects, where the respondents listed many benefits of project teaching, including the interdisciplinary approach of this method.

Only a minority of respondents held a negative attitude towards the projects, two of the respondents did not find any benefits of the projects. Unfortunately, only some respondents explained why they do not include projects. The provided responses show that it is not a problem with the project method as such but rather with the circumstances of the reality of traditional schools, such as lack of time, too many children in the classroom, and that students do not have the required skills for project teaching. The lack of skills has already been mentioned as one of the limitations of project teaching in the theoretical part of this thesis. For successful projects, it is necessary that students are able to do the required work, and they need to have certain skills for that. The respondent mentioned specifically that students are not able to create the final product during project teaching, therefore they focus on the development of these skills during the lessons, which seems to be an ideal solution to this problem and might lead to a successful implementation of projects in the future.

When asked about what would help them to include more projects, the majority of the respondents replied that they would need more time. There are usually three lessons of English per week in each grade, which is the minimum set by the FEP BE (MŠMT, 2021), some schools have more lessons per week due to the use of available time allotment for

English. The project method can be time-consuming; it was one of the limitations mentioned in the theoretical part – Petty (2009) set a minimum of eight hours as a requirement for projects. Since it is quite a lot, the requirement of more than two lessons has been set for this thesis. The question remains, whether more English lessons would truly solve the issue since teachers never seem to have enough time. Out of the respondents' schools, only one has more lessons of English per week than the required minimum, yet the respondent also answered that more time would help to include projects to a greater extent. Aside from more time, what could be beneficial is the cooperation among teachers and the incorporation of interdisciplinary projects through multiple subjects at once, therefore saving time.

Two questions were dedicated to time spent on projects and their amount. The average answer of three to four projects per year seems manageable. The highest answer was ten, in this case, the question of the quality of such project arises since the respondent stated that they dedicate one lesson to each project. Such projects cannot possibly be proper projects due to the lack of time dedicated to the activity, and according to Petty (2009), it would be called an assignment. The average of all responses was three, which is just above the minimum set for this thesis.

Questions number six and eleven focused on the definition of projects to see how the respondents understand projects and, therefore, whether their projects are proper projects. Based on the answers, it seems that teachers know what the main elements of a proper project are. Their answers included the main elements of proper projects, which are defined in the theoretical part of this work. However, not all answers included all the elements of proper projects, and two respondents selected the false answer claiming that projects should last up to two lessons. A deeper understanding of the method could lead to higher quality implementation of projects.

The majority of questions focused on projects in order to see what the situation at schools is, and to determine whether these are proper projects or not. Further, based on the data provided by the teachers, the interdisciplinarity of projects was to be assessed. Unfortunately, there were only a few examples provided by the respondents, and they were not detailed enough to assess their interdisciplinarity. However, almost a third of the respondents stated that they include multiple subjects in project teaching (and it is important to note that simply including multiple subjects does not make the project interdisciplinary), and almost half of the respondents answered that at least some of their

projects are interdisciplinary according to the provided definition. It could be expected that the respondents would answer the same to both questions, so the reason for the discrepancy between the answers to these two questions is unknown. A possible explanation could be, that due to the provided definition the respondents realised that some of their activities in class are interdisciplinary without connecting it to the previous question, which asked about the cooperation of disciplines (school subjects in this case). A positive sign is also that several respondents included interdisciplinarity (in other words) as one of the benefits of project teaching, which indicates that teachers realise the interdisciplinary aspect of project teaching.

The last question revealed that teachers consider the experiences of their colleagues as the best source of information, aside from seminars and webinars. On the other hand, literature appeared once, and universities not at all. Interestingly, in cases where there were more respondents from one school, their answers were similar, at least in the sense of whether they include projects and their knowledge of SEP. In order to implement interdisciplinary projects successfully, it is necessary to understand how projects should work and how to make them truly interdisciplinary. Due to the complexity of this method, it is important to learn from reliable sources.

The SEPs analysis has shown that all of the selected schools include projects to some extent, and most of the schools specifically mentioned the project method in English language. Although specific examples were rare, most respondents answered that they include projects in their lessons. However, the quality of such projects and their level of interdisciplinarity remains unknown. The inclusion of interdisciplinary projects in EFL classes can lead not only to the development of language skills and fulfilment of the expected outcomes prescribed by the curriculum but also to the development of various important skills and students' independence. It also allows to include more complex topics and, through the involvement of various disciplines and their methods, more authentic life-like situations are created. Since foreign languages already deal with various general topics, they seem ideal for the project method and interdisciplinary approach.

The answer to the first research question, which asked about the occurrence of projects as samples of interdisciplinarity in the School Educational Programmes is that interdisciplinary projects occurred rarely. Although projects, in general, occurred frequently, it was mostly in the form of mentions and general proclamations. Specific examples of projects were relatively rare, and usually, there was not enough information

about the projects to be able to determine whether they were interdisciplinary. However, the examples included at least some elements of interdisciplinarity, and the projects might be fully interdisciplinary, although it was not clearly stated in the documents. Furthermore, to answer the sub-question which focused on the context of English – although most of the SEPs at least mentioned projects in English, specific examples of the projects occurred only rarely, and those projects did not show any clear signs of interdisciplinarity.

The second research question asked to what extent are the projects realised in ELT interdisciplinary regarding teachers' perspective. In an attempt to answer this question, lower secondary English teachers at the selected Pilsner schools were given the questionnaire. The research has shown that some of the realised projects are interdisciplinary according to the teachers' perspective. Over half of the respondents stated that at least some of their projects are interdisciplinary. The provided context suggests that some of the projects are proper projects and include markers of interdisciplinarity. To verify the answers and objectively assess the interdisciplinarity of the projects further research is required.

This chapter presented the results of the analysis of selected School Educational Programmes and the questionnaire survey. A thorough commentary was provided for both parts of this research as well as the main findings in the form of answers to the research questions. The next chapter will discuss the implications of this research.



## V. IMPLICATIONS

This chapter will discuss the possible implications of this research. It will introduce the implications for teaching, where the findings important for teachers will be summarised. Then the limitations of the research will be described, and ideas for future research will be introduced.

### **Implications for Teaching**

It was described in the theoretical part of this work that the interdisciplinary approach realised through the project method has many benefits, such as the development of students' responsibility and independence, their active involvement, a connection of school to practical life, and the option to cover complex topics through an interdisciplinary approach. To achieve these benefits, it is necessary to understand the method fully and to learn to do it properly. Thorough preparation and planning can help to overcome some of the possible issues. Although there are some limitations, or even disadvantages, we believe that they are overbalanced by the benefits. The research has shown that the teachers usually realise the benefits, but still, not all respondents have decided to implement projects into their lessons.

Both projects and elements of interdisciplinarity occur in the curricular documents on the national level, in the Framework Educational Program for Basic Education, which is reflected in the curricular documents of the school level, the School Educational Programmes. Therefore, these elements should be implemented by the teachers into their lessons. Since project teaching is a complex method and it has some requirements, it might take some time and practice to implement it into lessons. As mentioned in the survey, the students also have to be able to participate in the projects and have the required skills for that. Preparation of the students and practicing the required skills can lead to successful project implementation.

The interdisciplinary aspect of projects might be challenging for some teachers since it requires knowledge from various areas, in this case, school subjects. For this reason, cooperation with colleagues is recommended.

### **Limitations of the Research**

This research focuses on the complex topic of interdisciplinarity in education. Due to the extent of this work, the topic has been limited to projects as samples of interdisciplinarity. Although various aspects of interdisciplinary approach have been

searched for in the analysis, it is possible that not all have been found since it is such a complex topic. The term interdisciplinarity is also not used very frequently in the Czech context.

For this research, the convenient sample of the SEPs, which were available online, was used, and it was limited to the public lower secondary schools in Pilsen. We realise that different sample might bring different results. However, thirteen SEPs have been analysed as a part of this research, which presents a respectable sample of Pilsner schools and can be generalised.

The focus on publicly available documentation in the form of SEPs is one of the limitations of this research. Although the SEPs are prescriptive and should be reflected in the school reality, they do not have to, and possibly cannot, include every single project and element of interdisciplinarity that occurs during the school year. So, the results of the analysis do not fully reflect the schools' reality, they only describe what it should be like based on the curricular documents. In order to address this limitation, the questionnaire survey has been included in the research as a second source of data.

The questionnaire survey has been selected as an appropriate tool for this task since it is possible to collect higher numbers of answers and possibly quantify the research. Unfortunately, the low number of answers did not allow to do this, and for this reason, the results cannot be generalised. They provided the missing context for some of the analysed SEPs and allowed teachers to express themselves, but further research would be required to draw more general conclusions. It was difficult to collect even this number of answers since schools, and teachers especially, seem to be overwhelmed by questionnaire surveys. The majority of the schools also do not share their teachers' subject specialization, so the survey had to be sent to the schools' headteachers or deputy headteachers, which might have led to the situation where some of the teachers did not receive the questionnaire survey. A possible solution to this issue would be visiting all selected schools in person and asking the teachers to provide answers for the survey or to select different tools for data collection. For example, an interview might be an interesting tool. Although it does not allow to collect as many responses, more detailed answers could be collected, and the research could provide more qualitative analysis.

Another limitation of the questionnaire survey is the choice of questions and their formulation. Simple and mostly closed-ended questions have been selected to make the

questionnaire accessible and hopefully gain more answers. This approach has not been successful and led to limited answers. The respondents also sometimes did not answer the sub-questions or follow-up questions. A better formulation of the questions and possibly a use of different online tools to collect the answers might help avoid this issue in the future.

### **Suggestions for Further Research**

This research was limited to the sample of thirteen Pilsner schools, and it was further limited to lower secondary education and focused on English. This study might be easily expanded through a selection of a different sample, for example, the inclusion of primary or upper-secondary education. Recreating this research while overcoming the limitations of this research, which were described above, might also be beneficial.

This research analysed the curricular documents on the state and school level and viewed the topic of projects as samples of interdisciplinarity from teachers' perspective. The natural next step of this research would be a case study of a concrete project, which would allow to observe the process of project teaching and objectively assess the quality of the project and its interdisciplinary aspect. This step would provide the missing context to this research and enable viewing the problematics from students' perspective. It would also allow to compare the theoretical findings of SEPs with the teachers' perspective and the reality of observation. Finding a school where interdisciplinary projects are realised and which would be willing to participate in such research would be a key part and would require timely planning since projects do not have to occur very frequently during the school year.

A similar study on the topic of interdisciplinarity has been conducted by Poesová et al. (2021). The study describes the inclusion of interdisciplinarity in the curricular documents of several English-speaking countries and then focuses on the context of English in Czech education. Twenty SEPs of Basic Schools in Prague have been analysed as a part of the research. The focus was on the occurrence of inter-subject relations and cross-curricular subjects in English and the quality of such occurrences. The results are presented qualitatively and quantitatively.

This chapter presented the implications of this research – specifically the implication for teachers, the limitations of this research, and suggestions for further research. The next chapter will conclude this thesis through a summary of the main thoughts.

## VI. CONCLUSION

The term interdisciplinarity has been gaining popularity in recent years. The interdisciplinary approach allows to combine the knowledge and methods of multiple scientific fields in order to reach a new level of understanding due to this cooperation. This approach in education can be realised in numerous ways, one of which is the project method. This complex method is based on interdisciplinarity, as it could not fully function without it. Although projects might be viewed as a modern method, they have been used for over a century. Teaching through projects can be very beneficial, as it helps to develop various skills, students' independence and responsibility, and it connects school theory with real life problems, which can also be motivational. At the same time, there are some limitations, project teaching requires planning and thorough preparation, a lot of time, and the students need to be capable of completing the task. The interdisciplinary aspect of projects might be viewed as a limitation, considering the teachers' subject specializations, therefore cooperation among teachers is recommended.

Projects are mentioned in the curricular documents at the national level – the FEP BE and the research has shown that they were also included in all of the selected SEPs, which means that they should also be realised in the lessons. However, not all projects are *proper* projects or interdisciplinary. Due to the lack of provided information, it was not always possible to classify the occurrence. Specific examples of projects were also rare. To get more context and also to be able to verify the findings from the official documents, a questionnaire survey has been conducted among the English teachers of the selected basic schools. Due to the lower number of responses, the results cannot be quantified, however, they serve as an interesting addition to the SEP analysis. The inclusion of interdisciplinary projects in EFL classes can help to develop communicative skills in the foreign language and allows to cover complex topic connected to real life. According to the responses, the teachers at least partially know the definition of proper projects, the majority of teachers include projects in their lessons, and they also consider at least some of these projects to be interdisciplinary. On the other hand, the quality of these projects and their level of interdisciplinarity remains unknown and requires further research, for which this thesis might serve as an inspiration.

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## APPENDICES

### APPENDIX A

#### **The Questionnaire Survey in Czech**

##### ***Realizace projektů ve výuce jakožto představitelů interdisciplinarity***

Vážené kolegyně, vážení kolegové,

jmenuji se Kristýna Šimková a jsem studentkou Pedagogické fakulty na Západočeské univerzitě. Zabývám se tématem interdisciplinarity ve výuce anglického jazyka se zaměřením na projekty, součástí tohoto výzkumu je i dotazníkové šetření na vybraných základních školách v Plzni.

Dovoluji si Vás požádat o vyplnění tohoto dotazníku, který nezabere více než 15 minut Vašeho času. Veškeré Vámi uvedené informace budou zpracovány zcela anonymně, budou využity pouze pro účely této práce a bude s nimi nakládáno dle etických standardů akademické práce. Prosím o vyplnění do 2.6.2023.

V případě jakýchkoli dotazů mě můžete kontaktovat na emailu: [simkov.kristyn@gmail.com](mailto:simkov.kristyn@gmail.com). Pokud budete mít zájem o výsledky mé práce, ráda Vám ji zašlu.

Děkuji za Váš čas a ochotu.

Kristýna Šimková

##### ***Identifikace respondenta:***

Pohlaví:

Věk:

Vyberte si prosím identifikační kód, např. poslední trojčíslí Vašeho telefonu.

Základní škola, na které působíte:

Délka praxe:

Aprobace:

Které další předměty, kromě anglického jazyka, učíte?

1. Myslíte si, že Vaše ŠVP obsahuje projekty/projektovou výuku? (K odpovědi na tuto otázku není potřeba nahlížet do ŠVP vaší školy.)
  - Ano
  - Ne
  - Nevím
  
2. Jaké výhody spatřujete v zařazování projektů do výuky?
  
3. Zařazujete Vy sami do svých hodin **anglického jazyka** projekty/projektovou výuku? Pokud ne, napište prosím do možnosti "jiná" z jakého důvodu projekty nezařazujete.
  - Ano
  - Ne
  - jiná \_\_\_\_\_
  
4. Kolik projektů ročně přibližně připadá na jednu třídu v rámci hodin anglického jazyka?
  - 1
  - 2
  - 4
  - jiné
  
5. Kolik **vyučovacích hodin** přibližně zabere jeden projekt (od plánování po realizaci a zhodnocení)?
  
6. Jak byste vlastními slovy definovali projekt? Stručně popište.
  
7. Zapojuje se do Vašich projektů v rámci anglického jazyka někdy více předmětů?
  - Ano
  - Ne
  - Projekty vůbec nezařazují
  
8. Pokud jste na předchozí otázku odpověděli ano, popište prosím stručně o které další předměty se jedná, jakou formou a do jaké míry se zapojují a jak probíhá spolupráce mezi učiteli. Použijte konkrétní příklad. Pokud jste odpověděli ne, tuto otázku přeskočte.

9. Co by vám pomohlo zařadit více projektů do výuky?
10. Myslíte si, že jsou alespoň některé z Vašich projektů v rámci hodin anglického jazyka interdisciplinární? (*tj. propojující znalosti, terminologii a přístupy z více než jedné disciplíny, potažmo předmětu, a žáci díky tomuto propojení objevují nové souvislosti*)
- Ano
  - Ne
  - Nevím
  - Projekty vůbec nezařazují
11. Vyberte všechna tvrzení, která dle Vašeho názoru platí pro projekty:
- jsou propojené s životem a reálnými problémy
  - témata vychází z iniciativy studentů
  - propojují teorii s praxí
  - studenti se účastní všech fází projektu, včetně plánování
  - jsou smysluplné
  - studenti mají jistou míru autonomie
  - mají jasně stanovený cíl
  - studenti přebírají zodpovědnost za projekt
  - projekt celkově trvá do dvou vyučovacích hodin
  - většinu rozhodování vykonává učitel
12. Jaké jsou podle Vás nejlepší zdroje inspirace a informací pro projektovou výuku?
- odborná literatura
  - školení a webináře
  - zkušenosti kolegů
  - vysokoškolské vzdělávání
  - jiné \_\_\_\_\_

## APPENDIX B

### **The Questionnaire Survey in English**

#### ***Projects as Samples of Interdisciplinary Education Realisation***

Dear colleagues,

My name is Kristýna Šimková and I am a student of the Faculty of Education at the University of West Bohemia. My research is focused on the topic of interdisciplinarity in English language teaching, specifically on projects, a part of this research is also a questionnaire survey at selected basic schools in Pilsen.

I would like to ask you to fill out this questionnaire, which will not take more than 15 minutes of your time. All provided information will be processed anonymously, they will be used only for the purposes of this work and handled according to the ethical standards of academic research. Please fill out the questionnaire by June 2, 2023.

If you have any questions, you can contact me by email: [simkov.kristyn@gmail.com](mailto:simkov.kristyn@gmail.com). If you are interested in the results of my work, I will send it to you.

Thank you for your time and cooperation.

Kristýna Šimková

#### ***Identification of the respondent:***

Gender:

Age:

Please choose an identification code, e.g. the last three digits of your phone:

Basic school where you work:

Length of work experience:

Subject specialization:

What other subjects do you teach besides English language?

1. Do you think that your SEP includes projects/project teaching? (To answer this question, it is not necessary to look into the SEP of your school.)
  - Yes
  - No
  - I do not know
  
2. What advantages do you see in including projects in teaching?
  
3. Do you include projects/project-based teaching into your **English lessons**? If not, please write in the option "other" why you do not include projects.
  - Yes
  - No
  - other \_\_\_\_\_
  
4. Approximately how many projects per year are there in one English class?
  - 1
  - 2
  - 4
  - other
  
5. Approximately how many lessons does one project take (from planning to realisation and evaluation)?
  
6. How would you define the project in your own words? Briefly describe.
  
7. Do your English language projects involve more than one subject?
  - Yes
  - No
  - I do not include projects at all
  
8. If you answered yes to the previous question, please describe briefly which other subjects are involved, in what form and to what extent they are involved, and how does the cooperation between teachers work. Use a specific example. If you answered no, skip this question.

9. What would help you to include more projects into your lessons?
10. Do you think that at least some of your projects within your English lessons are interdisciplinary? (*i.e. connecting knowledge, terminology and approaches from more than one discipline – subject, and pupils discover new connections due to this connection*)
- Yes
  - No
  - I do not know
  - I do not include projects at all
11. Select all the statements that, in your opinion, apply to projects:
- They are connected to real life problems
  - The topics are based on the students' initiative
  - They connect theory and practice
  - Students are included in all phases of projects
  - They are meaningful
  - Students are given autonomy to some extent
  - They have a clearly defined goal
  - Students have responsibility for the project
  - The project lasts up to two lessons
  - Most of the decisions are made by the teacher
12. What do you think are the best sources of inspiration and information for project teaching?
- literature
  - seminars and webinars
  - colleagues' experiences
  - university education
  - other \_\_\_\_\_

## SUMMMARY IN CZECH

Tato diplomová práce se zabývá tématem interdisciplinárního přístupu a jeho realizace ve vzdělávání prostřednictvím projektů. Interdisciplinarita umožňuje kombinovat přístupy a metody více oborů a tím vytvářet nové výstupy, proto může být její aplikace ve vzdělávání přínosná. Teoretická část této práce přibližuje téma interdisciplinarity a vzhledem k tomu, že pozornost je zaměřena převážně na projektovou metodu, je následně tato metoda podrobně prozkoumána – její historie, principy, přínosy a omezení a její propojení s interdisciplinaritou. Vzhledem k zaměření praktické části je zahrnut i výskyt projektů a interdisciplinarity v českých kurikulárních dokumentech národní úrovně, tedy v Rámcovém vzdělávacím programu pro základní vzdělávání. Druhá část práce popisuje výzkum, který byl zaměřen na výskyt projektů jakožto představitelů interdisciplinarity v kurikulárních dokumentech školní úrovně (Školní vzdělávací programy) a na realizaci těchto projektů z pohledu učitelů anglického jazyka. Výzkum byl proveden pomocí analýzy vybraných školních vzdělávacích programů a dotazníkového šetření, které zjišťovalo postoje učitelů. Výsledky ukázaly, že projekty se v dokumentech vyskytují poměrně často, ale jejich interdisciplinaritu nelze plně posoudit na základě poskytnutých dat. Některé případy však vykazovaly znaky interdisciplinarity a z odpovědí učitelů také vyplynulo, že některé projekty realizované v hodinách anglického jazyka jsou podle učitelů interdisciplinární.