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ABSTRACT

The ideas of project-based language learning (PBLL) align well with the action-oriented approach, which is considered a promising approach in language education (Piccardo & North, 2019). In this study, we carried out the scoping review of empirical research articles describing the implementation of PBLL in higher education during the period from 2011 to 2021, to answer these research questions: How are project-based language learning experiences designed and implemented in higher education? What are the characteristics of effective language learning projects that could be offered to university students? The results reveal that PBLL can be implemented in creative and varied ways in language education. The reviewed cases provide various solutions for topics, questions, or problems of projects; ways of designing the authentic learning environment; measures for ensuring student choice and voice; ideas for students' reflection, critique, revision, and assessment; as well as a range of public products that students could create as outcomes of projects, which may be beneficial for language educators and curriculum designers in higher education.

Keywords: *project-based learning (PjBL), project-based language learning (PBLL), design of project, project element, higher education, action-oriented approach*

A significant trend in education is a move towards more active and student-centred methods that initiate learning rather than focus on effective teaching (Cope & Kalantzis, 2017; Deslauriers et al., 2019). One method that proved to be successful across various disciplines is project-based learning (PjBL) (Boss & Larmer, 2018; Greenier, 2020). A representation of learning by doing, PjBL was introduced more than a century ago and is associated with the work of philosopher John Dewey (1938). The pedagogy also is closely related to Vygotsky's (1978) social constructivist theory, in which knowledge construction is seen as social practice and the collaborative nature of learning is

emphasized. The Buck Institute for Education (n.d.) defines PjBL as "a teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging, and complex question, problem, or challenge" (Buck Institute of Education, n.d., para. 3). This method is characterized by a longer duration (as opposed to individual tasks), and by its substantiated potential to equip learners with deep subject-related knowledge and help them develop diverse skills (Boss & Larmer, 2018; Dooly & Masats, 2019; Thomas & Yamazaki, 2021).

Although PjBL is not a new method for teaching various subjects, its popularity is rising all over the world (Boss & Larmer, 2018; Nanni & Pusey, 2020; Thomas & Yamazaki, 2021). Since mid-1970s, the method also has been successfully used in language education (Beckett, 2002; Thomas, 2017; Slater & Beckett; 2019; Stoller, 2006). Referred to as project-based language learning (PBLL), this approach to PjBL integrates teaching of language, content, and skills (Thomas, 2017; Cox & Montgomery, 2019; Slater & Beckett, 2019). By moving beyond language learning and mere linguistic outcomes, PBLL gives new meaning to language education—learners are additionally given opportunities to master new subject content and develop diverse skills, which usually remains a secondary goal in language classes (Thomas & Yamazaki, 2021).

Today, the significance of applying PBLL for language education lies in the fact that its tenets have much in common with the action-oriented approach, which is predicted to influence language learning and teaching for a long time to come (Piccardo & North, 2019). Further elaborated in the *Common European Framework of Reference for Languages: Learning, teaching, assessment – Companion volume* (*CEFR Companion volume*) (Council of Europe, 2020), the action-oriented approach highlights a major paradigm shift in language education. It requires moving from linear and analytical language teaching (i.e., teaching discrete skills, items, vocabulary, and grammar decontextualized) to viewing language learning and teaching as a more complex, holistic, and integrative process. This approach also involves creating manifold and multistep tasks and scenarios, which most commonly are projects (Piccardo & North, 2019).

Moreover, the increasingly complex world puts forward the idea that individuals should act together in order to produce something, rather than only to exchange ideas without a clear purpose (Piccardo & North, 2019). These ideas are well-reflected in both the action-oriented approach and in PBLL. The still popular communicative approach sees communication both as a means and the end goal of language learning; however, humans seem to be more active when their actions are clearly goal-driven, resulting in more than mere communication (Piccardo & North, 2019). Both PBLL and the action-oriented approach require socially-oriented language learning in the context of purposeful actions that end with the creation of learning artifacts or products having real-life applications (Boss & Larmer, 2018; Dooly & Masats, 2019; Piccardo & North, 2019). They also share the idea of authenticity or the necessity of language learning in realistic contexts while performing activities and using tools as in real life (Piccardo & North, 2019; Thomas & Yamazaki, 2021).

Designs of properly developed language-learning projects, may be reused with some changes (Boss & Larmer, 2018); therefore, comprehensive analysis of quality cases of PBLL implementation is vital for successful integration of this method into university language education. Resources include specific websites that detail language-learning projects based on the principles of PjBL (see Appendix A); a number of research articles that focus on a single PBLL-based project implementation in the context of higher education; reviews related to the implementation of PjBL in various educational contexts (Guo et al., 2020; Kokotsaki et al., 2016); and a specific literature review of PBLL in China from 2002-2017 (Wang, 2020). However, no previous scoping review has been done in an attempt to synthesize evidence on the implementation of PBLL in the context of higher education for 2011-2021.

Given that the popularity of foreign language learning in the context of projects is expected to rise, a literature review may contribute to knowledge advancement in this area. Therefore, in this study, we synthesize evidence from empirical research articles on PBLL realization for teaching foreign languages in higher education, to answer the following research questions:

1. How are project-based language learning experiences designed and implemented in higher education?
2. What are the characteristics of effective language learning projects that could be offered to university students?

Our rationale for conducting this scoping review is to increase university language educators' awareness of how to organize PBLL by ensuring its quality implementation. This study also stems from our interest in the application of the method and constant search for suitable projects, as well as the ongoing refinement of the existing projects for university students. We hope that our findings will suggest new ideas for language educators who are already familiar with the method, as well as inspire new educators to start using it.

Literature Review

Key Elements of PjBL

As PBLL is closely related to PjBL, this literature review begins with an overview of the elements pertinent to PjBL in general. PjBL is considered a particular approach "under the larger umbrella of *problem*-based learning" (Lee et al., 2014, p. 19). Kokotsaki et al. (2016) noted two similarities between PjBL and problem-based learning (PBL): participants achieve a shared goal through collaboration; and when engaged in a project, students face problems they need to address in order to present the end product in response to the driving questions. The difference between PjBL and PBL was explained in the following observation: students engaged in PBL primarily focus on the process of learning, while participation in project activities culminates in an end product (Kokotsaki et al., 2016).

Both in mainstream and language education, the implementation of PjBL has resulted in a number of versions and models used (Boss & Larmer, 2018; Greenier, 2020; Thomas & Yamazaki, 2021). Implementing the vision that all students should be given opportunities to experience high-quality learning via PjBL, regardless of the subject to which it is applied, an international group of educators facilitated by the Buck Institute of Education offered the research-and-practice-informed framework for high-quality PjBL (Boss & Larmer, 2018, pp. xiv-xvii) and established six criteria for high-quality PjBL (see Table 1).

Criteria	Criteria Explanation
1) Intellectual Challenge and Accomplishment	Learning deeply, thinking critically, and striving for excellence.
2) Authenticity	Giving projects that are somehow relevant to students' lives, future, and culture.
3) Public Product	Creating final products for their display, discussion and/or critique in public.
4) Collaboration	Collaboration with other students either in person or online.
5) Project Management	Planning and implementing a project from initiation to completion.
6) Reflection	Reflecting on one's work and learning throughout the project.

Note: Boss & Larmer, 2018

Table 1. Criteria in the Framework for High-Quality PjBL

Larmer et al. (2015) outlined seven essential project design elements in Gold Standard PjBL: a) a challenging problem or question; b) sustained inquiry; c) authenticity; d) student voice and choice; e) reflection; f) critique and revision; and g) a public product (Boss & Larmer, 2018, pp. 2-3). The additionally distinguished element of sustained inquiry requires engaging students in the processes of asking questions, investigating, conducting research, and evaluating evidence (Boss & Larmer, 2018). This element is particularly important for subjects that do not belong to language education, the central focus of which is the acquisition of subject-related knowledge. In language education, a more important element may be the kind of inquiry that naturally generates a need for communication in a target language and projects are potentially less cognitively demanding.

PBLL in Foreign Language Education

In foreign language education, the use of PjBL-related terminology is somewhat fuzzy. First, the method is referred to using more than one concept, e.g., *project-based learning* (Greenier, 2020; Nanni & Pusey, 2020), *project-based language learning* (Cox & Montgomery, 2019; Thomas, 2017; Slater & Beckett, 2019; Kato et al., 2020), or *project-based instruction* (Oh, 2012). The second issue is related to the initialism of *PBL* that stands for both *project-based learning* and *problem-based learning*. To avoid confusion, while referring to project-based learning, some researchers use the abbreviations *project-BL* (Greenier, 2020) or *PjBL* (Tatzl, 2015). The latter term is used in our study. Third, the use of additional labels, such as *project-based language teaching* (Grant, 2017), *project-based instruction* (Virtue, 2013), or *project work*, among others, creates even more confusion. For this study, we use the term *project-based language learning* and *PBLL* as its acronym while discussing its implementation in university foreign language classes.

In foreign language learning, PBLL is also appreciated for a number of non-linguistic gains: the development of information literacy and digital literacy skills (Dooly & Masats, 2019; Nanni & Pusey, 2020); collaboration and project-management skills (Beckett & Miller, 2006; Thomas & Yamazaki, 2021); and the promotion of greater independence in the learning process (Beckett & Slater, 2018; Grant, 2017). Additional benefits of PBLL include boosting creativity (Beckett & Slater, 2018); fostering higher-level cognitive skills such as critical thinking, decision making, and problem solving (Beckett & Miller, 2006; Socciarelli et al., 2020); creating possibilities for acquisition and application of new knowledge (Zachoval, 2013); helping to master research skills (Thomas & Yamazaki, 2021); and teaching learners to create higher quality final artifacts (Tatzl, 2015). PBLL engages learners in the target language usage for authentic purposes, causing them to feel more motivated (Dooly & Masats, 2019; Grant, 2017; Greenier, 2020). Though some evidence of linguistic gains brought about by PBLL exists (Dooly & Masats, 2019; Grant, 2017; Greenier, 2020), the data is inconclusive (Spring, 2020; Thomas & Yamazaki, 2021). The exploration of linguistic aspects might be complicated as all projects are unique, implemented in different settings, lasting for different periods, and including unequal amounts of language practice.

Although there is no single definition of PBLL, valid explanations are not lacking. For instance, on the website of the National Foreign Language Resource Center (n.d.), PBLL is defined as "a transformative learning experience designed to engage language learners with real-world issues and meaningful target language use through the construction of products that have an authentic purpose and that are shared with an audience that extends beyond the instructional setting" (para. 1). According to Slater and Beckett (2019), "project-based language learning (PBLL) is a comprehensive pedagogical approach that can engage and empower students by developing academic skills such as planning, researching, analyzing, synthesizing, producing, and reflecting, all while developing language and content knowledge" and also "a sound pedagogy through which learners can use language as a medium to learn language form, content, and sociocultural knowledge" (pp. 1-2). Stoller (2006) summarizes that effective PBLL should:

> (a) have a process and product orientation; (b) be defined, at least in part, by students to encourage student ownership in the project; (c) extend over a period of time (rather than a single class session); (d) encourage the natural integration of skills; (e) make a dual commitment to language and content learning; (f) oblige students to work in groups and on their own; (g) require students to take some responsibility for their own learning through the gathering, processing, and reporting of information from target language resources; (h) require teachers and students to assume new roles and responsibilities (Levy, 1997); (i) result in a tangible final product; and (j) conclude with student reflections on both the process and the product. (p. 24)

In the current study, the specific criteria adopted from the Framework for High-Quality PjBL (six criteria), Gold Standard PjBL (seven elements), which were explained in the previous section, and additional elements suggested for PBLL in foreign language education have been merged to produce the following set of criteria for quality PBLL realization:

- question, problem, or topic of a project (challenging; adapted to students' interests)
- authenticity (realistic contexts/activities/material; use of real-life digital tools)
- student choice and voice (some freedom to choose activities, information sources, formats of final products, ways and tools of working)
- reflection, critique, revision, and assessment (encouraging students to engage in ongoing reflection on their learning; providing possibilities to fine-tune the project implementation processes and refine final artifacts, based on teacher and/or peer feedback)
- public product (suitable for real applications, to be shared with audiences outside class)
- series of language learning tasks (similar to real-life language use, lasting for an extended time)

The following key elements of PBLL enabled us to establish a priori framework for data extraction and analysis. Furthermore, we carried out an in-depth analysis of the selected studies in order to explore the implementation of these framework elements in the context of higher education.

Method

A *scoping review* (or *scoping study*, as initially suggested by Arksey and O'Malley [2005]) is a type of evidence synthesis methodology applied to address a broad research question and describe a big picture in a particular field (Campbell et al., 2023). The method is typically contrasted with a systematic literature review, which has a narrower scope resulting in more focused research questions (Campbell et al., 2023; Munn et al., 2018; Munn et al., 2022). Accordingly, as our research question is quite broad, we considered the method suitable for conducting an overview of the application of PBLL for foreign language learning and teaching in the context of higher education.

To answer the research questions of how PBLL is implemented in foreign language education and what projects could be offered to university students, only empirical research articles that reported on quality PBLL realization were selected, analyzed, and reviewed. More precisely, the first five steps from a 6-stage methodological framework proposed by Arksey and O'Malley (2005) and later enhanced by Levac et al. (2010) were applied: a) identification of the research question; b) finding relevant studies; c) their selection; d) charting the data; and e) collating, summarizing, and reporting

the results. As the sixth stage of the consultation exercise is commonly considered optional for scoping reviews (Arksey & O'Malley, 2005), it was not implemented. In addition, following the recommendations provided by Arksey and O'Malley (2005) and Levac et al. (2010), the entire procedure of the current scoping review (identification of relevant studies, their selection, data analysis, and reporting of results) was treated as an iterative process, and all stages were regularly discussed by both researchers.

The research articles were selected by using variations of a broader search phrase, "project-based [foreign] language learning." Only papers that met the following criteria were included in the dataset: full and/or open access empirical research articles reporting on the application of PBLL in foreign language learning contexts in the field of higher education that were published from 2011 to 2021. The following exclusion criteria were applied: restricted access publications; articles in other languages than English; book chapters; reviews; editorials; articles focusing on PBLL realization in schools or teacher training; and publications discussing classroom projects, in which the realization of research-informed PBLL elements had not been highlighted. The search for articles was conducted in April, June, July, and August 2021. Seven databases (JSTOR, Oxford Journals, SAGE Journals Online, ScienceDirect Journals, Taylor & Francis, Wiley Online Library, and Google Scholar) were explored. The process of study selection is depicted in Figure 1.

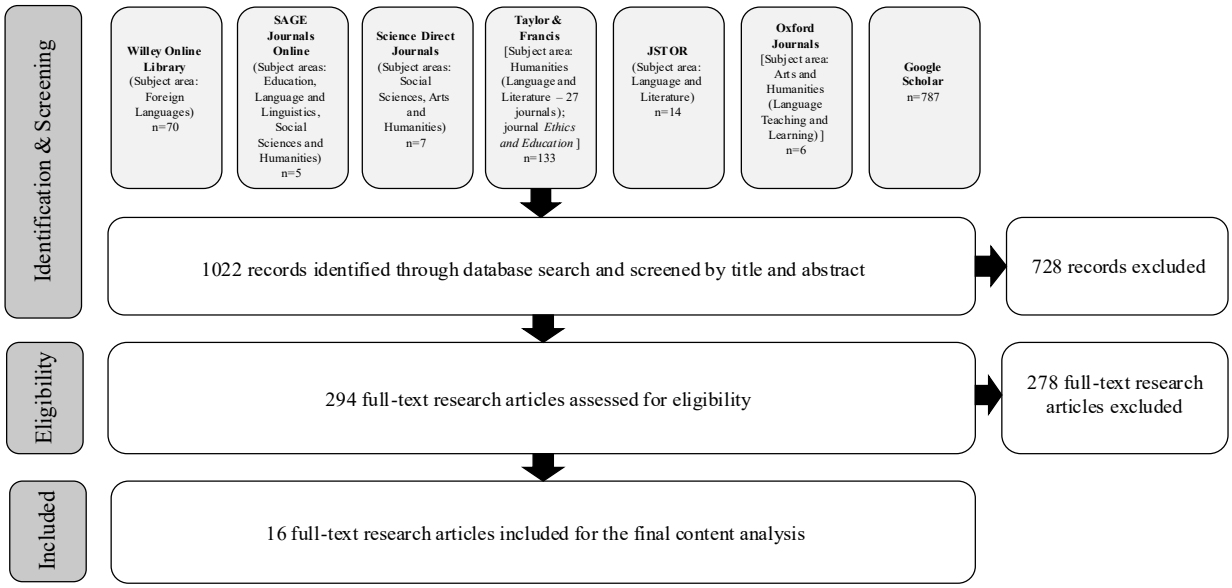

Figure 1. The Process of Study Selection

The search in the aforementioned databases yielded a total of 16 full-text articles for in-depth analysis. For data analysis and its reporting, as recommended by Peters et al. (2020), we opted for a framework synthesis and chose to sort and chart data "against *a priori* identified framework" (p. 421). We utilized the framework with the criteria for quality PBLL realization in foreign language education that was established at the end of the section, PBLL in Foreign Language Education. In the process of coding, we highlighted important segments of the articles relating to the implementation of the criteria listed in the given framework. We also highlighted various types of additional information about the implementation of the projects. The coding of all articles was completed by both researchers separately, after which the findings were collated and discussed. Some elements of the implementation of the projects, as well as additional descriptive information, had to be checked repeatedly. Appendix C provides a summary of PBLL elements in the reviewed cases; the elements

were listed according to the initially established framework. Additionally, we followed the advice of Arksey and O'Malley (2005) and Levac et al. (2010) and collated descriptive data on other important aspects of projects that are listed in Table 2.

Results

This section presents the findings about PBLL implementation in the analyzed cases. First, general information on the reviewed projects is provided, and second, the implementation of PBLL elements in specific educational settings is discussed.

Design and Implementation of PBLL Experiences

General Information on the Projects

PBLL-based projects were carried out in various university foreign language courses, e.g., Critical Reading (Kartika, 2020), Business English (Kelsen, 2018), EAP Writing (Grant, 2017), and Technical Communication (Tatzl, 2015) (see Table 2). The method was used during the courses that were aimed at teaching various languages and for learners of different language proficiency levels, as well as different disciplines and years of study. In specific cases, students from distinct disciplines enrolled in the same course and participated in the same project (Gibbes & Carson, 2014; Spring, 2020; Kelsen, 2018). In scenarios described by Sampurna et al. (2018) and Kato et al. (2020), participants from different institutions cooperated in the projects. The projects spanned different timeframes, from several individual lectures to an entire academic year.

No	Author/s	Course	Target Learners	Language(s) Taught/ Proficiency Level	Duration of Project
1	Gibbes and Carson (2014)	Institution-wide foreign language learning programme	Undergraduate students from various disciplines	German, French, Irish, Italian, Spanish, Korean, Turkish (A1-B2)	4 weeks, 2 hours weekly
2	Cox and Montgomery (2019)	Spanish	Undergraduate students from various disciplines	Spanish (intermediate)	N/A
3	Spring (2020)	Practical English Skills	Second-year engineering and law students	English (B2)	15 weeks; once per week
4	Ha (2020)	Japanese Language VI	University students aged 21-23	Japanese	N/A
5	Sampurna et al. (2018)	Non-formal EFL course for multiple universities	University students aged 19-23	English	5 weeks
6	Grant (2017)	EAP writing course	Third and fourth-year students aged 19-24	English (B1 as entry level)	4 weeks
7	Nanni and Pusey (2020)	Intensive English course	University students	English (intermediate)	A term-long project
8	Kato et al. (2020)	1) Japanese Oral Communication; 2) English	1) American students aged 20-28; 2) Japanese students aged 20-22	Japanese, English	15 weeks
9	Kartika (2020)	Critical Reading	The fourth-semester students	EFL	5 weeks
10	Kelsen (2018)	Business English	Undergraduate students from various	ESP (advanced)	4 weeks

			disciplines		
11	Roy et al. (2021)	Design of Movies for Professional Communication	Undergraduate third-year computer science students	EFL	7 weeks
12	Tatzl (2015)	Technical Communication (EFL for communication in the workplace)	Undergraduate second-year aeronautical engineering students	EFL	3 months
13	Virtue (2013)	Advanced French (medieval literature class)	Advanced French students	French (advanced)	During the 2nd half of the term
14	Bauer-Ramazani et al. (2016)	Intensive English programme	Intensive English programme class	English (intermediate to high-intermediate)	N/A
15	Zachoval (2013)	Russian	A third-semester students aged 19-21	Russian	A semester-long project
16	Oh (2012)	Korean classes (the Korean Language Program)	Learners of the modules: Korean and Independent Reading & Research	Korean (pre-advanced, advanced, high-advanced)	A semester-long project

Table 2. General Information on the Projects

PBLL was either integrated as a part of the course (Ha, 2020; Kartika, 2020; Kelsen, 2018; Tatzl, 2015; Virtue, 2013; Zachoval, 2013) or the projects were utilized as the main organizing components of the curriculum (Gibbes & Carson, 2014; Roy et al., 2021; Oh, 2012). For example, Gibbes and Carson (2014) reported on the use of PBLL as the main instructional method for teaching various foreign languages at the undergraduate level at Trinity College Dublin, where weekly classes were conducted for two hours during both terms of the academic year. In the Korean Language Program at Harvard University, a PBLL curriculum was approved as an alternative to a regular class (Oh, 2012). Nanni and Pusey (2020) and Zachoval (2013) ran term-long projects at respective institutions (i.e., a Thai university and a research institute in the Southern United States). Alternatively, Ha (2020) described the integration of PBLL as part of the Japanese language course at Yersin University of Dalat; Grant (2017) integrated a PBLL-based project in the EAP writing course in an English medium university in Macau; and Virtue (2013) conducted the experiment in the Medieval French Literature course at Indiana University–Purdue University Fort Wayne. The reviewed cases revealed that PBLL can be successfully integrated into various language-learning courses regardless of the geographical context.

Implementation of PBLL Elements

Appendix C provides details on the implementation of the following PBLL elements in the projects: a) questions, problems, or topics of projects; b) authenticity; c) student choice and voice; d) reflection, critique, revision, and assessment; and e) public product. More detailed findings on each of these aspects are provided below. Furthermore, Appendix D includes practical suggestions about how to design each PBLL-based project element to make language learning projects effective, as well as answers to our second research question of what the characteristics of effective language learning projects might be.

Questions, Problems, or Topics of Projects

Specific tendencies have been noted in terms of selecting topics, questions, or problems for projects. First, some educators (Gibbes & Carson, 2014; Zachoval, 2013; Oh, 2012) tend to give students freedom of choice. For example, in the project "Semester Project: Let's Read," designed by Zachoval

(2013), learners could research a topic of their interest through a set of readings. Students could also choose topics in the projects described by Gibbes and Carson (2014), including *The Stem Cell Controversy* (for French at B2 level), *Obesity* (for Spanish at B1 level), *An Emergency Hospital Visit* (for Korean at A1 level), and *An Educational Visit to South Tyrol* (for German at A1 level). The second observed tendency is to adjust topics or questions of projects to the overall aim of the course, which is illustrated by the following practices:

- Grant (2017) assigned to solve one writing problem during the EAP writing course to his students.
- Kelsen (2018) tasked students with developing realistic investment strategies during the Business English course.
- Tatzl (2015) suggested his students of Technical Communication course to design the concept for a silent aircraft, using a software package.
- Virtue (2013) produced a dramatic performance of a 12th-century play in the Medieval French Literature course.

The third tendency is that topics, questions, or challenges supplemented topics presented in the coursebooks of the courses, as shown in the project designed by Cox and Montgomery (2019). In this project, learners were required to invite native speakers for interviews about immigration, which was a topic mentioned in the textbook of the course. Fourth, as proved by Cox and Montgomery (2019), Kato (2020), Spring (2020), Tatzl (2015), and Zachoval (2013), effective selection of topics facilitated the design of final products with real-life applications (videorecording newscasts, conducting interviews with native speakers, creating video projects for school-wide competition, developing a webpage for exchange students, designing an aircraft, publishing a newsletter, etc.).

The reviewed projects included a series of language-learning tasks. The range and scope of the accomplished tasks directly related to the aims, nature, and duration of the projects, and the learners' proficiency. Students engaged in reception, production, interaction, mediation, or combinations of these activities. Some educators first asked learners to complete individual assignments and then switch to pairs or small groups to develop the final project outcomes (Gibbes & Carson, 2014; Cox & Montgomery, 2019; Zachoval, 2013), while others encouraged either pair (Grant, 2017) or collaborative work (Kartika, 2020; Tatzl, 2015) from the launch of the project. In the projects described by Gibbes and Carson (2014), students first completed individual written assignments and then engaged in discussions, aiming to prepare group presentations of the final artefact. In the project designed by Cox and Montgomery (2019), learners of the experimental group conducted individual 30-minute interviews in Spanish with native speakers, wrote a reflective composition, and then created small group video presentations, synthesizing the insights group members gained from individual interviews.

Designers of specific projects emphasized developing academic, journalistic, or technical writing skills of learners in addition to developing other 21st-century skills. In Roy et al.'s (2021) project fostering entrepreneurial thinking, computer science students acquired technical writing skills while developing a storyline and an informative, persuasive, demonstrative and procedural script for a movie documentary on smart products, such as intelligent toilets. They also familiarized themselves with new media design principles and tools. In Tatzl's (2015) project replicating authentic engineering activity, aeronautical engineering students, while designing the concept for a silent aircraft or researching a selected topic from a course, analyzed literature on scientific topics, implemented features and conventions of technical-scientific writing, adopted language and register proper for this type of writing, enriched subject-specific vocabulary, and peer-reviewed and edited technical texts. Oh's (2012) learners of advanced Korean chose to hone academic writing and research skills while

producing research papers related to different study fields and presented summaries to the entire class. Analysis of the students' own assessments of learning processes showed that the classes helped them to broaden their learning skills, improve the knowledge of content, and upgrade their language skills. Zachoval's (2013) project focused on acquisition of language, cultural, and content skills. Students of Russian who were engaged in this reading project researched a topic of their interest (related to college major, professional or personal interests) through a set of readings, practiced journalistic writing skills, and produced a newsletter containing articles of various styles, formats, and topics.

Authenticity

The analysis revealed that educators took various measures to ensure project authenticity. In the majority of the analyzed cases, authentic material was used, and realistic learning environments were designed. For example, in Ha's (2020) projects students were advised to study real travel material prior to producing their own travel posters and video clips. Sampurna et al.'s (2018) students had to explore specific websites for learners of English in order to prepare for the development of their own website designated for early-age English learners. Conducting interviews with real people (Cox & Montgomery, 2019; Grant, 2017), collaboration with learners from other institutions (Kato et al., 2020; Sampurna et al., 2018), developing products for specific purposes (Tatzl, 2015; Virtue, 2013), and mastering real-life tools (Tatzl, 2015) were also proofs of authenticity.

From a perspective of digital skills development while learning to use real-life tools, participants of Roy et al.'s (2021) project used digital tools such as Adobe Spark, Animoto, iMovie, Promo, and Final Cut Pro. Sampurna et al. (2018) integrated communication and collaboration tools such as Facebook, WhatsApp, Google Docs, LINE, and website design solutions. Tatzl's (2015) learners used a three-dimensional drawing programme, Rhinoceros. In the project designed by Kartika (2020), the students used Canva to create posters for presenting their research findings. The project described by Bauer-Ramazani et al. (2016) combined both working online and face-to-face; learners used personal mobile devices and Google Drive for collaboration; videorecorded newscast projects were uploaded to YouTube, and their recordings were ranked using the mobile application, Polleverywhere.

Student Choice and Voice

Manifestations of student voice and choice in the analyzed cases were abundant. To name a few, learners were given the freedom to select topics, tasks or roles, and content for analysis (Gibbes & Carson, 2014; Grant, 2017; Oh, 2012; Tatzl, 2015; Virtue, 2013; Zachoval, 2013); take decisions about outside community members to be involved in project activities (Cox & Montgomery, 2019; Grant, 2017; Virtue, 2013) and formats of final products (Gibbes & Carson, 2014; Oh, 2012; Tatzl, 2015; Zachoval, 2013). For example, in the project designed by Oh (2012), learners could choose between two options: to create a documentary video or to write a research paper. Similarly, students could choose both the topic and the format of a collective video in Spring's (2020) project. In the project described by Gibbes and Carson (2014), learners were allowed to self-assign into groups and divide responsibilities.

Reflection, Critique, Revision, and Assessment

The strategies of ongoing reflection, critique, revision, and assessment were described in the majority of the analyzed cases. Most commonly, the projects were concluded by the assessment of the final artifacts, based on the criteria established in advance (Roy et al., 2021), offered by educators (Ha,

2020), or by involving learners in their co-creation (Kelsen, 2018). In addition to the assessment of final project outcomes, some researchers (Kartika, 2020; Oh, 2012; Spring, 2020; Virtue, 2013) integrated the assessment of learners' collaboration and overall performance, done by themselves or educators, which promoted active and equal participation of all members. In the project described by Roy et al. (2021), students rated personal performance, as well as the performance of their team members. Bauer-Ramazani et al. (2016) suggested the use of formative classroom assessments, while other researchers implemented various draft reviews based on peer and/or teacher feedback. The engagement of students in ongoing reflection on their own work and the work of their colleagues was illustrated by Spring (2020), who asked learners to give brief presentations on the achievement of their group and receive regular feedback from other groups. Learners also benefited from the teacher's feedback on the quality of their created videos and refined the videos as a result. In Sampurna et al.'s (2018) project, groups reflected on their experiences and provided feedback to other groups regularly, while creating websites for children learning English.

Public Products

A range of public products or final artefacts produced by students in the analyzed contexts included academic seminars (Gibbes & Carson, 2014), production of performances (Gibbes & Carson, 2014; Virtue, 2013), websites (Gibbes & Carson, 2014; Kato et al., 2020; Sampurna et al., 2018), brochures and newsletters (Gibbes & Carson, 2014; Zachoval, 2013), collective videos (Bauer-Ramazani et al., 2016; Cox & Montgomery, 2019; Ha, 2020; Nanni & Pusey, 2020), documentaries (Spring, 2020), posters (Kartika, 2020), presentations, reflective compositions, or research papers (Kelsen, 2018; Oh, 2012). Bauer-Ramazani et al. (2016), Kato et al. (2020), Sampurna et al. (2018), Spring (2020), and Virtue (2013) reported on cases to publicize the developed products:

- Bauer-Ramazani et al.'s (2016) class uploaded video recorded newscast projects to YouTube.
- Spring's (2020) learners produced videos and uploaded them to a webpage of school-wide film making competition.
- Kato et al.'s (2020) students created a homepage with information for current and future exchange students.
- Sampurna et al.'s (2018) project participants developed a website for early age English learners.
- Virtue's (2013) advanced French students produced and gave a live performance of a medieval mystery play, which was attended by the faculty, students, and French students from area schools.

Discussion

The results show that PBLL is a versatile method that can be integrated into various foreign language learning courses at institutions of higher education designed for learners of different language proficiency. PBLL projects can be confined to several individual lectures or expand to the entire duration of the course. These projects may be applied as an integral part of a language course or serve as its central organizing unit. The PBLL elements described in the PBLL in Foreign Language Education section of this article (i.e., question, problem, or topic of a project; authenticity; student choice and voice; reflection, critique, revision, and assessment; public product; a series of language learning tasks) were implemented, to a lesser or greater extent, in the 16 projects studied.

For selecting topics, questions, or problems for projects, the reviewed projects revealed that four aspects might be useful:

1. Some designers of the studied projects gave students freedom of choice, thus aiming to sustain students' interest during the exploration of topics (Gibbes & Carson, 2014).
2. In some projects, the topics and questions were well adjusted to the aims of the course (Grant, 2017).
3. Educators of specific projects creatively used the material of the coursebooks by relating their topics to the questions and topics of the projects (Cox & Montgomery, 2019).
4. Effectively selected topics facilitated the design of final products with real-life applications (Spring, 2020).

Though meeting the dual aim of content and language learning in specific courses is important, as well as the development of other 21st-century skills, educators should be aware of their students' potential limitations (e.g., lack of disciplinary knowledge, linguistic knowledge, or general experience; academic workload; time restrictions). In addition, educators must foster a better understanding of the content and offer smart choices; otherwise, overly cognitively challenging and demanding tasks may dampen learners' motivation. Nonetheless, it is worth noting that specific courses may be particularly conducive to incorporating community partners and client-based projects. (See Lee et al. [2014] for possibilities on how to initiate projects depending on the needs of partners.) Also, community partnerships may be rewarding and long-lasting, despite some difficulties related to implementing projects within the boundaries of the syllabuses. Moreover, the university context allows the implementation of PjBL across several courses (Lee et al., 2014), if the use of the method is supported by the institution's management. Therefore, faculty members may benefit from concerted efforts to engage students, plan and implement joint projects, develop assessment tools, and carry out evaluation of results.

The designers of the reviewed projects managed to ensure authenticity and the conditions that may support it. The learners were immersed in sustained inquiry into significant content, exploring challenging problems or questions. In the majority of the cases, the gap between classroom practice and real-world language use was bridged. The research confirms Grant's (2017) and Cox and Montgomery's (2019) findings that the possibilities to access native speakers while performing PBLL tasks may increase students' perception of authenticity and their motivation as native speakers provide a cultural context for participants' language practice. Furthermore, the research (Lee et al., 2014) proves that integration of community organizations may help learners experience success (i.e., the fact that lecturers and students manage to implement projects in higher education settings is successful; the possibility to obtain authentic feedback from partners on students' projects, build networks and find internships in specific fields are positive aspects; and projects simulating the work environment enable participants to focus on significant learning outcomes). For this reason, educators may be interested in the possibilities of creating projects that support the learning objectives of academic courses while also meeting the needs of community partners.

Grounding projects in the real world requires the use of real-life tools and technologies. The range of tools used to facilitate participants' interaction, as well as the development of final products, may be further expanded by the integration of business task-management tools or even sophisticated project management software. Functionalities for scheduling, showing task dependencies, and visualizing tasks in a timeline view may help participants stay accountable to each other and deliver results in a timely manner.

The principle of student voice and choice underlay the designs of all reviewed projects. The

findings support Behizadeh's (2014) view that in well-implemented PjBL, teachers and students both teach and learn. They arrive not at "a right answer," but grappling with complex ideas, they come to "a definition that is nuanced and dynamic—the way ideas are in the world" (p. 102). In line with Behizadeh's (2014) and Kokotsaki et al.'s (2016) findings, the conducted research proves the importance of students posing their own problems, doing research, and communicating the results to real audiences. Freedom to select topics, tasks, study material, inquiry methods, and formats of final products, as well as to make decisions about group formation and, in specific analyzed cases, design of their own schedules, fosters self-regulated learning, provokes thought and helps develop critical thinking skills. This structure also engages students in the PBLL environments and strengthens their motivation, autonomy, and accountability. Moreover, the finding that participants of many projects were asked to judge the effectiveness of the projects in assessments of learning processes in PBLL classes, project task evaluation surveys, post-project perceptions surveys, and post-treatment interviews reveals that participants' voices, experiences, and perceptions were treated seriously and further explored.

The language educators of the reviewed projects put in sustained efforts to engage learners in activities stimulating reflection, critique, and revision. In most cases, students were creatively involved in the assessment of personal achievement (development of linguistic and other 21st-century skills, and acquisition of content knowledge), collaboration and overall performance of the team, final artifacts, and the learning processes. Yet, the challenge of assessing student work with a PjBL model has been articulated in several studies:

1. The danger of assessing superficial project work vs. deeper understanding of content has been addressed (Marx et al., 1997).
2. Faculty members' "discomfort" with grading products other than papers and exams (i.e., brochures, films, certain aspects of presentations), as well as discomfort with assessment of the soft skills has been mentioned as "the more subjective stuff . . . is harder to evaluate" (Lee et al., 2014, p. 26).
3. Striking a balance between group work and individual work is challenging (Lee et al., 2014).

The findings of this research are consistent with the findings of Bauer-Ramazani et al. (2016) and Lee et al. (2014): (a) the ability to find the necessary information to solve the problem should be emphasized, not memorizing the facts; (b) measuring of performance is inseparable from reflection and self and peer evaluation; (c) intermittent benchmarks and formative assessment procedures serve as effective assessment tools (i.e., educators closely monitor and document progress); (d) questionnaires, rubrics and taxonomies, interviews, tests, and self-reflection journals are used by educators to measure student outcomes; (e) giving students the feedback from community partners would be beneficial; (f) self-assessment skills help students learn to regulate their learning and assume responsibility for it in the process; and (g) substantial training and assessments on various teaching methods, including PjBL, should be offered to university faculty.

The reviewed PBLL-based language-learning projects culminated with diverse final artifacts or public products. Real-life tools or technologies were used to produce them, which complies with the requirements for high-quality PBLL. The findings of this research confirm that educators creatively sought ways to encourage learners to develop end products as outcomes of participation in specific projects, representing learners' new understandings, knowledge, and attitudes. To match new technological standards and demands, educators in the analyzed contexts used educational technology and encouraged learners to use telecommunications for oral interaction, hold online conversations and discussions, and engage in goal-oriented online transactions and collaboration. (For

the full list of newly added online interaction descriptors, see the CEFR Companion volume [Council of Europe, 2020, pp. 84-86].) Instructors also encouraged the use of multimedia and the creation of multimodal content.

The conducted research reveals that the strategies used, the communicative language activities undertaken, and the competences sought and/or developed in the analyzed PBLL scenarios are in line with the guidelines of the *CEFR Companion volume* (Council of Europe, 2020). This approach also promoted participation in collaborative project work, the use of film, theatre, recitals, and multimodal installations as the other types of creative text, and more. In addition, if potential community partners are available for a specific discipline in the location, project designers may consider focusing on meeting the course learning objectives, as well as the needs of the community partners. (See Lee et al. [2014] for ideas on teaching professional, technical, and web writing, and engaging students in client-based projects.)

The factor of language acquisition was more significant in some projects than in others, which was manifested in the range and scope of the accomplished tasks that required linguistic abilities. Altogether, educators planning linguistic tasks in the PBLL setting may find the following valuable: (a) following guidelines and recommendations on the acquisition of plurilingual and pluricultural competence and communicative language competences (linguistic, sociolinguistic, pragmatic), provided in the *CEFR Companion volume* (Council of Europe, 2020); (b) using the list of "can-do" descriptors for each language proficiency level (see Appendix B); (c) engaging in self-reflection and sharing insights and experience with colleagues experimenting with PBLL; and (d) developing tools for measuring and systematic assessment of learners' linguistic progress in PBLL.

The conducted study has some limitations. For instance, publications on foreign language classroom projects in higher education have been excluded if they lacked the indication of project-based language learning or project-based learning as pedagogy initiating learning under given circumstances. Also, some elements of projects lacked their detailed descriptions. An important limitation is also the exclusion of research articles whose full texts were not accessible for free or via institution subscription.

Conclusion

The results of this study allow us to answer the research questions about the implementation of PBLL and possible types of projects for language education in the context of higher education. They show that PBLL is a method that broadens the mission of foreign language education. Although the method might be more challenging and time-consuming for language educators, especially at the start of its usage, the benefits PBLL provides for language learners are more overarching. Studies in higher education should prepare learners for real life; therefore, more realistic ways of language learning, accompanied by the development of a range of useful skill sets, as well as the creation of public products with real-life applications, are needed to meet this aim. Moreover, as collaboration is at the core of PBLL, it prepares students for an increasingly popular project work.

This review allows us to provide insights about key elements of high-quality PBLL projects, such as the selection of topics and questions for projects; the means of ensuring authenticity, as well as student voice and choice; ways to stimulate students' reflection on their learning; and ways to organize critique, engage students in the revision of final products, and implement assessment. The study also reveals characteristics of final artifacts that university students may deliver as a result of engaging in projects. With these ideas, university language educators may design or refine their already available projects. Most importantly, in this study, we argue for the design of projects based on the elements of research-informed PBLL.

For language educators, PBLL opens doors for engaging students in learning languages in authentic situations and performing meaningful activities in groups. To overcome all challenges

related to the implementation of this method, we see the iterative practice of designing and refining language learning projects as the most viable solution. University teachers experimenting with PBLL should also seek and be offered institutional and collegial support. Overall, we consider proficiency in designing and implementing quality PBLL projects to be a characteristic of modern and advanced language educators.

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Appendix A

Websites Listing Language Learning Projects Based on the Principles of PjBL

- Project-based learning resources from the Association for Language Learning (ALL): https://www.all-languages.org.uk/research-practice/language-futures/resources-2/project-based-learning/.
- Project-Based Language Learning Repository (Pebbles): https://nflrc.hawaii.edu/pebbles.
- Project-based learning workshop gallery from the University of Utah: https://l2trec.utah.edu/news/pbll-2020-workshop-gallery/index.php.

Appendix B

"Can-do" Descriptors

The following link contains lists of "can-do" descriptors from the CEFR Companion volume (Council of Europe, 2020): https://www.coe.int/en/web/common-european-framework-reference-languages/cefr-descriptors.

Appendix C

Implementation of PBLL Elements in the Analyzed Projects

No	Author/S	Question, Problem or Topic	Authenticity	Student Choice and Voice	Reflection, Critique, Revision, Assessment	Public Product
1	Gibbes and Carson (2014)	Various language learning projects	Authentic material	Self-choice of groups, topics, material, information sources and type of a final product	Individual self-assessment based on forms provided in advance	An academic seminar, a debate on a controversial issue, a theatre project, a website or a tourist brochure
2	Cox and Montgo-mery (2019)	Interview project	Inviting native speakers for interviews about immigration	Self-choice of additional topics for interviews, formats of videos, and interviewees	Revision of interview questions based on peer and teacher feedback; oral feedback from class while presenting videos; summative teacher's feedback on individual and collaborative tasks	Collective video presentations summarizing insights from individual interviews
3	Spring (2020)	Video creation project	Creating videos for school-wide competition	Self-choice of topics and video formats	2 min presentations about group's progress and feedback on it from other groups; ongoing teacher's feedback on language in scripts; participation scores for each session; final mark based on participation, quiz scores, teamwork and quality of a final product	At least 5-min documentary-style video descriptions or short film of narrative style
4	Ha (2020)	Travel package design	Studying tourism posters; designing travel packages for real purpose use	Self-choices of tourism type and material	Assessment rubrics provided in advance	Posters and video clips introducing travel packages for one type of tourism (spiritual, eco, food, golf,

						cultural, or adventure)
5	Sampurna et al. (2018)	Website creation	Real-life communication and collaboration tools; websites for real purpose use	Self-choice of content for a website	Reflections on experience at the end of each week; peer feedback to other groups	Websites for children to learn English
6	Grant (2017)	Solving an individual academic writing problem	Indentification of individual writing problems; interviewing real people	Choice of writing problems and interviewees	Ongoing consultation between a teacher and each group	10 min presentations on solutions to the identified problems
7	Nanni and Pusey (2020)	Media project	Authentic material; finding experts on topic for interviews	Self-choice of a country and a recent event for investigation in detail	Rubrics provided in advance	The recorded informative news videos and interviews
8	Kato et al. (2020)	Homepage creation for exchange students	Authentic material; creation of a website to university students	Self-choice of topics for parts of the website	Peer assessment and feedback	Homepage offering helpful information to exchange students
9	Kartika (2020)	Is Kpop a real-life hunger game?	Authentic material	Self-choice of a Kpop aspect for research	Assessment of performance and final outcomes	Summaries and posters of the chosen Kpop aspects
10	Kelsen (2018)	Investment simulation project	Authentic material	Self-choice of own portfolio and investment strategy	Peer assessment of other teams' final presentations	Group presentations on investment strategies
11	Roy et al. (2021)	Smart toilets	Authentic material; real-life tools for digital content production	Self-choice of goal, media, and tools for video production	Assessment of final products based on the criteria provided in advance; peer review of assignments	Creating promotional videos on intelligent toilets
12	Tatzl (2015)	Designing the concept for a silent aircraft or selecting a research problem/ topic from the course	A product approach to writing corresponds to scenarios encountered in aeronautical career fields	Possibility to choose between 2 options for a project	Peer-reviewing and editing technical texts; students assessed the concept aircraft design of the group that produced it; marking (analysis of final project reports and presentations; instructor's project supervision log)	A conceptual aircraft design or presentations and reports of solutions to other research problems
13	Virtue (2013)	Production of a dramatic performance	Authentic study material; authentic setting	Freedom to slightly adapt the text of the	Viewing the recording of the performance and	Production of a live performance of

		of an anonymous 12th-century play	outside the boundaries of the classroom; collaboration with a faculty member from the Theatre department	play, select roles, take decisions related to staging the play	production of written reports to analyze the performing experience and synthesize what had been learnt Aspects evaluated by the instructor: analysis and application of students' research; quality of participation in the project; quality of analytical reports	the medieval mystery play
14	Bauer-Ramazani et al. (2016)	Video recorded newscast project with student pairs playing news anchors interviewing experts in particular fields	Development of communication and technological skills that graduates may require in future workplaces	Freedom to self-regulate learning	Assessment based on the rubric reflecting elements of the creative process, language, and content; voting on recorded projects	A 3-minute, videorecorded newscast project, uploaded to *YouTube*
15	Zachoval (2013)	A reading project "Semester Project: Let's Read"	A topic of students' interest about contemporary Russia	Freedom to choose topics and make decisions about the format of a newsletter	Sharing findings in class; agreement on the format of the end product; participation in post-treatment interviews	Reporting findings in the format of a newsletter article
16	Oh (2012)	1) Creation of a documentary video, or 2) writing a research paper	Authentic study material	Possibility to choose the number and type of assignments	Student-instructor meetings for obtaining advice; possibility to revise papers before finalizing them; students' self-evaluation of their own learning	A documentary video or a research paper

Appendix D

Suggestions for the Design of Effective PBLL-Based Foreign Language Learning Projects

<table>
<tr>
<td><u>Topics, questions, or problems:</u>
• chosen by students;
• matching the aim of the course (e.g., developing realistic investment scenarios during the BE course);
• supplementing topics presented in the coursebook of the course;
• meeting the needs of the community partners.</td>
<td> 
Pixabay image</td>
<td><u>Social/collaborative aspects:</u>
• individual assignments may be preceded by pair/small group work aimed at development of the final product;
• pair or collaborative work (3-7 members) from the launch of the project;
• promotion of collaboration: study of additional material on teamwork, use of descriptions of responsibilities, assessment of students' collaboration throughout the project and/or at the end of it.</td>
</tr>
<tr>
<td><u>Authenticity:</u>
• use of authentic material for research;
• realistic language use (e.g., conducting interviews with real people; completing real online surveys);
• collaboration with learners from other institutions;
• development of final products for real-life application;
• integration of real-life tools;
• obtaining feedback from the community partners.</td>
<td>Suggestions for the design of effective PBLL-based foreign language learning projects</td>
<td><u>Student voice and choice:</u>
• freedom to choose topics for projects;
• selection of groups and roles;
• selection of tasks and material for research;
• making decisions about formats of final products and tools to be used;
• acting autonomously.</td>
</tr>
<tr>
<td><u>Reflection, critique, revision and assessment:</u>
• asking for draft reviews based on peer or/and teacher feedback;
• using formative assessments;
• concluding projects with the assessment of the final artefacts, based on the criteria established in advance, done by educators and by involving learners;
• gauging the effectiveness of projects in assessments of learning processes (e.g., post-project perceptions surveys).</td>
<td><u>Final artefacts:</u>
• tangible products;
• digital, multimodal content (infographics, choice boards, memes, maps, presentations, posters, videos, documentaries, websites, quizzes, brochures, newsletters, compositions, research papers);
• events (e.g., academic seminars, conferences, performances);
• publicized products (shared with audiences outside class).</td>
<td><u>Language learning tasks and activities:</u>
• traditionally appreciated by learners and innovative ones;
• planned in advance and unplanned;
• designed following the descriptors from the CEFR Companion volume (Council of Europe, 2020);
• naturally generating a need to communicate in the target language.</td>
</tr>
</table>

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Dr. Evelina Jaleniauskiene is an Associate Professor at Kaunas University of Technology (Lithuania). She is a member of the research group on Language and Technologies at the Faculty of Social Sciences, Arts and Humanities. Her doctoral research focused on merging EFL teaching with developing problem-solving skills in a university setting. Her current research interests lie in the action-oriented approach, project-based language learning, and AI-powered tools in language education. Evelina Jaleniauskiene holds a certificate on conceptualizing, designing, and assessing project-based language learning (PBLL) experiences from the National Foreign Language Center (the University of Hawaii at Manoa) and the Second Language Teaching and Research Center (the University of Utah). She has organized many international and national professional development events on designing PBLL and action-oriented language learning scenarios for university and K-12 language educators.

Dalia Venckiene

Dalia Venckiene was a lecturer of English at Kaunas University of Technology (Lithuania). Her academic and research interests include teaching English as a second language, project-based language and translation learning, translation technologies, translation theory and practice.