

**UNIVERSITY OF TARTU
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**CREATING TEACHING MATERIALS FOR
IMPLEMENTING PROJECT BASED LEARNING IN YEAR
6 EFL CLASS
MA thesis**

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**TARTU
2024**

ABSTRACT

Project Based Learning is a student-centred method that allows to learn content through finding solutions to a driving question and presenting the results publicly either in classroom or outside. The method involves authentic materials and enhances student autonomy, creating opportunities for developing the 21st century skills. The aim of the present master's thesis is to create materials for implementing Project Based Learning in Estonian EFL classroom to teach Scottish culture and develop the skills of communication, collaboration, critical thinking, and creativity in students.

The thesis consists of an introduction, two chapters and a conclusion. Introduction outlines the historical background of Project Based Learning and states the aims of the thesis. The first chapter provides an overview of Project Based Learning, its implementation in EFL classroom and 21st century skills. The second chapter focuses on the principles for creating lesson plans and materials for implementing PBL, piloting the materials and discussion. The materials compiled for the project are included in the appendices.

List of abbreviations

EFL – English as a Foreign Language

ICT – Information and Communication Technologies

ILE – I Love English

OECD - Organisation for Economic Co-operation and Development

PBL – Project Based Learning

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INTRODUCTION

Although Project Based Learning (PBL) is often considered a modern teaching method to help students achieve 21st century skills, it dates to more than a hundred years ago, being rooted in the work of John Dewey, William H. Kilpatrick and Jean Piaget to name a few.

Dewey drew attention to the controversy between the learning environment in schools and preparing students for later working lives by emphasising the need to allow students to learn through authentic experience and communication and, thus, considered important to give students an opportunity to acquire skills like cooperation, communication, and critical thinking (Dewey, 1915). However, according to Knoll (2012), it was Kilpatrick who gave name to the project method and started practising it in classrooms in the United States. Knoll (2012) discusses that the Project Method did not prove to be effective right from the beginning, but it had strong supporters, and it did not disappear from the educational landscape. On the contrary, it has been developing ever since and by 21st century, it has been found a successful method by scientists, researchers, and educationalists all over the world. Piaget's ideas and research on constructivism from as early as the 1920s are well compatible with PBL where the focus is on constructing new knowledge through experience (Sjøberg, 2007, Gallagher and Reid 2002). To help medical students integrate fragments of knowledge and put them into practice, an approach of Problem Based Learning was created in the 1960's and it has been gradually implemented and researched in educational establishments all over the world, giving rise to Project Based Learning (Boss et al 2015).

PBL is a student-centred method, involving a significant question or a problem, finding creative solutions through inquiries and discussions, and a final product to present, encouraging students' autonomy (Bell 2010, Blumenfeld et al 1991, Boss et al 2015, Thomas

2000). It has also been found that in addition to deeper learning of the topic, PBL is effective in developing 21st century skills, such as communication, collaboration, critical thinking and creativity (Bell 2010, Boss et al 2015). In 2018, Organisation for Economic Co-operation and Development (OECD) describes PBL as one of the innovative teaching methods even though it has been around and researched for decades already. OECD (2018: 101) reports that although the number of schools allegedly using PBL is high, OECD have found only 30% of teachers actually apply it. In addition, the “proportion of lower secondary teachers that engage their students in projects that require at least one week to complete” is just over 15% in Estonia, according to the Teaching and Learning International Survey (TALIS) (OECD, 2018). Moreover, in Estonia there seems to have little research been done regarding the implementation of PBL in English as a Foreign Language (EFL) class.

A study to determine EFL teachers' beliefs and practices in PBL in second stage of education was carried out in Estonia by Keerpalu (2020). Six teachers of the same school participated in the study and had all practised PBL at some point. The study revealed that the teachers did not mention going through all the stages of PBL generally considered necessary. It was also concluded that teachers may have different understandings of the stages and organisation of PBL. In addition, Keerpalu (2020: 34) inferred that the teachers found PBL challenging due to lack of time, students' low language levels, teachers' passive role in PBL lessons and difficulties with reflection skills among their students. On the positive side of implementing PBL, the teachers mentioned possibilities in integrating subjects, constructive learning, and a rise in motivation. The study as well as the results from the TALIS (OECD, 2018) reveal that PBL deserves more attention in Estonia to raise awareness of the method and its positive effects on student learning.

The aims of the present thesis are as follows:

- to create lesson plans and materials for implementing PBL in the 6th grade English class.
- to teach Scottish culture through PBL.
- to develop 21st century skills – communication, collaboration, critical thinking, and creativity – in students through PBL.

There are two main chapters in the thesis. The first chapter gives an overview of PBL, its effect on teaching EFL and the development of 21st century skills. The second chapter describes the materials that were created for implementing PBL in a 6th grade EFL class and are based on a PBL learning and teaching models by Boss et al (2015). It is followed by a discussion whether the created materials are suitable to teach Scottish culture and develop the 21st century skills in students.

1. LITERATURE REVIEW: PROJECT BASED LEARNING

1.1 Project Based Learning

PBL as a method has been practised for decades already due to its many positive effects. PBL seems to be relatively uncommon in Estonian schools as confirmed by the survey of OECD (2018). Being a complex learning method, PBL has been defined and described in a variety of ways, yet the main characteristics are shared between the definitions – PBL is student-centred, authentic and develops 21st century skills in learners (Bell 2010, Boss et al 2015, Bloom et al 2017, Halvorsen 2018).

According to Bell (2010: 39), “PBL is an approach to instruction that teaches curriculum concepts through a project”. It is important to remember that teaching must take place within the project and the project should not be treated as an additional or final assignment following more traditional learning methods (Boss et al 2015: 67-70).

Because of the complexity of PBL, it is important to keep the key elements of this method in mind. As explained by Blumenfeld et al (1991: 371), there are two main principles to be considered when planning a project. These are constructing a driving question from which the learning activities derive and offering a solution to it in the form of an end product. Bell (2010: 39) and Boss et al (2015: 92) stress the importance of a driving question that should form the basis of the activities planned. The driving question should be open-ended, appealing to students and in accordance with the learning aims (Larmer and Mergendoller 2010, Boss et al 2015). As conveyed by Bell (2010: 39), a well-composed driving-question should create a path of meaningful activities that lead to a final product ready to be shared with an audience.

To distinguish PBL from other forms of active learning, Thomas (2000) has put forth a set of criteria as follows:

- PBL projects are central, not peripheral to the curriculum /.../
- PBL projects are focused on questions or problems that "drive" students to encounter (and struggle with) the central concepts and principles of a discipline /.../
- Projects involve students in a constructive investigation /.../
- Projects are student-driven to some significant degree /.../
- Projects are realistic, not school-like /.../. (Thomas 2000: 3-4)

Based on these criteria it can be said that in addition to a central project and a driving question, other important aspects to consider and bear in mind are meaningful research, student choice and authenticity.

When it comes to research as an integral part of PBL, it has been found that student investigations are multifaceted, involving critical thinking, constructing new knowledge and application of specific skills (Boss et al 2015, Blumenfeld et al 1991). In order for a project to be considered PBL, the process must be challenging for students, making them acquire new knowledge and apply new skills instead of applying previously existing knowledge or competence (Thomas 2000). Students can conduct research in several ways, such as visiting the library, interviewing specialists, recording data, or using information and communication technologies (ICT). Bell (2010: 42) stresses the importance of teacher's guidance and support as students may need assistance with necessary skills in using ICT and applying critical thinking skills when evaluating the result of their research.

Modern education puts emphasis on student autonomy more than ever. PBL provides a suitable setting to develop that ability in learners. Traditional teaching methods place the teacher in the centre of a lesson, being actively involved in passing on information to students, which, in turn, makes students passive receivers (Bloom et al 2017). Boss et al (2015) point out the importance of keeping a balance between student's choice and teacher's guidance to ensure that students have a say in what and how they learn while teachers manage to achieve the learning aims. Bell (2010: 40) stresses the significance of time

management and thorough planning as well as self-assessment by students themselves throughout the process. Although PBL is student-centred, it does not mean that teachers can take a step back and continue as observers after the project is launched. Grossman et al (2019: 45) point out that to develop higher level thinking skills, students need constant supervision and instruction from the teacher. In addition, Bloom et al (2017) find that PBL has a positive effect on student motivation deriving from the autonomy PBL offers.

One of the essential features of PBL is authenticity and therefore, all the aspects of PBL must be as realistic as possible as PBL creates a connection between what is being learnt in the classroom and experienced in the real world (Blumenfeld et al 1991; Bell 2010). Thomas (2000: 3) states that projects should be perceived as authentic as possible by students and the final product should “have the potential to be implemented” outside the classroom. Bloom et al (2017) concluded in their study that authenticity played a significant role in increasing student motivation and dedication to the project. Therefore, students should feel a personal connection to the project and see the possibilities to apply it in their lives to make PBL successful. Grossmann et al (2019: 46) refer to the possibility that authentic projects may influence student identity when asking about students’ personal opinions on the matter at hand. This interesting aspect indicates that PBL does have the potential to affect students personally and should therefore be handled carefully.

PBL has also been claimed to have a positive effect on students’ motivation. Students consider collaboration and working towards a common outcome an important and motivating aspect of PBL (Bloom et al 2017). To complete the curriculum, students often need to learn details that do not attract their attention. Hinnant-Crawford and Virtue (2019) found that PBL increased student motivation to learn a new topic even if it did not arouse interest in them, and the reason behind it was the motivation and necessity to finish the project. In addition, students may feel greater responsibility for their group mates than their

teacher as they wish to remain reliable in the eyes of their peers and therefore must contribute equally or as expected by fellow students (Bell 2010).

1.1.1 Scaffolding

An aspect of PBL that needs closer examination is scaffolding. PBL brings together a variety of activities that require specific skills from students. The younger and more inexperienced the students are the more support they need (Boss et al, 2015). Blumenfeld et al (1991: 378) state that students need skills specific to the project at hand, making scaffolding throughout the project an integral part of the whole process. Boss et al (2015: 50-51) have described ways of scaffolding as follows: “Scaffolding may include everything from structured lessons and lectures to student handouts and readings, to tools and processes that support students in achieving project goals.” Blumenfeld et al (1991: 383) have pointed out that students need to use higher level thinking skills to be successful in PBL and therefore, scaffolding proves a necessary tool for those who may not have these skills at the required level. Therefore, when designing and managing a project, it is necessary for a teacher to keep in mind that though PBL is considered a student-centred approach and the focus is on student autonomy and independent work, students still may need guidance from their teacher in specific areas of knowledge or skill.

Austin et al (2020: 1110) have found that PBL enhances student-teacher relationships and creates an environment where teachers offer support to students in a variety of areas like motivation, setting goals, making choices, and reflecting. Research has shown that there may be shortcomings in self-directed learning and students need to be taught how to learn and manage their resources (Thomas 2000: 34). At the same time, it is important to remember that scaffolding is necessary only as long as students have required the missing

skill, after which students become self-directed in that specific area, and therefore scaffolding should be taken as a temporary measure (Bell 2010: 41).

1.1.2 Assessment

Bell (2010: 43) claims that 21st century skills are not often assessable with traditional academic tests. He suggests rubrics and reflection to assess students when using the method of PBL. However, Boss et al (2015: 47) maintain that traditional assessment is also suitable to use, especially for summative assessment. PBL can stretch over a lengthy period and students need feedback on their progress to understand if their choices are suitable for reaching the goals. Therefore, students should receive continuous feedback. Formative assessment, reflection, and peer-assessment should be used throughout the process, but the project may also end with summative assessment in the form of tests or assignments if considered necessary by the teacher (Boss et al 2015: 47).

Kasimatis et al (2019) discuss the efficiency of rubrics when evaluating student projects and stress the importance of considering social and professional aspects of learning outcomes. Thus, it is not just content that needs to be assessed, but also communication and collaboration need to be considered. Although Sharma (2019: 20) claims that rubrics are tools mainly used for summative assessment rather than instruction, it has been found that students appreciate the use of a rubric to assess and reflect on their work during the process (Kasimatis et al 2019: 186, Kulprasit 2016: 35). As students need to work in close collaboration with each other, they need the means to assess their own work as well as their partners' contribution. A rubric can be used as a tool to maintain focus on the important aspects of the project. Sharma (2016:35) also points out that rubric is an effective way to encourage learner autonomy and turn the learning process more learner centred. Students

need an opportunity to assess their working process to make improvements and learn from it (Blumenfeld et al, 1991:378).

1.1.3 Challenges

Both, teachers and students have concerns regarding PBL. Mergendoller and Thomas (2005) describe a controversy between teacher's own deeply rooted beliefs arisen from traditional learning methods and efforts to apply PBL as a modern method. Hinnant-Crawford and Virtue (2019) studied students' perceptions on PBL and found that students were concerned about not going through as much material as they were in regular classes and were therefore afraid of missing out on learning opportunities, even though their own learning through PBL was deeper and more satisfactory. Students were also found worried about being assessed as a group, not individually like they were used to. Transition from traditional learning methods to PBL might make students feel insecure and cause them doubt in this method (Hinnant-Crawford and Virtue, 2019). When comparing those observations from students and teachers, it shows that traditional teacher-centred and textbook-based learning methods are so deep-seated that it may become a serious obstacle on both sides to implement PBL effectively.

Among other challenges, teachers' concerns over class discipline and feeling a loss of control over students' learning when implementing PBL have been stated (Aksela and Haatainen 2019, Keerpalu 2020, Mergendoller and Thomas 2005). To prevent discipline problems, it is advisable to plan the project carefully and enhance classroom culture by close cooperation with the students (Boss et al 2015, Mergendoller and Thomas 2005). Aksela and Haatainen (2019: 15) conclude that teachers and students need external support to follow through the process of PBL and suggest considering "in-service training for teachers" to minimise any possible problems.

1.1.4 Teaching and learning models

Boss et al (2015) compiled models for Gold Standard PBL that states the key elements for project based learning and teaching and is in compliance with the above discussed PBL features.

Project Based Learning model:



Figure 1. Boss et al (2015: 34).

In the centre of both models are the key knowledge, understanding and success skills which state that the goal of Gold Standard PBL for students is to “learn deeply and develop the skills they will need for success in college, career, and life” (Boss et al 2015: 33).

The key features that encircle the key knowledge, understanding and success skills, are considered crucial to make PBL effective and purposeful. For the students, every project

should begin with a challenging problem or question that gives the project a meaning and a goal. Students gain new knowledge and skills when attempting to find solutions or answers and they should be able to apply those skills and knowledge in the future in another context (Boss et al 2015: 37).

The next key factor for finding answers or solutions to the challenging problem or question is sustained inquiry. In this stage, students should determine what their previous knowledge on the topic is and what needs to be learnt to answer the challenging question. There may be different forms of inquiry from conducting web search to making experiments and it should be guided by teacher's careful planning of the project (Boss et al 2015: 39).

Authenticity as well as student choice and voice are important to support student motivation and autonomy and give PBL a personal meaning (Boss et al 2015: 42). It is important for students to reflect on their experience to find ways to improve and learn from it. Reflection should help students find appropriate ways to answer the driving questions (Boss et al 2015: 43).

Critique and revision represent assessment in this model and the aim is to enhance learning. Both formative and summative assessment can be used here. Formative assessment can occur in the form of self-assessment, peer-assessment, teacher feedback. For summative assessment, both traditional and modern tools are acceptable, depending on the project (Boss et al 2015: 44).

Each project should end with a public product that can be presented either in the classroom or to a chosen public outside the classroom. This again has a positive effect on student motivation and encourage them to do their best (Boss et al 2015: 44).

Project based teaching model:



Figure 2. Boss et al (2015: 46).

PBL teaching model presents a set of key features to focus on when planning and conducting a project. For the teacher, a project starts with designing and planning phase to set the aims, thinking of a driving question and a final product. As the next step, it is important to ensure that the outcome of the project and skills necessary to achieve them, are in accordance with the standards set in the curriculum (Boss et al 2015: 48).

Building the culture in a PBL classroom is seen as one of the fundamental key features. Students are encouraged to ask questions and explore different possibilities, while their learning is guided and structured by the teacher. It is the teacher's role to show students what they can achieve through commitment (Boss et al 2015: 49).

Managing activities and scaffolding student learning is a challenge to any teacher. Boss et al (2015: 49) compare the teacher's role in a PBL classroom with a project manager who is responsible for "organizing tasks; setting schedules, checkpoints, and deadlines; keeping people focused and productive; controlling quality; and handling a hundred other details". The aim of the scaffolding is to provide students with support in acquiring skills necessary for finishing the project. Scaffolding also makes it possible to differentiate instructions and to introduce effective ways for working individually and in teams (Boss et al 2015: 50).

Assessment is an integral part of PBL from the start of a project until the final products are presented. Assessment in PBL can be either formative or summative, traditional or modern, depending on the stage of the project and current needs. In addition, self-assessment and reflection should always be part of the process (Boss et al 2015: 47).

When it comes to engaging and coaching, PBL provides opportunities for teachers to offer emotional support to their students and get to know their strengths and weaknesses. This aspect teacher to keep students interested in the topic and motivated while students work as teams towards their goal (Boss et al 2015: 51).

1.2 PBL in EFL classroom

PBL is a multifaceted learning method and when applied in an EFL classroom, it develops all language skills simultaneously. Stoller (2002: 113) summarises the application of PBL in EFL classroom as follows: "After being introduced to the theme unit and its most fundamental vocabulary and concepts, the instructor introduces a semi-structured project that will be woven into class lessons and that will span the length of the thematic unit." The description suggests that applying PBL in a foreign language classroom must be carefully planned, and students should be given instructions to follow through the

whole process. Students' motivation increases when given more autonomy, which, in turn, helps them to tackle assignments that they find difficult (Kettanun 2015, Bell 2010) and contributes to the development of self-directed learners (Bell 2010).

As PBL in the EFL classroom is all about teaching language in context, it provides a great opportunity to practise language skills through learning about culture. Çelik and Turkan (2007: 24) suggest that culture should be taught along with language, while ensuring it is taught at a feasible level and students remain active participants as “intercultural competence will make them more aware of their own culture, as well as the target culture”.

As stated in the Estonian national curriculum for basic schools (2023), among other things, students should become aware of different cultures while acknowledging cultural diversity. The curriculum for foreign languages (2011) states that by the end of the sixth grade, students know the main characteristics of the cultures of the languages being learnt. Therefore, teaching the culture of English-speaking countries is an essential part of the curriculum. PBL provides an opportunity to combine teaching culture, language and 21st century skills.

When implementing PBL in an EFL classroom, all four main language skills – reading, writing, listening, and speaking – as well as higher order thinking skills and learning skills (Stoller 2002, Kettanun 2015) are developed. To show the effect of implementing PBL in an EFL classroom, the results of a selection of studies is discussed below. As there is not a significant need to teach English as a foreign language in English-speaking countries, the studies discussed have largely been conducted in Asia where the topic of PBL is relatively well-studied.

Speaking skills. Ekizer (2021: 1069-1070) concludes that students advanced in their speaking skills, including fluency, coherence and publicly expressing themselves, while some students also noticed shortcomings in their vocabulary which made contributing to the

project more difficult. This serves as evidence of PBL being a multifaceted process which not only develops language skills, but also affects students' higher level thinking skills, prompting them critically evaluate their performance. Also, Lungu (2022: 49-50) observed improvement in students' speaking skills along with a notion that students are not as worried about making errors, which, in turn, has a positive effect on the performance skills. Rodríguez and Torres (2017: 69) determine that although students struggled with their language competencies at the beginning of the project, during the process they became increasingly more skilled in speaking with the help from their teacher and peers. Rodríguez and Torres (2017: 69) emphasise that the students, being beginners and previously inexperienced in PBL, never stopped using their mother tongue completely, but they started speaking in English more freely and frequently in comparison to their previous experience with traditional learning methods. Taking all that into account, it can be said that PBL has a positive effect on students' speaking skills.

Writing skills. Cahyono and Sa'diyah (2019: 210) found that students showed significant improvement in their writing skills when compared to the students that used traditional methods. Alotaibi (2020: 23-24) applied PBL to teach secondary school students about writing persuasive essays and saw a significant improvement in comparison to the control group and therefore suggested incorporating PBL in the curriculum. Artini et al (2017: 1150) established that there was noticeable progress in seventh-grade students' productive skills, speaking and writing, after PBL was applied. Yet, it seems that PBL does not always have a positive effect on language skills. Irawati (2015: 32) found that although implementing PBL had a positive effect on students' "content and vocabulary", it did not improve "organization and language use". Therefore, some changes in students' language skills may take a longer period than a single project and although PBL is versatile, it does not necessarily bring about all the expected developments (Irawati 2015).

Reading skills. Research has also shown positive effects of PBL on students' reading skills (Hendrey 2021, Kurniady et al 2023, Larsari and Shiraz 2014). Reading is a crucial skill in most subjects and as one step in PBL is conducting inquiries, students need to critically read the information they find. Hence, PBL can be applied with a purpose to develop students' reading comprehension. Cárdenas and Imbaquingo (2023: 17), found that PBL allows the use of different types of texts and reading activities, whereas the use of authentic texts and topics that are of personal interest to primary school students increases their motivation.

Listening skills. Bakar et al (2019: 22) saw significant improvement in students' listening skills compared to the control group. They also stress that progress did not occur due to natural communication but through well-constructed project work, including scaffolding and group work. Ekawati et al (2023: 159) discussed students' positive attitude towards developing listening skills through PBL, but they also called attention to deficiency in comprehension and vocabulary which were seen as an obstacle in implementing PBL. While Krisnoviani and Sulistyani (2022: 6139) demonstrate the improvement in listening skills, they also stress that the role of the teacher cannot be underestimated during the process to avoid students' confusion and possible problems with communication.

1.3 PBL and 21st century skills

In a traditional teacher-centred classroom, much emphasis has been on memorising facts and receiving knowledge from the teacher, whereas students remain relatively passive (Bloom et al 2017, Markina and Mollá, 2022: 4), but when students move on in their career paths, different skills are expected from them (Bell 2010, Bagale et al 2017, Bloom et al 2017). Bagale et al (2017: 48) draw attention to the problem that schools do not often provide students with skills they need in their future working lives of the 21st century.

Individual approach to students and development of 21st century skills are generally considered important parts of contemporary education. Blumenfeld et al (1991: 372) explain that due to its versatility, PBL can be employed to teach students with different abilities, and it can be used in various circumstances, therefore making it a suitable method for individualised approaches.

In the present thesis, the 21st century skills to be discussed are Communication, Collaboration, Critical thinking, and Creativity as the 4Cs (Geisinger 2016, Halvorsen, 2018). It has been found that PBL is a fitting method to teach students 21st century skills (Bell 2010, Bloom et al 2017, Boss et al 2015). Yet it must be considered that one project is not enough to learn and master those skills, therefore, students need to practise and follow through the process of PBL repeatedly (Bell, 2010).

Aifan (2018: 270) saw improvement in students' 21st century skills by applying PBL and suggests including the development of 21st century skills in curricula and applying it in authentic situations to prepare students for their future careers. Students need proper conditions to practise those skills (Boss et al 2010: 36) and all the 4Cs of 21st century skills can be activated and developed through PBL (Halvorsen, 2018).

Communication. According to Geisinger (2016: 247), communication is a vital and complex skill in the 21st century as the internet has made it possible for people all over the world to collaborate. Bell (2010: 41) stresses the importance of constant development of communication skills that can be practised via expressing ideas, listening to peers and reflection in PBL. PBL allows realistic communication when students work together to find possible solutions for the goals they have set (Bloom et al 2017).

Collaboration. In the rapidly changing world of the 21st century, problems have become so complex that a collaboration of varied experts is needed to solve them (Geisinger 2016: 246). In PBL, when students work in teams looking for the possible answers to the

driving question, they must listen to each other and be open-minded as well as expressive and creative to successfully complete the project (Bell 2010). PBL seems to an appropriate method to develop collaboration skills so that students would be prepared for the demands of the 21st century working life while also enhancing interpersonal relationships and sense of belonging (Bell 2010, Bloom et al 2017).

Critical thinking. Critical thinking is an essential 21st century skill to enhance deep learning and future success (Boss et al 2015, Kivunja 2015) but may not be necessarily taught or developed by all educators (Boss et al 2015: 6). Bloom et al (2017) state that the conditions for implementing PBL make students “use critical thinking skills throughout the entire learning experience to analyze, synthesize, and evaluate their findings and outcomes”. Critical thinking is an essential part of any project and therefore the skill is developed even when the project is not complex, making PBL a suitable method to enhance critical thinking for beginners as well as advanced students (Boss et al 2015).

Creativity. Amabile (1998: 79) describes creative thinking as a way people solve problems and seek for answers, while being able to present what is already known in a new or innovative way. She also stresses that intrinsic motivation has a significant effect on creativity in comparison with extrinsic motivation as “passion and interest – a person's internal desire to do something – are what intrinsic motivation is all about”. Key features of PBL, such as autonomy, group work and authenticity of the materials are found to increase motivation in students (Boss et al 2015: 63) and therefore it can be concluded that PBL allows a fertile ground for expressing creativity.

As the previous research discussed above confirms, PBL is a versatile method for teaching content along with 21st century skills to students. PBL has been successfully implemented in EFL classrooms and one of the many possibilities for applying the method is to teach culture through PBL. In this context, project based learning and teaching models

by Boss et al (2015: 34, 46) are applied to create PBL materials for teaching Scottish culture and developing the 4Cs.

2. CREATING LESSON PLANS AND MATERIALS FOR A PBL PROJECT

As stated in the Estonian national curriculum for basic schools (2023), teaching the culture of English-speaking countries as well as enhancing 21st century skills in students are expected outcomes in English language learning. In this chapter, the principles of creating lesson plans and materials for implementing PBL in the EFL classroom are discussed. The created materials accompany the chapter of Scotland in ILE 4 Student book. The compiled materials are designed to achieve the following objectives:

- to teach Scottish culture through PBL.
- to develop 21st century skills – communication, collaboration, critical thinking, and creativity – in students through PBL.

2.1 Principles of the project

Teaching materials for implementing PBL in year 6 EFL class were created to provide a deeper learning experience for students when discussing Scottish culture and develop the 21st century learning skills, more specifically the 4Cs – communication, collaboration, critical thinking, and creativity. As a final product, students compiled a travel guide in a form of a slideshow of a freely chosen place in Scotland.

I Love English (ILE) 4 textbook and accompanying materials by Ülle Kurm and Ene Soolepp is used with the year six students. The student's book contains a unit about Scotland. Among the materials of this unit there is a hand-drawn map of Scotland, a text about Scotland followed by some questions and expressions and a page with different pictures of Scotland. There are no specific Scotland related exercises in the workbook. The materials from the textbook were partly used in the first lesson of the project to provide an introduction to the topic. When designing the lesson plans and materials, the PBL models by Boss et al (2015) were taken as a basis.

In the given basic school, the English syllabus for the 6th grade states that students should acquire knowledge about the customs, important dates, people, and events of English-speaking countries. The syllabus also states that students should independently look for information about topics they find interesting and be creative in group activities and games. The emphasis is on self-directed learning so that students would learn to plan, choose appropriate actions, and use self-analysis to assess the results. All the above-mentioned aspects can be practised and developed through PBL; therefore the method was chosen to teach Scottish culture and develop the 4Cs. The following aspects were considered when compiling the materials.

Driving question. In the first lesson, the students are led to the development of the driving question through class discussion. A meaningful question guides students to find answers through research and understanding the concept of the subject, but forming a suitable question may prove difficult for students and, therefore, the help and guidance from the teacher are in place (Thomas 2000, Blumenfeld et al 1991).

Research. During the project, the students receive most of their knowledge on Scotland and Scottish culture through research, mainly conducted online, but are also encouraged to visit libraries and look for possible materials in the form of books, magazines, and travel brochures.

Student-centred learning and autonomy. The students choose the location for their research, conduct the research in groups, design a slideshow, and make a presentation to their peers and thus actively organise their activities. As Grossman (2019) states, students should not be left on their own during the project and constant help from the teacher must be made available. Scaffolding is an essential part of PBL and should provide students with the skills necessary for the work at hand (Blumenfeld et al, 1991: 378). For that reason, as part of scaffolding, the broad topics of culture to present in the travel guide are agreed on in

the first lesson. Within these topics, the students have free choice on what to present as part of their vision about Scottish culture. The students also have a choice in organising their teamwork and creating the final slideshows. They assess their own work and give feedback to peers thus taking the responsibility for their learning, progress, and time management.

Authenticity. The students mainly use web search for their research and are encouraged and directed to look for information on the websites of Scotland and the United Kingdom. By doing so they create a bridge between the classroom and the life outside of it (Blumenfeld et al 1991; Bell 2010). Also, as Thomas (2000: 3) suggests, the final projects, which in this case are in the form of travel guides, can be used in real life should students get the opportunity to travel to the destination they discussed.

21st century skills. The 4Cs discussed in the present thesis are communication, collaboration, critical thinking, and creativity. During the project, the students work in teams and thus, communication and collaboration are the central elements of the project (Bell 2010, Boss et al 2015). While doing the research, the students are exposed to a great amount of information online and are therefore required to use critical thinking when choosing appropriate websites and searching for the information necessary for the project (Halvorsen 2018). Furthermore, when finding ways to design the travel guide and choosing the examples of cultural elements, students are expected to show creativity (Amabile 1998: 79). Students also have an opportunity to be creative during the public presentation at the end of the project by giving a compelling performance.

Assessment. To assess the project, both formative and summative assessment methods are used. Formative assessment is applied to provide feedback and advice for possible improvements throughout the project whereas summative assessment is applied to evaluate the final product (Boss et al 2015: 47). For both assessment methods, a rubric (see Appendix 5) is created to evaluate the learning outcomes and analyse if the created materials

have been helpful in reaching the learning objectives in the school syllabus as well as the three components of the 4Cs. The intended criteria for the rubric are as follows: content, organisation, critical thinking, communication, collaboration. In this project, creativity is not assessed, but feedback is given on the improvements students make in their work throughout the process in regards of creativity (Boss et al 2015: 125). Also, the same rubric is adapted for students to give feedback to their peers and assess their own work. Students are given oral and written feedback by the teacher throughout the learning process.

2.2 Overview of the lesson aims and class activities

Lesson 1: Introduction. The aim of the first lesson is to build background knowledge of Scotland and introduce Scotland-related vocabulary, introduce the driving question and choose a destination for the project. According to the models by Boss et al (2015: 34, 46), a challenging problem or question, authenticity, student voice and choice, and reflection are applied from the learner's perspective and designing and planning, aligning to standards, building the culture, managing activities, scaffolding student learning, and engaging and coaching from the teacher's perspective, whereas designing and planning as well as aligning to standards is done prior the first lesson.

As this is the first PBL experience in EFL class for the author of the thesis as well as for the students involved, the driving question will not be created by the students but presented by the teacher as part of scaffolding (Blumenfeld et al 1991: 383). The driving question for the project at hand is as follows: *How can we create a travel guide of Scotland to learn about Scottish culture?* Also, culture itself is a broad topic and may be difficult to comprehend, another part of scaffolding is to create a mind map together with students to establish the main features to be researched and presented in the travel guide students are going to create.

Regarding class activities, students review Scotland-related material from their textbooks and engage in activities to familiarise themselves with Scottish culture. The lesson also involves vocabulary practice through Quizlet Live to enhance communication and collaboration skills. Furthermore, students are introduced with the rubric and the requirements for the project are discussed. Each lesson of the project discussed in the present thesis ends with a reflection which is considered an important feature to make PBL effective. The first lesson is concluded with an exit-ticket that helps students to reflect on their prior knowledge of Scotland and start thinking and planning for the project ahead.

Lesson 2: Research. The second lesson focuses on student research which is considered a crucial feature of PBL (Bell 2010: 43, Thomas 2000: 3). The aims of the lesson state that students use variety of ways to search for specific information online, communicate in English, collaborate in teams, and apply critical thinking when choosing the information necessary for their travel guide. The focus for students is on sustained inquiry, authenticity, student choice and voice and reflection, and for the teacher, on culture building, managing activities, scaffolding student learning, and engaging and coaching students, as stated by the learning and teaching models (Boss et al 2015: 34, 46).

The lesson begins with a presentation that is compiled with an aim to provide scaffolding when students start searching for the necessary information. Students use Google Docs for collaborative research, applying ICT skills and the 4Cs. The teacher shares a worksheet created on Google Docs to help students remember the features of culture and organise the information they find. It is considered important to keep students' attention focused on the key elements to avoid vagueness and irrelevant results (Sage and Torp 1998: 21). Students critically evaluate online sources, focusing on relevance and reliability. Due to the abundance of information that online search allows, students are encouraged and expected to be creative and critical when choosing what to include in their travel guide. As

students start working on their research, they are expected to communicate in English as much as possible. All the group members need to work together to share the workload, discuss and give feedback to each other's work and agree on the final result. The teacher manages the research process, providing guidance and monitoring language use. The lesson concludes with a reflection in the form of an exit-ticket to assess communication, collaboration, and critical thinking skills.

Lesson 3: Designing a Slideshow. In the third lesson, based on the learning and teaching models by Boss et al (2015: 34, 46), the focus for students is on authenticity, student choice and voice and reflection, and for teachers, on culture building, managing activities, scaffolding student learning, and engaging and coaching students. In the third lesson, students design a travel guide based on the research findings from the previous lesson by using Google Slides. The travel guide based on authentic materials presents Scottish culture.

Students develop their communication skills through group discussions when expressing their ideas and listening to others attentively, and collaborations skills through organising content and designing the slideshows. Critical thinking skill is developed by creating the slideshows as students must be critical about the content. The text and the illustrations must be in accordance with each other to express a certain cultural element. Student creativity plays a significant role, when they choose the design for their travel guide, including the font, colour schemes, images, music, and arrangement of the slides. The lesson ends with a reflection to enhance collaboration skills and self-assessment.

Lesson 4: Feedback and Revision The aim of the lesson is for students to practise giving constructive feedback to their peers and making necessary corrections to their own work based on the peer-feedback as well as communicating in English and collaborating in groups. In addition, by the end of the lesson, students know and practise the main principles of giving a presentation. According to the models by Boss et al (2015: 34, 46), the main

focus in this lesson is on critique and revision as well as reflection from the learner's perspective and building the culture, managing activities, scaffolding and assessing student learning, and engaging and coaching from the teacher's perspective.

In regards of the 4Cs, students develop their communication and collaboration skills throughout the lesson. Each activity expects them to discuss their ideas and express their viewpoints. Critical thinking is developed through assessing the slideshows based on the criteria of the rubric and revising the travel guides to determine whether the content and organisation of the slideshow is accurate and relevant without any unnecessary information or inappropriate pictures. The activity that enables to develop creativity is the preparation for giving a public oral presentation. Students can experiment with intonation, body language and overall oral expression.

During the class activities, students give constructive feedback on peers' work, focusing on content, organisation, and critical thinking. Students use an adapted version of the rubric and a worksheet presenting a table and some guiding questions to help students give constructive feedback to their peers. Both, the adapted rubric, and the worksheet serve as scaffolding to enhance and practise the process of giving feedback. The teacher guides the feedback process and provides support for revision. to prepare students for oral presentations, the teacher gives them a puzzle on the principles of giving an oral presentation as Boss et al (2015: 126) advise teachers to prepare students for public speaking and provide appropriate scaffolding. The lesson concludes with oral reflection to evaluate ICT skills, communication, and collaboration.

Lesson 5: Public Presentation and Final Reflection. The final lesson involves group presentations of travel guides, emphasising communication and collaboration. The first aim of the lesson is to develop students' communication skills through public speaking – giving a presentation to their classmates and the teacher. As the presentations are given by

groups together not individually, the second aim is to develop collaboration skills. The third aim is for the students to reflect on the whole process of PBL. From the model by Boss et al (2015: 34, 46), the focus for the students is on the public product and reflection and for the teacher, on building the culture, managing activities, assessing student learning, engaging and coaching.

After public presentations, a secret ballot is held to determine the most popular destination, relating learning to the real world. The lesson concludes with reflection on the PBL process and learning outcomes. Students assess their communication, critical thinking, and collaboration skills through reflection worksheets. Boss et al (2015: 47) emphasise the need for student self-evaluation through reflection. This activity helps students to review their achievements in terms of the learning outcomes as well as to contemplate their role in group work, promoting critical thinking. The reflection worksheet also serves as scaffolding, guiding students to notice their strengths and weaknesses in the context of the project discussed. Finally, to enhance creativity, students are encouraged to give an expressive and captivating performance when presenting their final product.

2.7 Piloting the materials

The project was piloted from January 29th to February 12th, 2024 in one of Tartu's basic schools of about 800 students with 6th grade students. Five 90minute lessons were conducted during a period of two and a half weeks. The author piloted the created teaching materials herself in the 6th grade in a language group with 12 students and is also their current English teacher. The students have studied English since the first grade and have had more lessons per week than required in the national curriculum for basic schools. The appendix for foreign languages in the Estonian national curriculum for basic schools (2011) states that

there are at least three weekly lessons in grades one to three and nine weekly lessons in grades four to six. In the basic school discussed in the present thesis, the hours of the lessons are nine and 13 respectively. Consequently, all the students have reached A2 language level and as estimated by the author of the present thesis, the language level of some of the students in this group is even higher.

Lesson 1. The lesson (see Appendix 1) was conducted on January 29th from 10.30 to 12.00 in a regular language classroom. All the planned activities were completed. The lesson started with filling in a map of the UK (see Appendix 2) and the students were able to place the countries on the map, but most of them did not remember all the capitals. On the presentation (see Appendix 3) they recognised only the flag of Scotland but could not name any of the items on other slides, although the thistle and the bagpipe have been learnt in the previous years. The students claimed to remember the symbols after they had heard the correct words. Therefore, it can be concluded that it is important to activate knowledge from prior learning, before adding new information.

Learning the words (see Appendix 4) in Quizlet Live took longer than expected as there were technical problems with some tablet computers not switching on or taking too long to switch on, and a repeatedly disrupted internet connection. Yet, the students were able to practise four rounds individually and four rounds in different teams created by Quizlet. As the students needed to move around in class to form teams, the assignment served as a moving break as well. The teams created in the last round of Quizlet were the groups that the students had to work in throughout the project. As one student was absent from this lesson, the teacher added the student to the smallest group by the teacher. The groups were designated as A, B and C.

As a part of scaffolding, a mind map to establish the main features of culture was created on the board with students. The elements chosen for the project were as follows:

landscape and nature, sightseeing, food, culture event, music, souvenirs. It was difficult for students to define the elements of culture and therefore the exercise served its purpose to help students understand what is expected from them.

Due to the technical problems, there was little time for the preliminary research to choose the destination place for the project. Regardless, all groups managed to make a choice and the overall explanation of the project and rubric (see Appendix 5) did not give rise to any further questions. To conclude the lesson, students filled in a short reflection in the form of an exit-ticket (see Appendix 6). The aims of the first lesson were achieved.

Lesson 2. The lesson (see Appendix 7) was conducted on January 30th from 10.30 to 12.00 in a computer class. One student from group A and two students from group C were absent. In the computer class, each student had a desktop computer with the fixed internet connection. Some technical difficulties occurred in this lesson as well. Two students needed to log on and off the computer repeatedly before it started working properly. Also, the students needed help with making copies of the documents shared by the teacher (see Appendix 9) and then sharing the created document within their group. With a little assistance from the teacher, the problems were solved.

Search tips (see Appendix 8) presented by the teacher at the beginning of the lesson proved useful for the students. For instance, the students did not have previous knowledge about using quotation marks to search for a phrase or a specific order of words, and *site:* to search for a specific country code domain.

In regards of communication, all groups needed constant reminding to speak in English as they tried to switch to Estonian every time a longer explanation was needed, or they were short for words when trying to express themselves. This was expected due to students estimated language level of A2 that sets limits on their active vocabulary and ability

to freely express themselves in English. This conclusion is supported by the findings of Ekizer (2021), Irawati (2015) and Rodríguez and Torres (2017).

In terms of collaboration, in two groups, the group members worked well together, discussing different ideas. There was a complaint in group A that one of their group members did not cooperate and sat idly watching others, but after a suggestion from the teacher to share their workload and assign certain topics to each group member, the issue was solved. The most captivating topics for students seemed to be music and food, as those topics were discussed elaborately by all groups, providing opportunities for active communication and collaboration as well as creativity when choosing from many possibilities and trying to decide what the most exciting options would be.

Critical thinking was needed when searching for correct and appropriate information and rephrasing it to only write down the most important aspects of each chosen topic. There were several occasions when students copied text straight from the internet, yet on a reminder, they rephrased most of it to concentrate on what was relevant. Group C claimed to have finished their research half an hour before the lesson ended, but on closer examination it was clear that some necessary information was missing, and the group needed to resume working. This again implied that the group did not assess their work critically enough and the skill needs more practise. The lesson again ended with an exit-ticket (see Appendix 10) to reflect on students' communication and collaboration skills and assess their use of the search tips discussed at the beginning of the lesson.

Lesson 3. The lesson (see Appendix 11) was conducted on February 5th from 10.30 to 12.00 in a computer class. One student was absent but managed to work from home. At the beginning of the lesson, the teacher presented a slideshow (see Appendix 12) to the students to introduce the organisation and structure of a slideshow. At the end of the presentation, the students needed to notice one missing element from the slideshow. The

students needed a moment to think but soon gave a correct answer about the missing pictures. The aspects of the organisation and structure of a slideshow were familiar to the students as they have created slideshows in other subjects before.

After the introduction, one of the students in each group needed to create a slideshow in Google Slides and then share it with their group mates. As the process of sharing documents had been practised in the previous lesson, it was managed without difficulties. There was a problem with one student not being able to access their account, but the student was able to restore the access and start working. No other technical problems occurred in this lesson.

As most of the information was collected in the previous lesson, the students worked on creating the slideshows, which allowed them to work on their communication, collaboration, critical thinking, and creativity skills. In terms of communication, students again tended to use their mother tongue, but switched back to English as soon as asked by the teacher. In this lesson, there was more discussion between the students than in the previous lesson, as they tried to decide on the layout and organisation of the slideshow. It was observed by the teacher that students expressed their ideas and listened to each other to reach an agreement; therefore, the circumstances allowed to develop their communication skills.

The situation also created favourable conditions to develop collaboration skills. At first, all groups tried working on the same slide at the same time, but it took them much time and therefore, it was suggested by the teacher to open individual files and share the workload, to make sure all the necessary information was transferred to the slides, allowing them more time to work on the design later. As the file was shared among all group members, the student absent from the class was able to collaborate from home, adding information to the slideshow and helping with the design. Not all the information collected in the previous lesson was

suitable or necessary to be presented on the slides and the students needed to evaluate the information critically and decide on the key words and short sentences to be added to their slideshow.

Designing the slideshows, choosing the font, colour schemes and illustrations, allowed students to show and develop their creativity. The students paid much attention on details which also brought along some arguments when their ideas about the final design differed significantly. That, in turn, emphasised the need for good communication and collaboration skills, which occurred not only within the groups but between different groups as well, when students walked around in class helping each other to use different functions in the application of Google Slides.

The noise level in this lesson was rather high and the students moved around a lot when discussing ideas within their group. The students also communicated with other classmates to ask for help with the functions in Google Slides or to just share pictures and ideas for the layout of the slideshows. For the teacher, the lesson was busy as the students needed constant reminding to speak in English, some arguments needed an interference by the teacher, and feedback was given about the appropriateness of the text and illustrating pictures on the slideshows. From the teacher's perspective, the lesson was a little hectic and it felt uncertain whether the students would be able to complete their slideshows as expected, yet all groups managed to share the link to their finished slideshows five minutes before the end of the lesson.

Lesson 4. The lesson (see Appendix 14) was conducted on February 6th from 10.30 to 12.00. The lesson took place in a regular language classroom and each group received a laptop to work on the slideshows. One student from group A and one student from Group B were absent. The focus of the lesson was on giving feedback to another group, assessing

their own work based on the received feedback, and making necessary corrections to the slideshows. The students also prepared for giving an oral presentation.

The students used the adapted rubric (see Appendix 16) to give feedback to another group assigned by the teacher. They managed to share their slideshows with the assigned group without any problems. Using the rubric proved difficult for all three groups. Although the rubric had been discussed and the students also received a worksheet (see Appendix 15) for giving feedback to scaffold the activity, having to formulate their opinion in a neutral way created difficulties. Also, having read the feedback from another group, the first reaction by many students to suggestions about what to improve or add was resentment, and it took some discussion with the teacher to accept that there is room for improvements in their work. It shows that peer feedback and using rubrics as part of the learning process should be practised more often for students to feel comfortable with it and use those skills for their own benefit.

The puzzle on the principles of giving oral presentations (see Appendix 17) took the students approximately ten minutes to solve and involved active discussion. The students asked the teacher several times if they had made correct choices and seemed to enjoy the activity. When practising for the presentation, they tried to follow all the aspects involved; therefore, the activity proved to be a useful example of scaffolding and helped the students to prepare themselves for the oral presentations in the next lesson.

As the students participated actively in all assignments, all the 4Cs were practised in this lesson. The students developed their communication skills by reading the slideshows, discussing feedback and oral presentation skills, listening to each other's ideas, and formulating their opinions when giving feedback. Collaboration was developed by group discussions, making decisions about giving feedback and making improvements to the slideshows. Critical thinking was applied when the students used the rubric to give feedback

and assess their own work. The teacher noticed that the students tried out several ways to practise their presentation skills. They changed their tone of voice and made corrections to their body language, trying out different ways to captivate listeners.

The students managed to give feedback to another group and made some corrections to their own work based on self-assessment and peer feedback. They also practised giving oral feedback and the activities of the lesson encouraged the development of the 4Cs.

Lesson 5. The lesson (see Appendix 18) was conducted on February 12th from 10.30 to 12.00. The lesson took place in a regular language classroom and each group had a laptop to prepare for their presentations. The fifth and the last lesson focused on giving public presentations and reflection.

The warm-up discussion of visiting different countries and tourist attractions there – for example, water parks in Spain, castles in Sweden and natural attractions like Arthur's Seat in Scotland – helped students notice cultural differences that may be rooted in nature, climate, history, and many other factors.

Students received laptops at 10.45 for the last practise in groups before presenting their final products to the class. It was observed by the teacher that all groups practised actively as they seemed to feel a little nervous about performing to the class. All groups presented their travel guides as a group and had divided the slides between them, so each student had to talk about one or two slides. When giving the presentations, the students in group A and group B read most of the text from the slides, while the students in group C had memorised the text. All students tried to keep eye contact with the listeners and spoke in a clear voice although students in group C could have raised their voices a little. The listeners followed the principles from the presentation puzzle, but no extra questions were asked from the performers after the presentations.

Choosing a favourite travel guide proved to be a pleasant activity that allowed students to move around and take a final closer look of each other's travel guides. After that, students had 20 minutes to write their final reflections (see Appendix 19) and all students finished by the end of the lesson. Answering the questions on the reflection sheet was not easy for students, requiring them to think carefully. Some students needed encouragement from the teacher to write more than just one or two words for answer.

The final products – travel guides of Scotland – met all or most of the requirements and based on the rubric were done well or very well. Group B did not use appropriate pictures on all the slides and group C did not introduce a cultural event to visit. Group A had included all the cultural features discussed in the first lesson and inquired in the second lesson as well as appropriate illustrations. All groups had organised their travel guides logically and had been creative in regards of the design.

In terms of the 4Cs, the focus was on creativity in this lesson. The students were able to creatively express themselves when giving the public presentation. It was evident that students had put great effort in their performance. They used different ways to connect with the audience, like eye contact, clear voice and hand gestures. As the students gave well-reasoned answers to the questions on the reflection sheet, it can be concluded that they applied critical thinking when analysing their strengths, weaknesses, and learning.

As all the students presented their final products to the class and filled in a reflection sheet based on their learning experience throughout the project, it can be said that the lesson aims were achieved.

2.8 Discussion

The author of the present thesis created a set of lesson plans and materials to implement PBL in a sixth grade EFL class. When piloting the materials, it became evident

that the students were able to follow through all the planned activities. Also, given the students' age, language level and limited PBL experience, scaffolding activities proved useful and necessary to help the students keep clear focus and complete all stages efficiently.

By the end of the project, the students had created and presented travel guides introducing Scottish culture. The main cultural elements discussed at the beginning of the project were largely represented (see Appendix 9) and briefly explained by the students during the public presentation. It can be concluded that the created materials and lesson plans were suitable to teach the key features of Scottish culture.

The method of PBL proved especially useful for developing the 4Cs. The students were expected to apply those skills throughout the project and though certain skills were more pronounced in some lesson, all the skills were developed in each lesson.

Communication skills were developed through class and group discussions that required expressing thoughts and ideas and listening to others as suggested by Bell (2010). PBL enabled the students to communicate spontaneously and although their language level did not allow them to express all their ideas in English, they made noticeable effort to find ways to express themselves in English.

The project was conducted in groups, making collaboration essential part of it. Though students had some minor setbacks in dividing the workload, the issues were quickly solved. Using Google Slides as the platform for the travel guides, enabled an absent student to collaborate from home during the actual lesson. Also, it made it possible for other students who were absent to make their contributions to the project later at home. It supports the claim by Bell (2010) that students feel responsibility to their group mates and are willing to contribute to the project independently.

The project involved decision making, inquiries, self- and peer-assessment, reflection and product creation which all need critical thinking by students as advised by

Bloom et al (2017). The students had to decide which information and where to look for. They needed to analyse it to make sure the information is relevant and accurate and find ways to present it in the form of a travel guide. They provided critical feedback to another group and improved their own work based on peer-feedback. At the end of each lesson, the students reflected on the process to analyse their strengths and weaknesses and look for ways to enhance their work.

The students were able to develop their creativity when deciding on the best and most interesting examples of Scottish culture and designing a travel guide to present them. They also expressed their creativity through public speaking when presenting their travel guides. Amabile (1998) has suggested that a courage to disagree and offer different solutions as well as individual working styles allow creativity to grow. Halvorsen (2018) has suggested letting students make their own choices about their learning. These suggestions are in accordance with the principles of PBL and the piloting of the materials showed that students had several occasions for offering solutions and ways to carry them out, thereby promoting the development of creativity.

The teaching and learning models by Boss et al (2015) proved suitable for creating the lesson plans and conducting the project. All aspects on the models were applied during the project and provided sufficient support in the planning and designing phase.

CONCLUSION

PBL is considered a versatile learning method to prepare students for the modern world (Boss et al 2015), and although it has been researched thoroughly, the method is still not widely used in classrooms (OECD 2018). The aim of the thesis was to apply the method of PBL to teach Scottish culture and help students develop the 4Cs of the 21st skills. To compile the materials for the project, the principles of PBL, its implementation in EFL classroom, and the 4Cs were studied.

Blumenfeld et al (1991: 370) refer to the flexibility of PBL, enabling to incorporate different aspects of a subject into one extensive and authentic unit. To make a project successful, it must be well thought out with all the stages carefully considered and planned before it is introduced to students (Boss et al 2015). At the same time, the teacher must be willing to make changes to the project, add or remove scaffolding, when the need arises (Bell 2010, Boss et al 2015). During the lessons, the teacher should observe students and provide constant feedback, and be prepared for any challenges that may occur unexpectedly. Therefore, it is a significant effort for the teacher to implement PBL.

PBL also requires a great amount of responsibility and autonomy by students, when they need to decide on how to answer the driving question, carry out inquiries, analyse the information they have found, create a product, collaborate, assess their own work, and give feedback to others. It is important to consider that students should not be left alone during the working process and appropriate amount of necessary scaffolding should be provided (Bell 2010, Blumenfeld et al 1991, Boss et al 2015, Thomas 2000).

In addition, it has been found that PBL is a suitable method to develop 21st century skills in students as the process of learning requires significant amount of communication, collaboration, critical thinking, and creativity. By careful structuring of the entire process, the 4Cs as well as student autonomy and motivation can be enhanced (Blumenfeld et al 1991,

Boss et al 2015, Geisinger 2016). Communication and collaboration are essential in students' future working lives and it is important they feel assured in their language performance. Student autonomy and freedom in making choices allow learners to apply and develop their creativity. Critical thinking is a crucial skill in any field of life when designing projects and looking for solutions to problems. There are ample ways to develop the above-mentioned skills through implementing PBL.

Chapter two gives an overview of the materials and lesson plans created by the author of the thesis to implement PBL in a 6th grade EFL classroom. The project is structured based on learning and teaching models by Boss et al (2015) to ensure that all relevant key features of PBL are included. The aim of the project is to teach students the elements of Scottish culture and develop the 4Cs of the 21st century skills through PBL. The overview of the project is followed by more detailed analyses of the created lesson plans.

When the project was piloted, it became apparent that the learning and teaching models were suitable and beneficial for creating the lesson plans and scaffolding materials and planning the project. It was assured by the presenting of the final products that students had acquired knowledge about the specific features of Scottish culture. It was also observed by the author of the thesis that the 4Cs were enhanced during the project through variety of activities. Scaffolding proved useful for teaching students the skills of making inquiries, giving constructive feedback, reflecting and public speaking.

The challenges that occurred during the project were mainly related to technological and communication problems. Although students used English when asked by the teacher, they clearly preferred to use their mother tongue. From teacher's perspective, the project itself and designing and planning phase for the project were time consuming in comparison with the regular English classes. This as well as the complexity of the method may be among the reasons why PBL is not widely used in Estonia.

As only one project was implemented, the author of the thesis acknowledges that it is insufficient to make any final conclusions about the appropriateness of the learning and teaching models by Boss et al (2015) to be used as the bases for creating projects or the development of the 21st century skills in students. Yet, the results of the piloting were promising, and further practise is advisable.

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APPENDIX 1

Lesson plan 1

School: A basic school in Tartu

Grade: 6

Subject: English

Time: 90 min

Topic: Scotland

Aims: Students are familiarised with the vocabulary related to Scotland. Students can name the main features and places of Scotland. The driving question is introduced to students. Students choose a destination for their project.

Necessary materials: Interactive board, tablets, worksheets, I Love English 4, Student's book

Time	Activities and instructions	Aims
2 min	The beginning of the lesson. Marking absence.	
5 min	Students fill in an empty map of UK with the names of the countries and capital cities.	Students recall the parts of UK and are able to place them on a map.
8 min	Teacher presents pictures of Scotland using the interactive board and Google Slides presentation. Students describe the pictures and try to guess which part of the UK they illustrate.	Students recall the symbols of Scotland (apart from Highland cows, all symbols have been learnt in the previous years).
	Teacher explains that students will start a project on Scotland. Teacher explains the aims of today's lesson.	Students are familiarised with short- and long-term aims.
20 min	Exercises from the student book. I Love English 4. Student's book. Unit 10, pages 57-60. Discussion of the map of Scotland on page 57. Eliciting the meanings of Highlands, Lowlands and Loch. Finding the highest mountain and the biggest lake on the map. Students read the text on page 58 and find names from the text for the terms given. <i>Lake, mountain, country, island, capital, the biggest city, city, region.</i>	Students can name the main features and places of Scotland.
20 min	Vocabulary practise. Quizlet Live.	Students learn and practise Scotland-related vocabulary.

10 min	<p>During the last round of Quizlet Live, the programme divides students into groups of three. These will also be the groups students will continue their work in until the end of the project.</p> <p>Teacher presents students with the driving question for the project: <i>How can we create a travel guide to Scotland to learn about Scottish culture?</i></p> <p>Students fill in a mindmap on the board about topics that should be presented in the travel guide to introduce Scottish culture to others. Topics to cover will be chosen with the teacher.</p>	Students can identify some features of culture.
10 min	<p>Teacher writes possible destinations on the board. <i>Aberdeen, Glasgow, Edingburgh, Shetland, Dundee.</i></p> <p>Each group gets a tablet and conducts an initial search to choose a destination for their project.</p>	Students choose a destination for their project.
5 min	Each group will let the teacher know about their chosen destination and briefly comments on why they chose it.	
5 min	Discussing the rubric. The teacher presents students with the rubric and explains the criteria of grading, focusing on the outcomes of „very good“ and „fail“.	Students are informed of the grading criteria and know what is expected from them to successfully conclude the project.
4 min	Reflection. Exit-ticket. Ending the lesson.	Students reflect on their prior knowledge and start planning the project.
Homework	Revision of the vocabulary in Quizlet. Choosing the destination in case the group did not have enough time during the lesson.	Students know and are able to use the vocabulary related to Scotland.

APPENDIX 2

Fill in the map. Put the names of the countries and capitals in the correct places.

England	Scotland	Wales	Northern	Ireland
Cardiff	Edinburgh	Belfast		London



UKMap360°. Available at <https://ukmap360.com/united-kingdom-%28uk%29-blank-map>, accessed January 13, 2024.

APPENDIX 3



Photo 1. Thistle.



Photo 2. Bagpipe.



Photo 3. Kilt.



Photo 4. Highland cow.



Photo 5. Scottish flag.

APPENDIX 4

Scotland – vocabulary list for Quizlet.

bagpipe - torupill

culture - kultuur

festival - festival, pidu

haggis - täidetud lambamagu (šoti rahvustoit)

highland - kõrgustik, kõrge ala

highland cattle - Šoti mägiveiste kari

island - saar

kilt - kilt (šotlaste ruuduline meesteseelik)

loch - mäestikujärv Šotimaal

lowland - madalik, madal ala

mountain - mägi

mountainous - mägine

perform - esinema

performance - etendus

poetry - luule

population - rahvastik, rahvaarv

puffin - lunn (lind)

region - piirkond

souvenir - meene, suveniir

symbol - sümbol

tartan - ruuduline kangas

theatre - teater

thistle - ohakas

unique - ainulaadne

APPENDIX 5

RUBRIC

Scotland travel guide	Very good	Good	Satisfactory	Fail
Content	All the required topics are presented on the slides. The text is written in simple sentences or keywords and not copied from the Internet. There are suitable pictures to illustrate each slide.	1 or 2 topics are not presented on the slides. Some of the text is copied from the Internet. There are suitable pictures to illustrate most of the slides.	3 or 4 topics are not presented on the slides. Most of the text is copied from the Internet. More than three pictures are not suitable.	More than 4 topics are not presented on the slides. All or almost all of the text is copied from the Internet. The pictures are not suitable.
Organisation	Slides are arranged logically. There is at least one slide for each topic. Font and colour of the text are clear and easy to read.	Slides are mostly arranged logically. There is at least one slide for each topic. Font and colour of the text are mostly clear and easy to read.	More than 3 slides are not in a logical order. There is more than one topic on one slide. Either font or colour of the text is not easy to read.	Slides are not arranged logically. There is more than one topic on one slide. Font and colour of the text are not easy to read.
Critical thinking	The text is relevant and accurate. There is no unnecessary information.	Most of the text is relevant and accurate. Some of the information is not necessary.	25-50% of the text is not relevant or accurate. There is a lot of unnecessary information.	The text is not relevant or accurate. Most of the information is unnecessary.
Collaboration	Team members cooperate throughout the whole project. Decisions are made together. Tasks are shared equally.	Team members cooperate most of the time. Most decisions are made together. Some team members may work more than others.	Team members cooperate sometimes, but a significant amount of work is done individually. Many decisions are not made together. Some team members work a lot more than others.	Team members do not cooperate. Decisions are not made together. Some team members do not have any tasks.
Communication	Students use English to communicate with each other all or most of the time.	Students use English to communicate with each other most of the time, but occasionally Estonian is used as well.	Students use English to communicate with each other when reminded by the teacher, but most of the time Estonian is used.	Students do not try to use English to communicate with each other.

APPENDIX 6

Reflection 1.

Name one thing you knew about Scotland before today's lesson.	
Name one thing you learnt about Scotland in today's lesson.	
Name one thing you would like to find out about Scotland during the project.	
Give one tip for a successful group work.	

APPENDIX 7

Lesson plan 2

School: A basic school in Tartu

Grade: 6

Subject: English

Time: 90 min

Topic: Scotland

Aims: Students use variety of ways to search for specific information online. Students communicate in English and collaborate in teams. Students apply critical thinking when choosing the material necessary for their travel guide.

Necessary materials: Interactive board, computer classroom, presentation slides, reflection slips.

Time	Activities and instructions	Aims
2 min	The beginning of the lesson. Marking absence.	
5 min	A discussion on using search engines. Teacher uses a presentation to give tips for using search engines effectively. Students are encouraged to make notes. The presentation remains on board until the end of the lesson.	Students know how to use search engines effectively.
5 min	Teacher shares a Google Docs document with key words agreed on in the previous lesson. Teacher draws a mind map on the board and students fill it in with possible search terms to find the necessary information.	Students know which key words to use to find necessary information. The document is part of scaffolding to keep students' focus on culture related content.
70 min	Students work in teams and search for the required information online. They make notes in Google Docs whereas one document is shared by the group. Teacher monitors the progress of each group and offers support when needed.	Students search for information. Students communicate in English with each other to make group work effective and practise their speaking and listening skills. Students are creative when choosing the content for their travel guide. Students assess information online critically and decide on what is appropriate and reliable.

3 min	Reflection. What was most difficult? Were the search tips helpful?	Students reflect on their communication and collaboration skills and assess their use of the search tips discussed at the beginning of the lesson.
1 min	Ending the lesson.	
Homework	Students finish their research if needed. (The following lesson takes place in six days).	Students have finished their research and can start working on their presentation in the following lesson.

APPENDIX 8

Slideshow. Search tips.

- Use quotation marks to search words together – “*Scottish flag*” (Bausch et al 2006: 2)
- site:uk or site:scot to search from the websites of the UK or Scotland – *Scottish dish site:scot* (Bausch et al 2006: 7)
- Check your spelling
- Keep your search words simple and accurate
- Be critical of the source!
- Try different search engines
- Different word order may give different results

APPENDIX 9

Team:

Your team has chosen a place to visit in Scotland.

Name of the place:

Find information about the following topics:

Landscape and nature	
Sightseeing	
Food	
Culture event	
Music	
Souvenirs	

APPENDIX 10

Reflection 2.

Reflection	All the time	Sometimes	Not at all
I worked together with my teammates and helped them.			
I spoke English with my teammates and listened to them.			
I used the search tips.			

APPENDIX 11

Lesson plan 3

School: A basic school in Tartu

Grade: 6

Subject: English

Time: 90 min

Topic: Scotland

Aims: Students use the results of their research to create a slideshow. Students communicate in English and collaborate in teams. Students assess their current work.

Necessary materials: Interactive board, computer classroom, presentation slides.

Time	Activities and instructions	Aims
2 min	The beginning of the lesson. Marking absence.	
7 min	How to make a slideshow? Teacher presents a slideshow as an example. The slideshow consists of tips for creating slideshows. At the end of the presentation, students need to notice one element that was missing from the slideshow. Each team will name at least two important aspects of creating a slideshow.	Students revise the principles of creating a slideshow. (Students have used Google Slides before in several subjects.)
10 min	Teacher uses an interactive board to remind and show students how to create a slideshow using Google Slides (new slide, font, design, adding pictures).	
65 min	Students create a slideshow about their chosen places in Scotland based on the information they searched for in the previous lesson. Students use the rubric to follow the criteria of the project.	Students communicate in English with each other to make group work effective and practise their speaking and listening skills. Students are creative when designing the slideshow for their travel guide. Students assess the information they chose critically and create a slideshow. Students use the rubric as a supportive tool.
5 min	Reflection.	Students reflect on their collaboration skills and assess the work completed during the lesson while noticing the shortcomings.
1 min	Ending the lesson.	

APPENDIX 12

Presentation.

Slideshow

Kristina Guhse

2024

Introduction

- easy to read
- interesting to look at
- only the most important information

Layout

- clear font
- short sentences
- keywords
- pictures

Structure

- A title page
- Introduction
- One slide for each topic
- Conclusion

Conclusion

- Be creative!
- Be critical!
- What is missing from this slideshow?

THANK YOU!

APPENDIX 13

Reflection 3.

❖ Our teamwork was:

- Excellent
 - Good
 - Needs more practice
- To work better together, we need to
-

❖ Our slideshow:

- Is completed
 - Is almost completed
 - Needs a lot of work
- To complete the slideshow, we need to
-

APPENDIX 14

Lesson plan 4

School: A basic school in Tartu

Grade: 6

Subject: English

Time: 90 min

Topic: Scotland

Aims: Students follow the criteria for giving feedback. Students know how to give constructive feedback, focusing on the strengths and weaknesses of the work at hand. Students communicate in English and collaborate in teams. Students assess their work and make necessary corrections based on the feedback. Students know the main principles of giving a presentation.

Necessary materials: Interactive board, laptops, presentation slides, hard copies of feedback rubrics, presentation puzzle, laptops.

Time	Activities and instructions	Aims
2 min	The beginning of the lesson. Marking absence.	
10 min	Teacher presents students with a feedback rubric. Discussion about giving constructive feedback while using the rubric as a supportive tool.	Students know how to give feedback on each other's slideshows. Students know how to use a rubric as a supportive tool to give feedback.
20 min	Each group will open their slideshow on a laptop and share it with another group assigned by teacher. Group A with group B, group B with group C and group C with group A. Students give written feedback to the assigned slideshow using the feedback rubric. Students will write the feedback on a form given by the teacher.	Students are able to follow through the process of sharing a document in Google Drive. Students practise giving constructive feedback.
30 min	Each group receives the feedback for their slideshow and makes corrections to their slideshow based on the feedback from the other group and the teacher.	Students discuss the feedback received and apply the suggestions to improve their work.
10 min	Preparing to give a presentation. Teacher gives students a puzzle on the principles of giving an oral presentation. Students put the puzzle together and participate in a class discussion. Students give reasons for their choices.	Students recognise and examine the principles of oral presentation.

15 min	Students work in groups to practise for the oral presentation of the following lesson. Students follow the criteria from the puzzle to give a presentation to their teammates.	Students apply the principles of oral presentation.
3 min	<p>Oral reflection. Students close their eyes and listen to the statements made by the teacher. They use their thumbs to express agreement, disagreement, or partial agreement.</p> <p><i>I can give feedback on someone else's work. I can share documents in Google Drive.</i></p> <p><i>I can improve my work based on feedback.</i></p> <p><i>I know how to give a presentation.</i></p> <p><i>I speak to my teammates in English.</i></p> <p><i>I am good at teamwork.</i></p>	Students assess their ability to give and receive feedback. Students reflect on their collaborative and communicative skills.
1 min	Ending the lesson.	
Homework	To practise the oral presentation of the slideshow.	Students prepare for the oral presentation.

APPENDIX 15

Feedback

Read the rubric. Write your feedback to group What have they done very well?

What can they do better?

What is missing from their slideshow?

	Scotland travel guide
Content	
Organisation	
Critical thinking	

APPENDIX 16

FEEDBACK RUBRIC

Scotland travel guide	Very good	Good	Satisfactory	Fail
Content (sisu)	All of the topics are presented on the slides. The text is written in simple sentences or keywords and not copied from the Internet. There are suitable (sobivad) pictures to illustrate each slide.	1 or 2 topics are not presented on the slides. There are 1 or 2 long sentences and unfamiliar (võõrad) words. 1 or 2 slides are missing a suitable picture.	3 or 4 topics are not presented on the slides. There are long sentences and unfamiliar words on more than two slides. More than three pictures are not suitable.	More than 4 topics are not presented on the slides. There are long sentences and unfamiliar words on most slides OR there is not enough information on the slides. The pictures are not suitable.
Organisation (ülesehitus)	There is at least one slide for each topic. Font and colour of the text are clear and easy to read.	There is at least one slide for each topic. Font and colour of the text are mostly clear and easy to read, but not on all slides.	There is more than one topic on one slide. Either font or colour of the text is difficult to read.	There is more than one topic on one slide. Font and colour of the text are difficult to read.
Critical thinking (kriitiline mõtlemine)	The text is relevant (oluline) and accurate (täpne). There is no unnecessary information.	Most of the text is relevant and accurate. Some of the information is unnecessary.	25-50% of the text is not relevant or accurate. There is a lot of unnecessary information.	The text is not relevant or accurate. Most of the information is unnecessary.

APPENDIX 17

What to do:	What NOT to do:	How to listen:
<p>Stand up straight</p> <p>Speak in a clear voice</p> <p>Keep eye contact</p> <p>Speak in English</p>	<p>Read word for word from the slideshow</p> <p>Keep your eyes on the board or on the floor</p> <p>Speak in a low voice, so only the teacher can hear you</p> <p>Speak in Estonian</p>	<p>Be quiet</p> <p>Make notes to ask questions</p> <p>Be polite and supportive</p> <p>Ask questions after the presentation</p>

APPENDIX 18

Lesson plan 5

School: A basic school in Tartu

Grade: 6

Subject: English

Time: 90 min

Topic: Scotland

Aims: Students present their slideshows orally as a group. Students assess the presentations and ask questions. Students reflect on their PBL experience.

Necessary materials: Interactive board, worksheets, I Love English 4 Student's book.

Time	Activities and instructions	Aims
2 min	The beginning of the lesson. Marking absence.	
10 min	Discussion about travelling and other cultures. <i>What is the most exciting place/country you have visited?</i> <i>What was the most surprising thing you experienced?</i> <i>In your opinion, is their culture similar to Estonian or different?</i> Discussion in groups first, followed by a whole class discussion.	Students discuss their personal experience in terms of culture. Students compare other cultures to Estonian culture.
45 min	Oral presentations of the slideshows. Students present their slideshows orally in front of the class and answer questions from their peers. While listening to the presentations, students make notes to ask additional questions if necessary. Students give oral feedback on each presentation by saying what they found most interesting. Teacher gives oral feedback on the presentations in class and written feedback in Studium.	Students develop their speaking skills by presenting their slideshows to an audience. Students apply the principles of oral presentation.
10 min	Choosing the most interesting travel guide. Teacher places the hard copies of the travel guides on the tables. Students examine the travel guides and decide which one they would like to use on their trip to Scotland. Everyone gives a secret vote for their favourite. Teacher counts the votes.	Students examine the slideshows to choose the most appealing travel guide.
20 min	Reflection. Students fill in a reflection sheet.	Students reflect on their learning outcomes, communication, critical thinking, and collaboration skills.
3 min.	Ending the lesson.	

APPENDIX 19

Reflection**Project – Scottish culture**

What is the most interesting thing I learnt about Scottish culture?

What else do I want to find out about Scotland?

Is it easy or difficult to search information online? Why?

How well did I work with my teammates?

How can I make the teamwork even better next time?

Is it easy or difficult to speak in English with my teammates? Why?

What helped me most while doing this project?

What would I do differently next time?

What did I do really well in this project?

RESÜMEE

TARTU ÜLIKOOL
ANGLISTIKA OSAKOND

Kristina Guhse

Creating Teaching Materials For Implementing Project Based Learning in Year 6 EFL Class

Õppematerjalide koostamine projektõppe rakendamiseks 6. klassi inglise keele tunnis

Magistritöö

Aasta: 2024

Lehekülgede arv: 82

Annotatsioon:

Käesoleva magistritöö eesmärk on koostada õppematerjalid projektõppe rakendamiseks 6. klassi inglise keele tunnis Šoti kultuuri õpetamiseks ja 21. sajandi oskuste – suhtlemine, koostöö, kriitiline mõtlemine ja loovus – arendamiseks.

Magistritöö koosneb sissejuhatusest, kahest peatükist ja kokkuvõttest. Sissejuhatus keskendub projektõppe ajaloolisele taustale ja projektõppe metoodika rakendamisele Eestis, et tuua välja teema olulisus. Esimene peatükk annab ülevaate projektõppe põhimõtetest ja projektõppe metoodika rakendamisest inglise keele kui võõrkeele tunnis. Lisaks käsitletakse projektõppe mõju 21. sajandi oskustele. Teine peatükk kirjeldab projektõppe rakendamiseks vajalike õppematerjalide loomise põhimõtteid ja piloteerimist, millele järgneb saadud tulemuste analüüs.

Piloteerimisest saadud andmete põhjal selgus, et loodud materjalid on rakendatavad projektõppe läbiviimiseks 6. klassi inglise keele tunnis. Kõik planeeritud tegevused viidi läbi ja saavutati soovitud õpiväljundid. Probleeme esines peamiselt tehnoloogiliste vahendite ja ingliskeelse suhtlemise osas. Projekti hindamisel kasutati läbivalt kujundavat hindamist ja õpilase enesehindamist. Projektõppe tulemusena valminud lõpplahendust hinnati kokkuvõtva hindega.

Märksõnad:

Inglise keel, projektõppe, 21. sajandi oskused.

Lihtlitsents lõputöö reprodutseerimiseks ja lõputöö üldsusele kättesaadavaks tegemiseks

Mina, Kristina Guhse,

1. annan Tartu Ülikoolile tasuta loa (lihtlitsentsi) minu loodud teose

Creating Teaching Materials For Implementing Project Based Learning in Year 6 EFL Class,

mille juhendaja on Liina Tammekänd,

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[Juhendaja allkiri]
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