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Phenomenon-Based Learning for the Enhancement of Learning a Foreign Language in Lithuanian Schools

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Abstract: The current research is organized while relying on the research findings which highlight the rising significance of foreign language training. The researchers underline the value of good command of a foreign language and argue that different levels of proficiency while using a foreign language might be developed while using complex learning strategies that would create not artificial, but real-life communicative situations. One of the is Phenomenon-based learning (further PhenoBL) the complex activities of which are built on active language usage. Still, PhenoBL being quite a fresh educational innovation in Lithuanian schools, provokes a lot of didactic disputes and discussions that are concentrated not only on the support of the idea of PhenoBL as an enhancement of learning English but also on the reasonong concerning the implementation of PhenoBL in EFL on the whole. Thus, the fresh experience of the implementation of PhenoBL by Lithuanian EFL teachers in their classes became of vital importance. As research data show, the experiential attitudes of EFL teachers might be grouped into pros and cons that are centered round the failure or success of the implementation of PhenoBL The research is conducted while using the mixed research approach. The sample of the quantitative part is 405 foreign language teachers who were teaching English while implementing PhenoBL 20 teachers participated in the qualitative semi structured interview. According to the final findings of the research the PhenoBL might be regarded as an enhancement of English teaching when teachers demonstrate foundational knowledge about the processes of any innovation implementation, have didactic knowledge about the PhenoBL itself, highlight the content of his/her methodical portfolio, and the complementary nature of teaching languages using PhenoBL without replacing the curriculum. The teachers stressed the idea that the PhenoBL focuses on the process rather than the final product. The PhenoBL process is based on intensive communication, inquiry reports, ect. so that the linguistic and social competences are purposefully developed. The pupils demonstrate better discussion, argumentative speaking and writing skills. For this reason, the PhenoBL may be regarded as a process, enhancing learning English.

Keywords: EFL, Foreign language teaching, Innovative methods, Phenomenon-based learning.

Introduction

The significance of foreign language training is evidently rising for several reasons. To begin with former homogeneous national societies are now becoming multicultural, multilingual societies, raising new demands for the communicating in foreign languages. Secondly, the proficiency in foreign languages opens far more wider possibilities for future career and employability. In other words, a high level of knowledge of a foreign language enables one to do things that would otherwise be impossible.

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Learning a new language is an one of the most important learning experiences happening at any age. "The pupil needs to learn not only the social language required to follow what is going on in conversations surrounding them in their environment, but also the academic language needed to succeed in the various subjects required in their education system. The educators in charge of teaching English Language learners may even carry the additional responsibility of introducing students to a completely new culture, as well as the customs that come along with it" (Johnson, 2021; p.5). For this reason, teachers of foreign language face the task of finding the strategies to ensure success in every student's language acquisition.

Phenomenon-based learning (hereinafter PhenoBL) in the context of language teaching is based on the principles of activity-based teaching, responding to the communicative direction of language teaching. According to communication based sociocultural theory, students should work with information, academic resources, using the help of teachers and peers. While cooperating they should solve real-life and real-world situations, thereby significantly expanding their understanding of the contextual use of the target language. In other words, the students are emancipating their communicative powers. Thus, PhenoBL is directed towards an integral learning while managing different flows of information, turning language (foreign language as well) learning into an inevitable, organic process.

PhenoBL is a holistic approach to education where students learn like scientists, exploring themes rather than learning separate subjects. The goal of the PhenoBL is to provide students with life experience in order to increase the desire to learn and create learning opportunities (Akkas, & Eker, 2021; Ciuciulkiene, Tandzegolskiene-Bielaglove & Culadiene, 2023). Thus, it is possible to state that PhenoBL is developing not only critical thinking or problem-solving competencies, but also social skills.

The above-mentioned complexity of PhenoBL suggests a preposition that only an experienced, innovation open pedagogue could organize the successful PhenoBL process which would enhance learning of a foreign language. Still, there is not much objective data helping us to find out if the Lithuanian schools could be successful while integrate the PhenoBL in teaching foreign languages. Therefore, a series of problem questions arise: How can we help schools prepare to integrate PhenoBL into their Foreign language teaching curriculum? What specific preparation do foreign language teachers need if they want a PhenoBL success? The presented questions presuppose the main aim of the research: to analyze Lithuanian foreign language teachers' attitudes about the implementation of PhenoBL in the foreign language teaching.

The research object: Lithuanian foreign language teachers' attitudes towards the implementation of PhenoBL in the foreign language teaching.

Research objectives:

- To perform the scientific literature review on PhenoBL practices and the implementation perspectives.
- To conduct the research of Lithuanian foreign language teacher's attitudes on the PhenoBL in the process of FLT.

Research methods: the mixed research strategy was applied in the research. Data were collected while applying the survey of 405 teachers and conducting a semi structured interview of 20 teachers who were implementing PhenoBL while teaching a foreign language. The survey was conducted in written form, online. The survey tool was sent to school representatives by e-mail (the tool is Google Forms). The received data were analysed while using the SPSS analytical package. The data received from the semi structured interviews were analysed by applying qualitative inductive content analysis.

Theoretical Literature Review

The most popular definition of PhenoBL characterizes it as the complex learning strategy, which is based on a concept of active, student-centred learning. Students learn to set goals and solve problems both independently and with others via active communication (Binkley et al., 2012; Meriläinen & Piispanen; 2012; Grusche, 2019; Kangas & Rasi, 2021; Ciuciulkiene et al., 2023). Majority of PhenoBL researchers state that the PhenoBL approach consists of several dimensions, stressing the holistic approach towards learning, authenticity, contextuality, problem-based inquiry, and learning process (Symeonidis & Schwarz, 2016).

Silander (2015) argues that holistic real-world phenomena help initiate learning if they are presented as complete phenomena in their real-world contexts The information and skills associated with them are taught across subject (discipline) boundaries. Therefore, students are taught to clarify the essence, to understand why certain processes take place, to create logical connections, instead of looking at individual details of "the

puzzle" which is being learnt and to communicate intensively during all process. In other words, the holistic approach provokes an intensive verbal communication and enables it to become a vital medium for discussion the topic choose and its understanding. Thus, The PhenoBL becomes relevant while learning a foreign language as it emancipates learners' speaking/reading/writing in a foreign language while using an authentic lexis of information sources, real-world situations, and discussion materials (Makarova et al., 2020).

Authenticity dimension is centred on the use of methods, tools and materials needed in real situations to solve problems relevant to students' lives and significant in the community. This means that students do not simulate the study of the chosen problem but use all available resources. Theory and information have immediate utility value, and experts and professionals from various fields are drawn into the learning community. The professionals are invited to the later stage of research, for reflection, when the aim is to hear their opinion on how the students managed to analyse and present the chosen problem. Such situation in a foreign language learning helps the students to use the authentic discourse that is created while reading the materials and discussing the findings with the experts. This is how the learners are encouraged to participate in real expert culture and practice. The real environment, rather than the traditional classroom, is considered an authentic learning environment, based on vivid communicative practice.

Another important focus connected to authenticity dimension is the basic knowledge students already possess. The phenomenon method, during which a lot of new knowledge is acquired, is not intended for the acquisition of basic knowledge. As they acquire new knowledge and skills, students learn to reflect on their learning, experiences, and emotions. Positive emotional experiences, joy of learning and creative activities promote learning and inspire students to develop their competence. It is important that students are connected in some way to what is being taught and how they can apply their knowledge to their learning in each lesson.

Dimension of contextuality distinguishes the learning by crossing disciplinary boundaries, exploring a phenomenon in its meaningful natural context and environment. Interdisciplinarity can help uncover and understand the nature of a phenomenon from multiple perspectives. In this sense, the phenomenon of inquiry cannot be defined in advance, but remains rather vague and ambiguous, which allows students to see a wider context. As mentioned earlier, students themselves choose the direction of inquiry, teachers are the "scaffolding" the students by helping them to ask targeted questions about the topic they care about and to discuss (Fields, 2018). It is important that students can make purposeful decisions, do not choose the direction of research based on "ease", and are not afraid to challenge themselves both: in subject study matters and in communication.

The peculiarities of the PhenoBL process are determined by the changing roles of the students and the teacher. Students are part of the learning process but do not necessarily initiate it. In the same way, teachers cannot fully instruct students on what and how to learn (Symeonidis & Schwarz, 2016). In the learning process, teachers are valued as facilitators, they do not impose their knowledge on students by conveying facts. Moreover, it encourages and directs students to solve problems that the students themselves have defined. (Silander, 2015). According to Biesta (2012), teachers must make specific decisions about what is expected of education when managing the process of investigating the phenomenon. This process does not aim to create a product, the essence is also to enable the learning process. Students take responsibility for their choices, learn to understand the research process, how to ask problematic questions, how to communicate discoveries, defend their position, and argue decisions. This is a distinctive feature of PhenoBL It means that PhenoBL provides the opportunity for every student to plunge into discussion about the content that he/she studies, performance results, development ways and strategies (Varzari, 2022). The teacher on his/her turn monitors the discovery-learning process setting purposeful questions, commenting the responses, presenting explanations and reflections on the content and language quality (Varzari, 2022; Ciuciulkiene, Tandzegolskiene-Bielaglove, & Culadiene, 2023). Thus, the students are provided with active communication possibilities allowing students to concentrate not only on linguistic issues, but also to the content of message. While collaborating with their teachers, students overcome the spoken communication barriers, which are still determined by the deeply rooted, indoctrinated educational tradition, whereby a student is supposed to present the exact answer without making grammatical and stylistic language mistakes. Thus, the communicative activities of PhenoBL scaffold and further emancipate the development of spoken communicative skills in a foreign language (Ciuciulkiene & Stankeviciene, 2014; Bobrowsky, 2018; Fields, 2018; Johnson, 2021).

The topic of the implementation of PhenoBL has hardly been studied in the context of educational practice in Lithuania. The information has been presented on the few practices of several schools that have tried to integrate this method. Moreover, there are very few investigations with the specific orientation towards foreign language learning in the context of PhenoBL. The lack of research and experiential data on integrating PhenoBL in teaching foreign languages in Lithuanian schools makes this research relevant and innovative. The shortage of

objective data presupposes the following series of research questions: Do teachers in Lithuania know what phenomenon-based education is? What is foreign language teachers' experience of PhenoBL? What specific preparation do foreign language teachers need? These research questions model the further content of the research parameters.

Method

Research Design

The research aims to find out what are the attitudes of Lithuanian foreign language teachers towards PhenoBL implementation in foreign language teaching. The researchers have chosen a mixed method of research, combining elements of qualitative and quantitative research methods in order to gain a broader understanding of PhenoBL as an enhancement of learning English.

A quantitative survey method was chosen due to the possibility of examining the answers of a large number of respondents, concerning their opinions about the factors that might provide the success of PhenoBL while teaching a foreign language. The research aims to find out what is the attitude of foreign language teachers working in Lithuania towards innovations, what innovative methods they usually use in their lessons, as well as how, according to the teachers, their students are ready for the application of the phenomenon method and the position of school administrations, how schools evaluate the implementation of innovations and or creates space for change. While collecting responses to the survey, e-mails were sent to all school administrations in Lithuania using publicly available school contact information. The letter asked for the questionnaire link to be shared with foreign language teachers working at the school. After some time, another letter was sent to all the schools in order to encourage the teachers to answer the questions of the sent questionnaire.

The qualitative research was conducted in order to interview teachers who already use the PhenoBL method in Lithuania, to hear about their experiences and to provide recommendations on how PhenoBL could be included in general education programs. A semi-structured interview was chosen due to the flexibility of this method and the possibility of collecting data from a small group of informants, as there are not many teachers who already use this method in Lithuania. Also, this method allows to use more informative research questions and reveals the experience from the perspective of the research participants. It is important that clarifying questions can be asked during the interview, the conversation does not have very strict boundaries, and it is possible to adapt to the interviewer. The semi-structured interview aims to understand the informants' experience and individual approach to the situation. The design of the research is presented in the Table 1.

Table 1. Design of the research

No.	Stage	Activity during the stage
1.	Preparatory stage	In the first stage, an analysis of the scientific literature was carried out,
		the main research problem was identified, its relevance, research object,
		goals and tasks were justified
2.	Projecting of the research procedures	Two research methods were chosen: quantitative survey and qualitative semi-structured expert interview.
3.	Planning of the	A quantitative research instrument is being prepared and a future
٠.	quantitative part	research methodology is planned.
4.	Conducting the	The planned quantitative research is implemented, the data from the
	quantitative research	respondents are collected. The survey was conducted in written form,
		online. The survey tool was
		sent to school representatives by e-mail (the tool is Google Forms).
5.	Analysis of the	The quantitative findings are analyzed while using the SPSS analytical
	quantitative data	package.
6.	Planning of the	A semi-structured interview questionnaire is being developed. Timing of
	qualitative part	the interviews is planned
7.	Conducting the	In accordance with the principles of research ethics, 20 semi-structured
	qualitative research	interviews were conducted with 20 informants - English teachers who
		used PhenoBL in their classes.
8.	Analysis of the	The text is transcribed, a qualitative inductive analysis of the obtained
	qualitative data	data
		is performed
9.	Research conclusions	Final conclusions of performed research are presented

The chosen method of mixed research strategy, using quantitative survey and semi-structured interviews, made it possible to delve into the attitudes of the research participants towards PhenoBL and provide insights into the research question. Compliance with the requirements of data collection and analysis methods typical for quantitative and qualitative research ensures the validity and reliability of the research. A voice recording app was used in the qualitative research, which ensured that the data obtained was unbiased and reflected the true opinions of the respondents. A detailed description of location, time, data collection and data processing helped ensure validity.

Quantitative Research: Sample and Data Collection

The questions for the quantitative survey were compiled after the scientific literature analysis, taking into account the main components of the concept of "learning" in the process of PhenoBL, the content of the dimensions of PhenoBL, the structure of PhenoBL, the development of collaborative communication in a foreign language teaching with a help of PhenoBL. Data were collected while using an electronic survey, which was sent to teachers by e-mail. The survey questions are grouped into five question blocks. They include:

- demographic data (age, gender, etc.).
- teachers' attitude towards innovations.
- innovative methods already applied by teachers.
- teachers' knowledge and intentions about PhenoBL.
- teachers' opinion about their students' preparation for the application of the PhenoBL.

The measured construct is the application of PhenoBL in the context of innovative foreign language teaching. The questions were of a closed type, except for one - teachers were invited to supplement the list of applied innovative methods with the methods they used themselves. The main hypothesis of the research implies that PhenoBL can be successfully applied when foreign language teachers have knowledge and didactic experience in the field of innovative learning methods implementation, demonstrate the positive attitude toward the usage of educational innovations. According to the data of the Lithuanian Statistics Department, there were 4077 teachers who were teaching foreign languages in Lithuania during 2021-2023. In order to provide the survey results which would reflect the opinion of the population with a 95% probability and a 5% margin of error, it was necessary to survey 351 teachers who taught foreign languages. The final sample of the quantitative research is n=405. The main types of comprehensive schools were represented in the sample as well. The sample is quantitatively dominated by gymnasiums, progymnasiums, long gymnasiums, and secondary schools. State and municipal schools are the most dominant in the sample, as 85% of the respondents work in them. The sample consists mainly of master and senior teachers. There are few teacher experts (only 4.2 %). This corresponds to the formal realities of the Lithuanian foreign language teaching staff structure.

The most popular languages taught in schools remain English, Russian and German. Almost 74% of the respondents teach English, 30% teach Russian. Only 7% of teachers at the school teach other foreign languages - French, Spanish or others. The presented facts and arguments about the sample structure of the surveyed teachers allow us to state that the formed sample corresponds to the actual demographic realities that are formed in the Lithuanian foreign language teachers' community and is adequate for the research objectives. Respondents participated in the survey voluntarily and their anonymity was ensured. The respondents did not have to indicate the name, surname, or name of the school in the questionnaire. It was asked to indicate only the type of school and its founder (private or state), the language taught, the city. There was no way to identify the identity of a specific respondent.

The survey data were processed using SPSS Statistics 18 software. Statistical data analysis was performed, thematically homogeneous statements of the questionnaire were aggregated into scales (composite indices), Pearson (r) coefficient was calculated. The results were summarised and presented in the form of charts and tables.

Qualitative Research: Sample and Data Collection

For the implementation of the semi-structured interviews, 23 main questions were prepared relying on an inductive approach (the operationalisation of the main theoretical concepts, relying on scientific analysis and lesson observation). This was based on the relevant theoretical and practical insights, which served as a premise for formulating the interview questions. The list of interview questions is presented in Table 2.

Table 2	. Operationalization of	semi-structured interview questions
Concept Content	Research question	Interview questions
The theoretically based PhenoBL concept states that PhenoBL stands for relevant, innovative, substantive, and timely learning. This method is not only a method but also a new way of thinking (Binkley et al., 2011; Symeonidis & Schwarz, 2016; Lonka et al., 2018; Akkas & Eker, 2021; Roiha & Polso, 2021; Bărbuleţ, 2022).	Do foreign language teachers in Lithuania know what phenomenon-based learning is?	Did you have enough information about PhenoBL before implementing it into your language classes?
The relevant task of the foreign language teacher: to find the most effective strategies to ensure that a foreign language might become a tool, helping students to be successful in the global socialisation process (Bobrowsky, 2018; Fields, 2018; Fields & Kennedy, 2020; Johnson, 2021; Varzari, 2022; Bercasio & Adornado, 2023).	What is foreign language teachers' experience while facing PhenoBL?	What challenges do you face while using the PhenoBL method? What educational subjects are the easiest to integrate into the PhenoBL method? What academic subjects are the most challenging for the implementation of PhenoBL? What do you, as a teacher, lack in order to more smoothly incorporate PhenoBL into the curriculum for TFL? Do you notice a positive/negative impact on students' learning outcomes after starting to include this method? Comment your answer. What do you expect students to do before starting to explore the phenomenon? What is the attitude/mood of the students before/during/after investigating the phenomenon? How was the preparation process? How much time did you spend planning and how long did it take to successfully plan your investigation of the phenomenon? Is a 45 min lesson enough to apply PhenoBL? If not, how do you organise your class time? Do the students willingly engage in the study of the phenomenon? How did the learning process differ between less motivated and more motivated students? Did you involve parents in the process of researching the phenomenon? What basic knowledge did the students need to acquire before starting to study the phenomenon? Were students able to successfully integrate the necessary knowledge into the inquiry process? What are your recommendations for teachers who would like to try incorporating PhenoBL into their curriculum? Will you continue using this method?
Specific foreign language teachers' didactic skills, CLIL competencies (Ciuciulkiene & Stankeviciene, 2014; Valanne et al., 2017; Nguyen, 2018; Marsh et al., 2019; Tagunova et al., 2019; Makarova et al., 2020; Johnson, 2021; Bercasio	What specific preparation do foreign language teachers need?	Is collaboration between teachers an important part of the PhenoBL? Why? Do you think the inclusion of foreign languages in PhenoBL is important? Why? Do you include only the first foreign language or others as well? What methods and strategies do the language teacher apply while conducting PhenoBL?

& Adornado, 2023).

The theoretical analysis suggested three leading conceptual ideas concentrated around the experience of Lithuanian foreign language teachers who implemented PhenoBL in their curriculum. These ideas revealed the major meaning of PhenoBL, defining PhenoBL not only as a relevant, innovative, and timely learning strategy but also as a new way of thinking; its specification in teaching a foreign language frees up language usage and turns the foreign language into a successful tool for global socialisation, aligning with the special didactic requirements for a foreign language teaching and combining language acquisition process domains (see Table 2) The duration of a single semi-structured interview lasted about 1.5 h. Each interview was conducted by one researcher. The responses were recorded and later transcribed. The transcriptions were analysed by two independent researchers with the purpose of generating the main ideas and regularities. The main categories and subcategories were revealed. A validating consensus on the leading categories and subcategories was reached. The research participants were only those foreign language teachers who already have the experience of the phenomenon-based learning implementation in their work. A total of 20 foreign language teachers were interviewed (n-20). Interviews were coded with a letter (R) and a number from R1 to R 20. The received data were analysed using qualitative inductive content analysis according to Elo & Kyngäs (2008). Some insights of Lochmiller (2021), especially those dealing with the procedures of the research were also taken into the consideration.

Qualitative inductive content analysis was performed, which is an inductive process involving iterative coding. By inductive process, we mean that the codes used to label the data are developed during the process of coding, based on the actual content of the data set. The codes were identified by the researcher within the data. The received answers were analysed by three researchers using the MaxQda software. Finally, the received categories were validated by comparing the received results of the three researchers.

Results and Discussion

Quantitative Findings

Table 3. Sca	les/composite	indices	constructed	and their	explanation

	scale	scale
 CLIL (content and language integrated learning) Problem-based learning Project-based learning Immersion Flipped classroom Critical or moderate approach to innovation Innovation brings useful information. Innovation has a positive impact on my professional development. Innovation encourages me to update my knowledge of teaching the subject. Positive attitude towards innovation Innovation just doesn't work. Innovation is stressful for me. Using innovation in the classroom is extra work for which I am not Puzzle Phenomena Pupils teach Mind map Innovation Innovation innovation Innovation interesting. Innovation engagement Innovation implement interesting. Innovation interesting. 	inspires me to deeper in education. makes the learning has a positive in the in classroom activitien. The in executing that I do not it in my classroom. Should be my initiative.	ng process more mpact on student es. 5 n't find the time to e and not forced by
Frustration with the lack of innovation culture in school	3 in the school only ta	5 kes off if you start

• The organisation only formally supports innovation.

Supportive culture of teamwork and innovation at school

- If necessary, the school could temporarily adapt the traditional timetable by combining several subjects.
- The school has the conditions to allow teachers teaching several different subjects to work together.
- The school has a positive attitude towards combining several subjects.
- If necessary, I can even teach students in the school building.
- Educational innovation is viewed positively in the school.

Positive attitude towards the totality of students' abilities

• They are able to work successfully in a group.

Teachers work in interdisciplinary teams.

Inclusion, equality and democracy are the core

If I wanted to invite a guest expert into my

classroom, I would feel the approval of the school

5

• Can work as part of a team.

15

9

Teachers work in groups.

values that guide the work.

(this is not a pandemic situation).

- They are able to collaborate successfully.
- Can formulate logical arguments.
- They are able to participate in a discussion.
- They are able to evaluate own work.
- They are able to accept peer assessment and listen to reflections on their work.
- Can come up with and express a wide range of ideas, hypotheses and options.
- They see meaning in the learning process.
- They are empowered to ask questions that are interesting and relevant to them.
- Can combine knowledge from several different disciplines.
- They are able to express the purpose of a lesson when introduced to a new topic.
- When introduced to a new topic, they are able to set criteria for success.
- They are able to set themselves objectives when introduced to a new topic.
- They are able to use a variety of problem-solving strategies.

Table 4. Statistical correlations between scales/indexes

	Variety of teaching/le arning methods	Positive attitude towards innovation	Critical or moderate approach to innovation	Frustration with an innovation- unfriendly culture in the school	Supportive culture of teamwork and innovation at school
Positive attitude towards the totality of students' abilities	,312****	,228****	-,174***	-,225****	,403***
Variety of teaching/learning methods	1	,146 **	-,134 **	-,053	,273 ***
Positive attitude towards innovation		1	-,349 ****	-,238 ****	,373 ****
Critical or moderate attitude towards innovation			1		-,075
Frustration with an innovation- unfriendly culture in the school				1	-,252 ****

 $\overline{****} p \leq 0,000.$

No correlation	R ≤,20	$21 \le r \le 33$	$34 \le r \le 45$

Thematically homogeneous statements of the questionnaire were reduced to scales (composite indexes). When forming the scales, the rules adopted in social research methodology were followed. All scales met the criterion of internal consistency of the scale. Cronbach-alpha values of the reliability coefficient of the created scales ranged from 0.72 to 0.91 (Table 3). The scales are related to theoretical concepts such as the diversity of learning methods, teachers' attitudes towards innovation (positive or critical), the institution's innovation culture or lack of it, and students' abilities and attitudes towards active and conscious learning (Table 4).

Studies which deal with correlation matrices are called correlational studies. Table 2 reveals a summary of correlations between attributes, called the correlation matrix, consisting of 14 coefficient values. The Pearson @ coefficient was also calculated. As it is well known, correlation coefficient values cannot be treated judicially as an instrument for proving causal hypotheses. A correlation first of all shows that there is a statistical relationship between two variables. Whether the correlation is found it can be treated as a causal relationship depending on the theoretical context. In the case of this study, as many as 12 out of 14 coefficients meet the very stringent statistical confidence condition of $p \le 0.0001$.

The highest correlation coefficient was found between the scales "Critical or moderate attitude towards innovation" and "Frustration with the lack of innovation culture in school ". This is natural, because both scales basically measure very related constructs – the teacher's personal attitude towards innovations and his/her opinion about how innovations are implemented in school. It turns out that if the pedagogue does not personally believe in innovations and their benefits, then it seems to him/her that nothing good is happening in the field of innovations in the school itself. We can see a similar situation in the correlation of the scales "Positive attitude towards innovation" and "Supportive culture of teamwork and innovation at school". If the pedagogue's personal attitude towards innovation is positive, it is likely that he/she will tend to see the positive progress of innovation implementation in the educational organization itself.

Particularly noteworthy is the highly reliable and positive coefficient between the scales "Positive attitude towards the totality of students' abilities" and "Supportive culture of teamwork and innovation at school", as well as the highly reliable but negative coefficient between the scales "Positive attitude towards the totality of students" "abilities" and "Frustration with an innovation-unfriendly culture in the school". Of course, even in terms of theoretical interpretation, it would be difficult to say which diagnostic construct is the cause and which is the consequence. For example, whether a positive, optimistic attitude of a teacher towards students determines his/her favourable attitude towards innovation in school or vice versa. It is most likely that the detected relationships between the mentioned variables are hypothetically explained by the third group of variables, which does not appear in this study. It could be a positive professional auto-concept of the pedagogue, strong professional motivation and high competence.

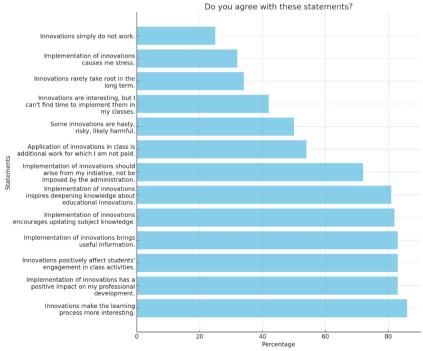


Figure 1. The scale of teachers attitudes towards the implementation of educational innovations

This hypothesis explains well the other statistical relationships found in the study and worthy of attention. The relationships between "Variety of teaching/learning methods" and such variables as "Positive attitude towards the totality of students' abilities" and "Supportive culture of teamwork and innovation at school" are really noted. The teachers were asked to rate how strongly they agree with the given statement about innovation applications in teaching process on a scale of 100 points. The higher the score, the stronger the support for the diagnostic statement (Fig. 1).

Respondents were presented with the 13 statements, and 405 respondents answered them. The statement that innovations make the learning process more interesting (Mean -85.6) was most strongly supported. The statements that innovations have a positive influence on my professional development (Mean -83.5), innovations have a positive influence on students' involvement in class activities (Mean -83.0), implementation of innovations bring useful information activities (Mean -82, 9), the introduction of innovations inspires deepening of knowledge about innovations in education (Mean -80.8).

The greatest disagreement was with the statements that "innovations simply do not work" (Mean - 25.0), "implementing innovations causes me stress" (Mean - 31.9), "innovations rarely succeed in the long term" (Mean - 34.0). Foreign language teachers favourably evaluate innovations and their benefits. Such responses are hopeful concerning the implementation of PhenoBL The statement that "innovations are additional work for which I am not paid " was neither agreed nor disagreed (Mean - 54.0), which suggests that educators consider the implementation of innovations as part of their work, treat them as duties of teachers. It was agreed with the statement that the introduction of innovations should occur on the teacher's initiative, and not be forced by the administration (Mean - 72.1). It is possible to state that this is related to the teachers' desire for autonomy and the human reluctance to simply follow instructions that they did not contribute to.

In the survey, foreign language teachers were asked to rate how often they use the specified methods in their lessons. Brainstorming was assessed as the most applicable method. With this method, teachers aim to enable students to spontaneously express as many ideas as possible. The project-based teaching method and the method where students teach each other are also often practiced. With these methods, teachers aim to develop students' cooperation skills, encourage them to independently obtain and present useful information (Fig. 2).

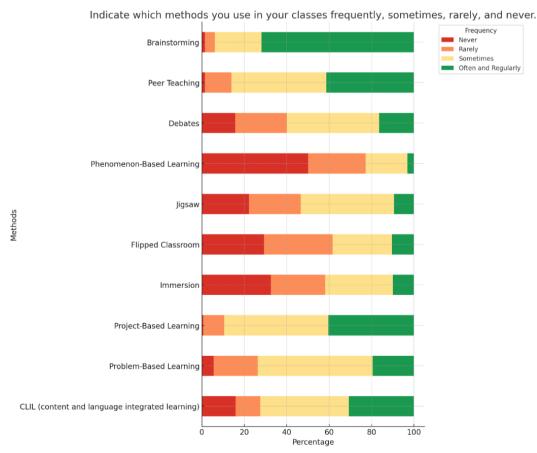


Figure 2. The rate of the most popular methods used by foreign language teachers

Surprisingly, the flipped classroom method was marked as one of the least used. The flipped classroom method is particularly suitable for analysing literary works or active vocabulary application tasks - students study the new information at home and apply it in the classroom. It is likely that teachers use this method without naming it as "flipped classroom". This possible "misconception" has possibly made the "flipped classroom" method one of the most unpopular.

PhenoBL became the least used method, but such results could be expected - this method is just starting to enter the list of methodical repertoires in Lithuania. The fact that foreign language teachers actively use brainstorming, problem-based and project-based teaching, CLIL, debates shows that they are already prepared for the application of the PhenoBL as all the previously mentioned methods might be regarded as methodical thesaurus of the PhenoBL

One interesting observation is that in the context of the COVID-19 situation, there emerged relatively new attitudes of teachers towards the use of IT. The teachers reviewed the wording of the tasks, the submission options and, as an innovation in the context of the pandemic, highlighted the submission of tasks online. This is a kind of readiness to work on the principle of a flipped classroom.

Teachers had a possibility to name innovative methods not mentioned in the questionnaire, but actively used in their lessons. Teachers highlighted podcasting, the route method, digital tools for self-assessment, lessons in non-traditional environments, video reporting, creating plays, theatre activities, journalistic research, student-led lessons. Such mentioned methods are very close to the PhenoBL didactic (Fig. 3).

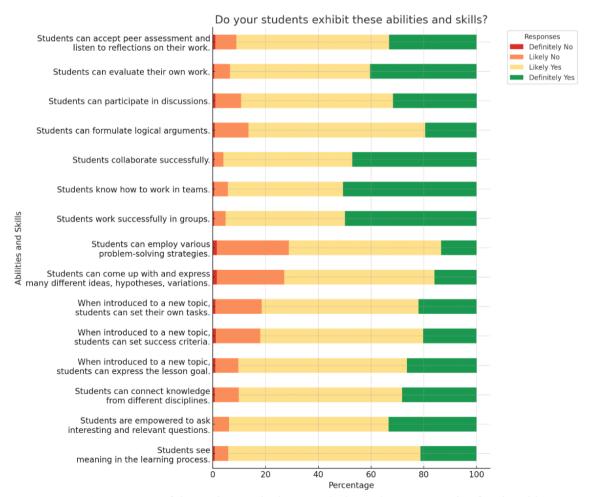


Figure 3. Rate of the teachers' attitudes towards the students' preparation for phenobl

After evaluating the teachers' attitude towards innovations, their most commonly used teaching methods, it remained to assess the students' preparation for the implementation of the PhenoBL method. The teachers were asked 15 questions inviting them to evaluate whether they agree or disagree with the given statements. The teachers mostly agreed with all the presented statements, but none of them were strongly agreed with. The statements that were agreed with were about group work, teamwork and collaboration. The foreign language

teachers agreed that their students are able to successfully collaborate both in group and team work, which is a very significant moment for the application of PhenoBL, because during the entire research, students work in groups. Thus, having this skill presupposes a successful PhenoBL process. While working in a group, students also develop organizational, leadership, and effective communication skills, which are necessary for the success of investigating the phenomenon.

Another important part of the PhenoBL is reflection, which occurs not only at the end of investigation, presenting the results, but also is a part of everyday research, when students strive to make sense of the discovered answers and raise questions that will help to plan the inquiry of the presented problem. The PhenoBL is based on students' curiosity and motivation for research. For this reason, students are encouraged to activate the acquired knowledge while raising new questions during reflection. The teachers agreed with the statement that their students are able to raise relevant questions and are also able to accept the reflections of other students. The presence of these skills gives a positive impression that the students at Lithuanian schools are also ready to accept the PhenoBL in their classes.

The statement that "Students are able to use various problem solving strategies" was the least supported by the teachers. It is clear that this is one of those skills that should be improved. There was a very similar response to the statement that "Students are able to invent and express many different ideas, hypotheses, and options of the solutions." It can be concluded that generating ideas is not the students' strong point, although this is somewhat unexpected considering that the brainstorming method was chosen by the teachers as the most frequently used during the lessons. It is likely that students should do more thinking tasks that would force them to create ideas themselves, raise hypotheses, express success criteria while indulging in an active communication.

Understanding that students' "weak point" is the independent generation of ideas, setting tasks and success criteria, whereas teamwork and collaboration are the skills that most of the students possess, we could be positive about the implementation of PhenoBL and invite teachers to apply it in their lessons as soon as possible - thanks to collaboration skills, the work process will take place smoothly, and due to the dimensions of the PhenoBL students will acquire and improve their independent thinking and problem solving competencies actively using language as a tool for a successful interaction.

Analyzing the data concerning the information the teachers have about PhenoBL, 44.2% of all the respondents have not heard about the PhenoBL. 42.2%, of the respondents are already familiar with PhenoBL but have not used it. Only 12.6% of respondents noted that they used PhenoBL at least once in their lessons. The fact that almost half of the respondents have not heard about PhenoBL is somewhat surprising, especially knowing that this method has been a part of the Finnish general education program since 2016. As the educational achievements of Scandinavian schools and are constantly discussed in Lithuanian educational community, the fact that half of Lithuanian foreign language teachers have not even heard of PhenoBL raises many questions. Why do teachers not get relevant information about innovative teaching methods? Is this another gap in Lithuanian education system or a sign of teachers' arrogance, indicating their reluctance to develop the competencies in their professional field? However, even 68.9% of respondents would like to know more about the PhenoBL. Such numbers encourage to be positive. It is particularly encouraging that only 5.4% of respondents did not want to learn more about PhenoBL. This is a very small part of pedagogues who are not inclined to be interested in new educational methods in Lithuania. The majority of respondents are willing to raise their qualification and embrace innovation, so the problem is how teachers can get up-to-date information. And although one of the reasons could be a language barrier preventing educators from accessing the latest information in English, this is not relevant because as it was mentioned earlier, 74% of foreign language teachers teach English. When asked if teachers wanted to integrate PhenoBL into their lessons, 35.3% of respondents agreed with this statement. The majority, 57.5%, could not answer this question, and this is understandable - as mentioned earlier, 44.2% of respondents had not heard of this method before getting familiar with the questionnaire. It is evident that although there are various ways of encouraging foreign language teachers to be interested and educated, it is obvious that such efforts are not enough.

The study of the survey of educators' attitude to PhenoBL allowed us to discover the following statistical regularities worthy of attention from the point of view of educational theory and educational practice. Educators who have a favourable attitude towards innovation are relatively characterized by the fact that they:

- More favourably evaluate the innovative process in the educational organization where they work.
- Those who tend to assess their students' educational abilities more positively, can be said to be optimistic about their students' educational opportunities and abilities.

- Are willing to apply a wider variety of teaching methods in their professional activities. On the other hand, pedagogues who are characterized by a critical or moderate attitude towards innovations are relatively characterized by the fact that they:
 - Tend to evaluate the innovative process in the educational organization where they work quite critically.
 - Are not too optimistic about their students' educational opportunities and abilities.
 - They are less likely to apply a variety of learning methods in their professional activities.

It is obvious that in terms of the images of the ideal educational process and the ideal pedagogue, a pedagogue who has a positive attitude towards innovations is significantly superior and more attractive. This fact directly effects the successful implementation of the PhenoBL in foreign language teaching process.

Qualitative Findings

After the analysis was performed, five leading major themes emerged: the competencies of student-centred teaching, the development of subject integration competencies, teamwork development competencies, major teacher achievements and challenges, and enhancement of foreign language usage (Table 5). It is worth noting that the teachers that participated in the research expressed more positive attitudes towards their experience of PhenoBL than negative. The revealed themes demonstrate that teachers paid major attention to the didactic possibilities of PhenoBL. Less attention was paid to the separate issues of evaluation systems.

Table 5. Content of themes, categories and subcategories

	memes, categories and subcategories		
Subcategory	Category	Theme	
Good knowledge of students' interests, abilities,	Student-centred activity	Competencies	
skills	management	of student-	
Planning of students' experiences		centred	
Independent choice of the phenomenon	Student is the main path finder	teaching	
Teacher as advisor and consultant			
Holistic, integrative approach towards teaching	Collaboration among teachers	Development	
Knowledge about colleagues' interests		of subject	
Good knowledge of curriculum	Phenomenon compliling skills	integration	
Creativity development		competencies	
Time management			
Preparation of the phenomenon design in	Team Teaching	Teamwork	
teaching groups		development	
Flexibility of PhenoBL planning and organising		competencies	
Dynamics of sharing responsibilities in the	Development of students'		
group	group work skills		
Collaboration of teachers and students			
Children's enthusiasm and engagement in	Teaching achievements	Teachers'	
investigation		major	
Feeling like a team member		achievements	
Engagement in discussion in a foreign language		and	
Range of didactic activities		challenges	
Teachers' fears about making mistakes and			
misleading students			
Discomfort of changing traditional teaching			
roles			
Lack of administrative flexibility			
Expansion of vocabulary due to phenomenon	Development of lexical	Enhancement	
analysis	competencies	of foreign	
Usage of terms	-	language	
Better usage of interrogative sentences due to	Polishing of grammar models	usage	
Phenomenon investigations		C	
Better usage of negative sentences			
Value-based speaking (speaking the truth)	Development of oral		
Presenting arguments	communication skills		
Courage for public speaking			
		-	

The first theme was defined from the respondents' answers to one of the semi-structured interview questions dealing with the foreign language teachers' primary knowledge of PhenoBL and their experience while applying

it (see Table 5). The teachers highlighted the importance of student-centred teaching (see Table 5). The evidence for the coding of this category can be illustrated by the following responses: "<...> Those who are more involved in this innovation often encourage other friends, set an example, etc...Teacher is not such a leader anymore. There are students in the classroom who are different leaders than teachers. They know what they want" (R3).

The second theme revealed the importance of subject integration competencies (see Table 5). The evidence for category coding emerged from the following typical answers: "<...> It is difficult to understand that my subject is not the most important. There is also no teaching of individual subjects, and the chosen phenomenon is studied, analysed, and produced through the prisms of many disciplines. Many educational subjects can be combined into one phenomenon, for example, when deciding to restore an old painting, mathematics, chemistry, art, a foreign language are included it is easier for a teacher who practices CLIL" (R1.

The third theme stressed the relevance of the teamwork development competencies of teachers in enhancing the development of students' group-work competencies (see Table 5). The presented answers "Just as students preparing for research will work in a group, teachers could prepare and research in teams—this way they will have an even better understanding of the challenges that the students will have to face" (R7). "There can be a study of 2–3 lessons, when the lessons of several teachers are combined, which are placed one after the other" (R4). Team teaching allows educators to turn ordinary class teaching into an authentic, problem-solving-based process, which is realised by turning groups of students into learning teams as well (Meriläinen & Piispanen, 2012; Symeonidis & Schwarz, 2016; Makarova et al., 2020). Becoming a learning team encourages inclusion and the development of communication and social skills.

The fourth theme was derived from answers to questions related to teachers' achievements and the challenges they faced while implementing PhenoBL (see Table 5). While speaking about their achievements, teachers once more highlighted a student-centred approach. "This is probably the greatest success, when the children's motivation grows, competencies improve... to see that even after the bell for a break, they are still discussing" (M12). "I was happy to use my CLIL" (R9). "That challenge is the same fear of saying something wrong. I myself feel like a student, because I learn together with the students, <...> This phenomenon is also a challenge, because the teachers do not know everything, and they are also researching something" (R10). As can be seen from the first citation, teachers are also mindful of their professional growth, reflect on emerging challenges, and evaluate the development of their competencies (Akkas & Eker, 2021).

The last theme was derived from answers to questions dealing with the foreign language teaching methodical specification while using PhenoBL (see Table 5). While talking about foreign language learning from the perspective of PhenoBL research, participants stressed the importance of the development of creativity, collaboration, and communication: "Public speaking skills are very important. After completing the research, it needs to be presented, so students must not only be original and creative, but also accurate, good time managers (M5). This attitude almost coincides with researchers' attitudes that learners are constantly encouraged to actively participate in researching and analysing specific academic information, in reflecting on emerging challenges with peers and groups, in debating and negotiating, in drawing conclusions, obtaining results, and reflecting on their experiences throughout the learning process (Roiha & Polso, 2021).

After carrying out a qualitative study and interviewing teachers already using this method, it became clear that no special preparation is needed for this method to be applied; the most important thing is that teachers are theoretically familiar with the application of this method, are interested in examples and good practices, have the know-how, and are willing to cooperate with colleagues in order to share their acquired experiences.

Conclusions

The PhenoBL approach aims to replicate real-life conditions, giving students the opportunity to explore various topics the way scientists do. In order to apply PhenoBL in the classroom, it is important to already have a basic knowledge of the topic that will be studied - this facilitates the research process and gives students a greater sense of success. The role of the teacher during the application of the method is advisory, the process is led by the students, it is important to trust them, but not to allow them to completely deviate from the goal by supporting them, rather by guiding them in the right direction. Holism and interdisciplinarity are distinctive features of PhenoBL. The method is focused on the process, not the final product, so it's important to enjoy the process and appreciate all its parts, not just what happened at the end of the process.

Language teaching using the PhenoBL may be implemented without replacing the educational program. It organizes language practice in almost natural conditions, stimulating the communication in a foreign language, as the foreign language is used among the students and teacher as a tool for active interaction. The intensity of language activities improves the understanding of a foreign language and reduces the fear of public speaking. In addition, the teachers distinguished that the way students use foreign languages is related to their age and experience—older students who know foreign languages better prefer to communicate in a foreign language.

Language teaching can be integrated in different ways. It depends on the language ability of the learners. In a quantitative study, the hypothesis that *PhenoBL* can be successfully applied when foreign language teachers have knowledge and didactic experience in the field of innovative learning methods, demonstrate the positive attitude toward the implementation of educational innovations was confirmed, as a correlation was found between the positive attitude toward innovative methods and new application of methods. Therefore, if the teacher has a positive attitude towards innovative methods, he /she will be able to successfully apply the PhenoBL method.

All teachers tend to recommend this method to colleagues who have not yet tried it, encouraging them to not be afraid to make mistakes and learn from them. However, this method also has challenges that can scare educators; it is important to cooperate with each other regardless of teaching subject by dividing the workload and saving time, sharing knowledge, reading a lot, and being interested before applying PhenoBL. The most widely discussed topic is how teachers and students incorporate foreign languages into the study of the phenomenon or teaching a foreign language using PhenoBL.

Recommendations

According to unanimous teachers' attitudes while noting a higher level of student engagement and interest during the learning process, PhenoBL might be implemented in foreign language teaching for the scaffolding the motivation for language learning. It is also noted that this method helps to develop students' independence, problem-solving skills, cooperation and group work. Teachers are also willing to recommend the method to colleagues who have not yet tried it, encouraging them not to be afraid of making mistakes and to learn from them. However, the method also has its challenges, noting the importance of teachers collaborating with each other, planning time and using additional tools. A qualitative study on the development of this topic, using observation and interviews with teachers who use this approach, would be recommended.

Scientific Ethics Declaration

The authors declare that the scientific ethical and legal responsibility of this article published in EPESS Journal belongs to the authors.

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