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STUDENTS' AND TEACHERS' PERSPECTIVES ON PROJECT - BASED LEARNING: FINDINGS FROM A CASE STUDY

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***Abstract:** The present shift towards digitization of education has made it clear that traditional models of education evolve to encompass a range of inquiry-based pedagogical approaches that leverage learner agency and motivational capacity. In response to this paradigm change a project aimed at developing key competences in academic English is launched at Ruse University in Bulgaria. This study which is part of the project seeks to examine the responses of students and teachers to a project-based task that served as a preparation for a student public speaking contest. There are 32 participants in the study and the data was collected via two questionnaires. The results show an increase in student engagement and a good degree of learner satisfaction. Problem areas turn out to be the need for more support provided by teachers and the necessity for further development of critical thinking and information gathering skills. The attested convergence of student and teachers reactions to the project-task is a sound basis for establishing a tradition of annual student public speaking contests at Ruse University.*

***Keywords:** Project-based learning, higher education, learner satisfaction.*

INTRODUCTION

Recent social and economic developments have brought changes in teacher student interaction and have defined the skills and knowledge students strive to acquire in a new way. It has become imperative to supplement traditional teacher-centred instruction with student-centred approaches and to develop creativity and innovation, critical thinking, problem-solving and communication skills and multilingual and learning to learn competences (Scott, C., 2015; Ananiadou, K., & Claro, M., 2009; European Union, 2019). A number of approaches have been applied to this end in the field of language teaching, some of them developed within the discipline (task-based learning), others imported from other disciplines (problem-based learning, action learning, reflective learning, experiential learning, group/peer/collaborative learning, research-based teaching). All these approaches share the underlying principle of inquiry and boost students' motivation, help students to organize knowledge and integrate skills and prepare them to become self-directed learners.

In line with the tradition of inquiry led learning, amid the COVID pandemic, when student engagement dropped, a project entitled *A Model for building and fostering key competences in academic English to incorporate 21 century skills* was launched by the Foreign Languages Department at Ruse University in Bulgaria (see Stefanova, D. & Georgieva, E., 2021 a, b). One of the tasks in this project was to organize a student public speaking contest to follow a project-based task. Students were asked to do research on innovations and original ideas in business, engineering and education and prepare a presentation for the contest. They were advised to concentrate on the field of their studies. The idea behind choosing the driving question for the project task and the presentations was to achieve integration of content and language learning. Students presented the results of their research at the Inspire Speaking Contest organised by the

Department of Foreign Languages and were judged by a panel of judges coming from university departments in other fields of study in addition to language teachers. The present study is part of the *Building competences* project and is aimed at studying the students' and teachers' reactions to the project-based task their aptitude for inquiry-based teaching and learning.

EXPOSITION

A case study using a mixed methods approach

The study involved a total of 32 participants. There were 22 student participants and 10 teacher participants. The students were following degree courses in Business and Management, Economics, Primary Education, Software Engineering, Computer Systems and Technologies, Social Work and Bulgarian Language and History at Ruse University. The teachers were faculty members from the Department of Foreign Languages. The students' level of English was intermediate and upper-intermediate. The student group comprised 12 females and 10 males. In terms of age groups, 19 students fell in the 18-25 age group range and 3 students were in the 26-35 age group range. The teacher group comprised 10 females. The age group range of teachers was as follows: none in the 18-25, 26-35 and 36-45 range, 2 in the 46-55 age group and 8 in the 56+ range. Their teaching experience ranged from 23 to 35+ years.

The main instrument in this study is the questionnaire. First the student questionnaire was designed and then it was modified to create a teacher questionnaire. The questionnaire was aimed at examining the reactions of students and teachers to the project-based task and to study their beliefs about learner-centered teaching. This research objective correlates to the more general objective of the larger study in Ruse University which includes measuring the impact of activities and practices associated with project-based instruction on the outcome of EFL learning. Therefore the specific content areas which the questionnaire addresses are related to the features of inquiry led project-based learning environments – the freedom and responsibility learners have in shaping the process of learning and the opportunity for reflection on their own learning style, features that are found in several definitions of this type of learning (Edelson, Gordon, & Pea, 1999), (Tosey & McDonnell, 2006), (Chu, Reynolds, Tavares, Notari, & Lee, 2017). After a review of the relevant literature including previous studies, nine concepts were selected to be addressed in the survey: (1) reflection on learning and becoming a better learner; (2) learner autonomy/responsibility and instructor as facilitator; (3) assistance provided by the instructor (scaffolding); (4) developing team work skills; (5) developing communication skills (presenting information); (6) developing problem solving skills (higher thinking skills); (7) developing critical thinking/collecting information skills; (8) time and effort/student engagement; (9) learner satisfaction.

Based on these content areas, the items in the questionnaire pool were written and they were mixed up to create a sense of variety. However, a division by broad topic and item type of the whole questionnaire was kept to avoid creating the impression that the questionnaire lacks logical order. The questionnaire was modified after a pilot study with two groups of part-time students who worked on a similar project task. The final version of the questionnaire consists of 3 main sections. Section 1 comprises 31 Likert scales with each content area covered by 3 or 4 items. Section 2 comprises 8 open-ended questions. And section 3 collects brief personal data.

The data collection for the case study took place in June 2021 after completion of the project-based task and the speaking contest. The questionnaires were administered via Google forms. All 22 students were asked to complete the questionnaire and we received 11 responses. Nine out of ten teachers filled in the questionnaire (the author of the questionnaire abstained from giving answers to avoid biasing the results).

Data analysis and results

The first area addressed by the student and teacher questionnaires concerns **the metacognitive skills of reflecting on and improving the learning process of students.**

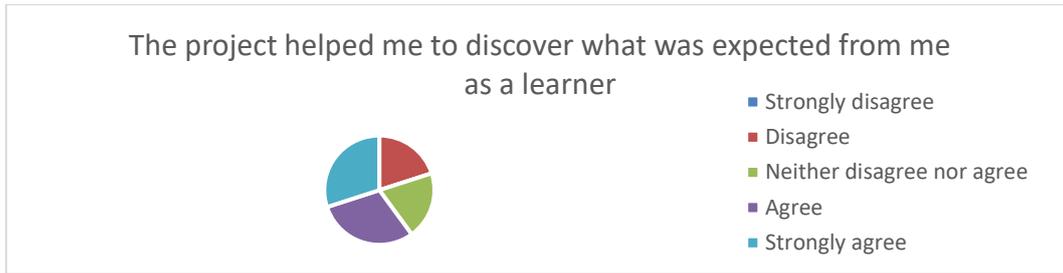


Fig. 1. An example of students' responses regarding opportunities for reflection on learning and becoming a better learner

Fig. 1 shows that about two thirds of the students agree that working on the project task has helped them to find out what is expected from them as learners. None of the teachers disagrees with this statement compared to 20% of the students who gave the same response. 33% of the teachers neither agree nor disagree. Many of them think that the task has helped students understand what is anticipated from them during the learning process. About 33% agree while approximately 56 % strongly agree with this statement. Another aspect of the first content area is **the ability of students to differentiate, acquire and ultimately use various strategies that can enhance their learning.**

Fig. 2 shows that 80 % of the students have discovered ways to become better learners (40 % of them strongly agree and 40 % agree with this statement). However, a small percentage (20 % who disagree or do not have an opinion) do not see any improvement in their skills as learners as a result of completing the project task. Most of the teachers also evaluate positively the outcomes of the project task and think that students have acquired skills that can help them become better learners. 11 % agree with this statement, 77.8 % strongly agree with it while only 11 % neither agree nor disagree with it.



Fig. 2. An example of students' responses regarding learner autonomy

The second content area concerns **learner autonomy and responsibility.** All student respondents express approval. Their answers about feeling in control of their learning are equally divided between agree and strongly agree. Students not only state that they had control over their learning, but also confirm that they were able to take responsibility for it and as a result better plan the process of task completion. Similarly, nearly 80% of the teachers also think that students were able to pursue their own inquiry and through guided support learners achieved a higher level of autonomy. Although students "owned" their learning and were able to work independently, they were guided by their teachers. **Teachers provided assistance (scaffolding) and acted as facilitators.** Fig.4 shows that 60% of the learners think that they received enough help from their teachers. However, 30 % considered they needed more help from their teachers. The instructors' responses differ from those of the students because only about 30% think students received enough support and guidance. This is half of the percentage of the satisfied students. Furthermore, 50% of the teachers think the assistance was enough while only 12.50% of them think more help was needed.

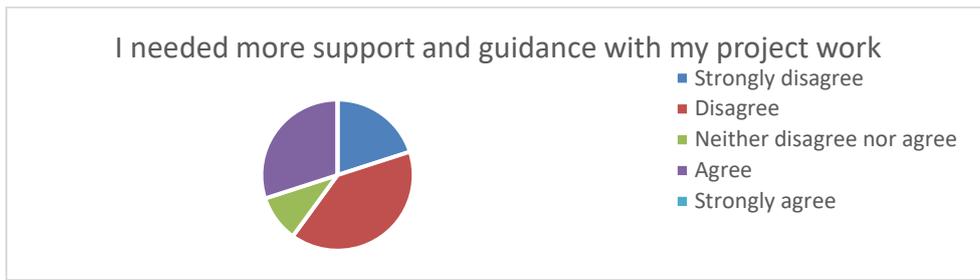


Fig. 4. An illustration of students' responses regarding support

After the task was set, a workshop on presentation skills for all first year students was organised and each of the faculty members provided help to students working on the project but students' answers show that these activities were enough. This is seen in Fig.5 as well which shows that 10 % of the students strongly disagree and 30% disagree with the statement concerning the sufficiency of support. This opinion coincides with the opinion of the teachers as nearly 45% of them agree with this statement. However, there is also a big percentage, a little less than 66%, who neither agree nor disagree with this statement. This could be due to the fact that this approach is new to some of them and they still need either training or further practice to fully embrace it.

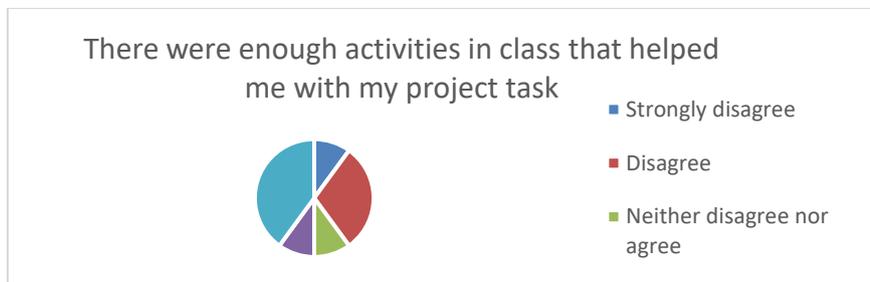


Fig. 5. The need for more support

Adopting project-based instruction and the constructivist approach to learning means that students must be taught to **construct their own meaning**. To make knowledge useful in a new situation, students must make efforts to find information, evaluate it and use it appropriately. They must also be able to build on their previous knowledge and establish connections between what they know and the new information (Cooperstein, S., & Kocevcar-Weidinger, E., 2004). With reference to this, Fig.6 and Fig. 7 show how students evaluate **the development of their problem solving, critical thinking and information gathering skills**.

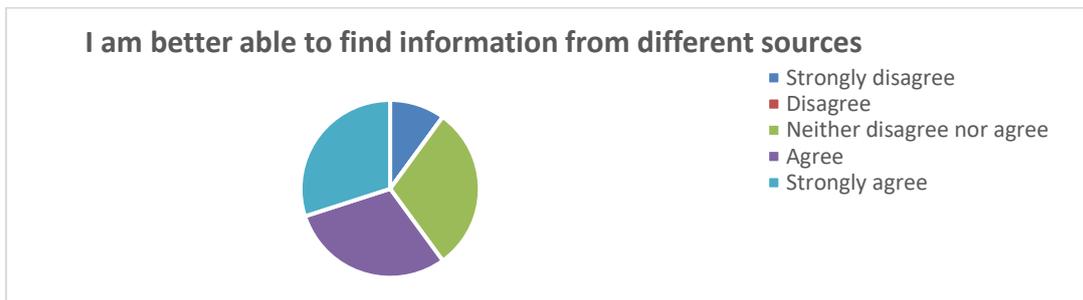


Fig. 6. An example of students' evaluation of their information gathering skills

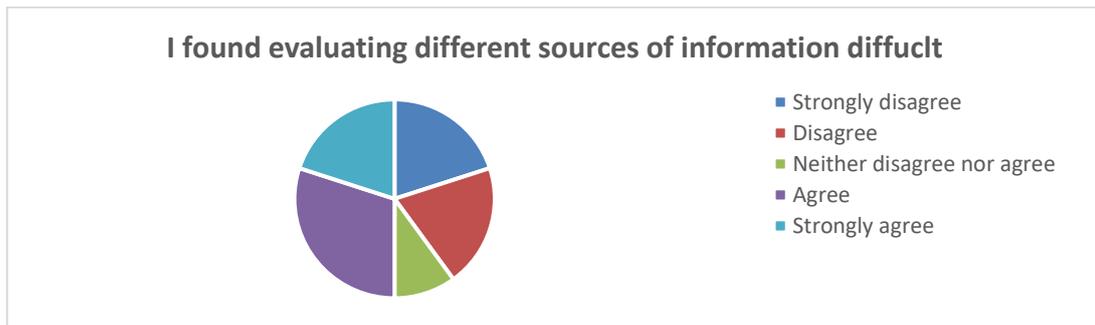


Fig. 7. An example of students' evaluation of their critical thinking skills

It can be seen that the majority of the students feel they have improved their ability to find information (i.e. 30% agree and 30% strongly agree with this statement). This opinion matches the teachers' opinion. Almost 80% of them agree with the statement. However, there is a considerable number who disagree (10%) and neither agree nor disagree (30%) which means that both teachers and learners should invest more in developing this skill. Developing the students' higher thinking skills and evaluating information, in particular, is another skill that requires additional work. Half of the students admit that it is difficult for them to assess different sources of information. Only 12.5% of the teachers agree with this statement but 62.5% neither agree nor disagree. This "grey" area raises questions about better structuring of the project task or providing more scaffolding.

In contrast, both students and teachers agree that learners have developed considerably **their communication skills**. Fig. 8 shows that nearly all students, i.e. 60% strongly agree and 20% say that they see an improvement in their ability to present information. These findings almost exactly match the teachers' opinion with 11.1% who agree and 66.7% who strongly agree with the statement.

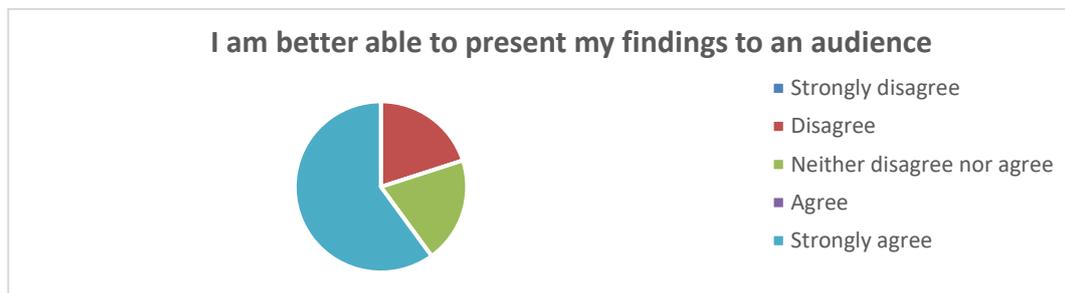


Fig. 8. Improvement on presentation skills

Another aspect of problem-based learning that was positively evaluated by both learners and teachers is the ability to **transfer knowledge and integrate it into other subject areas**. From Fig. 9 it can be seen that 56% of all learners strongly agree and 11% of them agree that the project task helped them improve their subject area knowledge.

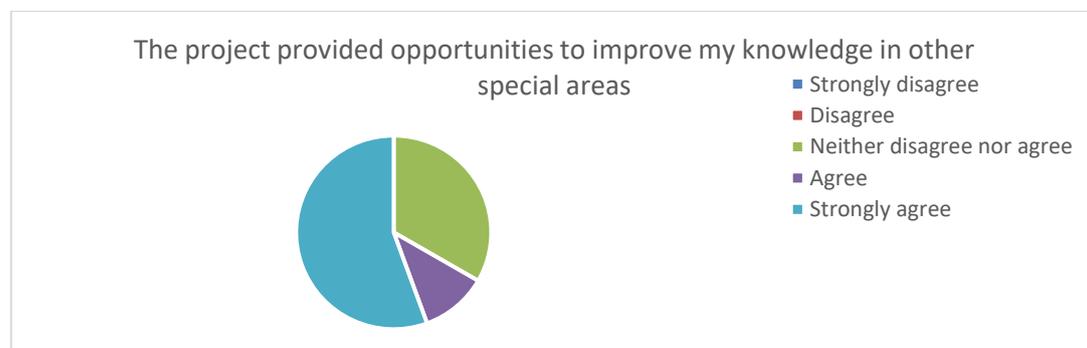


Fig. 8. Opportunities for integration of knowledge

CONCLUSION

The project-based task achieved its goal to increase **student engagement**. Learners invested different amounts of time and effort in the task completion but on the whole students report positive results. Only 30% disagree that they spent a lot of time working on the project. The remaining 70% have benefited from the task to different degrees.

Learner satisfaction was **high** (72% of all project participant). Teachers have a slightly different opinion. Only 44.4 % think that students enjoyed participating in the project while the remaining 55.60% cannot decide if students liked the project work or participated driven by instrumental motivation.

With reference to this, teachers feel they should introduce certain changes to their repertoire. They **should adopt new assessment techniques, develop more level – appropriate tasks which integrate various skills, and improve communication with students**. This will lead to more students being engaged in meaningful learning facilitated by carefully designed project task and teacher scaffolding.

In conclusion, both students and teachers evaluate highly the opportunities provided by project-based learning and state they have gained useful experience.

REFERENCES

Ananiadou, K., & Claro, M. (2009). *21st century skills and competences for new millenium learners in OECD countries*. Paris: OECD.

Chu, S. K., Reynolds, R. B., Tavares, N. J., Notari, M., & Lee, C. W. (2017). *21 centuries skills development through inquiry-based learning: From theory to practice*. Singapore: Springer.

Cooperstein, S. E., & Kocevar-Weidinger, E. (2004). Beyond active learning: a constructivist approach to learning. *Reference Services Revie*, 32(2), 141 - 148.

Edelson, D. C., Gordon, D. N., & Pea, R. D. (1999). Addressing the challenges of inquiry-based learning through technology and curriculum design. *The Journal of the learning sciences*, 392-450.

European Union. (2019). *Key competences for lifelong learning*. Luxembourg: Publications office of the European Union.

Scott, C. L. (2015). *The FUTURES of LEARNING 2: What kind of learning for the 21st century*. Paris: UNESCO Education Research and Foresight.

Stefanova, D., & Georgieva, E. (2021). (a) Measuring learner satisfaction in relation to digital project-based learning in higher education: Designing the tool. *EDULEARN21 Proceedings* (pp. 3944-3948). Valencia: IATED.

Stefanova, D., & Georgieva, E. (2021). (b) Transferring skills and disciplines in online foreign language learning: A case study. *EDULEARN21 Proceedings* (pp. 3910-3916). Valencia: IATED.

Tosey, P., & McDonnell, J. (2006, April 10). *L2L Working Paper*. Retrieved January 20, 2021, from <http://www.som.surrey.ac.uk>: <http://www/som.surrey.ac.uk>.

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