THE EFFECT OF PROJECT-BASED EDUCATION ON STUDENTS' ENGLISH LEARNING SUCCESS
(primary and secondary school example)

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Abstract. From the perspective of all stakeholders, it is seen that there has been an increase in project writing, implementation and professional development with stakeholders, especially in public institutions since 2000. After 2010, project-based education has been widely used in our country. In this study, experimental studies conducted in Turkey between 2010 and 2022, comparing project-based learning with traditional method and project-based learning, were combined with meta-analysis method. When the effect of the project-based learning approach on the academic development of English reading and speaking is examined, it is seen that the majority of the studies have a positive effect in favor of the experimental group. For this reason, it is thought that learning English will make a positive contribution to the process by implementing an interactive project after theoretical knowledge in order to reinforce academic knowledge, understand what you read in English and speak what you understand.
Keywords: Project-based learning, constructivist education, speaking skills, learning achievement, meta-synthesis

LAYİHƏ ƏSASLI TƏHSİLİN ŞAGİRDLƏRİN İNGİLİS DİLİNİ ÖYRƏNMƏSİNƏ TƏSİRİ
(ibtidai və orta məktəb nümunəsi)

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Annotasiya. Məqalədə layihə əsaslı təhsilin şagirdlərin ingilis dilini öyrənməsinə təsirindən söhbət gedir. Qeyd olunur ki, bütün maraqlı tərəflərin nöqteyi-nəzərindən, 2000-ci ildən başlayaraq, xüsusilə dövlət qurumlarında layihənin yazılması, həyata keçirilməsi və maraqlı tərəflər arasında peşəkar inkişafın artdığı görünür. 2010-cu ildən sonra ölkəmizdə layihə əsaslı təhsildən geniş istifadə olunur. Məktəblərdə layihə əsaslı təhsil konstruktiv tədris yanaşması ilə həyata keçirilir. Bu araşdırmada 2010–2022-ci illər arasında Türkiyədə layihə əsaslı öyrənmə ilə ənənəvi təlimi müqayisə edən eksperimental tədqiqatlar meta-analiz metodu ilə müqayisə edilir. Layihə əsaslı öyrənmənin ingilis dilində oxuma və danışmanın inkişafına təsiri araşdırıldıqda, tədqiqatların əksəriyyətinin eksperimental qrupun xeyrinə, yəni müsbət təsir göstərdiyi aydın olur. Bu səbəbdən şagirdlərin akademik biliklərini möhkəmləndirmək, ingilis dilində oxuduqlarını başa düşmək və anladıqlarını danışmaq üçün nəzəri biliklərin öyrənilməsindən sonra bu interaktiv layihənin həyata keçirilməsinin ingilis dilini öyrənmə prosesinə müsbət təsir göstərəcəyi düşünülür.
Açar sözlər: layihə əsaslı öyrənmə, konstruktiv təlim, danışma bacarıqları, öyrənmə nailiyyətləri, meta-sintez metodu.

1.INTRODUCTION

The learning situation begins with the birth of the individual and continues until the end of life. The change that we encounter in every moment of life also emerges in the constantly acquired knowledge and learning methods. It is observed that learning is not just a tool for behavioral change or newly acquired knowledge to be associated with previous ones and kept in memory as a warehouse. It is seen that the behavioral changes that occur in the learning process are as effective as the individual differences of the person, the learning of learning, the use of the learned information in life, as well as the power of communication. According to the behavioral approach, it does not seem possible for the individual to develop his/her language and acquire communication skills unless he/she can transfer the knowledge he/she has to life. In the globalizing world, it is a fact that students who are researching, questioning, and have the ability to realize products based on a collaborative learning approach will improve their language skills more quickly, try to use the information they have gathered on the international platform, work in cooperation and take responsibility, which will contribute to the realization of English teaching. Learning English, which is an international communication tool, is gaining great importance. Since the century we live in is the century of communication, effective communication seems to be one of the most important competencies that people should have. The most important tool that provides communication between people is speaking skill. A successful and effective speech is to come to success both socially and individually in people's lives. When we look at it globally, the way to speak and provide successful communication is to use a foreign language effectively. As a way of improving the foreign language, the importance of speaking English comes to the forefront with project work in our schools and learning English as the project language.

1.1. Problem Status

Today, the number of scientific studies is increasing rapidly. Independent studies on a particular subject can yield different results. Even if the studies have expressed comprehensive generalizations on their own, the applied designs are also related to the population, sample, duration, number of applied subjects, etc. they do not provide very comprehensive disclosures, with their limitations. Studies are usually carried out as independent applications from each other and it can be concluded that more research should be done on the subject studied.

In the education system carried out in our country, the main purpose should be to teach students how to access information and the skills they will acquire on the way to reaching information, rather than storing information or transferring

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information to them while they are passive. Learners should move from passive buyers to active producers. Because teaching processes require constant renewal.

In today's technology age, learners prefer to access information quickly and constantly ask themselves "Which channel has more information and how can I reach it quickly, how can I produce new things by learning new information?" Bruner placed great emphasis on students' own activities. Because, according to Bruner, learning can only take place as a result of the student's own invention [Korkmaz, 2002, p. 15]. Ausubell, on the other hand, drew attention to the effect of systematically linking the information to be taught to the previous ones on learning.

1.2.Purpose

The aim of this study is to bring together the findings of experimental studies examining the effect of Project Based Learning method on students' English learning success and speaking attitudes when compared to the traditional teacher-centered teaching method, with the meta-synthesis method. Within the scope of the research, the findings of 20 thesis studies comparing the project-based learning method and the traditional teaching method in terms of students' English learning success in terms of students' perspectives on the English lesson were brought together and the answers to the following questions were sought.

1. Does the project-based learning method have a positive effect on students' English learning, speaking and academic success?

1.2.1. Sub-Purposes

1. Does the project-based learning method have a positive effect on students' English learning success?

2. In English lessons where project-based learning method is applied, is there a difference in the effect of the students' learning success in terms of the grade levels in which the studies are carried out?

3. Is there a difference in the effect of the project-based learning method on the students' English learning and speaking success in terms of the education level (primary school and secondary school) to which it is applied?

4. Is there a difference in the effect of the project-based learning method on the students' English learning success and speaking skills in terms of application time?

1.3. Research Significance

With this research, the effect of the Project-Based Learning Approach used in English teaching has been tried to be revealed. It is of great importance in terms of English teaching, as it will affect the use and way of using the findings obtained as a result of the meta-analysis method of examining the results of the study on the Project-Based Learning Approach, which is applied in different

ways. In addition, it is thought that this research will fill an important academic gap in the related literature and contribute to the related literature. However, the fact that few studies have been conducted on this research subject in our country or that no study has been conducted on the same subject increases the importance of the research even more.

4. Definitions

Project: It is the work that students do individually or collectively to solve a problem [Saracaloğlu, Özyılmaz Akamca & Yeşildere, 2006].

Project-Based Teaching Approach: Project-Based Learning Approach allows students to; It is a student-centered teaching approach that provides solutions to problems by allowing students to imagine, plan and develop designs [Erdem, 2002; Kalaycı, 2008].

Academic Achievement: It is the level of proficiency demonstrated by the student towards the program goals as a result of a certain program [Demirel, 2003]. In the studies included in the meta-analysis in this research, the post-test results of the experimental and control groups will be considered as academic achievement.

Meta-Synthesis: It is a literature review method that allows us to obtain more information about the subject by combining the results of multiple studies on a particular subject with statistical methods [Hunter & Schmidt, 1990].

Effect Size: It is a standard measure value used to determine the strength and direction of the relationship in a study.

2. THEORETICAL FRAMEWORK

Learning a foreign language and being successful in that language is possible only by speaking that language. Therefore, if students do not acquire the proficiency of speaking in a foreign language and develop their communication skills, or if students are not given a chance to improve communication in a foreign language, it does not seem likely that they will achieve an advanced level of success in a foreign language. In a classroom enriched with appropriate activities at the right time, speaking skills will be more comfortable, and the learning environment will be more fun and dynamic. In this context, the intensification of English teaching at primary and secondary school levels and the application of different teaching programs to students gain importance in their development. Therefore, it is seen that project-based teaching gains importance in English teaching because it is suitable for the cooperation of primary and secondary school students and the constructivist model. Encouraging research on real subjects, in particular, provides students with the opportunity to develop a meaningful and communicative

international language. First of all, the problems used in the project-based learning application contribute to the motivation of the learner. A work of art design, a graphic design or a web environment design related to professional skills or interest is utilized by interacting with stakeholders. As a second-line approach, a task is assigned. This task should be interesting, challenging and achievable. As the third approach, data sources are accessed. These are scientific researches, observations, experiences, etc. it could be. High-level thinking (analysis, synthesis and evaluation of information) activities are required in the method or method approach, which is the last approach.

2.1. The Importance of Project-Based English Teaching

Effectively carried out technology education and English teaching have an important role in the upbringing of individuals. Because technology education students; It is a process that allows one to wonder, research, question, access information from different sources, and structure the information by establishing a link between the information obtained. In this context, one of the functions of technology education is contributing to the development of students as scientifically literate individuals, and it is observed that it also makes an important contribution to accessing scientific resources in English and improving the level of English learning. However, the difficulties in accessing resources while learning English, the high cost of resources in terms of economics, have revealed the options of teaching students with low cost and sponsor support.

Going beyond the resource and economic difficulties in our schools, it has highlighted project-based teaching as one of the alternative ways to learn English and improve speaking. In this approach, in which the student is at the center of project-based learning, the learning process is more important than the product. Because the designs that are considered in the projects and the constructs that are tried to be implemented emerge as thought structures that are open to change, and the most important output in this approach is to reveal the continuous organization of the student's mental skills. Project Based Learning Approach; It provides opportunities for students to take responsibility, make choices and use initiative [Wolk, 1994; Filippatou & Kaldi, 2010; Korkmaz & Kaptan, 2001] and enable students to reach information on their own, use information, transfer information to related fields, conduct research, scientific process It is an approach that enables them to use their skills, to gather and present the information they have obtained, and to express themselves [Krajcik, Blumenfeld, Marx & Soloway, 1994; Tortop, 2010].

In this context, project-based teaching emphasizes thinking while researching and applying while thinking, enabling students to overcome the communication and language difficulties they face while constructing their own learning in to-

day's changing life conditions, contributing to the development of their creativity, and learning by living by doing studies that will advance their English language skills and speaking capacity, It emerges as a learning approach where the living standards in which it is located create an important research area in developing language skills and by bringing life skills to the classroom, interacting with friends and all stakeholders actively participate in the learning process, just like in a family environment, and the whole learning approach is carried out by the students themselves. Therefore, students increase their English language proficiency and speaking skills through the English resources they are exposed to while they are doing projects or researching projects, and through foreign stakeholders. The chosen project topic should be one of the activities that is interesting, exciting, enthusiasm and class participation for the students. The fact that the topics are intertwined with real life, providing a fun and enjoyable environment will allow students to get rid of their worries, feel as comfortable as possible and gain more comfortable communication skills in English.

2.1.1. Differences Between Project Based Learning and Traditional Learning Approach

There are great differences between the Project-Based Learning Approach and traditional learning approaches, from the roles of teachers and students to the content, from the implementation of the course to the evaluation. In particular, it can be said that Project-based learning has a richer content than the traditional learning approach. It is observed that the Internet and access to information enable them to improve their English skills, enrich their speaking proficiency and self-confidence. Because project-based learning offers students the opportunities they may encounter in real life, how and where they can access foreign resources to access information. In order to solve the communication problem, students have to reach different sources such as verbal information, that is, speech channels, without depending on a single written material. In addition, in the Project Based Learning process, technological tools have superiority and students are encouraged to use these tools. In this case, students will have to stay alone with English and improve their speaking skills. The suitability of the topics in the research title to the student's interest, desire and life is another activity that facilitates the student's speech. If the subjects that are close to life and reflect the English language culture to be learned are given in the subject in accordance with the level of the students, it can be easier to reach communicative goals that will improve their speaking skills. In addition, a content that aims to appeal to the five senses (seeing, hearing, touching, etc.), supporting the subject with teaching materials and dramatization when the groups come together creates a more creative and productive student mass. It also provides permanence in learning. In

this case, learning conditions will allow students to develop their social, personal and collaborative skills. As a result, project-based learning contributes to the development of students' high-level thinking skills, English communication and speaking skills, and problem-solving strategies in reaching the source [Kadıoğlu, 2007; Yurtluk, 2003].

Differences Between Traditional Learning and Project Based Learning

Educational Features	Traditional Learning Approach	Project Based Learning Approach
Programme	Scope-centric Knowledge of the facts Learning with structured blocks	Depth of understanding Understanding of principles and concepts Developing complex problem-solving skills
How to implement the program and the ways to follow	Watch the program Progress from block to block, unit to unit Narrow, disciplined	Monitoring students' interest Large units of complex problems and topics A broad, interdisciplinary approach
Implementation of the lesson	Individual study Competition to fulfill the course requirements Getting information from the teacher	Working in a group Collaborate to meet course requirements Constructing knowledge and contributing to the formation of knowledge
The teacher's role in the lesson	Expert Explain the topic	Directory Providing resources, participating in learning activities
The student's role in the lesson	Apply what is taught Repetition and memorization of facts Don't speak only when promised	Self-directed learning Implementing activities personally, offering exploratory and combining thoughts Completing own tasks, working independently most of the tim
Evaluations	Test scores Comparing scores with other scores Reproduction of knowledge	Focus on tangible achievements Performance evaluation Display and application of knowledge

Teaching materials	Textbooks Presentations Course transfers	Direct original sources Written materials, documents, source persons Information and materials structured by students
Technology usage level	Supporting teacher presentation Use by the teacher only Use of superficial technology	Developing students' ability to support their presentations and use technology Use by students

In Project Based Learning Approach; It provides opportunities for students to take responsibility, make their own choices for their own acquisition, and use initiative [Wolk, 1994; Filippatou & Kaldi, 2010; Korkmaz & Kaptan, 2001]. It is an approach that enables them to transfer knowledge to their own research/learning field in the areas of improving their skills, to develop their language skills by doing research, to use their scientific language skills, to use the information they have obtained in accordance with the spoken language, and to express themselves by improving their speaking skills [Krajcik, Blumenfeld, Marx & Soloway., 1994; Tortop, 2010]. Project-based learning, student; leaving a passive receiver position in the learning-teaching process; It is a learning model that researches, examines, accesses information and aims to improve knowledge, solve communication problems and improve speaking skills with the information obtained. For this reason, project-based education has an important place in contemporary education approaches, in achieving the desired goals, improving language skills, and creating a student society that learns by being language literate [Çakallıoğlu., 2008].

2.1.2. Benefits of Project-Based Learning Approach

Although the Project Based Learning Approach has many benefits for the student, the most important ones are as follows;

– Improves students' problem-solving skills and problem-based learning abilities.

– It enables students to work collaboratively and improves their teamwork skills.

It improves students' ability to make decisions, plan and hold meetings by developing their critical thinking skills.

– Develops students in effective time management.

It builds student self-confidence and respect.

It makes the student an integral part of the school.

– Students combine real-life products and performances.

It provides lifelong learning.

It gives students the opportunity to reflect their knowledge.

– Gives meaningful feedback to the teacher, family and school administration about student performance.

It gives students the opportunity to apply the knowledge and skills they have gained through the project in different subjects.

It allows the use of different dimensions of intelligence.

– Students' ability to use technology develops.

– Students who are allowed to study what; they are self-motivated, put more effort and enjoy working.

– Contributes to the success of the student by enabling him to use his intelligence.

It provides learning with an interdisciplinary understanding in a natural environment.

2.2. STUDENT ROLES IN PROJECT-BASED LEARNING

The main goal of project-based learning is for students to work based on learning groups. Student groups determine their projects and content, and while the groups determine their own study strategy, it encourages the advisors to take full responsibility for the students' learning, engaging the students in the process, ensuring that the group members are constantly engaged in the study to contribute to the development of their project development, language development and speaking skills with foreign partners. It is this participatory work that makes project-based learning constructivist. Students work together to achieve specific goals.

When students use technology as a tool to communicate with others, they take an active role as opposed to the passive role of transmitting knowledge through a teacher, book, or publication. The student is constantly making choices about how to obtain, display, or manipulate information. Technology enables students to think actively about the choices they make and implement. Each student has the opportunity to participate individually or as a group. Along with using technology, sharing vocabulary that will improve students' communication skills, scientific knowledge based on grammar and practice sharing that will increase their speaking skills strengthens them to work more interactively and efficiently.

The role of the consultant in Project Based Learning is that of a facilitator. They do not give up control of the classroom or student learning, but instead foster an atmosphere of shared responsibility. The advisor structures the proposed question/topic in a way that directs the student's learning to content-based materials. The counselor organizes student achievement with spaced, transitional goals to ensure student projects remain focused and students have a deep understanding of

the concepts being explored. Students are held accountable to these goals through ongoing student feedback and assessments. Ongoing assessment and feedback is essential to ensure that the student stays within the scope of the guiding question and the core standards the project is trying to establish. According to Andrew Miller of the Buck Institute for Education, "To be transparent to parents and students, you must be able to track and monitor the ongoing formative assessments that demonstrate work towards this standard." The counselor uses these assessments to guide the inquiry process and ensure that students have learned the necessary content. When the project is finished, the consultant evaluates the finished product and the learning it has demonstrated. However, with the participation of foreign stakeholders, the language development skills of the students have also come to an advanced level, it has been revealed when the project is presented on national and international platforms, and it is confirmed that the students have more than one interaction based on constructivist education, and they have made an extra contribution to both the school, the group and themselves.

The student's role is to ask questions, build knowledge, and identify a real-world solution to the issue/question presented. Students should collaborate by expanding their active listening skills and requiring them to engage in intelligent, focused communication, thus allowing them to think rationally about how to solve problems. Project-based learning forces students to take ownership of their achievements, as they take an active role in the study and do the work and operations together in the whole process.

3. METHOD

3.1. Research Model

In this research, the effects of project-based learning method and traditional method on students' language learning success were investigated. Accordingly, it was tried to determine whether project-based teaching and traditional language teaching, which are independent variables, affect student success, which is the dependent variable. Therefore, the research is a research in the experimental model. In accordance with the experimental research model, an experiment and a control group were formed.

• **Experimental Group:** Students studying according to the project-based learning method in English class (Individual learning)

• **Control Group:** Traditional teacher-centered method (Group learning)

In this direction, the meta-synthesis method was used to determine the effectiveness of the Project Based Teaching approach. In the research, meta-synthesis method was used in order to determine the effect of teaching techniques on learn-

ing success. Meta-synthesis is the conversion of the results of similar studies on a subject into an effect size, which is a standard measurement unit, and the analysis of them by combining them [Cohen, Manion, & Morrison, 2007; Ergene, 1999; Hedges & Olkin, 1985; Hunter & Schmidt, 1990].

3.2 Collecting of Data

The studies to be included in the research consist of master's and doctoral theses and articles published in scientific journals, which have the necessary statistical data and the research problem related to the "Project-Based Learning Approach" in Turkey between the years 2010-2022.

The scanning of postgraduate theses made in Turkey, both in Turkish and English, was carried out on the website of YÖK National Thesis Center between 01.03.2022 and 31.05.2022. In the search, theses with the words "project-based learning", "project-based learning" or "project-based learning", "project approach" as keywords are listed. As a result of the listing, 50 thesis titles within the scope of the research were reached. As a result of the examinations, theses suitable for the research problem and inclusion criteria were included in the study. The analyzes were made in the form of examining the full texts. 30 dissertations were found outside the field of English Language Teaching. During the review, 30 theses, which are suitable for our subject, were reached on the effect of the Project Based Learning approach on the academic learning success of students in English lessons. These theses were included in the meta-analysis study. In order to reach the articles published in Turkey, the literature search was carried out between March 2022 and May 2022 in the ULAKBİM database, where scientific journals in Turkey are generally indexed. Since master's and doctoral theses are also published as articles in Turkey, the articles and theses were scanned mutually. As a result of the scans, 10 articles from the articles on the effect of the PBL approach on the academic learning success of students in English lessons were included in the study.

3.2.1. Inclusion Criteria

The criteria used for the studies included in the research are as follows:

1) The fact that the study was conducted in Turkey between the years 2010 – 2022.

2) The study must be a master's thesis, doctoral thesis written in Turkish or English, or an article published in scientific journals.

3) Experimental studies.

4) Project-based learning approach to the experimental group and traditional teaching approach to the control group.

5) There are studies that examine the effect on students' academic achievement.

6) Giving the sample size of the studied groups

7) It has been done in the field of English teaching

3.2.2. Collection of Related Studies

After determining the study criteria to be included in this study within the scope of meta-analysis, a literature review was made and the studies to be included in the study were collected. Literature search started from domestic sources. First of all, faculty journals and congresses were examined together with Ulakbim and YÖK databases. In the examination, 35 studies were found when 'Project-based learning' was written in the keyword section of Ulakbim database, and 30 studies were found when 'Project-based learning' was written. When "project-based teaching" is written in the keyword section to be searched in the YÖK database, 15 scientific theses were found, 12 scientific theses were found when "project-based learning method" was written, and 50 scientific theses were written when "project-based learning" was written. In order to reach foreign sources, EBSCO, ERIC and Proquest databases were searched on the internet and the number of studies to be included in the meta-analysis was tried to be increased. In this context, the relevant databases were scanned under the keyword 'Project-based learning'.

As a result of the researches, 1000 studies were found in the Proquest database and 400 studies in the ERIC database. These studies, which were reached as a result of the literature review, were examined one by one and their compliance with the study criteria was checked. In this process, studies on English education with a pretest-posttest experimental design with a control group, measuring academic achievement and speaking skills, and having standard deviation and arithmetic mean were included in the meta-analysis. Studies that did not meet the inclusion criteria were excluded from the meta-analysis.

3.2.3.Determination of Operating Characteristics

The reached full-text studies were examined one by one by the researcher and the study characteristics were determined. Study characteristics are expressed as independent variables in the meta-analysis study, which are thought to have an impact on the study and used to determine this effect size. The characteristic features to be used by the researcher in this study can be listed as follows;

- Publication status of the study
- Publication type of the study
- The subject area of the study
- Education levels of the students participating in the study
- Publication year of the study
- Technique used in the study
- Sample size of the study

4. CONCLUSIONS and RECOMMENDATIONS

4.1. Results

According to the pretest-posttest results, learning takes place in both the experimental and control groups. However, this result is inconsistent with the literature findings. The literature findings suggest that project-based learning is more effective than traditional teaching. More importantly than learning scientific knowledge, students need to learn to work in a community and therefore take on social responsibilities. The most important contributions of project-based learning are in schools with poor economic conditions in poverty-stricken regions; When students take responsibility for or own up to their learning, their self-esteem increases. It also helps create better study habits and attitudes towards learning. Schools that fail in standardized lessons can improve their language development, communication skills, and sharing with foreign partners by applying Project-based learning. Students become more independent in group work as they receive little instruction from the teacher. With Project Based Learning, students also learn the skills required in higher education. Students learn more than just finding answers, Project-based learning allows them to broaden their minds and think beyond what they would normally do. Students must find answers to questions and combine them using critical thinking skills to find answers.

Project-based learning is important for examining misconceptions; Examples of these are local concepts and childhood intuitions that are difficult to replace with traditional classroom lessons. In project-based learning, the scientific community culture in the project; student groups solve their understanding of phenomena with their own knowledge structures. Technology allows them to search in more convenient ways as well as get faster results.

Opponents of Project-Based Learning argue and warn against negative consequences in projects that are primarily focused and tangential, and that underdeveloped lessons can waste valuable lesson time. No teaching method has been proven to be more effective than the other. Opponents argue that the narrative and presentation of anecdotal evidence in lecture-style teaching can convey the same information in less lesson time. Class time wasted by an unfocused course poses a particular problem, given that disadvantaged students often have fewer opportunities to learn academic content outside of school. After all, it is cognitive activity that determines the success of a course. If students do not remain active in the project and content-oriented, the student will not be successful in learning the material and the lesson will be ineffective. A source of challenge for teachers may also include details such as: "Keeping complex projects active while meeting

students' individual learning needs requires brain-powered project management knowledge as well as artistic teaching." Like any approach, Project Based Learning can only be beneficial when applied successfully.

Project-based learning is a pedagogical approach similar to problem-based learning in that it solves students' language development problems, because problem-based approaches can also be used as a constructivist project approach by asking students to solve specific (open-ended) problems rather than relying on students to solve their own problems in the completion process. is characterized. Another similar approach is quest-based learning; Like project-based learning, in research the project is determined by what students find particularly interesting (with mentoring as necessary), rather than primarily the teacher being responsible for formulating the key question and task.

It is seen that a meta-analysis model conducted in a study conducted by students in the presence of a good mentor, when implemented well, can increase the long-term retention of materials and repeatable skills in Project-based learning and improve teachers and students' attitudes towards learning.

Experimental studies with control groups including pre-test and post-test were used in this study. A quality-oriented analysis could be made using quality scales with high validity and reliability. The research consists of studies conducted in Turkey. It is thought that such studies will be more useful in suggestions for country education strategies. It seems possible that the results obtained with the findings obtained in the studies can only be generalized to Turkey. Another limitation is that analogue ANOVA, which can be affected by various variables, was used in subgroup analyzes. The low number of primary numbers in some subgroups in the moderator analysis may also have affected the results.

Research question "Does the project-based learning approach have a positive effect on students' English learning, speaking and academic success?" is in the form. A total of 22 studies on the effect of PBL approach on students' learning, speaking and academic success in English lessons were examined. The total number of samples in the studies (the sum of the sample numbers of the experimental group and the control group) was 556 people. According to Cohen et al.'s (2007) effect size classification, it has a moderate effect. In the meta-analysis study conducted by Kaşarcı (2013) to determine the effect of the PBL approach on success, the effect size value was found to be ES=1.018 in the confidence interval between 0.763 and 1.273, which seems to be in line with this research. As a result of the meta-analysis study conducted to determine the effect of the PBL approach on the students' learning, speaking and academic success in the English lesson, it was determined that the PBL approach had a positive effect on the students' learning, speaking and academic success in English compared to traditional learning meth-

ods. It is seen that this effect is very close to the strong percentage level (1.00). In other words, according to the experimental studies on the PBL approach applied to a total of 556 people, the PBL approach is more effective in increasing the academic success of students in English lessons compared to traditional teaching methods. All 22 studies were positive. It can be said that the analysis results obtained by looking at the excess number of studies are reliable.

4.2. Suggestions

The permanence of learning English, the classical teacher role as a source of information, one-way communication (Teacher to student) etc. In terms of many limitations, it is necessary to increase the number of project-based teaching practices that apply and adopt subject-centered approaches and place the traditional foreign language learning method in the center of the learner, research, question, open to sharing. Based on the results obtained in the research and the experiences gained during the study process, the following suggestions can be made for practitioners, program development experts and researchers.

Recommendations for Practitioners

1) As a result of the meta-analysis study conducted to determine the effect of the PBL approach on the academic success of the students in English lessons; It has been determined that the PBL approach has a very advanced positive effect on the learning, speaking and academic success of students in English lessons compared to traditional learning methods. English teachers can use the PBL approach for effective learning.

2) When the effect sizes of the PBL approach are examined according to the education levels of the students, it has been determined that the highest effect size on academic achievement is at the secondary school level. According to this; The PBL approach can be used especially at the secondary school level to increase the academic success of students in English lessons.

Recommendations for Program Developers

1) Due to the positive effect of PBL approach on students' academic success in English lessons, PBL approach can be given more place in English teaching programs. Because of the high effect size of the studies in the field of speaking and communication, the PBL approach can be included more in the speaking lesson curriculum.

2) It has been determined that the PBL approach increases the academic success of students in English lessons, especially at the secondary school level. For this reason, PBL approach can be included more in secondary school education programs.

3) More studies on the PBL approach in primary schools and reanalysis of the effect sizes may be beneficial in terms of yielding more reliable results.

4) It is seen that the studies on the PBL approach included in the meta-synthesis are generally carried out at secondary and high school levels. Considering the 4+4+4 education system, studies can also be carried out at the primary school level.

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