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Enhancing Active Learning through a Holistic Approach: A Case Study of Primary Education in Lithuania

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Abstract: The renewed Lithuanian General Framework for Primary Education emphasises an integrated and holistic approach, advocating for active, experiential learning methods without compartmentalisation (2022). This study aims to determine which active, holistic educational methods are prevalent in the Lithuanian primary education system. In holistic education theory, active learning methodologies are divided into transactional and transformational strands. To accomplish the research goal, we carried out a two-phase quantitative study. This study involved 365 Lithuanian primary school teachers and seven public primary schools. The researcher observed 30 lessons conducted by different teachers. The collected data underwent quantitative analysis and qualitative interpretation. The results indicate that transaction-oriented active learning methods, such as group work, discussion, and play-based learning, are standard in Lithuanian primary education settings. The study identifies a lack of transformative educational approaches at the primary level.

Keywords: holistic education; active learning methods; primary education; survey; classroom observations

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1. Introduction

The term "holism" is derived from the Greek word "holos", which means "everything" [1]. The paradigm of holistic education is not new [2–4]. Aspects of the concept of the whole person can be found in the worldviews of a wide range of cultures, including indigenous peoples, the ancient Greeks, Buddhists, Hindus, Taoists, and American Transcendentalists [3,4]. In these historical cultures, the concept of "The Whole" has been consistently emphasised, highlighting the interconnectedness of each element of the human body and the relationship between our bodies and the surrounding environment [4]. The holistic education paradigm discusses transformative learning, intuition and imagination, postmodern, ecological, cosmic, and spiritual education, and the need to find an antidote to education's moral and spiritual crisis [5]. The basic principles of holistic education are identified [5] (p. 2), as follows:

1. Education is a dynamic, open human relationship.
2. Education develops a critical awareness of the diverse circumstances of learners' lives—moral, cultural, ecological, economic, technological, and political.
3. All humans have enormous and diverse potential that we are only beginning to understand.
4. Human intelligence comes in many styles and capacities, all of which we must respect.
5. Holistic thinking includes contextual, intuitive, creative, and physical ways of knowing.
6. Learning is a lifelong process and all situations in life can facilitate learning.
7. Learning is both an internal process of self-discovery and a collaborative activity.
8. Learning is active, motivating, supportive, and stimulating to the human spirit.
9. A holistic curriculum is interdisciplinary, embracing both community and world perspectives.

As we can see, holistic education promotes active and experiential educational methods in the classroom. Active learning involves instructional strategies that engage learners in participating actively in the learning process [6–9]. Learners take charge of their learning by establishing connections between ideas through activities like analysing, synthesising, and evaluating. This approach, as described by Bonwell and Eison [7], emphasises engaging learners in both doing and thinking about their tasks. Active learning prioritises cognitive development over mere information absorption, unlike traditional rote memorisation. Learners are encouraged to participate in discussions, evaluations, concept mapping, role-playing, projects, and group studies to enhance higher-order thinking skills such as analysis, synthesis, and evaluation.

In the holistic education paradigm, the ideas of active learning are based on the following theories: (1) progressive education [10,11]: this approach emphasises the importance of practical learning, personal experience, and the natural development of individual capacities; (2) pragmatism [12,13]: Dewey's pragmatism emphasises learning through active problem-solving and real-world experiences, encouraging critical thinking and practical skills; (3) critical awareness [14]: Freire's approach stresses the importance of questioning authority, promoting social justice, and fostering critical thinking and dialogue in education; (4) cognitivism [12–18]: cognitivist theories examine the mental processes of acquiring knowledge, understanding and solving problems, with an emphasis on active learning and the construction of meaning.

Holistic education encompasses the intellectual, emotional, physical, social, aesthetic, and spiritual aspects of the person and their learning process and emphasises the balance between them [19–30]. Thus, educating the "whole child" requires a combination of different educational approaches, considering the learner's and the group's individual needs. In holistic education, educational approaches are divided into three strands: transmission, transaction, and transformation, with an emphasis on the need to balance the application of each strand in the classroom [4,23,31,32] (see Table 1):

- Transmission refers to traditional education, which can be curriculum-based or teacher-led, where students are seen as the recipients of knowledge. In this approach, knowledge is viewed as a fixed rather than a dynamic process and is often broken down into smaller units to help students understand the material. Traditional teaching methods include classroom learning, direct instruction, exercises and practice, guided reading or teaching, memorisation, and demonstration or modelling.
- Transactional orientation refers to a progressive and experiential approach to education centred on personal and group experiences and reflection. In this approach, students are encouraged to be problem-solvers and explorers. Knowledge is not seen as something fixed but rather as something that can change and be manipulated. The focus is on a dialogue between teachers and students, with the stress placed on emphasising. Active learning methods include inquiry-based, problem-based, project-based, case-based, Socratic questioning, play-based, and cooperative learning.
- Transformational education is a holistic approach that aims to help students understand themselves and the world around them. In this approach, the teacher integrates all aspects of education, and the curriculum is no longer separate from the student. The goal is to educate the whole child, engaging their senses. Transformative education employs methods such as visualisation exercises, metaphor, poetry, critical thinking, the Socratic circle, awareness-raising exercises, yoga, dance, acting, cooperative learning, peer-to-peer learning, restorative justice, service learning, environmental awareness, outdoor education, gardening, storytelling, meditation, and journal writing to integrate new knowledge into the student's personal development.

As we can see in Table 1, transactional and transformational education is dominated by active–experiential educational approaches, which are promoted in the holistic education paradigm. Therefore, the empirical study further explores the transactional and transformational education methods that primary school teachers use in the classroom.

Table 1. Distribution of transmission, transaction, and transformation educational methods (developed by authors).

Transmission	Transaction	Transformation
Traditional education.	Progressive and experiential education	Transformative and holistic education
Lesson-based learning Direct instruction Exercises and practice Guided reading and/ or instruction Memorisation methods Demonstration or simulation	Inquiry-based learning Problem-based learning Project-based learning Case-based learning Socratic method Games-based learning Cooperative learning	Visualisation exercises Metaphor Poetry Critical thinking Socratic circles Mindfulness exercises Yoga classes Movement through dance Acting Cooperative learning Peer learning Learning Circles Restorative Justice Service Learning Environmental awareness Outdoor education Gardening Storytelling Meditation Blogging/journaling
The teacher is an active actor—at the centre of attention	The teacher is an equal participant with the pupil	The teacher is the passive actor, and the student is the active actor

This study is a part of the dissertation work "The search for the features of the holistic education paradigm in the Lithuanian primary education system", which has been granted permission by the Research Ethics Committee of Kaunas University of Technology (publication number M6-2023-01). The research data were collected in February–May 2023. Lithuania's case is based on the renewed Lithuanian General Framework for Primary Education, which states that "in primary school, the needs of the pupil are best met by an integral, holistic education" [33] (p. 151) and "education is based on the active process of cognition and the application of learning outcomes, engaging students in active and conscious learning; it encourages an active interpretive relationship with the material, critical and creative thinking, problem-solving, and experiential learning" [34] (p. 9). The choice of the primary stage is based on the research of Lee, Hong, and Niemi [35], which found that "holistic education has the greatest impact on personality development in younger age groups (i.e., primary school)" (p. 875). This study aims to determine which active, holistic educational methods (transactional or transformational) are prevalent in the Lithuanian primary education system. Two quantitative data collection methods were used to achieve the aim of the study: (1) an online survey of primary school teachers and (2) classroom observations. The data were analysed quantitatively and compared with each other.

2. Materials and Methods

To explore the effective use of active, holistic education methods in Lithuanian primary education (whether transactional or transformational), we conducted two quantitative studies: (1) a survey of primary school teachers and (2) non-participant observation of primary school classes. This study is based on a holistic ontology, so it was decided to take a holistic view of the phenomenon by collecting the research data through a survey and then conducting observations to see if similar results would be recorded. This study adopted a pragmatic epistemology of inquiry, collecting, analysing, and synthesising survey and observational data to explain the same phenomenon.

2.1. Survey for Primary School Teachers

This study is an exploratory survey study [36–38], which does not seek to conclude but attempts to discover what holistic (i.e., transactional and transformational) active learning methods teachers use in the classroom.

Instrument development and validation: The "Active Educational Methods" scale aims to measure the frequency of educational approaches along the lines of transactional and transformational education (see Appendix A). The scale used a 4-statement Likert scale where: 1 = "Never-I do not practice this activity"; 2 = "Sometimes-I do it once or twice a semester, trimester"; 3 = "Often-I do it once or twice a month"; 4 = "Regularly-I do it every week or every day". The following content and construct validation steps were carried out in the construction of the questionnaire [37]: (1) scientific content validation—based on the principle of deductive reasoning, the questions in the questionnaire were based on the analysis of the scientific literature; (2) expert content validation—the questionnaire was sent to 5 primary school teachers to assess the clarity of the statements, using a convenience sampling technique; and (3) statistical content validation—a pilot study was carried out with a total number of n = 42 primary school teachers. The questionnaire comprised 18 statements (see Appendix A) and Cronbach's α = 0.914, making the data reliable.

Sample size: The survey was aimed at primary school teachers because they know what teaching methods they use in the classroom. The sample for the study was calculated using data from the Education Management Information System [39], which indicated that there are n = 6159 primary school teachers in Lithuania [39]. To make general conclusions about the Lithuanian primary education system, it was estimated that a minimum of n = 362 teachers needed to participate in the survey to achieve a confidence interval with a confidence level of 95%, a margin of error of 5%, and a population of 6159 teachers. This study involved 365 primary school teachers in Lithuania.

Dissemination of the survey: The survey used a convenience sampling approach [38]. The questionnaire was sent to the administrators of all primary schools in Lithuania with a request to share the study with primary school teachers. The questionnaire was also sent to the heads of education departments of all municipalities in Lithuania, asking them to invite schools to participate in the study. The questionnaire was administered online on the "manoapklausa.lt" website for convenient data extraction options.

Data analysis methods: The data were processed using the statistical analysis platform SPSS (27.0). The statistical analysis methods used included descriptive statistics to determine the frequency of active learning methods, paired t-tests to assess whether the group means (i.e., transactional differences) were statistically significant, and the Mann–Whitney U test to compare the ranks of the means of the variables between the two groups (teacher seniority, traditional, and non-traditional curriculum).

2.2. Classroom Observations

The observations were carried out in primary schools in Lithuania between March and May 2023. This study aimed to determine which active holistic education methods were manifested in the observed primary education classes.

Validation of the research instruments: The classroom observation table (See Appendix B) was developed and validated based on two steps [40]: (1) scientific content validation—analysis of the scientific literature; (2) expert content validation—consultation with a senior researcher.

Sampling: The used purposive sampling of the schools participating in the study [38], where "researchers self-select the cases to be included in the sample based on their perception of their typicality or possession of the characteristic(s) sought" [40] (p. 218). Two selection criteria were used in this study: (1) the school participated in the "Millennium Schools' Programme", as it states that "The aim and vision of the programme is to narrow the achievement gaps, to create integral, optimal and quality education conditions in every municipality and to upgrade all schools in a consistent and progressive manner, so that every child in Lithuania has the opportunity to learn in a modern and open school"

(https://tukstantmeciomokyklos.lt/en/home/ (accessed on 26 May 2024), so there is a precedent for looking for holistic educational features in these schools; (2) the school principal agreed to participate in this study. However, it should be noted that the selection of the observed lessons was based on a random sampling method, as the school heads themselves determined which lessons could be observed by the researcher.

Sample size: A total of 7 schools from different regions of Lithuania voluntarily agreed to participate in the study. A total of 30 lessons were observed with different primary school teachers. The principle of data saturation was applied to control the sample size.

Data collection: During the classroom observations, the researcher completed an observation protocol (see Appendix B). The data were then entered into Excel. The data were coded according to the educational methods used in the classroom: 1 = Yes (method present); 0 = No (method not identified).

Data analysis: Based on the coded data results, the frequencies of the active, holistic education methods identified in the observed lessons were calculated; the means of the frequencies of the groups of transactional and transformational methods were calculated.

2.3. Data Analysis and Synthesis

The results of the quantitative surveys of primary school teachers and lesson observation studies were synthesised using qualitative comparative data analysis. The conclusions were presented using an interpretative paradigm.

2.4. Limitations

This study examined the Lithuanian primary education system based on data from a quantitative survey of primary school teachers (n = 365) and classroom observations in schools (n = 30). The generalised conclusions about the Lithuanian primary education system were based on the data from the quantitative teacher survey, while the observations in schools were complementary and reinforced the findings. However, this study can draw generalised conclusions about the Lithuanian primary education system because it was based on the results of a quantitative survey with a representative sample to draw generalised conclusions. Nevertheless, it is recommended that future researchers conduct more lesson observations in different schools to collect more accurate data. It would also be helpful to carry out separate observations in traditional and non-traditional curricula and compare the results, as this study only observed traditional public schools.

2.5. Research Ethics

All subjects were informed about the aim and objectives of the study, as well as the conditions for participation and withdrawal from the study. Subjects were assured of complete confidentiality. All participants signed consent forms to participate in the study. The study was authorised by the Research Ethics Committee of Kaunas University of Technology on 6-01-2023, protocol Number: M6-2023-01.

3. Results

The online survey results for primary school teachers (n = 365) are presented first. Then, the results of the lesson observations (n = 30). Finally, a comparative analysis of the two studies is presented.

3.1. Survey for Lithuanian Primary School Teachers

3.1.1. Demographics

This section presents the distribution of the sample by demographic variables. The results are presented in Appendix C. There were 365 respondents in total. Of these, 96.4% were female, 3.0% male, and 0.5% other. Regarding the type of school, 95.3% of the respondent primary school teachers worked in a public school and 4.7% worked in a non-state school (i.e., private). Regarding work experience, we can see that most respondents (71.2%) were primary school teachers with significant work experience (i.e.,

25 years or more). By district of residence, we can see that primary school teachers from all districts of Lithuania participated in the survey. The highest number of respondents came from Kaunas district (22.7%), Vilnius district (15.3%), Klaipėda district (11.0%), and Panevėžys district (11.0%). The lowest number of respondents came from the Alytus district (4.1%) and Telšiai district (4.1%).

Regarding the type of curriculum used in the schools, 85.8% of respondents followed a traditional curriculum, and 14.2% followed a non-traditional curriculum (see Appendix D). When analysing the non-traditional curriculum, 2.7% used the Ecological and Environmental curriculum, 2.2% used the Humanistic curriculum, 1.4% used the Catholic curriculum, 1.4% used the Holistic curriculum, 0.8% used the Waldorf curriculum, 0.5% used the International Cambridge curriculum, and 4.4% chose the answer "other", indicating a mixture of several curricula (e.g., Contextual curriculum and the Cambridge International curriculum).

Based on the demographic data presented in Appendices C and D, it can be concluded that there was a diversity of respondents in the study. The survey included respondents from major Lithuanian cities, regions, and villages. Respondents varied in terms of length of service, gender, and the type of curriculum used at the school. However, it should be noted that most respondents were women (96.4%) with more than 25 years of work experience (71.2%) working in the public traditional education system (85.8%).

3.1.2. Active Transactional and Transformational Teaching Methods Used by Lithuanian Primary Teachers

This study sought to identify the most common transactional and transformational methods that Lithuanian primary school teachers used.

Thus, looking at Figure 1, we can see that among the methods of transaction-oriented holistic education, Lithuanian primary school teachers most often used the discussion method (3.21 ± 0.702) and various games (2.89 ± 0.691). The least often used method was the individual project method (2.43 ± 0.710). The overall mean score of the scale is 2.766, which shows that teachers sometimes or even often use transactional active teaching methods.

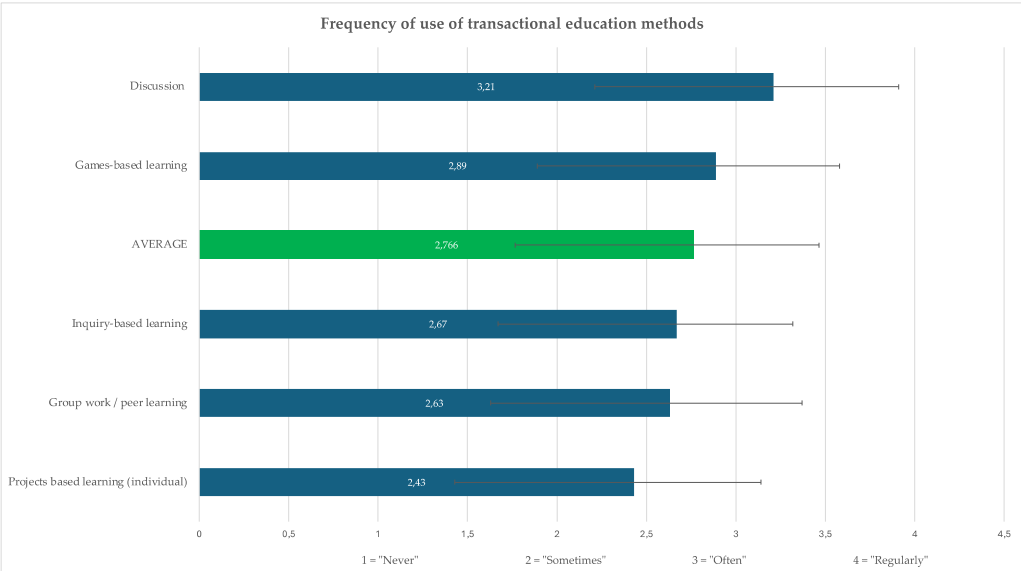

Figure 1. Frequency of use of transactional education methods by Lithuanian primary school teachers.

Figure 2 shows that of the transformational education methods, Lithuanian primary school teachers most often used the democratic election of a class elder (3.35 ± 0.977) and regular classroom duties (3.23 ± 0.906). The least often used methods were gardening (1.93 ± 0.742) and student observation notes/diary writing (2.03 ± 0.883). The overall

mean score on the transformative teaching methods scale is 2.531, indicating that teachers sometimes or even often use active transformative teaching methods.

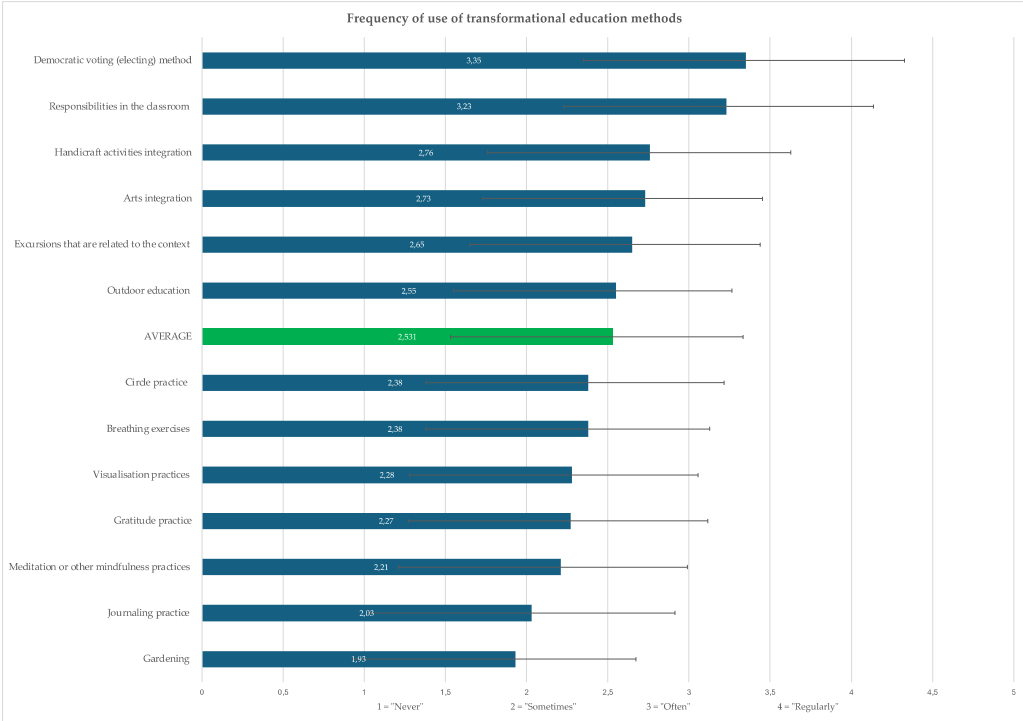

Figure 2. Frequency of use of transformational education methods by Lithuanian primary school teachers.

A comparison of the frequency of application of transactional (see Figure 1) and transformational (see Figure 2) approaches to holistic education by Lithuanian primary school teachers shows that teachers, on average, apply transactional approaches more often (2.766) than transformational approaches (2.531). We can assume that teachers also often use transactional education methods such as various games (2.89 $\pm$ 0.691), inquiry and experiments (2.67 $\pm$ 0.648), and group work (2.63 $\pm$ 0.740). And also transformative education methods, such as field trips (2.65 $\pm$ 0.789), contextual lessons outside school (2.55 $\pm$ 0.715), integration of arts into subject lessons (2.73 $\pm$ 0.724), and integration of handicraft production into subject lessons (2.76 $\pm$ 0.868). To a lesser extent, teachers use the following holistic, transformative education methods related to spirituality: meditation and awareness sessions (2.21 $\pm$ 0.780); breathing exercises (2.38 $\pm$ 0.748); circle practice (2.38 $\pm$ 0.835); gratitude practice (2.27 $\pm$ 0.845); and visualisation practice (2.28 $\pm$ 0.775).

This study went on to test this hypothesis:

H1: *Transactional education methods are statistically significantly more common than transformational ones.*

A paired *t*-test was used to compare means between variables. The paired *t*-test tested the following hypotheses:

$$\begin{cases} H_0 : \textit{The difference between the means of the variables is } 0 \\ H_1 : \textit{The difference between the means of the variables is not equal to } 0 \end{cases}$$

The work applied a 5% confidence level. Therefore, if the *p*-value of the *t*-test is less than or equal to 0.05, we reject the null hypothesis and conclude that the difference between the means of the groups is not equal to zero. If the *p*-value exceeds 0.05, we cannot reject

the null hypothesis and conclude that the difference between the means is zero. We present the means of the variables in Figure 3.

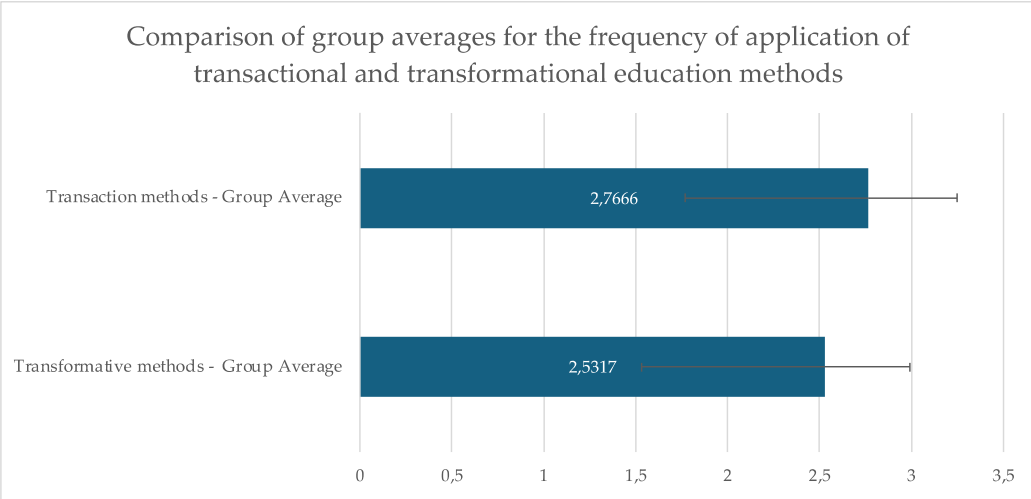

Figure 3. Comparison of group averages for the frequency of application of transactional and transformational education methods.

As expected, the average frequency of transactional education methods is higher than that of transformative education methods (see Figure 3), 2.766 > 2.5317, according to the variables' gain frames. Therefore, we further compare with a paired *t*-test whether these means are statistically significantly different.

The *t*-test showed that the *p*-value is <0.05, so we reject the null hypothesis and conclude that the difference between the groups is not equal to zero. The difference in means between the variables is statistically significant. This means that transactional education methods are, on average, used more frequently than transformational methods.

3.1.3. Data Interpretation with Demographic Variables

When comparing the data with the respondents' demographic information, it is evident that most primary education teachers have more than 25 years of experience (71.2%). Based on these data and the study results, the question can be asked whether teachers' seniority impacts the teaching methods used.

Therefore, in this paper, we further tested these hypotheses:

H2: *On average, teachers with more than 25 years of experience use more holistic education methods.*

H3: *On average, teachers with less than 25 years of experience use more holistic teaching methods.*

To test these hypotheses, we needed to compare the values of the relevant variables between the two groups of seniority: those over 25 years old and those under 25 years old. These variables are not normally distributed, so parametric tests cannot be applied. Therefore, a non-parametric Mann–Whitney U test was applied to compare the mean ranks of the variables between the two groups. The test tested the hypothesis:

$$\begin{cases} H_0 : \textit{Average ranks between groups equal} \\ H_1 : \textit{Average ranks between groups are not equal} \end{cases}$$

The confidence level used in this paper was 5%. Therefore, if the *p*-value exceeds 0.05, we cannot reject the null hypothesis and conclude that the average ranks between the groups are equal. If the *p*-value is less than or equal to 0.05, we reject the null hypothesis and conclude that the mean ranks between groups are unequal. The test looked for statistically significant differences between all the holistic education approaches (in the transactional

and transformational directions). Still, the table below shows only those statements with a statistically significant difference. No statistically significant differences were found for all other statements.

Figure 4 shows that teachers with more than 25 years of experience are more likely to use the following holistic teaching methods, according to the average ranks: assigning a lot of independent work and taking on a mentoring role; using a reflective approach in lessons every day; taking time each week to discuss individual student progress; starting each lesson with a discussion with the students about how the lesson relates to their lives; and democratically electing a class elder. Teachers with less than 25 years of experience are likelier to use the individual project method. The *p*-value for all these statements is less than 0.05 (Asymo. Sig. (2-tailed)), so we rejected the null hypothesis and concluded that there are statistically significant differences in the length of teachers' seniority and the educational methods used. Although it was expected that teachers with shorter years of experience would use more active teaching methods based on a holistic education approach, this was not reflected in the data. These findings partially support Koç [41], who found that gender, seniority, and branch variables did not significantly affect teachers' perceptions of self-efficacy. Further research is necessary to examine the influence of teacher seniority on the variety of teaching methods utilised.

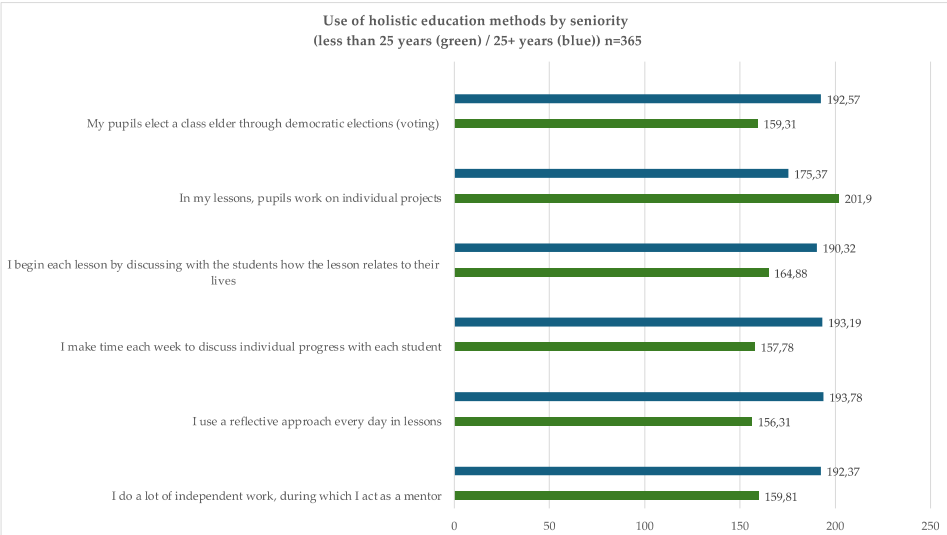

Figure 4. Holistic educational methods in Lithuanian primary education based on teachers' seniority.

The demographic data revealed that most teachers surveyed work in traditional education programmes (85.8%), which raised the question of whether there are statistically significant differences between the active, holistic education methods used in traditional and non-traditional schools. Therefore, in this paper, we further tested these hypotheses:

H4: *The traditional curriculum uses statistically significantly more transformative educational approaches.*

H5: *The non-traditional curriculum uses statistically significantly more transformative educational methods.*

To test these hypotheses effectively, it is crucial to compare the values of the relevant variables for both traditional and non-traditional curricula. These variables are not normally distributed, so parametric tests cannot be used. Therefore, a non-parametric Mann–Whitney U test was used to compare the mean ranks of the variables between traditional and non-traditional curricula. The test will test the hypothesis:

$$\begin{cases} H_0 : \textit{Average ranks between groups equal} \\ H_1 : \textit{Average ranks between groups are not equal} \end{cases}$$

The confidence level used in this paper was 5%. Therefore, if the *p*-value exceeds 0.05, we cannot reject the null hypothesis and conclude that the average ranks between the groups are equal. If the *p*-value is less than or equal to 0.05, we reject the null hypothesis and conclude that the mean ranks between groups are unequal. The test looked for statistically significant differences between all the holistic education approaches (in the transactional and transformational directions). However, the table below shows only those statements with a statistically significant difference.

From Figure 5, we can see that, in terms of average ranks, the following holistic educational methods are more frequently used in non-traditional education programmes: experiential educational methods, contextual themes, individual project development, circle practice, and gratitude practice. The *p*-value for all these statements is less than 0.05 (Asymo. Sig. (2-tailed)), so we rejected the null hypothesis and concluded that there are statistically significant differences between traditional and non-traditional curricula using holistic educational approaches. Non-traditional curricula are more likely to use transformative educational methods such as experiential education, contextual education, individual projects, circle practice, and gratitude exercises.

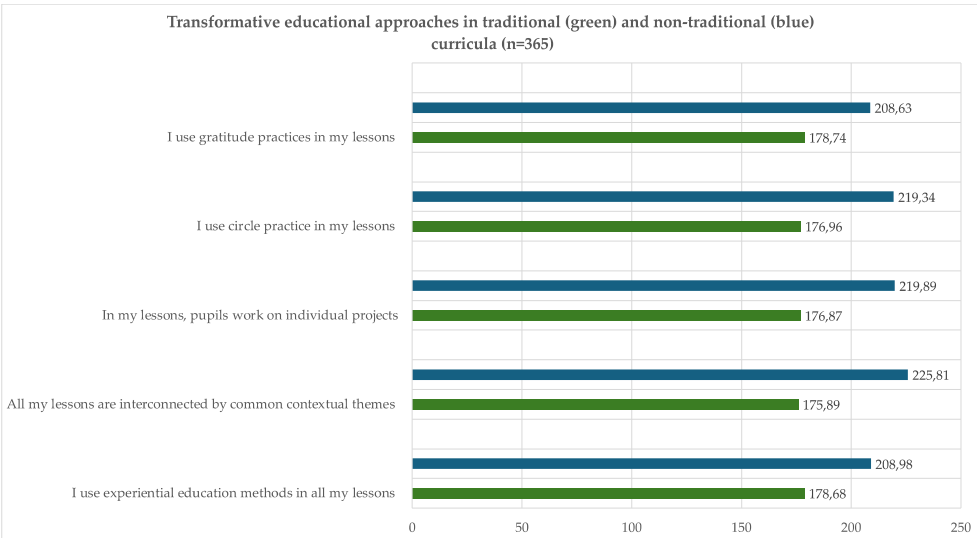

Figure 5. Transformative educational methods in traditional and non-traditional curricula in the Lithuanian primary education system.

3.2. Classroom Observations

A distinctive feature of holistic education is the balance between the different educational orientations—transmission, transaction, and transformation—in applying methods in the classroom [4,23]. To discern the predominant teaching methods and trends in Lithuanian primary education institutions, we meticulously recorded the frequencies of teaching methods employed by teachers during 30 observed lessons (n = 30) (see Figure 3).

From a transactional education perspective, the following educational methods were recorded in the classroom observations (see Figure 6): inquiry-based education (n = 5); play-based education (n = 15); discussion-based education (n = 16); project-based group work (n = 12); brainstorming (n = 4); problem-solving (n = 5); and reflection or self-evaluation (n = 16). The observed lessons revealed that primary education lessons are dominated by active, experiential teaching methods that engage learners in activities and arouse their interest and motivation. Many of these lessons start with a discussion about the topic of the lesson, a few questions about what the children know about the subject, followed by active learning activities, and then end with an evaluation (i.e., answering questions such

as: how did I do? what was the most challenging part? what is there still to learn?) or using evaluation methods such as traffic lights or smiley cards. It was observed that only a few minutes at the end of the lesson were allocated for evaluation and reflection, so there was not enough time for a deep transformative reflection to integrate the new knowledge into the student's worldview (i.e., answering the following questions: how does this knowledge change me?; what will I do differently?; where will I apply this knowledge?).

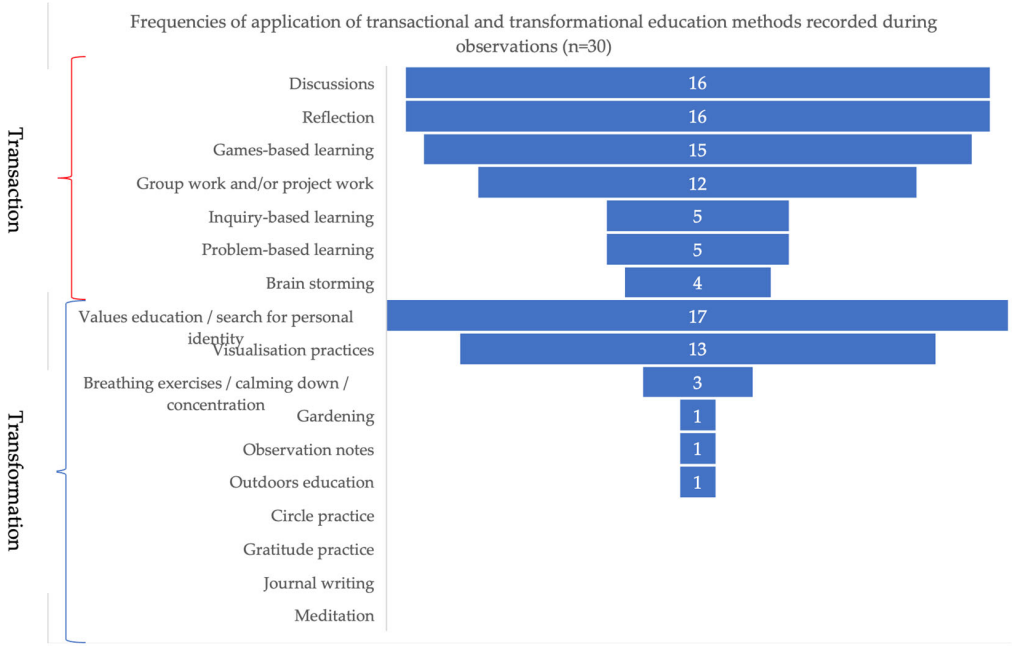

Figure 6. Frequencies of application of transactional and transformational education methods recorded during classroom observations.

From a transformative education perspective, the following educational methods were recorded in the classroom observations (see Figure 6): visualisation (n = 13); gardening (n = 1); observation notes (n = 1); breathing exercises (n = 3); and values education and personal identity search (n = 17). However, the observed lessons failed to capture meditation exercises, diary writing, and gratitude practices. These methods are considered transformative educational activities because they promote self-knowledge (i.e., body, emotions, thoughts), the ability to manage one's feelings and experiences, integrate new knowledge into the student's identity, and encourage self-reflection in the context of new knowledge and experiences. Classroom observations have shown that values education is essential to primary education, as teachers can emphasise the values of healthy living, good behaviour, and sustainable development. When inappropriate situations arise, they can explain to pupils why the behaviour is unacceptable and how to deal with such situations.

This study went on to test this hypothesis:

H2: *Transactional education methods are statistically significantly more common than transformational education methods in observed lessons.*

A paired t-test is used to compare means between variables. The paired t-test tested the following hypotheses:

$$\begin{cases} H_0 : \textit{The difference between the means of the variables is } 0 \\ H_1 : \textit{The difference between the means of the variables is not equal to } 0 \end{cases}$$

The work applied a 5% confidence level. Therefore, if the p-value of the t-test was less than or equal to 0.05, we rejected the null hypothesis and concluded that the difference between the means of the groups was not equal to zero. If the p-value exceeded 0.05, we

cannot reject the null hypothesis and concluded that the difference between the means was zero. We present the means of the variables in Figure 7.

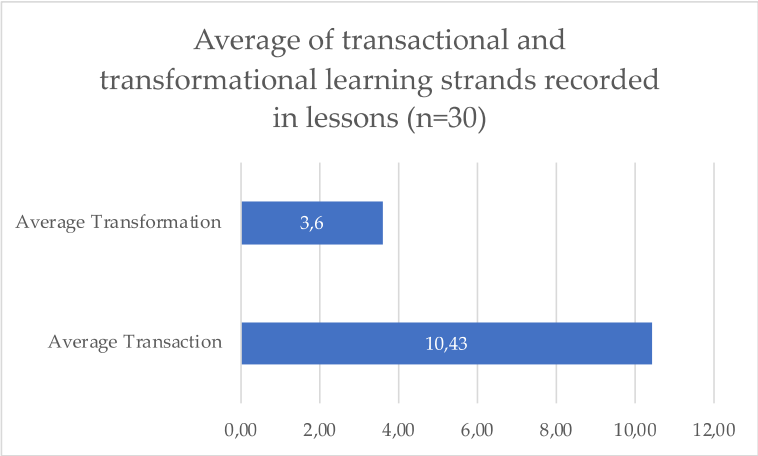

Figure 7. Average of transactional and transformational learning strands recorded in lessons.

As expected, the average frequency of transactional education methods is higher than that of transformative education methods (see Figure 7), 10.43 > 3.6, according to the variables' gain frames. Therefore, we further compared with a paired *t*-test whether these means were statistically significantly different.

The *t*-test has shown that the *p*-value is <0.05, so we rejected the null hypothesis and concluded that the difference between the groups was not equal to zero. The difference in means between the variables was statistically significant. This means that transactional education methods are, on average, used more frequently than transformational methods in observed lessons.

In conclusion, observations in primary education classes (n = 30) revealed that transactional education methods (e.g., discussions, reflection, games-based learning, group work, project work, inquiry-based learning, problem-based learning, brainstorming) were, on average, more frequently used than transformational education methods (e.g., values-based education, visualisation, breathing exercises, gardening, observation notes, meditation, journal writing, gratitude practice) (see Figure 4).

3.3. Comparative Analysis

Both studies have shown that transactional education methods are, on average, more frequently used in primary school lessons than transformational education methods. Table 2 reveals that both observations and questionnaires show that discussion, play-based education, and group work are the predominant active methods used at the primary education level in Lithuania. These methods are transactional in orientation, meaning that the pupils are active agents; however, the transformative educational process required for the holistic development of the "whole child" does not occur. This study also found that, in the case of Lithuania, inquiry-based education is rarely applied at the primary education level, even though the updated Lithuanian Primary Curriculum [33] emphasises inquiry-based education as an essential active learning method at the primary level.

A comparative analysis of the data also revealed (see Table 2) that the following transformative educational methods were rarely used in the classroom: gratitude practice, meditation, observation notes, gardening, circle practice, and breathing exercises. These educational approaches are perceived as transformative because they aim to create a connection between the child's "body, mind and soul" [4]. In pursuing holistic education, it is recommended to balance transactional and transformational approaches to education to ensure the whole child's development [32].

Table 2. Comparative analysis.

	Survey for Primary School Teachers (n = 365)		Classroom Observations (n = 30)	
	Transaction	**Transformation**	**Transaction**	**Transformation**
Often or regularly	Discussions Games-based learning	Democratic election method Responsibilities in the class Handicrafts Arts Contextual excursions Outdoors education	Discussions Reflection Games-based learning Group work or project work	Values-based education Visualisation practices
Rarely or never	Inquiry-based learning Group work Project-based learning (individual)	Circle practice Breathing exercises Visualisation practices Gratitude practice Meditation Observation notes Gardening	Inquiry-based learning Problem-based learning Brainstorming	Breathing exercises Gardening Observation notes Meditation Journaling Gratitude practice Outdoors education Circle practice

4. Discussion

Theoretical frameworks such as holistic education and active learning are pivotal in shaping modern educational practices by emphasising a comprehensive approach to student development. Holistic education, as defined by Lawrence [42], integrates the cognitive, physical, emotional, and spiritual aspects of learners with their educational environments, fostering a deep connection between the individual and their surroundings. This approach enriches students' understanding and cultivates creative thinking and moral principles, contributing to a more well-rounded educational experience.

The concept of active learning underscores the importance of a student-centred, goal-driven exploration of educational material in a structured learning environment [43–46]. Active learning promotes critical thinking, problem-solving skills, and teamwork by engaging students in collaborative tasks, simulations, and educational games [47]. This approach has been shown to enhance student motivation, understanding of content, and overall engagement in the learning process [48,49].

While the benefits of holistic education and active learning are widely recognised, challenges persist in their implementation, particularly in primary education settings. Research by Michael et al. [50], Ichikawa [51], and Makar [52] has highlighted obstacles such as limited teacher familiarity with active learning methodologies, lack of knowledge and motivation, heavy teaching responsibilities, and time and cognitive resource constraints. These challenges underscore the need for ongoing support and professional development to facilitate the effective integration of holistic and active learning approaches in primary education.

The empirical data on primary education in Lithuania reveal a mismatch between transactional and transformational approaches to classroom education. Primary education is dominated by active methods such as discussion, play-based education, and group work [48,53,54]. However, there is little evidence of transformative education methods that support holistic development, such as gratitude, meditation, and gardening. This gap points to more attention being required for transformative educational strategies such as meditation, breathing exercises, gardening, and visualisation because holistic learning

involves stimulating the learner's intellectual, physical, emotional, and spiritual aspects in an educational setting.

In conclusion, integrating holistic education and active learning principles promises to enhance student engagement, critical thinking, and educational outcomes. In the coming years, educators and policymakers must join forces in surmounting barriers and championing a more inclusive and revolutionary approach to teaching and learning in primary education.

5. Conclusions

A two-phase empirical study was conducted to answer the research question of which active holistic education (transactional or transformational) methods are prevalent in the Lithuanian primary education system. According to data collected from a survey of 365 primary school teachers and observations in 30 classrooms, transactional active learning methods are widely used in Lithuanian primary education. The survey indicated that discussion, play-based learning, and group work are the most common active methods in Lithuanian primary education.

A quantitative study of Lithuanian primary school teachers (n = 365) revealed statistically significant differences between teachers' seniority and the use of traditional and non-traditional curricula using active learning methods. First, teachers with more than 25 years of seniority are more likely to use the following holistic teaching methods according to the rank mean: devoting much independent work and taking on the role of mentor; using a reflective approach every day in lessons; taking time each week to discuss individual student progress; starting each lesson with a discussion with students about how the lesson relates to their lives; and democratically electing a class elder. The individual project method is more often used by teachers with less than 25 years of experience. Second, transformative educational approaches such as experiential education, contextual education, individual projects, circle practice, and gratitude exercises are more common in non-traditional curricula.

However, transformative educational methods such as gratitude practice, meditation, observation notes, gardening, circle practice, and breathing exercises are rarely, if ever, used at the primary level in Lithuania. Miller [4] and Bhatta [27] argue that transformative educational approaches help to connect the human body, mind, and soul. Through transformative active education, students are taught to search for their identity, to integrate new knowledge with their value system, and to reflect on their behaviours in the context of new knowledge.

Therefore, can holistic education lead us to transformative active learning? Theoretically, it could, but the example of an empirical study in Lithuania represents that primary education is currently oriented towards transactional active learning methods. Teachers clearly understand that they are expected to be actively engaged and in dialogue with their pupils. However, it seems it is still too early to talk about transformative education at the national level in Lithuania.

This study represents the situation of primary education and active learning methods in a young, post-Soviet democratic country. In more developed countries, it is expected that more transformative methods of education could be identified at the primary level. More empirical research is recommended to test this hypothesis. This study's findings may be helpful for Lithuanian education policymakers working on curriculum improvement. It is also relevant for school leaders responsible for curriculum development and implementation. This study applies to all researchers and educationalists interested in holistic education and wishing to put the philosophy of holistic education into practice.

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Appendix A

The "Active Educational Methods" scale measures the frequency with which active educational methods are used. It examines how often teachers use active and holistic education methods, divided into transactional and transformational strands.

The Holistic Education Strand	Item-Active Educational Methods	Never	Sometimes	Often	Regularly
Transaction	I use a variety of games to achieve the lesson objective	1	2	3	4
Transaction	In my lessons, students carry out experiments, collect data, explore	1	2	3	4
Transaction	In my lessons, pupils work on individual projects	1	2	3	4
Transaction	In my lessons, pupils work in groups	1	2	3	4
Transaction	I use the discussion method in my lessons	1	2	3	4
Transformation	I organise excursions that are related to the topic of the lesson-context	1	2	3	4
Transformation	I organise lessons outside the school (e.g., in the forest, in the garden, in the city, in the library)	1	2	3	4
Transformation	I incorporate the arts (acting, dance, music, art) into subject lessons (language, mathematics, science)	1	2	3	4
Transformation	My pupils keep observation notes, diaries, reflective notes	1	2	3	4
Transformation	In my classes, students do gardening, grow plants, tend the garden	1	2	3	4
Transformation	My pupils have their responsibilities in the classroom (e.g., cleaning the blackboard, handing out assignments, carving pencils)	1	2	3	4
Transformation	My pupils elect a class elder (or pupil representative) through democratic elections (voting)	1	2	3	4
Transformation	I incorporate handicrafts that develop fine motor skills (e.g., knitting, crocheting, sewing, embroidery, plaiting, moulding, carving)	1	2	3	4
Transformation	I use meditation or other mindfulness practices in my lessons	1	2	3	4
Transformation	I use breathing exercises to calm and focus students	1	2	3	4
Transformation	I use circle practice in my lessons (i.e., when the whole class sits in a circle and shares their thoughts)	1	2	3	4
Transformation	I use gratitude practice (i.e., reflecting thinking about what I am grateful for)	1	2	3	4
Transformation	I use the practice of visualisation (i.e., when a child closes their eyes and listens to the teacher's voice/imagines)	1	2	3	4

Appendix B

Lesson observation table.

Active, Holistic Education Methods in the Classroom		
The Holistic Education Strand	**Educational Methods Used**	**Yes = 1/No = 0**
Transaction	Discussions	
	Game-based learning	
	Group work or project work	
	Inquiry-based learning	
	Problem-based learning	
	Brainstorming	
	Reflection	
Transformation	Developing values/finding personal identity	
	Visualisation	
	Breathing exercises/calming down/concentration	
	Gardening	
	Observation notes	
	Meditation	
	Journaling	
	Gratitude practice	
	Outdoors education	
	Circle practice	

Appendix C

Demographic data of the respondents.

		Count	Column N %
Gender	Male	11	3.0%
	Female	352	96.4%
	Other	2	0.5%
School	Public school	348	95.3%
	Non-public school	17	4.7%
Years of service	0–5 years	22	6.0%
	6–10 years	22	6.0%
	11–15 years	15	4.1%
	16–24 years	46	12.6%
	25 or more years	260	71.2%
Place of residence (district)	Alytus district	15	4.1%
	Kaunas district	83	22.7%
	Klaipėda district	40	11.0%
	Marijampolė district	18	4.9%
	Panevėžys district	40	11.0%
	Šiauliai district	36	9.9%
	Tauragė district	35	9.6%
	Telšiai district	15	4.1%
	Utena district	27	7.4%
	Vilnius district	56	15.3%

Appendix D

Distribution of respondents by school curriculum.

		Count	Column N %
The curriculum of the school	Traditional Education Programme	313	85.8%
	Non-traditional education Programme	52	14.2%
Curriculum strand	Traditional Education Programme	313	85.8%
	Humanistic Education Programme	8	2.2%
	Jesuit Education Programme	0	0.0%
	Catholic Education Programme	5	1.4%
	Montessori Education Programme	0	0.0%
	Waldorf Education Programme	3	0.8%
	Suzuki Education Programme	1	0.3%
	Ecological and Environmental Education Programme	10	2.7%
	Cambridge International Programme	2	0.5%
	Contextual Education Programme	1	0.3%
	Outdoor Education Programme	1	0.3%
	Holistic Education Programme	5	1.4%
	Other	16	4.4%

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