

Creating Didactic Games in Group Work: Key Competencies Development of Secondary Vocational School Students

Lenka Nosková*, Pavlína Vočková, and Adéla Štěpánková

Palacký University Olomouc, Czech Republic

Abstract

A game is a source of education since we can talk about human culture. A didactic game is a game used in the learning and teaching process, and it holds a great potential to develop various skills. Playing the didactic games in groups benefit students since the group work means active (cooperative) learning. But creating games benefit students even more, in another aspects of life than the cognitive part. We aim to present what skills are developed when creating a didactic game in group work. The social level broadens the spectrum of skills. There is a need to cooperate, to argue, to decide, to divide roles in the group. Besides these soft skills, creating a didactic game develop creativity of students. In the article, we discussed pedagogical and curricular background for the usage of this kind of activity in education. Given one example of a creation of a didactic game in Language Arts in the secondary vocational school in the Czech Republic, we show how students asses their experience. Today it is crucial to be able to work in teams, to use the knowledge creatively and work hard towards the concrete outcome. All of this is naturally practiced in a didactic game creation.

Keywords: didactic game; games in education; key competencies

1. Introduction

A game is an integral part of all cultures, it is even much older than the mankind itself, because animals can play too, and they did not wait for humans to teach them (Huizinga, 1971). The popularity of games among children and adults consists, among other things, in the fact that “it brings temporarily limited perfection to an imperfect world and a confused life” (Huizinga, 1971, p. 17). A game also has its place in education. Students encounter various forms of games from pre-school education. There are many games on the market from various fields and of various types, i. e. card games, board games, fun games, trivia games, strategy games, etc.

Students come into contact with games within lessons and leisure activities. There are games that also develop learning objectives and actively strengthen students’ language skills, as well as games specifically designed to develop the key competencies, which Belz and Siegrist (2015) discuss in their book. Game used in learning or teaching process is called a

didactic game. This kind of games have always an educational goal (Farber, 2019). Another expression for such games that incorporate curriculum content is educational (Michel, 2016).

There is no doubt about the benefits of games in education. Their benefits multiply when student players become student creators. In this article, we present the benefits that we see in the creation of didactic games in the form of group learning.

Since the authors of this article are teachers of Czech language and literature, they use the example of creating a game in the subject Czech language and literature (similar to the subject Language Arts). However, they relate the knowledge to a broader context and emphasize the developed competencies and skills regardless of the subject in which the game is created or played.

1.1 Education in the Czech Republic

For better understanding the educational context in the Czech Republic, we attach a brief explanation of the educational system. From the age of 6 or 7, a child in the Czech Republic is obliged to attend a primary school, which is divided into two parts. Students leave the first part after five years and move on to the second part, the so-called second grade. Each year is named after the relevant serial number. The second part of primary school therefore begins with the 6th grade, when students are 11 or 12 years old. Primary school ends after nine years, i.e. at the age of 14 or 15. At this point, students choose between general upper secondary schools (ISCED 3) to prepare for university study and secondary vocational schools (i.e. nursing, economical, civil engineering, etc.).

In this article, we focus on vocational schools. This article is based on our own experience and also on research valid for various types of secondary vocational schools (i.e. Průcha, 2019) and on such goals of education (defining the development of key competencies), which are identical to the second grade of primary school. Therefore, it is possible to relate the theses presented by us in general to the education of students older than 12 years.

2. Theoretical background

The concept of teaching literature and its real form in primary and secondary schools in the Czech Republic is currently and has been recently the subject of various studies. Unfortunately, their results are not very satisfactory and do not correspond to the communication concept of teaching, which is supported by Czech curricular documents (Hník, 2014; Jindráček, 2018).

Vočková (2021) carried out a survey in January 2021, the results of which provide similar findings. 809 students from the second to fourth year of secondary vocational schools took part in it. One of the questions concerned the content of literature lessons. Only 7 % of respondents answered that the discussion of literary works is in the centre of the lesson. And about 6 % of respondents could not answer the question related to the interpretation of texts at all, because they have never dealt with any works or their parts. Even though, according to the already mentioned, literary education should take the form of communicative approach,

not doctrine. Vala (2013), Řeřichová et al. (2016), and Radváková (2012) deal with this topic at Czech schools more broadly. Let us also add that the ČŠI (Czech School Inspectorate)¹ states that teachers “choose very often in the lessons methods and forms of work that do not allow the active involvement of students in the educational process” (ČŠI, 2020, p. 113).

The above-mentioned curricular documents are in the Czech Republic at two levels – state and school level. The state curricular document is called the Framework Educational Programme (hereinafter FEP) and describe mainly the educational goals that students should achieve in individual educational subjects. It includes a kind of a student profile – skills that students should reach by the end of the education at the given school grade. These curricular documents have been prepared by the Ministry of Education, Youth and Sports of the Czech Republic and are binding on all schools. School curricular documents are based on the FEP and regulate education in individual schools. Each school creates its document separately and they are binding. These documents are usually published on the school’s website. The current curricular documents were created at the first decade of the 21st century. The goal of state and school educational programs is to increase the quality of education to meet the requirements of today’s society.

In this article, we work with the Framework Educational Program for Secondary Vocational Schools (2020; hereinafter FEP SVS). This document classifies literary education in the field of aesthetic Education, the aim of which is “to form a positive relationship to material and spiritual values and to try to contribute to their creation and protection” (FEP SVS, 2020, p. 41). As part of aesthetic education, students should form their attitudes, become resistant to manipulation and intolerance, and develop social competencies. “Literary education, in addition to education for reading, analysis and interpretation of works of art, also leads to a general overview of the main phenomena and pillars in Czech and world literature. Cognition of the text also serves to create various communication situations in which the students’ dialogue with the texts and the teacher takes place, and also the dialogues between the students with each other” (FEP SVS, 2020, p. 41).

Secondary vocational school graduates should acquire various professional and key competencies. Such competencies include learning, problem solving, communication, personal and social areas, civic and cultural awareness, employment, entrepreneurial activities, mathematics, the use of information and communication technologies and work with information (FEP SVS, 2020, p. 8–11). It is of course possible, appropriate and desirable to develop these competencies also within the framework of literary education.

Průcha (2019) draws attention to the need to develop key competencies of secondary vocational school students. He presents the results of a qualitative survey carried out in 2013 by Doležalová and Vojtěch. Using an electronic questionnaire with 26 open questions, they were trying to find out in more than 8,000 companies which key competencies the employees

¹ The Czech School Inspectorate is an office that carries out independent inspection activities in the Czech Republic in the field of education. This office also organizes various international surveys in the Czech Republic, such as PISA or PIRLS.

should have, and which competencies schools should focus on because the graduates often lack them. From 543 answers the following results. Most often, employers pointed to competencies that should be further developed by learners in schools: to take responsibility; ability to solve problems; willingness to learn; the art of dealing with people; ability to make decisions; communication skills; ability to work in a team, etc. According to employers, the following were mentioned as competencies, the importance of which will increase in the coming years: fluency in foreign languages; ability to solve problems; willingness to learn; to take responsibility, ability to deal with stressful situations; communication skills (Průcha, 2019, p. 74). Most of those skills are considered to be among the so called soft skills, the cognitive and knowledge-based skills were rarely mentioned in the survey.

If we consider the above-mentioned competencies, it is true for all that they can be developed by active (cooperative) learning within group work, while the transfer of finished knowledge in the form of frontal teaching still widely used does not develop any of them. In a group solving an educational task, the students must behave responsibly, otherwise the task would not be completed, they must communicate with each other, try to reach a compromise, make a decision for the whole group. Thus, they improve in most of the skills that employers require from their future employees.

3. Group work initiates active learning

The creation of a didactic game in a group fulfils the principles of modern pedagogical theories and develops key competencies, which are defined in the curricular documents of the Czech Republic as important goals of education. It develops such competencies that are necessary for the current person in the labour market, as confirmed by the findings of Průcha (2019) above. In particular, these are the so-called soft skills, which are emphasized in group work.

Looking at the benefits of a didactic game, we start from a constructivist approach, for which the activity of the student is necessary in the learning process. In pedagogical constructivism, learning is a process of constructing knowledge by a student himself from presented information and evoked experience (Zormanová, 2009). Thus, the student creates his own meanings (sense) of the newly learned and connects new knowledge with what he has learned before (Petty, 2013). Learning is therefore necessarily an individual process taking place in the student's mind, which is influenced by his characteristics of cognitive processes, character, current emotional state, opinions, previous experience, and expectations based on personal precepts (Woolfolk, 2010). The translated information and experience are processed differently – in different ways and with different results. Precisely because the process of constructing meanings is a highly individual matter, therefore what each student acquires from a lesson differs.

Teaching methods that activate students' cognitive processes and lead to the development of independence, imagination, logical and critical thinking, and creative abilities are described in many articles. These teaching methods are dialogue, discussion, problem-solving

methods, brainstorming, didactic games, project-based learning, inquiry-based learning, methods of critical thinking, problem solving and others (Maňák, Švec, 2003). Forms of teaching such as group work and active (cooperative) learning lead to the development of the above-mentioned skills and abilities more easily.

Thus, active (cooperative) learning is not limited to the transmission and acquisition of knowledge, but at the same time contributes to the all-round development of the student's personality, their independence, responsibility, creativity and critical thinking. According to Sitná (2013), "active learning means the procedures and processes by which a student receives information with active involvement and on the basis of which he or she forms his/her own judgments."

In group work is necessary:

- Cooperation of students in solving usually a more difficult task or problem,
- Division of students' work in solving a task, problem,
- Sharing opinions, experiences in a group,
- Prosociality, i.e. mutual assistance of group members,
- Responsibility of individual students for the results of collective work (Maňák, Švec, 2003, p. 138).

Group work, more than any other teaching methods, boosts the development of the key competencies of students. Given that the secondary vocational schools, on which our contribution focuses, prepare students for the profession immediately after graduation, it is desirable that sufficient attention is paid to the key competencies in the education.

3.1 Students experience with creating of a game in group work

The need to describe examples of good practice is present in the Czech Republic therefore several authors publish works like this – Příklady dobré praxe SOŠ a SOU, 2011 (in English Examples of Good Practice of Secondary Vocational Schools) by National Institute of Vocational Education. In this book, the teachers describe in detail the activities that have proved successful in teaching, and thus they make them available to their colleagues across the country. We consider such sharing to be very inspiring and we are happy to share our experience as well.

Our experience of the creating a didactic game in group work comes from the task in one of the secondary vocational school in Prague, Czech Republic. The students who graduate at this school are going to be bookbinders or bookdealers (booksellers). The game is called Křížem krážem literární Prahou (in English Crisscrossing the Literary Prague). This game was one of the final products of the three-year literary project Učme se číst, čtením se učme (in English Let's Learn by Reading, Let's Read to Learn), supported by the Erasmus+ programme. This card game should include knowledge of literary theory and history taught at that school and examined at graduate exam. The game rules were created by the teachers, the students were involved in creating questions on the individual cards.

The students experienced thematically focused literary excursions prepared by external co-workers according to their artistic or work specialisation. Having heard new and interesting information, students later created the game questions. Several questions were not included in the final version of the game, thus they did not fulfil the stated requirements. Despite students' disappointment, we found such experience extremely valuable for students. They could see that to be successful in creating a product (at school or in an occupation), one must be precise and pay attention to the given requirements. In line with our belief that we should prepare students for employment at secondary vocational schools, it is important that they realize during their education that they will not meet the required goal without following the assignments (client's requirement, employer's instruction, etc.).

From the reflection after the completion of the game, which was done with the project coordinator by self-evaluated survey and the group interviews, follows important conclusions. Students valued that the responsibility of completing the task in a group was motivating to work hard. They mentioned the competitive level of the task – the groups were motivated to work well to compete other groups. Within the group then, individual students did not want to be left behind thus almost everybody in the group work efficiently. They wanted to contribute. Shared responsibility was shown as a stimulating effect of the work of an individual. Several students claimed it was difficult to reach the compromise in the group discussions and planning. Additionally, they found hard to leave their own ideas and give space to another and better ideas in order to the success of the whole group.

The coordinator of the project noticed that students had problems in creating the questions right and precisely in terms of key information in the question and its formation. Students were either asking for unimportant details (i.e. the hobby of the writer's mother), or they were asking in a confusing way which shows their limits in productive language skills in their mother tongue.

Students also said they felt that their activity is important, because the result of the task was not a completed exercise in the textbook, but a real game which will be played by them and possibly by students in other schools. Due to the financial support of the Erasmus + programme, the game was printed and distributed to schools and other institutions.

4. Conclusion

In the students' observations is clearly seen how challenging the creation of a didactic game was. It is truly a complex task needed to combine knowledge and creativity, ability to express the game questions understandably and many social abilities including reaching the compromise, making agreements and co-working with others toward the common goal.

The coordinator sees a huge benefit of creating a didactic game in the unique combination of creativity and knowledge of the students together with the ability to use both of that and produce a valuable product in a high quality. This positive experience with the involvement of students in the production of the game is an important impulse for us to keep in mind the

words of Petty (2002, p. 113) when didactic transforming the curriculum, who claims that “the more active and involved the students in lessons are, the more they enjoy them.”

Acknowledgment

This paper is an output of the research project IGA_PdF_2021_020 Reflection of Literary Education Teachers at Lower-Secondary Schools as a Tool for Effective Education, at Palacky University in Olomouc.

References

- Belz, H., Siegrist, M. (2015). *Klíčové kompetence a jejich rozvíjení: východiska, metody, cvičení a hry*. Praha: Portál.
- ČŠI. (2020). *Výroční zpráva České školní inspekce za školní rok 2019/2020* [online]. [Cit. 2021-09-13]. Praha: Česká školní inspekce. Available at https://www.csicr.cz/Csicr/media/Prilohy/PDF_el._publikace/Vyrocní%20zprávy/Vyrocní-zprava-Ceske-skolni-inspekce-2019-2020_zm.pdf
- Farber, M. (2019). *Global Perspectives on Gameful and Playful Teaching and Learning*. Pennsylvania: IGI Global.
- Framework Educational Programme for Secondary Vocational Schools. (2020). [online]. [Cit. 2021-09-29]. Praha: MŠMT. Available at <https://www.edu.cz/rvp-ramcove-vzdelavaci-programy/ramcove-vzdelavaci-programy-stredniho-odborneho-vzdelavani-rvp-sov/obory-l-a-m/82-umeni-a-uzite-umeni/>
- Hník, O., Jindráček, V. (2020). Literární výchova v české škole po 130 letech polemických diskusí. *Český jazyk a literatura*, vol. 71, pp.1–9.
- Maňák, J., Švec, V. (2003). *Výukové metody*. Brno: Paido.
- Michel, H. (2016). Characterizing Serious Games Implementation’s Strategies: Is Higher Education the New Playground of Serious Games? *2016 49th Hawaii International Conference on System Sciences (HICSS)*, 2016, pp. 818–826. Doi: 10.1109/HICSS.2016.106.
- Zormanová, L. (2009). *Výukové metody v pedagogice*. Praha: Grada.
- Petty, G. (2013). *Moderní vyučování*. Praha: Portál.
- Průcha, J. (2019). *Odborné školství a odborné vzdělávání: fungování systému, problémy praxe a výzkum*. Praha: Wolters Kluwer.
- Příklady dobré praxe SOŠ a SOU*. (2011). Praha: Národní ústav odborného vzdělávání.
- Radváková, V. (2012). Interpretace textu na gymnáziu [online]. [Cit. 2021-09-18]. Available at <https://dspace5.zcu.cz/bitstream/11025/10784/1/Disertacni%20prace.pdf>.

- Řeřichová, V. et al. (2016). *Úroveň čtenářských strategií patnáctiletých žáků na konci základního vzdělávání*. Olomouc: Univerzita Palackého.
- Sitná, D. (2013). *Metody aktivního vyučování: spolupráce žáků ve skupinách*. Praha: Portál.
- Vočková, P., Vala, J. (2021). Tvůrčí psaní jako součást literární výchovy na středních odborných školách. *Český jazyk a literatura*, vol. 72, p. 25–31.
- VALA, J. (2013). *Poezie, studenti a učitelé*. Olomouc: Univerzita Palackého v Olomouci.
- Woolfolk, A. (2010). *Educational psychology*. Upper Saddle River: Pearson Education.