

Enhancing Language and Communication Skills through Project-Based Learning: A Study in a Workplace Communication Classroom

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Abstract

Currently most employers prefer to hire Malaysian graduates who have the necessary academic qualification and employability skills which are important in the present job environment. To meet the expectations of employers and future employers, Malaysian graduates are expected to have linguistic capabilities, information and communication technology (ICT) skills, interpersonal skills, management skills, thinking skills, and knowledge (Pandian & Aniswal, 2005). This study aims to examine to what extent project-based learning (PjBL) has succeeded in developing students' language and communication skills while undergoing Workplace Communication course. Secondly, this will help researchers to identify the language and communication problems students faced in carrying out the assigned project. A set of questionnaire was designed and administered to determine the language and communication skills that students employ while engaging themselves in PjBL. In assisting students to acquire the employability skills, it is hoped this study will help course designers to identify the above mentioned problems and suggest possible solutions towards enhancing students' language and communication skills through PjBL .

Keyword: project-based learning (PjBL), employability skills, linguistics skills and communication skills.

Introduction

Low employability rate among graduates has become an overwhelming problem in the past few years. Based on a report by the Human Resource Ministry Malaysia (2008), the marketability of graduates is generally low due to poor communication skills. The Human Resource Minister, Datuk Dr S. Subramaniam suggests that graduates should sharpen their communication skills and specifically improve their language skills in English language in order to be recruited.

Project based-learning stems from a Communicative Language Teaching (CLT) approach which is the current shift in language classes. The core aspects of this shift focuses on student-centred learning in which students learn language in real-life experiences and is facilitated by the language teacher (Brown, 2006). CLT approach probes into the nature of social and cultural features of language which reflects the principles of constructivism where knowledge is constructed by learners as they attempt to make sense of their experiences based on their current and previous knowledge. Grant (2002) synthesizes from previous studies done by Perkins (1991),

Piaget (1969), and Vygotsky (1978) in Wertsch (1985) that in constructivism, interactions with the environment through conducting investigations, conversation or activities, individuals construct new knowledge by building on their current knowledge. Consequently, in project-based learning (PjBL), learners learn meaningfully through the process of exploring, scaffolding, interpreting, negotiating, and creating products namely presentation and written report required in their project work.

Vygotsky in Wertsch (1985) theorizes that learning takes place through social interaction that encourages individuals to deal with cognitive challenges that are just slightly above their current levels of ability. When learners are involved in discussions and meaningful interactions with more capable peers or teachers, they develop concepts and understanding eventually occurs. Undoubtedly, PjBL is beneficial to students' as they acquire and practice not only workplace skills but also language skills while carrying out the project work.

PjBL in context of Workplace Communication course has apparently improved language learning and met the requirements of the employers. Moss, Van Duzer and Carol (1998) affirm that project-based work lends itself well to evaluation of both language skills and employability skills. This study aims to investigate to what extent project based learning (PjBL) has succeeded in developing students' language and communication skills while undergoing Workplace Communication Course. Secondly, this study will assist language practitioners and researchers to identify the language and communication problems students faced in carrying out the assigned project work. Literature and previous studies have shown that PjBL has facilitated language learning and communication skills towards improving students' workplace literacy.

Research objectives:

- i. To find out to what extent project based learning (PjBL) has succeeded in developing students' language and communication skills while undergoing Workplace Communication Course.
- ii. To identify the language and communication problems students faced in carrying out the assigned project.

Research Design

A survey questionnaire was designed and consisted of three sections to elicit students' responses to project based learning based on the following language skills:

- A. Listening and speaking (8 items)
- B. Reading (8 items)
- C. Writing (10 items)

The questionnaire employed a 1 – 5 point Likert scale with 1 being Strongly Disagree and 5 being Strongly Agree. Section A consisted of statements which examine students' listening and speaking skills, Section B on reading skills and lastly Section C on students' writing skills while undergoing the project work.

Students were asked to respond to the questionnaire upon completion of their project work. Findings from the questionnaire were tabulated and analysed using SPSS version 18. Descriptive statistics in the form of frequency and percentage was presented. The results were analysed, interpreted and discussed according to the respective language skills.

The subjects in this study were 29 second year students in a Workplace Communication class. They were from Faculty of Information Science and Technology and Faculty of Science and Technology. Workplace Communication was the second language course they took during their academic year at UKM. These respondents had obtained Malaysian University English Test (MUET) band score of 3 and 4. The subjects comprised a heterogeneous group of diverse social and cultural backgrounds. They consisted of Malays, Chinese, and other ethnic groups from Sabah and Sarawak and worked collaboratively as a team for the project work.

Project Work Description

This project work required students to work in groups of 2-3 and identify a problem area at a workplace. Each group then decided on the methods to employ in gathering information for the project. The methods used included observations, questionnaires, and interviews. Groups had to make effective presentations of the report at the end of the semester and produce a problem solution report as the final product. Each group would assume themselves as representatives of a company that has been commissioned by UKM to solve an internal problem. The group members collected information and also updated their employer (class instructor) with relevant information while working on the project.

Learning outcomes of the project work were as follows:

- Design and carry out a social science study using instruments such as questionnaire, interview and /or observation.
- Demonstrate leadership qualities when working in groups.
- Apply analytical and problem-solving skills.
- Demonstrate effective oral presentation skills of the report.
- Write effective emails and project report.

Figure 1 below illustrates stages of project work which were carried out in duration of approximately 10 weeks, starting from week 3 to week 12. In carrying out the project work, the teacher provided scaffolding in the form of comments, feedback, guidance, and suggestions based on students' progress in their project work. In addition, the teacher also monitored students' progress of project work through e-mail interactions with their group members and with the teacher who acted as their employer.

Figure 1: Stages of Project Work

Stage 1

- Form groups of 2 to 3
- Brainstorm problem areas in workplace situation
- Identify problem area in workplace situation
- Confer with teacher (scaffolding)

Stage 2

- Plan procedures for project work
- Prepare questionnaire and interview questions
- Confer with teacher (scaffolding)

Stage 3

- Gather and analyze data
- Write a problem-solving report
- Confer with teacher (scaffolding)

Stage 4

- Prepare meaningful visual aids
- Present findings

Literature Review

Employability skills include intellectual abilities, performance skills, social skills and a range of communication skills which according Hinchhelfe (2006) take years to develop. He believes that these skills are unrealistic to be fully possessed by fresh graduates. He further suggests that in order for graduates to be compatible for the workplace, the prescribed pedagogy that teachers opt for should serve as a platform for learners to absorb new knowledge, skills, and foster character formation.

Donnelly and Fitzmaurice (2005) propagate that teachers need to move away from their past practice as the usual teacher to a more facilitator role. In view of Communicative Language Teaching (CLT) and student centred-learning, project work facilitates the growth of learners in acquiring the aforementioned skills. Project-based learning not only benefits students in terms of social learning practices of the 21st century communication skills (Bell, 2010), but also promotes meaningful language learning.

The cornerstone of CLT is centred on real-life language use in the classroom which advocates that learners be equipped with tools to generate unrehearsed language (Brown, 2006). In an English language classroom, project-based learning provides learners with ample opportunities to be receptive and perceptive to other members of their group. Receptive skills include listening to others giving their opinions in English, and reading content materials in

English while perceptive skills include speaking and presenting ideas to others as well as writing a report on researched content ensuring the fluency and accuracy of the language. A local study by Nurshuhaida (2010) found that project work boosts self-confidence and promotes frequent use of English. In another study by Chou (2004) in Nurshuhaida (2010), found that socio-affective strategies in language learning are considered an effective approach to accelerate Asian learners' speaking competence. These studies indicate that project-based learning provides learners with a socio-affective environment thus enable them to listen, speak, read and write in English with confidence.

Archer and Davidson (2008) listed communication skills in *Graduate Employability: The Views of Employers* as the highest ranking in the views of employers in London. Similarly, the three key competencies in the Malaysian job market according to the Minister of Higher Education, Malaysia, Y.B Dato Seri Mohamed Khalid Nordin (2009) are (i) self imaging or grooming, (ii) effective communication skills and (iii) English proficiency. He further reports that many graduates fail to prove these competencies during the interview sessions which hinders them from landing a job. Lawton & Franc (2009) suggest that communication and language skills can be delivered in project work as in the case of Multilingual Project at the University of Wesminster. On the basis of observed literature on project-based learning, it can be concluded that second language learners greatly benefit in developing their language skills.

Moss, Donna - Van Duzer, Carol (1998) reported that project-based work lends itself well to appraisal of both employability skills and language skills as it presents second language learners with problems to solve and to fabricate products, all in which requires discussion, effective language skills, and communication. Ahluwalia & Aggarwal (2010) on language learning with internet-based project. The 8 items in Section A required the students to indicate their responses work among Engineering students reported that through project work, learners get involved in real communicative situations. It was observed that learners take more responsibility in deciding for their own learning which leads to increased autonomy. Thus, it is evident that project-based learning acts as a bridge between language use in the classroom and meaningful language use in the real world.

Findings and Discussions

This section presents and discusses the results of the study by examining the students' questionnaire responses. The discussion will highlight the findings in Section A, B and C. Section A presents the students' responses on listening and speaking, Section B focuses on students' responses on reading, while Section C emphasizes students' responses on writing. To facilitate the discussion in this section, the alphabet and number in the parenthesis such as (A1) will be used to refer to the questionnaire items in the relevant sections.

A. Students' Responses on Listening & Speaking Skills

Section A consists of 8 statements that attempt to elicit students' feedback on the impact of PjBL on their listening and speaking skills. Table 1 below shows students' responses on listening and speaking skills in relation to project-based learning.

Table 1: Students' Responses on Listening & Speaking Skills

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. I learned how to listen actively to my group members.	–	–	13.8	69	17.2
2. I learned how to ask and respond appropriately among group members.	–	–	20.7	55.2	24.1
3. I learned how to be assertive when exchanging ideas with group members.	–	–	27.6	48.3	24.1
4. I am confident to give suggestions freely among group members.	–	6.9	24.1	48.3	20.7
5. I learned how to brainstorm and forward ideas appropriately with group members.	–	–	41.4	44.8	13.8
6. I am motivated to speak and forward opinions in identifying problems and solutions.	–	3.4	17.2	65.5	13.8
7. I learned how to judge solutions and identify good views among group members.	–	–	24.1	62.1	13.8
8. I learned how to interrupt appropriately during interactions.	–	3.4	41.4	51.7	3.4

After undergoing the process of PjBL for almost 12 weeks, students were asked to respond as to whether while engaging themselves in process PjBL, it provided immense opportunities for them to develop their listening and speaking skills. Majority of the respondents or 86.2% of the respondents agreed that they learned to listen actively to their group members (A1). When students are able to listen attentively and comprehend what is being presented to them, this would further enhance their ability to make further inquiries and respond appropriately. This is evident when 79.3% of students responded they were able to ask and respond appropriately to any inquiries made by their group members (A2). Nevertheless, 20.7% of the students claimed they were still not able to make and replied to any inquiries made to them.

Apparently, when students are able to listen attentively, make and respond appropriately to inquiries, they display confidence in giving suggestions. 69.0 % of the respondents acknowledged they feel they have the confidence to give suggestions without any apprehension (A4). On the contrary, 24.1% claimed that they were uncertain of having the self-confidence to present their ideas and suggestions to their group members. This means that being confident does

not lend oneself to participate in brainstorming session actively and meaningfully. Only half of the respondents or 58.6% stated that they learned how to brainstorm and forward ideas appropriately with group members after they underwent PjBL, while 41.4% of the students believed they did not acquire the skills to brainstorm and forward ideas (A5). Similarly, negative responses were drawn from the respondents as 27.6 % or one-third of the respondents indicated that they were unsure whether they had developed the attribute of being assertive when exchanging ideas with their group members. Nonetheless, 72.1% of students did acknowledge they become assertive when they learned and practiced to express and exchange their ideas through PjBL (A3).

When students have developed their confidence and assertiveness, these will further enhance the development of other related skills, specifically the motivation to speak and forward opinions in identifying problems and solutions, the abilities to judge solutions and identify good views among group members and appropriate ways of interruptions during interactions. Respondents were requested to give their feedback on the above mentioned skills. About three-quarter of the respondents, 79.3% claimed that PjBL spurs their motivation to speak and forward their opinions in problem-solving tasks when they had to identify causes to a problem as well as to propose possible solutions (A6). In the process of identifying possible solutions to a given problem, students had to weigh and evaluate views and opinions given by other group members. 75.9% of the respondents agreed that they were able to judge and review opinions offered by other group members (A7).

In evaluating and reviewing other group member's opinions, students interrupted each other's oral interaction which enhances their social skills. Only 55.1% of the students indicated that they learned the appropriate way to interrupt during interaction and 41% responded that were not sure (A8). The data analyzed and presented in this section, clearly signifies the contribution of PjBL as a means not only to enhance students' listening and speaking skills, but it also develops students' analytical and critical thinking skills. Students are put in various meaningful and everyday situations faced at the workplace that challenge and provoke their high level thinking skills. Besides that, students also practice how to interrupt aptly during a group discussion when they wanted to put forward their ideas or opinions.

B. Students' Responses on Reading Skills

Section B comprises 8 statements that require students to give their feedback on the effect of PjBL on their reading skills. These responses would reveal insights on the problems that students faced in reading. Table 2 below shows students responses on reading skills in relation to project-based learning.

Table 2: Students' Responses on Reading Skills

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. I have to read a lot about problems at workplace.	–	3.4	44.8	41.4	10.3
2. I can easily focus on the main idea needed for the project	–	10.3	34.5	44.8	10.3

work.					
3. I understand and able to gather information for the project based on the reading materials.	–	–	27.6	58.6	13.8
4. I faced a lot of problems in finding suitable reading materials for the project work.	–	17.2	37.9	37.9	6.10
5. I had difficulty in understanding reading materials regarding project work.	6.9	34.5	44.8	13.8	–
6. I learned how to identify the relevant ideas from reading materials regarding project work.	–	–	20.7	75.9	3.4
7. I could easily read and understand graphs and charts related to project work.	–	–	21.4	71.4	7.1
8. I have improved my reading skills in doing project work.	–	3.4	31.0	55.2	10.3

Students should be exposed to many reading materials for workplace to prepare them for relevant job employment. The above findings show that 51.7% of the students agreed that they had to read a lot about problems at workplace (B1). However, 44.8% were uncertain and 3.4% disagreed. This reflects that students undermine the importance of background reading. Furthermore, the core of project work is to get students to explore real workplace problems. Reading for main idea is equally essential for gathering information where 55.1% of the students claimed that they could easily focus on the main idea needed for the project work (B2). This depicts that less than half of the students are unsure on how to focus on the main idea for project work. In view of this, instructors should be aware of students' problems in order to provide the necessary resources. Easy access of resources and materials will create a conducive atmosphere for the needed reading practices.

Gathering information from reading materials is a required skill in doing project work. 72.4% agreed that they were able to understand and gather information for the project based on the reading materials but 27.6% were uncertain (B3). This denotes that nearly three quarter of the students are sufficiently skilful in collecting information from reading materials and only about a quarter needs assistance in information gathering. In parallel, instructors should encourage students to gather information from various resources such as academic books, journals, and articles besides the internet which students often refer to.

It is interesting to note that 37.9% of the students agreed and simultaneously 37.9% were also uncertain that they faced a lot of problems in finding suitable reading materials. Only 6.9% strongly agreed to this, whereas 17.2% disagreed (B4). Generally, almost three quarter of the respondents faced various problems in searching for appropriate reading materials. This may be due to time constraint or students' lack of skills in selecting relevant materials for workplace

problems. In addition, 41.4% disagreed that they had difficulty in understanding reading materials regarding project work whereas 44.8% were uncertain of this (B5). Apparently this indicates that more than half of the students need scaffolding from the instructor and proper coaching in understanding relevant reading materials which serves as secondary source in carrying out PjBL.

The findings show that 79.4% agreed that they learned how to identify the relevant ideas from the reading materials gathered regarding project work but 20.7% were unsure (B6). This depicts that students may have acquired some reading skills like skimming and scanning for relevant ideas. Besides that, more than three quarter or 78.5% of the students agreed that they could easily read and understand graphs and charts related to project work. Nevertheless, 21.4% were uncertain about this (B7). This implies that students have fewer problems in interpreting graphs and charts, and probably are well exposed to analyzing data based on graphical statistics. Due to students' scientific background, presumably respondents were exposed and trained in analysing and interpreting graphs and charts.

It is found that students' involvement in PjBL has improved their reading skills considerably, as more than half, or 65.5% of the students agreed. However, 31.0% were uncertain if they had improved their reading skills in doing project work (B8). This illustrates that carrying out project work inculcates good reading practices among students and indirectly requires students to engage themselves in the workplace milieu of a reading community. Undeniably, it is obvious that carrying out project work has exposed students in experiencing meaningful reading habits. It appears that students reading skills are adequately sufficient but not fully utilized. PjBL serves as a catalyst towards encouraging and enhancing reading skills among undergraduates.

C. Responses on Students' Writing Skills

Section C consists of 10 items that students need to respond in order to get feedback on effects of PjBL in their writing skill. Table 3 below illustrates students' responses on writing skills in relation to project-based learning.

Table 3: Students' Responses on Writing Skills

	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
1. I learned to write e-mails related to workplace settings.	3.4	—	10.3	48.3	37.9
2. I responded well to e-mails I received related to the project assigned.	—	6.9	17.2	48.3	27.6
3. I become familiar with the writing format and style of workplace e-mails.	—	3.4	31.0	37.9	27.6
4. I learned to design questionnaire for my group project.	—	—	13.8	65.5	20.7
5. I learned how to collect and	—	—	17.2	51.7	31.0

	analyze data.					
6.	I learned how to write reports based on the findings.	–	–	27.6	51.7	20.7
7.	I learned how to draw conclusion from the findings.	–	–	17.2	58.6	24.1
8.	I could rewrite a report based on feedback I received from the instructor.	–	3.4	24.1	51.7	20.7
9.	I faced difficulty in choosing the right words and phrases in writing the executive summary.	–	20.7	24.1	41.4	13.8
10	I learned to organize ideas in preparing and writing the executive summary.	–	–	24.1	51.7	24.1

Writing e-mails related to workplace is a sub-section of the project work evaluation. More than three quarter, or 85% of the respondents agreed to both statements (C1 and C2) that they learned to write e-mails related to workplace settings and to respond well to such e-mails. However, when asked if they were familiar with the writing format and style of workplace e-mails (C3), 31.0% were uncertain compared to 65.5% respondents who agreed. This shows that respondents were familiar with writing and responding to e-mails but in relation to workplace setting, respondents seemed to be dubious. PjBL has exposed students to using e-mail as an effective workplace correspondence.

In order to obtain data for this project, respondents were required to design a questionnaire. A high percentage of 86.2% respondents agreed that they learned how to design a questionnaire (C4). When the questionnaire had been administered, the respondents had to collect and analyze data where 81.7 % agreed that they learned to collect and analyze data in this project (C5). About three quarter or 72.4% of the respondents stated that they learned how to write reports based on the findings (C6). However, 27.6% respondents were uncertain on how to write reports. A higher percentage of 82.7% of the respondents indicated that they learned how to draw conclusion from the findings (C7).

This clearly shows that students have gained meaningful experience in designing the questionnaire, analyzing the data and writing the reports. The draft of the reports that students wrote were checked by the instructor and 23 respondents or 72.4% agreed that they could rewrite a report based on feedback received from the instructor (C8). Nevertheless, there were still about 24.1% of respondents who were uncertain. This shows students perceived positively feedback from teacher to enable them to write a good report for their project.

The final step of the project was writing the executive summary based on the reports that they have produced. Respondents reported facing difficulty in choosing the right words and phrases in writing the executive summary, where 55.2% agreed with this statement (C9). Only 20.7% disagreed and 24.1% were uncertain on whether they faced difficulty of writing the executive summary. However, a higher percentage of 75.8% or 22 respondents agreed with the statement that

they learned to organize ideas in preparing and writing the executive summary (C10). Interestingly, for the uncertain statement the same result of 24.1% was shown similar to the earlier statement. These results show that respondents were able to write the executive summary reasonably well as they had written the report which was checked and discussed with the instructor during the conferencing session.

Conclusion

Findings from this study have shown that PjBL has succeeded in developing students' language and communication skills to some extent in all the four skills namely, listening and speaking, reading and writing.

In listening and speaking skills, students have learned to:

- listen actively to their group members.
- ask and respond appropriately among group members.
- be assertive when exchanging ideas with group members.
- develop their confidence in giving suggestions freely among group members.
- speak and forward opinions in identifying problems and solutions.
- judge solutions and identify good views among group members.

However, students seemed to have problems to interrupt appropriately during interactions and to brainstorm ideas appropriately with group members as indicated in Table 1 where a high percentage of 41.4% of respondents were uncertain to both statements. The anticipated reasons for these problems could be due to lack of background knowledge of workplace problems and lack of social skills to interrupt appropriately.

In reading, students have learned to:

- focus on the main ideas needed for the project work.
- understand and able to gather information for the project based on the reading materials.
- identify the relevant ideas from reading materials regarding project work.
- read and understand graphs and charts related to project work.
- improve reading skills in doing project work.

Nevertheless, students faced problems in identifying materials for project work and also in understanding the content of the reading materials. As shown in Table 2, 44.8% of the respondents have difficulties in identifying materials for project work and understanding the content of the reading materials. The reasons for these could be due to lack of exposure to reading materials related to workplace. Therefore, students are not familiar to the related materials needed for the project.

In terms of writing, students have learned to:

- write and respond well to e-mails related to workplace setting.
- become familiar with the writing format of workplace e-mails.
- design questionnaire and collect data for project work.
- analyze data and draw conclusion from the findings.
- write reports based on the findings.
- rewrite a report based on feedback I received from the instructor.

- organize ideas in preparing and writing the executive summary.

Despite the fact that students are able to cope with written work as mentioned above, the researchers observe that there are certain aspects in writing that students need more guidance from the instructor especially in choosing the right words and phrases in writing the executive summary. With adequate guidance and practice students will write reports effectively as they have the ability to write.

This study clearly shows that project-based learning has considerably enhanced students' language and communication skills through the project work assigned in the Workplace Communication class. The project work which aimed at providing students' opportunity to practice workplace communication has enabled them to learn meaningfully through the process of exploring, interpreting, negotiating, and creating products namely written report, e-mail correspondence and oral presentation. Evidently, project-based learning has assisted students in preparing them with the employability skills which will further enable them to function well in the real workplace settings.

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