Evaluation of the process and outcomes of junior schoolchildren’s project work

Elga Drelinga, Elfrida Krastina
Daugavpils University, 1 Parades Street, Daugavpils LV-5401, Latvia

Abstract

Project work during the learning process enables acquisition of stable, deep and personally meaningful knowledge. However, it is still used irregularly in Latvia. This study aims to establish what discouraged teachers from using project work constantly with junior schoolchildren. Qualitative analysis of data from observation of learners’ project work in junior forms of one school (n=20), expert interviews with teachers (n=8) and the authors’ schoolwork experience suggest that what impedes constant usage of project work is the challenge of evaluating learning achievements in situations where each learner improves different skills and develops personal and social characteristics in a unique way.

Keywords: Project work, learning and research skills, personal and social characteristics;

1. Introduction

Since 1998 at least one academic week has been dedicated to project work in Latvian schools. Until then project work was used sporadically, depending on the readiness and willingness of schools and teachers. The need for project work was determined by the following factors: social demand, necessity to work in cooperation, development of team work for completion of different tasks, need to acquire the experience of creative work, introduction of nontraditional learning methods in order to establish relations between learners and teachers based on cooperation (Information on Education Systems and Policies in Europe, 2011).

In the paradigm of sustainability, everybody realizes their place in the Universe more clearly. Each participant of the ecosystem is unique, closely related to and dependent from others (Grabovska, 2006; Jutvika, 2008; Salīte, 2008; Pappas & Pappas, 2011). Basic school junior grade learners, like all other people, proceed through phases in their...
The growth of consciousness development, in each consecutive stage acquiring a whole that is complete in itself and makes a part of the succeeding one (Vilbers, 2010; Belousa & Stakle, 2010).

The authors believe the development of each learner may happen in a sustainable learning process within which, proceeding from the learner’s own values, interests and needs, and not threatening the opportunities for the following generations to provide for theirs, learners independently or in cooperation with the teacher and peers actively construct new knowledge, skills and know-how, develop attitudes and experience that will make it possible in future to make decisions significant for themselves and others and thus secure short-term and long-term economic, social, and ecological well-being in the cultural environment. In a sustainable learning process, freedom of choice, diversity and learners’ individual and cultural needs are respected.

Project work is a form of learning that secures the execution of these conditions. It provides for the perception of wholeness, brings out the bond between theoretical knowledge and practical life, forms and develops children’s skills of acting in a healthy and secure environment. Also, it facilitates learners’ co-responsibility for their learning outcomes, participation in planning and assessment of their learning activities (Dewey, 1956, David, 2008).

Despite these advantages, project work is still used somewhat sporadically in Latvia schools, which means that the reasons for this irregularity ought to be established. In the study described in this paper, the authors aimed to determine what discourages teachers from using project work on a regular basis with junior schoolchildren. The authors observed teachers, like in Raven’s (Raven & Stephenson, 2001) research, who organize project work within the annual project week in Latvian schools, interviewed teachers-experts as well as referred to their own schoolwork experience. During the study, they focused on the way learners (a) acquire basic skills, learn to read, write, calculate; (b) facilitate their individual growth by consolidating their personal capabilities – self-evaluation, self-regulation and motivation; (c) consolidate their social capabilities – empathy and ability to encourage a desirable conduct of others. The authors also paid attention to the difficulties related to the evaluation of the process and outcomes of learning considering them as significant parts in learners’ development.

2. Research method

During one project week learners (n=256) and teachers (n=10) of one Latvian school were observed. The observation was organized in the natural environment of teachers and learners on school premises: the classroom, library, computer lab, halls, medical nurse’s study, refectory and sports hall. The observer described the conversations, actions and interaction among learners as well as the interaction among learners and teachers.

For data collection, semi-structured interview (appreciative inquiry) was used to investigate the work of teachers in the moments when they achieve the best results and most successfully conduct the process of learning. Interviews were conducted with teachers (n=8) from different regions of Latvia who have at least 5 years of work experience in basic school junior grades and who successfully integrate project work in the learning process. Teachers told about the proceeding of project work and the evaluation of learners’ achievement.

The first author of this paper has worked for 15 years as a teacher of basic education, has organized project works in one or several academic subjects and for 8 years has been a headmaster of basic school and coordinator of project work procedure in the entire school. The author compares the information observed and heard in interviews with her own schoolwork experience.

3. Findings

3.1. Evaluation of topic selection and planning

With respect to the learners’ interests and needs, project work is based on the content that is deep and significant for learners. Teachers-experts claim that learners choose project topics in “free discussions”, “starting with the closest” (i1, i8), “according to their interests” (i2, i7), “gradually distancing from the place of residence”, “choosing wider topics” (i4, i2). In basic school junior grades learners need greater teacher’s support, hence learners together with teachers carry out common project work within which each learner is entrusted with a
particular task: “...it is important to split the bigger topic in smaller parts”, “... for each to have his or her own question” (i3, i6). Teachers-experts admit that “it is impossible to find a topic that would interest absolutely everybody” (i1, i5, author), therefore there is a need for individual topics or subtopics.

It was observed at school that the selected topic “Friendship” was related to the social aspect of sustainable development. Learners analyzed an image of a successful person who is a personality and can form constructive relations with others. In the course of working out their project, learners also investigated the topic from the economic standpoint: “we have different values: some bother about the way they are dressed, what car is owned by their parents...”. Others approached the topic from the ecological standpoint: children told about their friendship with domestic animals and pets: “we understand each other without words”, learners made a collage: “my pet is my friend”, they told with great enthusiasm of their observations in the zoo: “I liked best of all to observe the animals’ friendship in the zoo”. Still others investigated it in the culture aspect: answers to questions were sought in the cultural legacy – folk songs, anecdotes, riddles, cooking recipes, traditions.

In the evaluation of project work, the observed and interviewed teachers paid attention to the way learner selects the topic and motivates its significance. Understanding the topic selection further prepares learners for planning the project, setting its aim and tasks and acting in a meaningful way.

3.2. Application and consolidation of basic skills

In project work, learners form an understanding about the relatedness of mathematical calculations to real life, develop understanding of statistics. They learn to locate the information they need in a wide range of reference literature, make notes, charts and descriptions. Learners realize that they have not completely mastered the skills of learning and willingly improve them in project work: “now I know where to put lengthening diacritics”, “I learned to write more neatly”. While doing project work, learners are found to conduct interviews and summarize the findings in charts and tables, read unfamiliar texts and choose the necessary information.

Hence, even when learners in class investigate one and the same topic, they deepen different knowledge and basic learning skills, which means that evaluation becomes problematic for teachers.

3.3. Evaluation of personal capabilities

In project work learners learn to select a topic or discern a problem, set assumptions on the outcome, to plan, search for information and summarize it, make presentations, perform self-evaluation. Each learner gets involved in project work with his or her own individual experience of life and learning (strategies, duties and individual talents), knowledge, skills, attitudes; they perform the tasks that they like and find easier.

The skill of planning helps people solve many practical problems in real life. Planning in the observed grades was organized differently. In grades 1-2 there was a tendency for the teacher to offer her own plan of project work that was accepted by learners expressing their opinion and making insignificant corrections. In grades 3-4 a reduction of teacher’s influence was observed as learners made significant changes to the guidelines suggested by the teacher, provided their tasks, schedule of work, supplemented the description of the expected outcome of the project. It must be noted, however, that not all learners participated in the discussion and preparation of the plan. Also teachers-experts noted that “children must not be given a preset example; when prompted, children tend to repeat the question (i1, author), they found it harder to do it independently but it was more interesting” (i5). This proves that learners have different skills of planning and their development proceeds in different ways.

Grade 1-2 learners did everything together – attended the library or computer lab, consulted encyclopaedias, selected the necessary information. In this age group, interaction with the teacher is significant – learners expected instructions, suggestions (i1, i2, i5, i7, author). Grade 3-4 learners talked to experts and specialists in various spheres and individually sought the necessary information on the Internet or in library. Learners acquire information by various means: “children are so different and the materials available for them are so diverse” (i4, i8, author). The gained information is different both in terms of amount and quality: “at the same time... this is the best he is capable of at present” (i4).
When making descriptions, performances, practical works, drawings or charts, learners constructed their understanding of the investigated question and improved their research skills. If grade 1-2 learners produced mainly collective drawings, games and performances without deeper analysis, grade 3-4 learners demonstrated descriptions and performances of the problem by bringing out the possible solution of the problem, making comparisons and conclusions. Grade 3-4 learners carried out both individual and collective research.

For instance, having completed a written task about “my best friend”, learners came to the conclusion that much depends on them, the emotions with which they perceive the events. After discussion it could be observed that some learners tried to control their emotions, having become aware of their impact on the surrounding people. In learners’ work groups, an idea was expressed that “whether I am angry or joyful” determines the success or failure of a venture. Also in project work it was observed that some learners perceive events emotionally and need additional time to be able to return to work.

To do project work tasks, the involvement and responsible action of each participant is key. The study suggests that learners learned to take responsibility for the trusted works. They emphasized in conversation having liked “to organize the folder”, “liked to work on my own”, “make a poster”, “create one’s own portfolio”, “draw”, “make paper hands”, “colour”, “write a greeting”, “think”, “write”. The author also writes that “despite the fact that there were more free choice tasks, they were more complicated, learners worked independently”.

Motivation is the driving force of learner development. In some of learners’ judgements and actions it was possible to note their trust in their power and optimism that helps attain the goal. They say that it was “interesting”, “I can complete the work”, “can finish the whole work”. However, it must be noted that the observer had an impression that external motives were more significant and better understood by the learners. When starting project work and tasks, learners often asked what they would have of it. Teachers-experts also admit that “the gain is the sticker in the diary, diplomas” (i1, i2, i6, i7), despite the fact that “they received sound explanations, they keep asking why they should learn, why they should know and why that is important”. After the project work, learners admit with enthusiasm that “I not only know it myself but I can tell others” (i2, i3).

In the course of project work, learners not only acquire research skills but also form their self-awareness, learn the self-regulation of their emotions, build their inner motivation, strengthen their personal capabilities. They do it in their own individual ways and that complicates the evaluation of learners’ achievement. Carrying out the evaluation of their work together with the teacher allows learners to form a notion of themselves, their capabilities and limitations. Each assessment was authentic, adjusted to the particular situation and learner. It was possible to observe that formative assessment was more productive in project work as it encouraged each learner to consider the work done and still to be done, related success and difficulties. Therefore, learners cooperated with the teacher in their self-evaluation.

3.4. Development of social capabilities and its evaluation

Learners acquired social and research skills during the entire process of project work. In cooperation, learners learned from each other to “plan”, “search for information”, “show situations”, “play games”.

Other learners concluded that “before work there is a need for extensive discussions”, “you must not order around”, “you must know how to work in a group”, “there is much work in groups”. This may indicate that they have mastered the leading of small groups and have acquired some rules of managing group work.

Some learners learned to resolve disagreement, “speak correctly in conflict situations”, “it is not easy to deal with disagreements”, yet “there are many ways how to make up”.

Some others acquired neither research nor group leading skills but successfully “presented, explained” the outcomes of the common work to their peers and external evaluators. They admitted that it was pleasant that “they listened to my ideas” but acknowledged the need to “think of details”, “listen to others”. Communication skills were acquired.

At the very beginning of project work each individual is significant with his or her experience, interests, needs, knowledge, skills and attitudes, also with the mode of thinking. Each problem may be solved when uniting in interest groups and dealing with the problem in one narrow direction (mathematics, natural science, etc.). Working
in group of different participants is important for this way a wide notion of the problem to solve is created. Participants in a group help each other understand what they have already grasped, in a secure environment devoid of competition, envy or dislike for the different. During project week there are favourable conditions to learn and acquire the basis of empathy that helps reduce one’s egocentrism.

When evaluating the course and outcomes of project work, learners came to the conclusion that “each person is completely different”, “we have various interests”, even “my and my friends’ knowledge and skills differ”. Yet one must “accept a person as s/he is”, everybody has one’s “strong and weak points”. Though “people differ, you must cooperate with everyone” as then “one may do more”. Such an approach may facilitate desire and skills of noticing the talent of inferiors and colleagues in future and think how to promote their development and capabilities for reaching common goals.

4. Conclusion

Teachers-experts in cooperation with learners select criteria and make individual programs for everyone. These programs help teachers not only register learners’ achievement and plan teacher’s further action but also control the efficiency of teacher’s work. Majority of teachers need methodological aid to organize the evaluation of learners’ achievement in project work.

In basic school junior grades learners cooperate with the teacher in project work while acquiring personally significant subject matter and basic learning skills and developing personal and social capabilities. The acquisition is individual for each learner, related to the learner’s experience, interests and needs.

Standardized tests are inappropriate for the evaluation of learners’ individual growth; therefore, an extensive application of project work in learning is not encouraged and no provision is made for adequate evaluation of learners’ knowledge and skills, social and personal capabilities. This problem may be solved by using individual learner development programs; to create them, teachers need to find out each learner’s interests, needs and experience. Observation and correction of development must be carried out in the course of the entire learning process. Completion of these tasks is a complex, creative, scrupulous work. Its accomplishment is impossible without corresponding paraphernalia that would help teachers specify learners’ experience, interests and needs and use them to promote the learners’ development.

In the course of research, the criteria of project work assessment are specified by putting them into practice.

Acknowledgement

This work has been supported by the European Social Fund within the Project “Support for the implementation of doctoral studies at Daugavpils University”, agreement No. No.2009/0140/1DP/1.1.2.1.2/09/IPA/VAA/015.

References

Belousa, I. & Stakle, A., (2010) Intercultural and media literacy: Global tendencies in metacontent of teachers education in Latvia. Discourse and Communication for Sustainable Education, 1(1), 110-132.

David, J. (2008). What research says about project-based learning. Educational Leadership, 65, 80-82.

Pappas, E., & Pappas, J. (2011). A dispositional behavioral approach to teaching cognitive processes that support effective thought and action. Innovative Higher Education, 36(5), 1-14.

Salite, I. (2008). Educational action research for sustainability: Constructing a vision for the future in teacher education. Journal of Teacher Education for Sustainability, 10, 5-16.

Grabovska, R. (2006). Iļģspējības principa īstenošana skolotāju izglītībā [Implementation of the principle of sustainability in teacher education], Unpublished doctoral dissertation, Daugavpils University, Latvia.

Jutvika, G. (Ed.) (2007). Izglītība pārmainām: Iļģspējīgas ataskaites mācīšanās un mācīšanās rokasgrāmata [Education for change: Handbook of the teaching and learning of sustainable development]. Riga: Gandrs.

Raven, J., & Stephenson, J. (Eds.) (2001). Competence in the learning society. New York: Peter Lang.

Vilbers, K. (2010). Visaptverošā teorija [Comprehensive theory]. Riga: Jumava.
Dewey, J. (1956). The child and the curriculum. In L. Carmichael (Ed.), *The child and the curriculum, the school and society* (pp. 3-32). Chicago: University of Chicago Press.

Eurydice (n.d.). Information on Education Systems and Policies in Europe. Latvia: Overview. Retrieved 29 November 2012, from https://webgate.ec.europa.eu/ftpfs/mwikis/eurydice/index.php/Latvia:Overview.