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ADDRESSING CHALLENGES IN ENHANCING TEAM COLLABORATION AND EVALUATING INTERDISCIPLINARY PROJECTS

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Abstract. The aim of this paper is to clarify the extent to which collaborative project work needs to be promoted to develop key competences, notably autonomous learning, and effective collaboration, essential in the context of our rapidly evolving world. The impact of different assessment methods on the final outcomes of Project Based Learning (PBL) is examined in its interdisciplinary perspective. The samples encompassed 180 American College of Sofia (ACS) students divided into two cohorts: a control group of 60 and an experimental one of 120. Of particular interest is to examine whether the use of alternative assessment techniques is applicable to an interdisciplinary project and how effective they are in incentivizing teamwork. Recommendations aimed at reducing instances of social loafing and increasing student activity in collaborative project work are also discussed. The assessment tools used to measure the course objectives comprise purpose-designed checklists tailored to the specifics course needs. The research methodology is based on extensive observations of project-related activities, including periodic evaluations, questionnaires on the achievement of intermediate objectives, peer evaluations and teachers' feedback, culminating in a final project report. In addition, a comparative analysis of the students' academic performance is made, focusing only on the area of mathematics in the context of a multidisciplinary project. This comparative analysis is intended to provide an overall assessment of the efficacy of the alternative assessment techniques used and their suitability for PBL.

Keywords: project-based learning; project-oriented learning; interdisciplinary project; teamwork; feedback; alternative assessment; rubric

1. Introduction

Preparing our students for the future poses an uncertain challenge. However, applying the student-centered methods, such as PBL, offers skills to equip our students with the versatility required to navigate real-life scenarios effectively. While PBL lacks a precise definition, in essence, it involves teaching students through tasks that replicate real-world situations within meaningful projects. Here, students

collaborate in groups to investigate and solve real-life problems, honing the skills necessary for these endeavors. In accordance with Marasheva's research (2011), it is evident that the team-based approach and collaborative work methodologies offer substantial benefits when compared to individual and group work. These advantages lead to achievements that individuals and traditional groups cannot attain. Nonetheless, effective collaboration within a team can present challenges, particularly when team members bring distinct proficiencies, inclinations, and responsibilities to the table. Recognizing both the strengths and limitations of teamwork holds paramount importance, fostering individual growth and professional development. This approach aims to prepare the youth for the challenges of the 21st century, complementing the traditional curriculum. Of particular note is the need to reframe project work from an interdisciplinary perspective as a method which fosters students' self-reliance and acquirement fundamental skill set needed to succeed. In this context, it is imperative not only to assess knowledge but also to evaluate performance. The objective is to translate theoretical understanding into practical applications, necessitating thorough assessment. Performance assessments are centered on intricate open-ended problems that demand advanced cognitive reasoning, innovative problem-solving, teamwork, and digital skills. These assessments prioritize evaluating a student's methodology in arriving at a solution, going beyond mere determination of whether the answer is correct. Assessment can be applied as a tool to enhance student learning through ongoing evaluation (formative) and to determine whether students have achieved the desired competencies (summative) (Albanese & Hinman 2019). Formative assessment is an integral part of the ongoing teaching-learning process, involving providing feedback to students with the aim of improving teaching, learning, and the curriculum. Summative assessment, on the other hand, occurs at the conclusion of a term or course and primarily serves to provide information about the extent of a student's learning and the effectiveness of the course (Wojtczak 2002). Importantly, this goes beyond merely assessing a student's ability to arrive swiftly at the correct answer, necessitating the development of objective criteria and scales for a comprehensive assessment. Traditional assessment methods for measuring achievement, including multiple-choice tests, true/false questions, and matching exercises, have proven insufficient for evaluating student performance (Wiggins 1993). In this regard, Petre (2017) recommends the alternative methods for assessing students' knowledge and skills. Simonson et al. (2000), identify three approaches to alternative assessment: authentic assessment, performance-based assessment, and constructivist assessment. In the domain of electronics environment, various alternative assessment strategies are used, including learning needs assessment; academic achievement testing; oral and written questionnaires; diagnostic student reflections; informal feedback from diverse sources; group discussions; progress reports; personal one-on-one interactions with each student, among others.

It is important to be mentioned that some authors, when discussing project applications in extracurricular or elective classes, employ the term "Project-Oriented Learning (POL)" as a synonym for Project-Based Learning (PBL) (Leal Filho et al. 2016). Conversely, others, as Chakarova (2022) and (Mellvile 2015)[1], contend that both methods are educational approaches in which students engage in project-based learning to acquire knowledge and develop skills, but these approaches exhibit distinctive differences in terms of their underlying principles and methodologies. The key difference lies in the extent to which the project assumes a central role in the learning process. PBL positions the project as the core element, underscoring student-driven inquiry and problem-solving, whereas POL integrates projects within a more traditional curriculum.

2. Background

Project-based learning is the most meaningful when implemented as an interdisciplinary, long-term project. This method not only requiring a diverse range of academic and digital competencies, but also assumed that by addressing challenges through the multidisciplinary perspective, students will attain a comprehensive understanding of various approaches and potential solutions. Kaloyanova (2021) characterized PBL as an educational framework that promotes an interdisciplinary approach, emphasized on the integration of knowledge and skills in real-life scenarios through project-based activities. Consequently, it can be concluded that the most effective approach involves educators from various disciplines collaboratively shaping the subject domains (rather than the specific problems) for students' subsequent research. Nicolade et al. (2017), state that practical experience demonstrates that comprehending the significance of PBL and, even more so, grasping its core principles through an interdisciplinary perspective, is not always achievable. However, it's essential to emphasize that this interdisciplinary approach is instrumental for optimizing the enhancement of competencies and proficiencies. Despite its benefits, the application of project-based learning, especially in the classroom, seems quite daunting and almost impossible to implement. It necessitates a high degree of coordination among different subject-areas teachers to allocate sufficient time for PBL and rigorously adhere to the established timetable. Additionally, it is of vital importance that the content taught in the relevant subjects aligns with the proposed research topics. Assessment of students' knowledge and skills could be carried out by any teacher whose discipline is for in the research, not necessarily with a quantitative assessment against curriculum-level outcomes. Only the final product of the whole group's activity can be assessed; the process of working effectively together in a group; or an assessment that reflects both the both the end-product and the effectiveness of teamwork throughout the project.

Another important distinction lies in whether the evaluation will be based on a collective assessment of the entire group or on an individual assessment of each

student according to their own contribution to the team activity. Alternatively, it can be a combination of both approaches, where a certain percentage reflects the group's performance, and the remainder accounts for individual contributions. In the latter scenario, the author's experience indicates that it is advisable not to assign more than 50% of the overall module grade to the group assessment. Regardless of how clearly the evaluation criteria are defined, some students often assert that they have contributed more than the teacher perceives.

The evaluation of PBL is not only influenced by the teaching method and its intended outcomes; it is also greatly impacted by the assessment approach (Holahan et al. 2000). Assessment should be seamlessly integrated into the teaching-learning process, maintaining both formative and summative elements. When formulating assessments in the context of PBL, it is crucial for educators to provide continuous feedback on their students' progress. Providing reports plays a key role in encouraging students to engage in self-reflection concerning their work and learning process. This introspection allows them to delve deeper into their learning and develop valuable metacognitive skills (Boud & Molloy 2013). Feedback can encompass acknowledgment of students' accomplishments as well as guidance on the steps required to attain specific objectives. It serves as a motivator, actively engaging students in their learning journey. Commendation and approval reinforce their endeavors, while constructive criticism serves as an incentive for persistence and improvement (Hattie & Timperley 2007). Regardless of the nature of said feedback, be it encouraging or corrective, educators should establish a framework for effectively following up on the comments they provide. To facilitate the implementation of this interdisciplinary approach and recognize its significance in nurturing essential competencies and student learning, it is essential to equip teaching staff with the requisite training in utilizing appropriate digital tools (Nikolade et al. 2017).

3. Methods

Getting started with PBL can be challenging, requiring teachers to define objectives, establish scope, divide students in suitable groups, and, importantly, identify topics that pique students' interest. PBL also necessitates a digression from traditional grading methods, as interdisciplinary projects cannot be assessed in the same manner as standardized tests or quizzes. Since real-world problems have multifaceted solutions that draw upon knowledge from various subjects and domains, to achieve effective summative assessment in PBL, it would be appropriate to develop well-defined grading standards within rubrics for each subject. As previously mentioned, PBL projects rarely yield a singular correct answer. In fact, many times, there may not be a correct answer at all. Consequently, creating rubrics is a challenging endeavor as they cannot simply consist of a binary 'yes' or 'no' checklist for determining student grades. Instead, they must consider numerous

factors, including students' engagement, problem-solving approaches, and the ambition and creativity demonstrated in their projects. In this context, Delinov and Marasheva (2014) introduced a comprehensive system comprising eight evaluation criteria for projects, with each criterion further delineated by three specific indicators. Additionally, Tzvetkova and Bankov (2022) put forth an approach for assessing individual students' teamwork abilities within an educational setting. This method exhibits remarkable adaptability, proving applicable across diverse scenarios regardless of the subject matter. It is also accommodating of teams of varying sizes. The fundamental tasks and the maximum attainable scores can be customized to suit the unique requirements of each project and the specific context.

Comprehensive assessment strategies are crucial for upholding the principles of PBL and providing comprehensive support to every learner throughout their educational journey. By implementing reliable assessment methodologies, PBL can cultivate an environment of exceptional achievement accessible to every student, thereby promoting profound and comprehensive learning experiences. These assessment criteria should be transparent and aligned with a student-centered approach to learning. Sometimes the most complex part of having an interdisciplinary PBL project is the evaluation, as teachers who are most of the time not used to having to evaluate a common project, are put into a new for them situation. This is where formative assessment is very helpful, as it allows the teachers to just guide the students as to how to improve a particular unit of their project in the required area and, the teacher whose subject is predominant, to grade the work at the end of the milestone. This is also possible through common formative assessment where all the teachers evaluate the project throughout the whole year and still give ideas for improvement, relating to their field. The explored component of this work was to investigate the influence of formative assessment, participation grade, self and peer assessment, and only "leading teacher" assessment in project-based learning on the learning outcome of students and also to probe the level of reliability and validity of these methods of assessment in project-based learning. Due to the interdisciplinary nature of PBL, comprehensive achievement assessment is essential. To attain this objective, the synchronization of assessment methodologies across integrated disciplines is important. To facilitate this, unified assessment rubrics have been implemented, ensuring their relevance in each integrated discipline. For the purpose, five types of checklists were developed:

3.1. Assignment in google classroom for weekly report, assigned and graded by the faculty member (formative or interim assessment)

Tutorial sessions were conducted once a week, spanning over seven months in the 12th-grade course, focusing on three core subjects: Mathematics, Physics/ Entrepreneurship, and IT/Computer Science. The assessment criteria, including weekly communication and reporting, self and peer assessment, and practice presentations, were graded on a scale from 0% to 100%. These assessment types

were not applied on a weekly basis; rather, they were tailored to the specific objectives addressed in each tutorial session, predefined at the commencement of the school year. The choice of criteria also corresponded to the stage of the PBL process the student group was engaged in. Following each tutorial session, the "leading teacher" responsible for Mathematics assigned a participation grade (interim assessment) to each group, graded within the 0% to 100% range, based on their performance in the "weekly communication" category. It is important to note that the assessment of participation has sparked considerable debate due to its potential subjectivity and susceptibility to varying interpretations. Jacobs and Chase[2] (1992) have outlined several reasons against grading class participation. These include the absence of specific instruction on improving participation, the inherently difficult and subjective nature of interpreting student behavior, the influence of individual personality traits on participation, which may disadvantage shy or introverted students, and the challenges associated with record-keeping, particularly when justifying participation scores in the event of disputes. In contrast to these objections, Holly et al. (2023) believe that grading class participation can send positive messages to students regarding the types of learning and thinking that instructors value. This includes the development of communication skills, critical thinking abilities, and the capacity to construct valid arguments through interactions with peers. Class participation, they contend, plays an important role in a student's education, and contributes significantly to positive learning outcomes.

Throughout the project, assessing participation was deemed necessary, regardless of individual teacher preferences, as it stood as one of the few means to assess student engagement effectively. To facilitate this process, a participation rubric was provided, encompassing various criteria (such as workload, engagement in surveys and post-class meetings, willingness to accept and solicit feedback from the teacher). This rubric proved instrumental in enhancing understanding, both for teachers and students, of the depth of learning achieved through group work. Essentially, this entailed that both parties could employ the guide to determine which criteria were met and how, allowing students to self-assess their performance by utilizing a Google form and articulating the reasons for their chosen grade. For teachers, this approach facilitated the separation of individual performance from group performance and provided insight into the acceptance of feedback. Furthermore, a comparative analysis of the papers produced by each group was conducted, aiming to discern whether students became more engaged and motivated as they grew more familiar and comfortable with the PBL approach throughout the semester. Towards the end of each month, the "leading teacher" summed the formative grades awarded by all teachers for the "Weekly report" criteria, summarizing them into a single average interim grade. This final grade held both formative and summative value. Additionally, at the close of each month, each subject tutor assessed the students' performance in the roles they had undertaken during classwork, whether as leaders

or participants. These role assessments were primarily formative in nature, aimed at enhancing student performance in future assignments, and did not have summative weight.

3.2. A self-assessment checklist (formative assessment)

Creating a questionnaire in collaboration with students to assess their progress and gauge their alignment with their set goals is a valuable formative assessment practice. This self-assessment process occurred at the conclusion of each month.

Employing a checklist comprising specific criteria to evaluate the cognitive outcomes of the study provides students with a structured means to reflect on their learning achievements at the end of each semester.

3.3. Peer-assessment checklist (formative assessment)

Each group had the opportunity to review another group's project, providing constructive feedback and, in some cases, to feel additional motivation for progress. Sometimes peers identified aspects that the teacher might have overlooked when making the questionnaires. Although the students gave very carefully assailed notes and assessments, they were given the opportunity to analyze the reasons behind their classmates' evaluations. Peer assessment was conducted at the conclusion of each month.

3.4. Final report / Article (summative assessment)

The comprehensive report empowers students to perform a self-assessment of their final project. It encompasses inquiries related to the research question, assessing its clarity, conciseness, and its overall merit for study. The final analyze delves into whether the project aligns with the initial plan's objectives and explores the findings' relevance. Additionally, it evaluates whether the collected data substantiates the original hypothesis. The questionnaire encompasses essential components such as the rationale behind the study, pertinent background information encompassing theories and prior research related to the examined process, as well as its potential implications on the environment and community. Furthermore, it addresses the identification of potential sources of error in the research.

3.5. Survey for 2021/2022 and 2022/2023 school years (anonymous /not graded)

In addition to the alternative assessment methods, the author has additionally developed a survey (Table 1) that includes questions that specifically address the skills acquired through PBL that are the objective of this study:

– developing autonomous learning skills
– acquire knowledge and skills for teamwork
– developing specific competences for self-assessment and control

The survey instrument (Table 1) included 12 questions, which the students could answer by a 3-point scale: 1 – disagree, 2 – neither agree nor disagree, 3 – agree. This scale was chosen as the preferred option due to the familiarity of ACS students with survey completion. Each school year, students undergo training where they

receive clear explanations about the criteria for different types of surveys and how to respond appropriately, especially when encountering double negatives in sentences. As a result, the use of this scale is expected to yield less subjective results. To mitigate subjectivity, some of the questions were asked in several different ways and shuffled on purpose. Sometimes students can be susceptible to subjectivity or provide answers they think the teacher wants to hear. Asking the same question in different ways reduces the probability of misleading answers and encourages students to be more honest. Also, different students have different learning styles and preferences in absorbing information. By asking the same question in multiple ways, each student was given the opportunity to find the appropriate way to express their opinion.

Table 1. Survey questions for 2021/2022 and 2022/2023 school years (anonymous /not graded)

	Statement
Q.1	”All of the teachers gave me clear instructions and rubrics about the grading policy”
Q.2	“The teachers’ feedback was helpful and I agree with it”
Q.3	“Due to the Formative Assessment grades my project became even more sophistcated”
Q.4	“Different types of assessment gave me the ability to correct my mistakes in time for the summative assessment”
Q.5	“The leading teacher gives an adequate monthly summative grade for the different subject areas”
Q.6	“My class participation during the year was graded fairly”
Q.7	“Setting intermediate goals and receiving the teachers’ feedback helped me make progress and increased my intrinsic motivation to continue”
Q.8	“All of the group members contributed equally to the development of the project”
Q.9	“Getting feedback from my peers improved my ability to assess the quality of my work”
Q.10	“All team members should receive equal grades”
Q.11	“I accomplished what I set out to do because we discussed all the suggestions together”
Q.12	“My grade reflects the quality of my work and I am satisfied with it.”

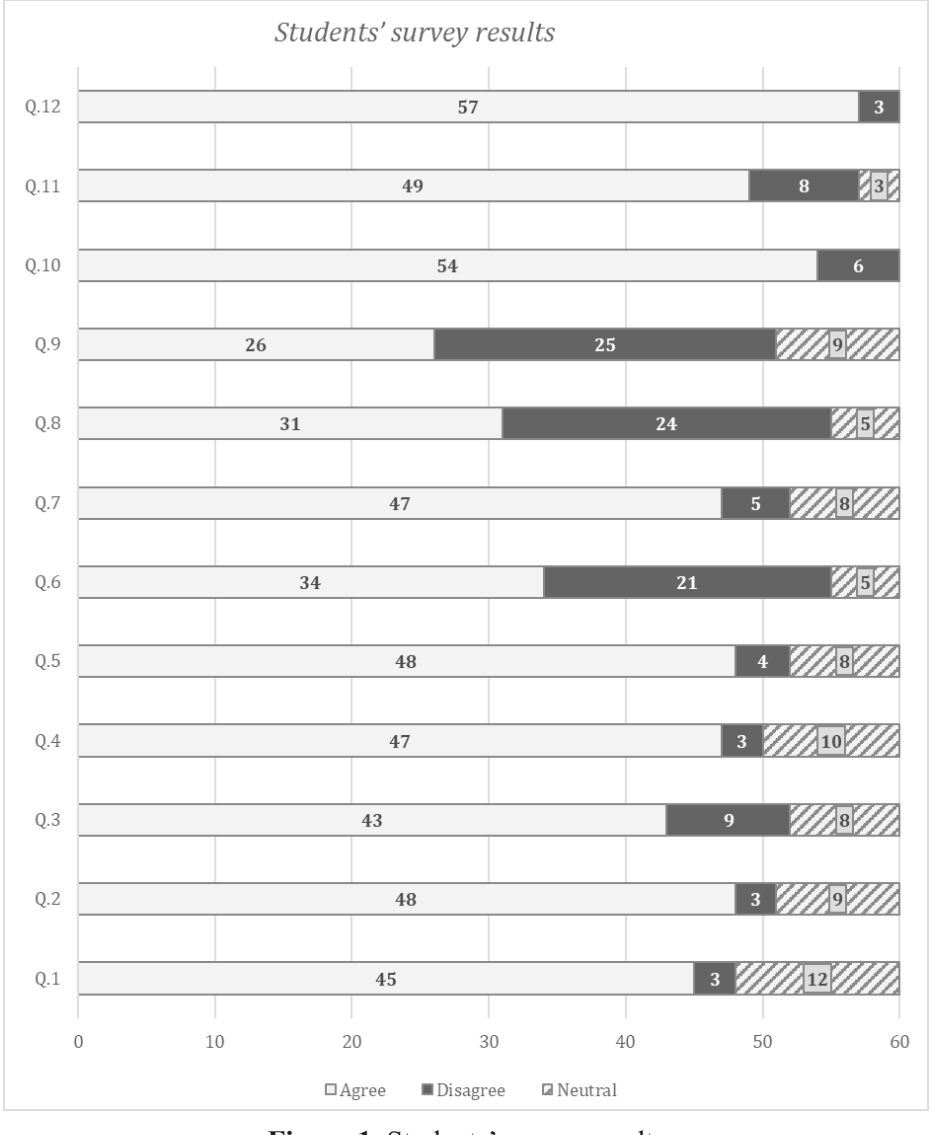

Figure 1. Students' survey results

4. Results and discussion

The study encompassed a sample of 180 students from the American College of Sofia, divided into two cohorts: one control group of 60 and an experimental one of 120, and spanned four consecutive school years. During the 2019/2020 school year

with the first group of 60 students, only summative assessment was applied, while in the next three years with the second group of 120 students formative assessment was used as well. Petrov (2023) highlights the inadequacy of the entry-level test in Bulgaria, primarily due to its incorrect implementation and lack of consideration for long-term knowledge retention. Usually, this test, conducted at the beginning of the school year, encompasses material from the entire prior school year, rendering it inconducive for diagnosing knowledge accurately. However, it proves suitable for comparing control and experimental groups in pedagogical experiments, providing a reasonably current assessment of students' average proficiency. The grades derived from this test are usually summative in nature. The average results of students in mathematics entry tests are very similar. Table 2 provides a comprehensive overview of all grades, including the scores obtained for both the final product and class participation for the interdisciplinary projects, all assessed using the ACS grading scale. Notably, despite the initial project's sole focus on mathematics and IT, with a single topic, student performance on the interdisciplinary project exceeded the scores achieved by the Group 2019/2020 cohort. This outcome was unexpected, considering the interdisciplinary project's development involved collaboration with three instructors. According to Nikolade et al. (2017) the foundation of interdisciplinary projects relies on effective coordination among the teaching staff, with the primary aim of fostering students' competency development. This advancement represents a significant step toward achieving higher standards in education quality. However, despite mine and my colleagues' best efforts to collaborate, there were instances when it proved challenging to assemble all parties involved, requiring students to independently pursue their subsequent goals. Nikolova and Ivanov (2022) discussed that peer-review and peer-assessment play established roles as formative assessment techniques and collaborative strategies. These practices foster a strong sense of fairness, self-assurance, and provide valuable constructive feedback. Consequently, the author believes that it's highly beneficial if the formative assessment precedes summative. A total of sixty students (2021/2022 and 2022/2023 academic years*)* were administrated a Google Form questionnaire (see Table 1) to elucidate prevalent issues related to teamwork. The questionnaire probed whether students' projects aligned with their initial plans, the extent to which teachers' feedback contributed to enhancing performance, and the influence of teamwork on individual roles and responsibilities. The responses obtained (Figure 1) varied in the level of detail provided, but it was found that most students (71.7%) indicated that their projects occasionally surpassed their initial expectations in sophistication. This was attributed to the guidance provided by the teachers, a perspective endorsed by approximately 80% of the respondents. Some students found it necessary to switch project topics, deciding that the new choice was more engaging and practical, fostering skill development relevant to their future needs. Notably, an overwhelming 95% of students expressed satisfaction with their

final grades, indicating the effectiveness of the teachers' feedback practices and the establishment of clear expectations. Only 51.7 % of the students fully agreed that all group members made equitable contributions to project development, while 43.3% believed they achieved their objectives with collective input. At the same time, almost all the students thought that they should receive equal grades. This observation raises concerns regarding inclusivity, as it appears that academically stronger students (10%) may undervalue their peers and prefer to perform independently, while weaker students face challenges in actively participating in teamwork, often remaining isolated. There are many factors that contribute to students' reluctance to actively participate in group projects. When the sole criterion for evaluation is the achievement of goals, some group members may choose to remain detached from project work, anticipating that others will complete it more swiftly and efficiently without their involvement. From the students' perspective, the challenge of social loafing emerges as a prominent issue in group projects. The influence of even a single individual engaging in social loafing can significantly disrupt the group's dynamics. These individuals invest less effort than is considered equitable in the collective endeavor, yet they still reap the benefits of the group's combined efforts, owing to the shared grading system (Aggarwal & O'Brien 2008). If 81.7% of the students reported setting their personal goals, but only 43.3% received constructive feedback from their team, the author may conclude that:

(a) There might be a misunderstanding among students between collaboration and teamwork.

(b) The team's goals may lack cohesion and diversity.

(c) Students may need to enhance their soft skills, particularly in communication and collaboration.

Table 2. Summary of the number of students by grades from PBL

GRADE	PBL Project Summative (Math) Number of Grades 2019/2020	Interdisciplinary PBL Project Formative (Math) Number of Grades 2020/2021	Interdisciplinary PBL Project Participation / Peer Number of Grades 2020/2021	Interdisciplinary PBL Project Summative Number of Grades 2020/2021	Interdisciplinary PBL Project Summative Number of Grades 2021/2022	Interdisciplinary PBL Project Summative Number of Grades 2022/2023
Poor (<59.5%)	2	2	0	0	0	0
Low (59.5% – 70.4%)	0	30	0	0	0	0
Average (70.5% – 80.4%)	6	16	0	0	2	0

Above the average (80.5% – 91.4%)	28	8	14	6	4	0
Excellent (≥≥ 91.5%)	24	4	46	54	34	20

5. Limitations and future research directions

It is noteworthy that there are two interesting aspects regarding group projects. Although some of the questions from the survey are essentially asking the same question, the responses indicate that students perceive the two aspects differently. This highlights the need to find a more sophisticated peer assessment method to inquire about student individual contributions to foster more candid responses. It is crucial for teachers to emphasize teamwork in the electronic environment, where a significant portion of project-based learning occurs outside of school and requires appropriate supervision and evaluation methods.

The teacher faces the exceptionally challenging task of organizing the working groups in such a way that, subsequently, the members have the opportunity to select a suitable leader. Simultaneously, group members must possess the requisite levels of both hard skills (e.g., computer proficiency, technical and analytical capabilities, internet communication) and soft skills (including effective verbal communication, a strong teamwork ethic, adept time management, and the ability to discern between teamwork and collaboration). This ensures that the work process can effectively advance toward achieving its intended goal. Efforts should be made to enhance mechanisms that distribute workloads equitably, preventing any member from bearing either an excessively light or burdensome load, while also ensuring that no member is excluded from active participation. Pfaff & Huddleston (2003) have highlighted that students' positive attitudes toward teamwork are directly correlated with their perception of workload equality among group members. The current grading methods underscore the importance of refining the criteria used by educators to measure success, emphasizing the need for greater detail in these criteria. Grading should not solely be based on the achievement of the set goals but also on the level of individual engagement in task accomplishment. Hence, it is essential to distinguish between 'teamwork' and 'collaboration' and pay closer attention to these distinctions. Addressing these challenges should not be limited to classroom sessions alone but should extend beyond them. Identifying the underlying reasons for students' reluctance to actively engage in group work within an electronic environment presents a significant challenge. Striking a balance is imperative, as we must manage teamwork to foster inclusivity, while also considering potential conflicts with students' individual values. Aggarwal & O'Brien (2008) developed

some hypothesis regarding the impact of some factors which might reduce the social loafing: (a) scope of the project, (b) group size, (c) group selection, and (d) use of multiple peer evaluations. Another potential factor considered was the lack of technology or digital skills, but in this instance, this hypothesis is not supported. At the beginning of each school year, every ACS student is provided with a personal Chromebook, which is mandatory for classroom use, replacing traditional notebooks. Consequently, working in an electronic environment and mastering skills related to sourcing, managing, evaluating, and deriving reliable information from digital data have become integral aspects of students' education. Future research endeavors should prioritize promoting reflective discussions regarding the PBL requirements concerning group size and selection. Given that this case study was limited to a comparatively small group of students from American College of Sofia, and the rubrics for the participation items were developed by a small team of teachers in physics, informatics and mathematics, there is potential for bias in the formative assessments and checklists (see the appendix). Therefore, the results of the study may be subject to potential inaccuracies or limitations in terms of generalizability.

6. Conclusion

The attitude of each team member significantly influences the ultimate outcome when engaging in teamwork. If even one member harbors a negative attitude towards the task, it can inevitably affect the attitudes of others, leading to the gradual development of social passivity. Conversely, overly dominant behavior also hinders positive social interactions among team members. Perhaps one of the most interesting findings is the observation that certain highly self-assured students tend to take over the execution of tasks, leaving little room for their teammates to showcase their skills. This issue presents a dual challenge. On one hand, it fosters an unfavorable working environment among learners, and on the other, it poses difficulties for mentors in addressing issues related to social loafing. This is particularly relevant given the substantial effort required to provide meaningful feedback to students during PBL. Project-based learning can be initially daunting, as it requires a change in the core principles of the school curriculum. This transformation encompasses aspects such as grading, student participation, and the roles that students and teachers assume in the classroom. However, this shift in assessment methods proves liberating, as it grants students the freedom to experiment and become more deeply engaged in their tasks without the fear of facing negative repercussions, as there are no absolute right or wrong answers. Additionally, this approach empowers the teachers to improve their evaluation criteria throughout the school year, based on what they find to be more valuable. It also allows for a more equitable grading system that considers not only the final outcomes but also the effort invested by individual students in their projects. Furthermore, the coordination team demonstrates greater confidence in interdisciplinary collaboration when designing project experiences that encourage

students to cross disciplinary boundaries. This interdisciplinary approach fosters the development of what is commonly referred to as "21st-century skills", a concept that encompasses vital facets of contemporary student learning. These include critical thinking, problem-solving, collaboration, effective verbal and online communication, information and technology literacy, creativity, and overall self-reliance – a comprehensive skill set that empowers individuals to create independently. Given the significant educational value of these skills, the author contends that incorporating interdisciplinary project-based learning into the classroom is not only feasible but also essential. In numerous Bulgarian educational institutions, PBL has evolved into an indispensable element of the educational framework. Many educators adeptly integrate this approach into their daily teaching routines. The current edition of the "Best Practices in Focus" competition, organized by the "Teach for Bulgaria" foundation and the educational website "prepodavame.bg", centers on educational practices closely tied to PBL. Despite the potential initial challenges associated with its integration, its long-term benefits make it a worthwhile endeavor.

NOTES

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