Motivating Learners through Project-Based Learning

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Abstract: Project-based learning (PBL) is a learning approach that moves away from classroom, teacher-centered activities and instead focuses on learner-centered tasks which are integrated with real world issues and practices. This learning approach, which has been around for some time, is introduced into an English course offered to learners following the third-stage English Language programme at a higher learning institution. This paper describes the PBL task which these language learners carried out in groups. The task is conducted outside the classroom whereby learners are required to meet real-world professionals to gain information pertaining to their future careers. A study was conducted to investigate what the learners felt about this component embedded in the course, and to what extent PBL has motivated them in their learning. This paper also discusses the short and long-term gains learners reap from the learning approach.

Introduction

Project-based learning (PBL) is a learning approach that moves away from classroom, teacher-centered activities and instead focuses on learner-centered tasks which are integrated with real world issues and practices. PBL is defined as "a comprehensive instructional approach to engage students in sustained, cooperative investigation" (Bransford & Stein, 1993). Project-based Learning approach offers learners the opportunity to participate in projects thus requiring team effort and a host of other soft skills to ensure the successful completion of the project. The benefits of this approach are many; one of the most apparent would be that learners would instill in themselves much of the generic skills that are required to develop 'whole' learners. By the completion of the learning programme these learners undergo at the learning institution, they would mature and develop in all aspects: cognitively, socially as well as psychologically.

Review of Literature

Project-based learning (PBL) is a learning method which focuses on the learner; the teacher acts mainly as a facilitator and motivator. PBL emphasizes learning activities that are learner-centered and usually integrated with real world concerns.

The PBL project may have a number of different goals. Most PBL projects however, make a connection with the real world and address real world issues that are relevant to students' lives or communities. A project may be connected to real professions through the use of authentic methods, practices, and audiences. Real world connections might also be established with the world outside the classroom, via the Internet or collaboration with community members and professionals. The PBL approach thus enriches the lives and experiences of a learner as he is required to establish contacts with individuals outside his regular links of contacts.

Another benefit of the PBL is that it is said to motivate students as students are wholly engaged in the learning task. PBL is usually carried out in groups, thus learners get to develop their decision-making skills in groups as well as leadership qualities. Participation in PBL projects helps to maximize student decision-making and initiative as they would have to make many important decisions on their own throughout the project: from selecting from various options each team member has (e.g. in the case of the PBL project discussed in this article; which professional engineer to interview, and from which company, when and how to pursue the

professional engineer, what approach to undertake during the meeting with the professional, etc), to the design, production, and presentation decisions (which team member will be presenting which part of the project). PBL projects should thus be rather wide in terms of scope so as to allow learners to utilize their creativity and decision-making skills.

Adopting PBL projects in the classroom also helps reinforce social relationships among team members. PBL enhances collaboration among learners, between learners and the teacher, as well as between learners and other community members as well. Thus PBL gives learners opportunities to learn collaborative skills, such as relying on the work of peers and providing thoughtful feedback to peers.

PBL also bridges learning between different disciplines. Adopting this approach in the classroom helps learners see the bigger picture as they integrate the content of different disciplines when completing the project-based task. This is much more beneficial than asking them to integrate the different pieces of theories in the different lecture classes they are made to attend in 'artificial settings'.

As PBL usually involves projects done outside the classroom, these activities provide connections to life outside the classroom. Thus, PBL addresses real world issues and develop skills which they would find useful in the real-world outside. Many of the skills developed through PBL are those which employers usually seek: team-working spirit, the ability to work well and get along with others, make informed decisions, take initiative, and solve real-world problems.

Given sufficient time to complete the PBL project, learners would be given enough time to plan, revise and reflect on their learning. These activities lead to meaningful learning. Reflective learning consolidates what they have achieved for themselves in terms of learning and increases their awareness on their limitations and how these weaknesses could be overcome. This means that PBL is an innovative approach that employs a different mode of assessment. Utilizing the PBL approach, learners evaluate themselves continuously. Assessment is seen as an ongoing, varied and frequent process involving teacher assessment, peer assessment, self-assessment, and reflection.

Assessment techniques should thus be well understood by the learners. The criteria for assessment should be made known to the learners if they are to assess each other. Participating in the assessment process in ways not typically supported by more traditional teacher-centered lessons further develop learners into more matured, responsible and autonomous learners (Grant, 2002).

To conclude, it is not just the learner who reaps benefits from the adoption of the PBL approach. Teachers involved in orchestrating the Project-based Learning task whose role is mainly as task designer, facilitator, coach and motivator; would also get the opportunity to establish social contacts with the real world as the PBL projects are developed. Teachers may develop links with the outside world through the connections established by their learners. These links would be extremely useful to future learners as the learners' projects which document their learning process can be shared with other teachers, curriculum developers and the larger community who all have a stake in the students' education.

The Project-Based Learning Task

This paper describes the PBL component whereby the task is carried out in groups of four to five. The task which is conducted outside the classroom requires learners to meet real-world professionals to gain information pertaining to their future careers. The course is an English language course offered to learners following the third-stage English Language programme at a higher learning institution. The course, called English for Career Search, is aimed at equipping students with the right job-hunting strategies, so that they are able to secure a job upon graduation. The course has several components, namely, job advertisements, job application letters, resumes, interviews and the job search component.

The Project-based Learning task is integrated into the Job Search component. The task requires the learners to seek information pertaining to their future profession, thus they need to identify a professional working in a discipline related to their future profession. The learners are required to interview their respondents at their work place, after having made an appointment with the respondent. About twenty questions, all related to the respondent's career and work environment, are given for the learners to put forth to the respondent. These questions are used as a guideline, but the learners may add and create their own questions (as they know better about their discipline) so that they can acquire a more holistic picture of the career which they would embrace in future.

The main objective of the PBL project is for the learners to furnish themselves with all the information they can find about their future profession. This is not done via the traditional method where the lecturer imparts all the information to the learners. Neither is the professional called to give a talk to the learners on their future profession, although this has been requested by learners before. Instead, it is felt that learners would learn more by participating in a project-based learning task where they are required to establish the link with the professionals themselves, visit the professional's workplace so that they get better insights of the job, the profession and the work environment, and create and pose questions to the professional as they would decide the kind of information they want to gather from the professionals.

The objective of the PBL task is also to instill in learners the various generic skills they need in order to prepare themselves for the workplace. This is not solely because the course is actually the 'English for Career Search', but also because there have been numerous complaints about university graduates being ill-equipped in soft skills required to perform at job interviews, to get themselves employed and subsequently, to perform effectively at the workplace.

The PBL task requires learners to make appointments prior to visiting the professional. Once an appointment is made, the learners would go out and meet the professional face-to-face, usually at the workplace of the professional. The team members would ask the respondent all the necessary questions they have decided on and discussed in groups before actually meeting up with the respondent. Once they return to the classroom, they would have to prepare for a presentation, in which they share with fellow classmates, everything they had discovered about the profession.

Learners are assessed on the content of their presentation, as well as the language used as this is a language course. Learners would present their talks using multimedia technologies; however, sometimes, if the classroom does not have the required technologies, learners would then resort to using the OHP. The question-and-answer session follows, and the presenters are asked for

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clarification on points raised during their presentation. In addition to the oral presentation, learners also need to submit a written report furnishing the information gained from the professional.

Research Methodology

The study was conducted to investigate what the learners felt about this PBL component embedded in the course, and to what extent PBL has motivated them in their learning process. This paper also discusses the short and long-term gains learners reap from the learning approach, as well as shortcomings of the approach, if there were any. Their views were also sought on whether they found the PBL task challenging, enjoyable, and beneficial. The challenges of the PBL task were also identified so that the PBL task could be adapted or improved on for use with future groups of learners.

The research instrument used to gauge the views of the participants of this study was the questionnaire. Four-point Likert scale items were posed to the subjects requiring them to circle their responses on the aspects of PBL which were investigated. Apart from Likert-scale items, open-ended items were also included so as to gain a more in-depth account of the subjects' perceptions of PBL.

The subjects were students who were enrolled in the English for Career course at the time the study was carried out. The subjects comprise fifty-five third-year Electrical Engineering students who were following the English course with two different language lecturers. Although the subjects came from two different language classes taught by two different lecturers, the instructions given to the students, regarding the PBL task were standardized. The procedures they followed when embarking on the task were also the same. The research subjects interviewed their respondents at different times, depending on when their appointment with the engineer was set. Nonetheless, all subjects had already carried out the interview with their respective respondent by the second half of the academic semester. The questionnaires were distributed to the subjects immediately after the semester break to ensure that they had all completed the PBL task.

Findings and Analysis

The first item on the questionnaire is on whether learners thought of the PBL task as challenging. All 55 learners or 100% of them felt that the project-based learning approach is challenging. A few found the task a challenge as it "was hard for them to find someone available for the interview", "difficult to find transport", and they "need to interview someone I didn't know". However, a larger majority of the subjects felt that the task was a challenge for them as "there were many new things to explore and get new information about the real world", "it tests my skills in English" and "it is related to my future life when I become a real engineer". Thus, there were more learners who viewed the task positively and felt that the PBL task had challenged them cognitively.

On whether the task was enjoyable, 96.4 % of the subjects reported that they had enjoyed the PBL task while only 3.6 % claimed they did not enjoy the task because it is "cumbersome" and "needed a lot of preparation, work and effort". When asked if the task had improved their English, 100% of them reported that the project did help improve their English. None

complained that the task did nothing to their level of English proficiency. This was because the learners were required to interview the professional engineers in English. In addition, some learners admitted that the job enculturation task opened their eyes to the importance of English in the working world of an engineer.

On their motivation level to learn and improve their English further, 98.2 % of the 55 subjects agreed that their motivation level soared high after having conducted the interview with the professional. In fact, 92.7 % of them had high motivation levels while only 5.5% were slightly motivated to improve their English proficiency after they met up with the professional engineer and understood the requirements of the job better.

When asked if the project had motivated them to study harder in their Engineering course, all 100 %, with 72.7% highly motivated, 25.5 % somewhat motivated and only 1.8% slightly motivated to improve their content knowledge in the electrical engineering discipline. This was a positive indication that the learners now had increased awareness to improve themselves in aspects relating to their content and technical knowledge of their discipline.

The findings of the study also revealed that the project had changed 98.2 % of the learners in one way or another. Only one out of fifty-five learners was unaffected by the task. This was because this learner had already gathered similar information from his contacts with seniors of his faculty. Learners who were affected by the task revealed that they were taken aback by the finding that they may be working in an environment which is not related at all to what they had studied for and also the fact that the engineering scope is so wide and "I need to decide now". These new findings would benefit the subjects as, had they not been required to complete this PBL task, they would not be aware of the fact that they needed to make decisions that may alter their future. .

On the benefits derived from the project, learners cited several, with the most frequently-cited advantage being the fact that 34.2 % of them now understood the profession of an engineer better. 15.8% of the learners responded that they have now improved their knowledge on strategies to get themselves employed while 5.3 % of them are now more aware of the opportunities of conducting their practical training in the companies they have just visited. One learner remarked that he was now motivated to fulfill the requirements of an engineer.

While most respondents cited advantages relating to the engineering profession and what their future may hold for them, other respondents revealed that they discovered new dimensions in other aspects, for example, the soft skills required to become better individuals and better employees. One such benefit reported by 21.1 % of the respondents is that they have now learned how to communicate with others and felt that they have improved their communication skills. 13.6 % of the learners were delighted about learning new things such as networking with and meeting real professionals while 7.9 % felt that they were given the opportunity to learn to work in teams. 13. 2 % were now more aware of the need to improve their communication skills in English while one respondent reported his awareness of the need to become a more committed and responsible individual. This is because the team members had to really plan their trip to the company and the questions they wanted to ask the engineer, besides reporting that they also had to observe punctuality when dealing with a professional.

Although there appears to be a host of advantages for conducting PBL lessons, as revealed by these respondents, the PBL approach was not without its shortcomings. The most common

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Table 1
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Table 2
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ncy. This was because the disadvantage, as given by 25.5 % of the respondents, is that the adoption of the PBL approach
English. In addition, some was time-consuming. The complaints were regarding the cost they had to bear in making the
ie importance of English in trips to the companies (9.1 %), having to identify an appropriate engineer to interview (3.6%);
having to travel to the engineer's workplace which they did not quite appreciate (3.6%), having
98.2 % of the 55 subjects to analyze the situation first before entering the task (3.6%) and the added stress the task gave
ted the interview with the them (3.6%).
le only 5.5% were slightly
h the professional engineer Other disadvantages revealed by the respondent are they were not too delighted at the prospect of
having to establish contacts with the professional (3.6%), neither were they excited about having
eir Engineering course, all to use English to interview the engineer ((1.8%). Other complaints were that the task required
ed and only 1.8% slightly energy (1.8%), the task was tiresome (1.8%) and also that they had to be punctual when meeting
ering discipline. This was a members of the public (1.8 %). Another drawback which was expected to arise is that high levels
to improve themselves in of co-operation were required of team members to ensure the smooth running and successful
pline. completion of the project, and the learners revealed that this was difficult to achieve as some of
them were staying far from others. It is enlightening to note, however, that 25.5 % of the
8.2 % of the learners in one respondents, in response to the item, "what are some of the things you dislike about learning this
the task. This was because way?", actually wrote "nothing", "No, it was enjoyable" and "There's nothing I dislike" when
ntacts with seniors of his asked about what they disliked about the PBL task.
were taken aback by the The benefits derived from the PBL task are summarized in Table 1 below:
ated at all to what they had
nd "I need to decide now"

Table 1   Benefits of PBL Task

Benefits of PBL Task	Percentage of Subjects
1. Challenging	100 %
2. Enjoyable	96.4%
3. Improved English	100%
4. Further motivates to learn English	98.2%
5. Now understands profession of engineer	34.2 %
6. Improved communication skills	21.1 %
7. Gained strategies on how to get employed	15.8%
8. Learned about networking with professionals	13.6 %
9. Aware of need to improve English	13. 2 %
10. Given opportunity to work in teams	7.9 %
11.Aware of strategies to identify companies for practical training	5.3 %

What the students did not enjoy about the PBL Task may be summarized in Table 2:

Table 2   Aspects of PBL Task that Subjects did not Enjoy

Aspects of PBL Task which subjects did not like:	Percentage of subjects
1. Time-consuming	25.5%
2. Had to bear costs	9.1 %
3. Gave added stress	3.6%
4. Need to identify respondent	3.6%
5. Need to travel to engineer's workplace	3.6%
6. Need to analyze situation beforehand	3.6%
7. Need to establish contacts with professional	3.6 %
8. Tiresome	3.6 %
9. Need to interview engineer in English	1.8%
10. Need to be punctual when meeting member of public	1.8%

Conclusion

To conclude, the PBL approach brings about more benefits than disadvantages to these learners involved. We know that every teaching-learning approach has its strengths and weaknesses. However, the PBL approach introduced to the students taking the language course revealed that the benefits outnumbered the disadvantages. The project needs proper planning, however, on the part of the learners. In addition, the learners need to be given sufficient time to complete the task to ensure that they derive maximum benefit from it.

Suggestions for Future Research

Teachers and educators who employ Problem-Based tasks in their classes could determine the specific generic skills which learners have improved on, as a result of having undergone this learning approach. On the role of the educators, it would be fruitful to determine what they feel about this approach, as some are known to distance themselves from teaching approaches in which their roles are downsized to that of a facilitator. Teachers who have always been authoritative figures of knowledge in the classroom are usually the ones to oppose this kind of learning approach. Thus, it would be interesting to find out if our present-day teachers are welcome to the notion of providing more autonomy to learners.

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