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Explorations: Teaching and Learning English in India

**Issue 4: Understanding learners –
exploring and applying theories of learning**

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Explorations: Teaching and Learning English in India

Issue 4: Overview

Understanding learners: exploring and applying theories of learning

All three papers in this issue of *Explorations: Teaching and Learning English in India* investigate the professional practice of understanding learners and in particular choosing approaches which are most relevant to learners and which support effective learning. Through this professional practice, teachers can explore theories of learning and apply them to their contexts and subsequently reflect on how successful these approaches have been.

Papers in this issue investigate a range of activities and techniques the teacher can use in the classroom. **Robert Slattery** investigates how teachers generally teach grammar in high schools, concluding that these are often ineffective and recommending alternative ways of helping learners to achieve greater grammatical competence. **Subhra Sarita Samal** identifies the challenges that face primary school readers and suggests that phonological awareness training leads to the development of more effective reading skills. **Shahila Zafar** and **Zaved Ahmed Khan** recommend the use of a project-based learning approach to provide support for technical writing skills and provide convincing evidence of its effect on motivation and performance.

About the authors

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About the English Language Teaching Research Partnerships (ELTReP) Award programme

India has a long tradition of educational research but the results of this have not always reached the wider world. Through a range of programmes, British Council India places considerable emphasis on encouraging and supporting inquiry. A key strand of that work between 2012 and 2016 has been the English Language Teaching Research Partnerships (ELTReP) Award programme. The programme aimed to facilitate high quality, innovative research to benefit the learning and teaching of English in India and to improve the

access of ELT policy makers, professionals from India and the United Kingdom and the global ELT community to that research. All writers contributing to the eleven issues of *Explorations: Teaching and Learning English in India* were selected and supported in their research by the ELTReP Award programme.

All three papers in this issue have been written by practitioners in the field, whether teachers, lecturers, educational department personnel or other roles that involve day-to-day contact with the teaching and learning of English. The researchers, many of whom will be seeing their work published for the first time, have designed and implemented their studies and present results which in each case are innovative and thought-provoking. Each paper reflects the creativity, detailed awareness of context and practical suggestions of a wide range of writers, from different backgrounds and working in different situations.

We very much hope you enjoy *Explorations: Teaching and Learning English in India* and that you feel the insights the papers provide into a variety of educational environments are applicable to your own context, wherever you may be working.

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Papers 1 and 2 in this issue were edited by Professor Brian Tomlinson in collaboration with the writers themselves. We would like to extend our sincere thanks to Professor Tomlinson. Paper 3 was edited by Andy Keedwell, British Council India.

The opinions expressed in the papers in this issue are those of the individual authors and do not necessarily represent or reflect the views of the British Council.

The teaching of English grammar in Hindi medium high schools in Jharkhand

Robert Slattery

1. Introduction

This study was conducted to find out why students in Hindi medium schools in Jharkhand after ten years learning English cannot write or speak grammatically correct sentences. Based on interviews with teachers, observation of classes, study of relevant literature and the textbooks, as well as tests given to students, the study revealed that the problem seemed to be the methodology of the teachers. The teachers isolated the teaching of grammar from practical use of grammar. They also taught areas of grammar, e.g. types of nouns, types of adjectives that in no way helped the students to write and speak effectively. Secondly, the teachers did not use the teaching of the textbooks to strengthen grammar but tended to make it a vocabulary class. Only if the teacher engages the students in active relevant use of grammar will the students be able to write and speak grammatically acceptable sentences.

2. Background of the research

My personal experience teaching in schools in India for thirty three years and then inspecting schools for ten years is that many teachers are not clear on either the main areas of grammar to be taught or the methodology to teach grammar. The result is that most of the students studying in Hindi medium schools cannot speak or write grammatically acceptable English.

Fortunately or unfortunately, there is obviously a strong belief that competence in English is the way to get good employment. Hence, there has been a proliferation of English medium schools. There is no doubt that English medium schools do give most of the students competence in English and therefore a good start in the race for good employment. But poor parents cannot afford to send their children to English medium schools. Yet their children also deserve to become competent in English. I think such competence is possible. I have noticed that a Hindi medium school up to class 10 has students every year who after class 10 are admitted into an English medium school for class 11, being equal to students of the same English medium school who have been studying in that school from kindergarten (KG).

This study aims at finding out why students, after studying English for seven years in a Hindi medium school, are not competent in writing and speaking grammatically acceptable English. Secondly, it aims to try to find the relevant methodology to teach English grammar so that, if not all, at least a good number of students in Hindi medium schools become competent in English. And for competence, writing and speaking grammatically is crucial.

With regard to choosing class 8 for the research, in our schools in Jharkhand, the education

department sets the annual examination of class 9. Hence in class 9, there is less scope to be flexible in adapting the syllabus. Secondly, though the students coming to class 8 have a basic knowledge of English, their ability to speak and write correctly is minimal. Some have come to the high school from other schools to join at class 7 and often are very weak. By class 8, something more serious can be done and it can be the stepping stone to build on the students' basic knowledge and to move them to a higher level in speaking and writing effectively.

The next question was the choice of schools. The main consideration eventually came to whether the schools chosen would be willing to cooperate, to follow up and to be ready to make changes in their methodology if this would be helpful to achieve the aim of the project. As I had contacts with some schools run by the Hazaribag Jesuits Society and Holy Cross Society, and, as the schools were reasonably close to my office, I chose the following schools to be part of the project: St. Robert's Boys High School, Sindur, Hazaribag, St. Robert's Girls High School, Hazaribag, St. Joseph's High School, Tarwa, Dt. Hazaribag, Masi Marsal High School, Charhi, Dt. Hazaribag. All were Hindi medium Jharkhand Board Schools.

Though these schools were the major schools for the research project, I decided to also get some information from areas where I had projects. There was a project in Khunti district, Jharkhand for ten government high schools so I gave a simple questionnaire to the English teachers there. Also I was visiting government schools in Yadgir district, Karnataka so I gave a questionnaire to twenty two teachers in Kannada medium schools. This was more in the line of a pilot study. However, it was important because it revealed that teachers whether working in a Hindi medium school in Jharkhand or a Kannada medium school in Karnataka had no clear idea of the methodology to teach grammar. This was basically confirmed when I worked with the four focus schools.

3. The topic and the research questions

The topic is: 'Teaching English Grammar in Hindi medium high schools in Jharkhand'
The hypothesis is: Teaching grammar involves far more than teaching 'pure' grammar classes. By 'pure' grammar classes, I mean classes separated from texts in which for example different types of nouns are taught, or a tense is taught and memorised.

The research questions are:

- What is the basic methodology being used by the teachers of English in class 8 in four Hindi medium schools?
- Is this really helping the students to speak and write grammatically correct English? If yes, how?
- If not, what is the alternative?

4. Methodology

4.1. Tests of the students and analysis of the same

A preliminary test asking the students to write a short paragraph on 'Hazaribag' was given to all the students of class 8 in the selected schools to see their standard and discover their main grammatical errors. The main errors made by students coming from an analysis of tests given were use of the article, tense, word order, translating from Hindi literally to English (e.g. 'is' instead of 'has': 'Hazaribag is two temples'), singular/ plural. The fact that students cannot use the article (a, the, an) properly is not surprising as even teachers make this mistake sometimes. Of course this is probably connected with the fact that in Hindi there is normally no article.

Following on from this two more tests were given. In the first test, there were questions testing the use of articles, word order and effective use of tenses. In the second test, again following on the hypothesis that 'pure' grammar teaching is not well connected with the textbook and writing English, the question on tense was substituted by a question asking the students to write five

lines on a subject. These tests to a great extent confirmed for me that ‘pure’ grammar classes are not the answer to teaching the students to speak and write grammatically. In the questions in which the students had to fill in the blanks with the correct tense of the verb or the correct article, the questions were answered quite well by most students and very well by quite a few students. But when the students had to put the correct articles in a paragraph or write a few lines in their own words, the performance of the students in the use of articles or effective use of tenses was very poor. There seemed to be a big gap between the grammar class as such and the lessons the students were studying in their textbooks. In fact in the first test, there was a question on filling in the blanks with the correct tense of the verb. As this question was done quite well, the result was that the average mark of the students for the whole test was satisfactory. In the second test, instead of giving a straight fill in the blanks ‘tense’ question, the students were asked to write about five lines on ‘cats’ or ‘the importance of English’. For this test for all the schools the average total marks were much lower because this question was done very poorly. Moreover, in both tests, there were two questions concerned with the proper use of the articles. The first was a fill in the blanks activity with the correct article from the articles given in brackets. This was done quite well. But for the second question two short paragraphs were given and the students were asked to fill in where an article was missing. The students failed badly in this question (see Appendix 1).

4.2. Meeting with teachers

In the beginning of the project, the teachers met together, and an audio cassette prepared by British Council on ‘Planning our lesson’ was played. All of the teachers were given a DVD of the cassette with 12 audio programmes of 15 minutes each on the teaching of English in vernacular medium schools.

Then a questionnaire was given to them (see Appendix 2) followed by a discussion with the teachers on what they had written. From this meeting and what the teachers wrote in answer to the questionnaire it was clear that:

1. there was no clear consensus on what grammar is and what are the main aspects of grammar though most of the teachers did say that ‘tense’ was one of the key areas of grammar to teach
2. some of the teachers did use a separate grammar book whereas others relied on teaching from their own knowledge and from the textbook
3. some felt the NCERT textbook was useful whereas others felt it was not useful
4. regarding methodology in teaching grammar, again there was no consensus. Whereas some teachers, especially those who depended on a grammar book, said they used the grammar cum translation method, others simply said they taught tenses and tried to get the students to speak
5. regarding difficulties in teaching grammar, the teachers cited the Hindi background of the students and their difficulty in trying to speak.

Again at the official end of the project, there was another meeting with the teachers, though of course during the year the teachers were met individually especially after observing their classes. Always a written report of the class was given to the teacher. In this meeting the following points came up:

- the NCERT class 8 textbook was difficult, especially some lessons, in fact more difficult than the class 10 book! Fortunately during the time of the research, it was agreed not to finish every lesson but to focus on those that were more suitable.
- it was agreed for the next academic session to take only one of the prescribed books, i.e. the supplementary reader. Most of the stories are easier than the lessons in the textbook and the teacher can slowly work through the chapters.
- the teachers felt that one problem they faced was that there was not a clear syllabus, no clear direction on what areas of grammar to be taught from KG to class 8.

- it was good to know that the teachers rarely speak in Hindi in the class. However, often the students spend a great deal of time only listening to the teacher or to students reading turn by turn. Unless they are active learners, speaking and writing, my experience working in many schools shows that they will never acquire the language.
- the result of the second test confirmed the gap between 'pure' grammar classes and the ability of the students to write grammatically acceptable sentences.

4.3. Observation of classes and follow up reports to teachers and heads of schools

There was regular observation of classes in all the sections of class 8 in all the schools. This was followed up by a written report to the teacher and the Head of the concerned school. From the observation of the classes, the following points were noticed and feedback given.

- Sometimes the teacher taught a 'pure' grammar class which in my opinion was irrelevant. The teacher started with adjectives. 'What is an adjective?' and then asked for a definition and gave some examples. Then the teacher took up the topic 'Adverb'. A definition of adverb was given, then the types of adverbs, of time, place, manner, degree, interrogative, frequency. Some definitions of these types were also given. After my report the teacher did not teach such grammar, which was irrelevant to class 8 students.
- Often all the students did in the class was to listen. At least they were listening to English as practically all the teachers used very little Hindi.
- Towards the end of the project, one or two teachers tried to link up the story being studied in the textbook with grammar, but for most of the teachers the story was only a means of improving vocabulary. Even in this, giving the meaning of new words was often not useful. First of all, too many new words were given, both those that were passive (rarely used) and those that were

active (often used). Secondly the students were usually not asked to use the words in sentences.

- One or two of the teachers had no clear lesson plan, especially about the aim of the lesson. Probably their aim, a very vague aim, was to cover a certain portion of the story in the textbook.
- There is no need to finish every chapter in the book. Teachers should decide what chapters would be most useful to teach and then work slowly through these rather than rushing to finish the book

The Heads of schools were given written feedback (see Appendix 3).

4.4. Study of literature

As some of the teachers were using grammar books, I started with a study of some grammar books. Many of the grammar books are based on the old 'Wren and Martin' approach. For example, a chapter on 'Noun' will teach that there are actually seven types of nouns: proper, common, collective, material, abstract, countable, uncountable! And students are asked to memorise the different types, even though if you ask a student to use a particular noun in a sentence, they usually cannot do so. All the books listed in the references were of the same style except Doff (1988), Riddell (2003) and Varghese (2009).

C. Paul Varghese (2009) (Chapter 5) points out the difference between prescriptive grammar and descriptive grammar. Prescriptive grammar or traditional grammar is based on an historical model of what rules should govern the proper use of language whereas descriptive grammar determines right use of language by the way that language is used now. This is a very important point and is connected with spoken English, Some rules are of course of some importance but the methodology of continuous repetition of rules without their use in relevant conversation has often been found to be of little use. I also found especially useful (in Rama Meganathan's article) the following in 5.4 Teaching of Grammar:

‘What is worrying (in the teaching of grammar) is the idea of teaching of grammar in an isolated manner through simple sentence examples and telling the rules followed by an example.’

(www.teachingenglish.org.uk/blogs.ramameganathan/English-grammar-education-rural-schools-india-situation)

4.5. Study of the textbook

There are two textbooks, ‘*It so happened*’ and ‘*Honeydew*’ prescribed by the Jharkhand education department for class 8. The textbook ‘*Honeydew*’ does give good instructions at the beginning of the book:

1. *Words and phrases not closely related to objects and action remain empty lifeless to young learners. Language comes alive when presented in meaning-making contexts.*
2. *Learners become familiar with the system through continuous exposure to the language in meaning-focused situations.*
3. *Encourage learners to work in pairs and small groups and let them go beyond the textbook by providing a variety of language inputs for spontaneous and natural use of language.*
4. *Build on the exercises given in the textbook and design more tasks/activities in keeping with learners’ interests, needs and surroundings. Employ free-response exercises (with more than one possible response).*

These instructions focusing on meaningful use of grammatical structures are very important but unfortunately are normally not followed.

5. Findings

The following findings are based on feedback from the teachers, on observation of their classes, on tests taken, on a study of the textbooks, study of relevant literature and reflection on my thirty three years of teaching and ten years inspecting Hindi medium schools.

- Following both textbooks prescribed by the Jharkhand Education Department and

finishing all the chapters in these two books is detrimental to the learning of English and therefore to learning effective grammar. One book is enough.

- The textbook to a great extent is being used to increase the vocabulary of the students but not helping them write and speak English effectively.
- There is need of a syllabus in the whole school on what areas of grammar should be taught in every class, not only in class 8.
- Teaching areas of grammar and even testing them by simple grammar tests e.g. fill in the proper tenses, fill in the correct article, does not mean that the students will correctly use tenses and articles in writing or speaking English (see Appendix 1).
- During an English class quite often the students most of the time are listening to English spoken by the teacher or reading the book by students. It would be far more profitable for the students to spend more time in speaking in pairs and small groups and in writing. Research has shown that students learn the least by merely listening.
- Though the clientele of the schools was different, co-ed Dalits in Tarwa, co-ed Santhals in Charhi, all boys mainly from backward class groups in Robert’s Boys, all girls mainly backward class groups in Robert’s Girls, there was not a vast difference in the marks of the tests or the teaching method.

6. Final reflections

Let us look at the research questions and the answers found by myself and the teachers involved in this project.

6.1. What is the basic methodology being used by the teachers of English in class 8 in four Hindi medium schools?

The teachers, unlike many teachers I have seen teaching English, used very little Hindi in their classes. No doubt this was possible because the students were in schools where, in earlier classes, English was used to some extent. Secondly, all the

teachers were competent in speaking in English. Thirdly, despite the fact that many researchers stress multilingualism with quite a lot of the use of the mother tongue, my belief at this stage, i.e. class 8, has been that the students to learn English must listen to as much English as possible in class. So I have encouraged this approach.

The basic belief of the teachers was that grammar has to be taught separately from the teaching of the textbook. In fact when I first told the teachers about the project and then informed them that I would be coming to observe their class, they did not teach the textbook but 'pure' grammar, for example, the different types of nouns, adjectives, thinking that there was no other way to teach grammar! Later on, I insisted that they teach the textbook. Teaching grammar in an isolated fashion separated from the teaching of the lessons in the textbook is not the answer to teaching grammar as Meganathan points out. This was brought out strongly in a comparison between the results of Test 1 and Test 2. Test 1 among other questions had a straight grammar question asking the students to fill in the correct tense of the word in the sentence. They did it quite well. In Test 2, in place of this question, I asked the students to write five lines on a topic. The result was bad. Students who could fill in the correct tense in the blank space in Test 1 could not use the tense and simple grammatical constructions when asked to write on their own five lines.

There were exceptions but at the beginning of the project, the textbook was used to increase the vocabulary of the students rather than at the same time helping them to speak and write English effectively. Page after page was filled with words and meanings but, when asked, the students could not use these words to produce a sentence.

The basic methodology was that the teacher talks, explains and the students listen. Because the teachers were speaking in English and explaining well and the students were listening and obviously understanding, there was surely some benefit from the class but there was little time for the students to speak and write.

At the beginning of the project, teachers were expected to teach all the lessons in the two textbooks. After some time, and discussion with the Heads, and to the great relief of the teachers, it was agreed that not all the lessons will be taught.

6.2 Is this really helping the students to speak and write grammatically acceptable English?

- The teachers using English practically all the time was helpful in the sense that the students' confidence in being able to follow correct English was built up. It was clear that they were following what was said.
- The fact that the teachers usually isolated teaching grammar from teaching the textbook was not helpful. This showed from the tests taken. Only towards the end of the project did the teachers try to teach grammar from the textbook.
- The fact that the teachers gave little time for the students to speak in class in pairs or groups, often went through a class with very little writing of sentences, and a great deal of the time was spent in listening was not helpful.
- The fact that in the beginning, the teachers were expected to finish all the lessons in the textbook was not helpful. This was corrected towards the middle of the project.

6.3. If not, what is the alternative?

1. The alternative is to experiment by moving from the isolated grammar teaching approach to an integrated approach. The lessons in the textbook will be the springboard for teaching grammar. This will be done both by pointing out in the lesson grammatical structures and word order, and also by getting the students to use these structures in speaking and writing sentences.
2. Because the textbook '*Honeydew*' is difficult, only the supplementary reader: 'It so happened' will be used in the class. For this it will be necessary to work out what

exercises and questions can be part of the teaching of each lesson.

3. A syllabus will be drawn up from class 1 to class 8 on grammar areas to be covered. With a clear idea of what should be already known and what still needs to be known or revised, the teacher will be able to teach grammar more efficiently.
4. Much more stress will be put on speaking, and therefore far more time will be spent in the class in which the students speak in pairs or groups. The listening speaking writing ratio will be changed more in favour of speaking and writing.
5. More stress will be on learning to write sentences rather than only words.

7. Challenges, ethical questions and my own learning as a researcher

As I knew the teachers personally and they were ready to take part in the project, there was complete cooperation. My main challenge was to beware of deciding beforehand the answer to my questions. I suppose that could also be termed an ethical question. As a researcher, I learnt that the participants in the research, especially the teachers, and their knowledge and reflections, were the key to a successful outcome of the research. When the schools move from an isolated grammar teaching approach to an integrated approach, I will be able to see if this is the answer to teaching grammar to students who have no home English background.

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Appendix 1

1.1 English Test September 2014

1. Fill in the blanks with the correct form of the articles:

1. This is owl. (a, an)
2. Mr. Sinha is doctor. (a, an)
3. There is cat. (a, an)
4. It is ass. (a, an)
5. You are good player of hockey. (a, an)
6. Look at moon. (a, an, the)
7. earth is round. (a, an, the)
8. India iscountry. (a, an, the)
9. She came toschool. (a, an, the)
10.sky is blue. (a, an, the)

2. Complete the passage by filling in an article where necessary

The grapes are sour

Once fox was hungry. He went here and there in search of food. By chance he reached vineyard. There he saw some bunches of ripe grapes. They were hanging on vine. He was very happy to see ripe grapes. He wanted to eat grapes to his fill. He jumped up to get grapes. But he could not reach them. They were very high. He jumped again and again but in vain. He failed to reach them. Soon he was tired. He said to himself, 'It is good for me that I could not reach grapes. They were not sweet. They are sour. I should not eat them.' Then he went along way.

3. Fill in the blanks with correct forms of verbs

1. She cuts her finger when she vegetables. (cuts, will cut, was cutting)
2. She burned the rice because she the TV (watched, will watch, was watching)
3. He was sick and to hospital for treatment. (go, went, gone)
4. The kangaroos in Australia. (live, will live, was living)
5. Gold a very valuable metal. (is, are, were)
6. When you come to the school? (do, did, done)
7. How many daysthere in a week? (is, are, were)
8. Birds(fly, flies, flown)
9. Ia cow. (have, has)
10. Ram(is, has, have) a boy.

4. Rearrange the jumbled words to make a proper sentence:

1. Water the suck the ground roots from.
2. Floods prevent trees.
3. Environment trees the purify.
4. Men breathe oxygen and animals in.
5. Poem poets trees compose on.

1.2 September 2014 Test Result

School	Total Average Marks (out of 40)
St. Joseph's Tarwa	16.28
Masi Marsal Charhi 8A	17.30
Masi Marsal Charhi 8B	17.98
St. Robert's Boys 8A	16.75
St. Robert's Boys 8B	17.88
St. Robert's Girls 8A	18.64
St. Robert's Girls 8B	18.10
St. Robert's Girls 8C	18.00

1.3 English Test January 2015

1. Fill in the blanks with the correct form of the article (determiner)

- a). moon is bright. (a, an, the)
- b) Mr. Lakra is engineer. (the, an, a)
- c) I own.....goats. (a,an,the)
- d) You are good singer. (a,an,the)
- e)..... universe is vast. (a, an, the)
- f) Where arebooks? (a,an,the)
- g) Do you like..... English class? (a,an,the)
- h) He went to school at nine o'clock (a,an,the)
- i) Would you like to study in university?(a,an,the)
- j) She is best student in the class. (a,an,the)

2. Complete the passage by filling in an article where necessary:

There was king. One day he was going for walk with his ministers. On way, he saw old man. He was planting small mango trees. It was hot day. The old man looked very tired. The king came close to him and said: 'Good old man, why are you planting these little trees? You will never eat fruits.'

'You are right,' said the old man 'I shall never eat fruit of trees. But my children and grandchildren will eat fruit of trees.' The king was very pleased with his answer and gave the old man gold coin.

3. Rearrange the words to make a proper sentence

- You school going when to are?
- Widespread cold common is world's the illness most.
- The Eskimos cold from suffer not do.
- Like ice cream I.
- Friend best my is Ranchi in.

4. Write about five lines on the topic 'Cats' OR write about five lines on the topic 'The Importance of English'.

1.4 January 2015 Test Result

School / Class	Avg. marks in Ques.1	Avg. marks in Ques.2	Avg. marks in Ques.3	Avg. marks in Ques.4	Average Total
St. Joseph, Tarwa	4.7	0.02	3.23	2.04	10.0
Masi Marsal, Charhi 8A	6.3	0.34	4.1	3.3	14.02
Masi Marsal, Charhi 8B	6.1	0.3	4.0	3.09	13.4
Robert's Boys 8A	5.4	0.4	3.2	1.27	10.2
Robert's Boys 8B	6.5	0.5	4.1	1.51	12.51
Robert's Girls 8A	5.03	0.7	5.4	3.98	11.75
Robert's Girls 8B	5.7	0.5	3.3	2.31	11.49
Robert's Girls 8C	5.5	0.3	5.0	3.76	13.46

Appendix 2: Questionnaire given to teachers

1. What is grammar?
2. What are the important areas of grammar?
3. Are the textbooks helpful? How?
4. Do you use a separate grammar book? If so which one?
5. What methodology do you use to teach grammar?
6. What is the main difficulty in teaching grammar?

Appendix 3: Feedback to Heads of Schools

Dear friends,

Many thanks for agreeing to be part of this small research project to see how the teaching of English grammar in class 8 can be improved. So far I have been allowed to visit and observe the classes. I have had meetings with the teachers and got written suggestions. I have given tests to the students again to discover how well they know grammar. Because of all these observations, tests and conversations, I find the following points.

There was no clear consensus among the teachers on how to teach grammar. There was no agreement on the use of Hindi in the English class. In two schools, there was little use of Hindi and maximum use of English. In two schools, there was much more use of Hindi than English.

Especially with regard to grammatical structures, there was little reference to the textbook when going through a lesson/story in the textbook. To a certain extent, learning new words was the only connection with the text being taught.

Going through the written tests given to the students of the four schools, it was found that the main grammar mistakes made were: use of articles, tense, singular/plural, word order. Also some mistakes seem to have come from translating directly from Hindi to English e.g. 'The school are many classrooms' instead of: 'The school has many classrooms'.

On the basis of what has been done so far, I propose the following measures as part of the research to see if these will improve the teaching of grammar:

Much more use of English by all the students in every class by pair work/group work. Make sure that all instructions are given in English.

More flexibility in the use of the textbook. As this is part of a research project and as there is no academic council final exam in class 8, there is no need to finish all the chapters in the textbook. Chapters should be chosen that are according to the standard of the students. Moreover in every lesson of the textbook some grammatical structure should be noted and practised.

Regarding common mistakes, it may be best to concentrate on the main tenses: simple present, present continuous, simple past, past continuous, simple future.

I wish to give another short test concerned with tense, article and word order.

Many thanks
Robert Slattery, 13.09.2014.

Phonological awareness training for learning to read in early ESL contexts: a study of young learners in Odisha

Subhra Sarita Samal

1. Introduction

This study investigated the reasons behind Odia medium school learners' reading problems and evaluated the effectiveness of phonological awareness (PA) training in the improvement of these learners' reading skills. Data from classroom observations, textbook evaluation, interviews with teachers, and a test on English word reading in two Odia medium schools showed that the target learners lack the minimum skills required for reading in English. The materials and methodology for teaching reading do not focus on developing these learners' PA that may help them develop their reading skills. On the basis of these results, PA training with a sample group of 20 learners was carried out for a period of five months. Findings showed a significant improvement in all the skill categories trained. Greatest gains were realised in letter identification, identification of final sounds and phoneme deletion skills. It was predicted that this may have been a result of explicit teaching of phonemic awareness skills that the learners had not received before. Early interventions on PA may help these learners develop their skills in reading. A future study covering all aspects of PA in the context of Odia medium schools was suggested to improve these learners' reading skills.

Learning to read is critical to a learner's success

in school and later life. Reading is important for learners because it is the key to educational success. Studies (NRP, 2000; NAEYC, 2009) demonstrate that reading comprehension is heavily dependent upon some basic tools of which phonological awareness (subsequently PA) plays a critical role in the learner's reading success. PA is an understanding of the structure of the spoken language, i.e. language is made up of words, syllables, rhymes and sounds (phonemes) (Adams, Foorman, Lundberg and Beeler, 1998). It is argued that young children's performance on PA is a powerful predictor of their future reading success and training in these skills in young children has a positive impact on later reading achievement (Tarun and Gul, 2008). Despite attempts to bring about change, the learners of the Odia medium schools still lack the ability to read English fluently. A large number of learners in the Odia medium schools are considered to be slow learners because they face many difficulties while reading in English. The problem has become so deeply rooted that many of them cannot even read a simple sentence and their own names in English. As learners' success in school and later life is highly correlated with their ability to read and as the target learners are introduced to reading in English at elementary school, it was hypothesised that investigating the reasons behind the reading problems of these apparently slow learners might

help them overcome their difficulties in reading. Since PA skill is considered to be one of the strongest predictors of future reading success (Lyon and Moore, 2003), it was predicted that providing PA training at an early stage might assist in developing the reading ability of young learners that would be further helpful for them at high school. Therefore, this study aimed at preparing materials for PA training and evaluating the results of such an intervention at the introductory level of ESL. Because of the limitations of time it was possible to carry out the training on only one aspect of PA i.e. phonemic awareness. The study sought to find answers to the following questions:

1. How is reading being taught at the introductory level of ESL in the Odia medium schools of Odisha?
2. Can PA training (evinced through phonemic awareness) help these learners to read with greater fluency?

1.1. Context

The study was carried out in three Odia medium schools situated in the Binjharapur area of the Jajpur district of Odisha, India. One of the three schools is the Binjharapur primary school, which is situated in the Binjharapur block. The second school is the Mainda U.G.M.E. School and the third school is Binjharapur High school. Both these schools are situated near the Binjharapur primary school. All the three schools are government aided schools, of which Binjharapur primary school consists of five classes from class 1 to class 5. The strength of the school is approximately more than 400. There are six teachers including the headmaster for these five classes. There is also an Anganwadi preschool inside the school that runs in one classroom. The second school, i.e. Mainda U.G.M.E. School consists of seven classes from class 1 to class 7. More than 450 learners come to study here. There are five teachers including the headmaster for these seven classes. Like Binjharapur primary school, there is also an Anganwadi preschool in the Mainda U.G.M.E. School that runs in one classroom. The third school, i.e. Binjharapur High school consists of three classes from class 8 to class 10 having more than 450 learners. The learners in these three

schools read English as a second language and are tested in a test out of 100 marks. The method of instruction in all subjects including English is the mother tongue i.e. Odia.

1.2. Review of literature

Learning to read has paramount importance in a child's success in school and later life. With the focus on comprehension, attention seems to have been diverted from some of the basic tools that are the prerequisite of comprehension, tools that are necessary to be able to read. PA is one such tool found to be the best predictor for the learners' future reading success (Adams, 1990). PA refers to one's ability to attend explicitly to the sound structure in words. It is the understanding that language is made up of words, words are made up of syllables, and syllables are made up of individual sounds/phonemes. This awareness is necessary for young children to acquire in order to become successful readers.

The four specific targeted behaviours in PA are word awareness, rhyme awareness, syllable awareness, and phonemic awareness. Out of these, phonemic awareness is considered to be the strongest predictor of future reading success (IRA and NAEYC, 1998). It is the awareness that the speech stream consists of a sequence of phonemes, the smallest units of sounds that make a difference in communication (Jannuzi, 1998: 13). It is the ability to identify, isolate, blend and segment the sounds that are representative of letters in a certain language. This skill can be achieved by different classroom activities such as matching, blending, segmenting, manipulating, or isolating beginning or ending sounds (Lane, 2007). Phonemic awareness is important because it improves children's word reading, reading comprehension and spelling. Early phonemic awareness instruction develops the learners' understanding of the alphabetic principle and helps them make use of the relationship that exists between letters and sounds (Yopp and Yopp, 2000). It enables the learners to systematically process print through sequential decoding and rapidly recognise common groups of letters and whole words allowing them to focus the attention on actively constructing

meaning from print (Ehri, 1987). Phonemic awareness instruction combined with other forms of instruction (e.g. whole word/‘look say’ and Language Experience) creates a comprehensive reading programme (NRP, 2000).

Studies demonstrate that phonemic awareness is highly predictive of success in learning to read, particularly in predicting success in learning to decode (Lomax and McGee, 1987). Teaching phonemic awareness to young learners helps them develop their language skills better than those who do not receive such education (Tamimi and Rabab’ah, 2007). In a longitudinal study, Juel (1988) found that learners who were weak in listening comprehension and phonemic awareness skills at the beginning of first grade exhibited lower scores on year end proficiency tests in spelling, word recognition, writing, and reading comprehension than children who exhibited strong scores on the same measures. In a follow up study Juel, Griffith, and Gough (1986) found that the poor readers in the fourth grade entered the first grade with few or no phonemic awareness skills. At the end of the fourth grade, poor readers still had not achieved the level of decoding skills that the good readers had achieved at the beginning of the second grade. It was concluded that children who enter the first grade with little phonemic awareness are less likely to become proficient readers by the fourth grade.

2. Research methods

2.1. Design

Following Grotjahn’s (1987: 59-60) typology this study used a mixed paradigm. The study was carried out in a natural setting (i.e. Odia medium primary schools in Odisha). Three different types of techniques were used to triangulate the data, pre- and post- tests, interviews with teachers, and research diaries to record the classroom observations. In addition to these instruments, lesson plans and different activities on PA were developed to carry out the tests and provide training to the research sample in order to investigate how far this would help the target learners read words in English. Evaluation

of this training was carried out through tests which were analysed statistically. This study thus was exploratory in design where data was both qualitative and quantitative and the analysis both statistical and interpretative.

2.2. Procedure

In order to seek answers to the first research question, first, two introductory Odia classes in an Anganwadi preschool were observed to see how the learners of the Odia medium schools are introduced to reading in their first language. Secondly, the study evaluated the English textbook of class 3 Odia medium primary learners to identify how far activities on PA have been incorporated in it (see Appendix 1). It then recorded the observation of four introductory English classes of class 3 learners in an Odia medium primary school. In order to generalise beyond that particular school one more observation of English class of class 3 learners was carried out in another Odia medium primary school. The records of classroom observations were kept by taking notes during the observations and video records. The research diaries were written later based on these classroom records. Then the study conducted two tests on English word reading of class 4 learners of the two schools observed earlier to find how far these learners are able to read in English. The test consisted of two activities using a set of ten words from the learners’ previous year (class 3) English textbook and another set of ten non-words with corresponding sounds (see Appendix 2). The learners had to read aloud the words and non-words. Their readings were recorded and later transcribed. Following this, the informal interviews were conducted during the observation of English and Odia classes as well as during the testing (see Appendix 3).

In order to get answers to the second research question, the study attempted to prepare materials on PA to train a sample group of 20 learners and evaluate the results. Materials for pre- and post- tests and PA training were prepared and lesson plans were written (see Appendix 4). Based on Yopp (1992) seven types of phonemic awareness activities were prepared to provide

training to the sample learners (Appendix 5). These activities aimed at enhancing the learners' ability to read English words through practice on letter-sound relationship. The pre-tests were carried out before the PA training began. In order to see the reading behaviour and the progress of the sample learners, the classes were video recorded and transcribed. Research diaries were also maintained. In order to assess the effectiveness of the phonemic awareness interventions, the participants were given a test identical with the pre-test at the end of the training. The next section explains the findings of the study based on data collected from the sources mentioned above.

3. Findings

The findings of the study emerged from the following sources: classroom observations, the English textbook of class 3 Odia medium learners, semi- structured interview protocols, and test scores. The following are the major findings of the study.

3.1. Observation of Odia classes

Data from the observations of the introductory Odia classes in the Anganwadi preschool showed that the target learners come for preschool learning aged 1 to 6. At this stage these learners learn everything in Odia. They are not introduced to books, pens or pencils. However, they learn to write on slates. Although these learners are introduced to the letters of the Odia alphabet and several Odia words through stories, pictures, and songs, reading is not the key focus here. These learners are only provided with school experience and the knowledge about the world around them that is necessary before entering school. Learning to read in the first language takes a long period of time for these learners. The late introduction of reading in the first language and the lack of reading related experience appeared to be one of the major factors behind the target learners' problems in learning to read a second language. It was predicted that these learners' lack of exposure to reading in their first language might be making learning to read a long-term process for them.

3.2. Observation of English classes

Data from the observations of the English classes showed that the Odia medium learners are introduced to reading in English in class 3. At this stage, the learners are introduced to the letters of the English alphabet through listening and repeated practice, sometimes with the help of different teaching and learning materials (TLMs). Apart from learning the letters of the English alphabet, these learners are also introduced to several three to four letter words through pictures. The focus of teaching words is to familiarise the learners with the letters of the English alphabet and get the meanings of these words through the use of different examples in Odia. This is evident from the following transcript.

T- What picture is this?

Ls- *pimpudi*

T- What do we say *pimpudi* in English?

It was noticed that less emphasis was given to the sounds of the letters learnt that may help these learners read the target words correctly. A lack of emphasis was also noticed in the pronunciation of the words learnt (e.g. letter 'a' was introduced as /a:/ in the word 'ant'). The entire focus of teaching words was on getting the meanings through repetition of the words and explanation of such words in the mother tongue. Not a single activity focused on providing instruction on the sound system that is considered to be an important part of teaching reading.

Although the learners are introduced to rhymes, the focus was not to teach sound awareness which is the aim of teaching rhyme. The teaching of rhyme focused only on engaging the learners in different physical activities to make them memorise the entire rhyme by repeating it mechanically after the teacher. For example,

T- Hop a little (hopped)

Ls- Hop a little (hopped)

Although taking part in various actions, (e.g. hopping, jumping) and repeating the lines helped some of the learners remember the lines within a very short period of time, it did not help them

learn the similarities of sounds in words which is the main focus of teaching rhyme. This was evident from the fact that the learners only said mechanically what their teacher was saying, they were not aware of what they were saying or doing. They were not taught what parts of the words were similar and what rhyme words are, rather they were explained the words in the mother tongue.

3.3. Evaluation of the class 3 English textbook

The evaluation of the English textbook was conducted by analysing the organisation of the book and examining the activities based on the approaches mentioned in section 1.2. Data showed that in class 3 the target learners are introduced to the letters of the English alphabet in their capital and lower case forms. Several interesting pictures are used to draw the learners' attention towards the text. In the majority of the lessons a top down approach has been followed. That means the learners are first introduced to simple words with related pictures. From these words they learn particular letters through repeated practice. Different rhymes are also introduced to make the learners more familiar with these words. From the list provided at the end of the English textbook it was found that a total number of 321 words are provided, which are recycled throughout the book in activities on letters with pictures, words, sentences, rhymes, and short texts. Only two activities are provided to make the learners familiar with the sounds of the letters. The textbook seems to follow a whole word approach. It was concluded that the textbook lacks an adequate number of PA activities that may help the learners learn the sound structure of English and develop their reading skills.

3.4. Testing the learners of class 4

The test on English word reading of class 4 learners in two Odia medium primary schools was conducted to find out how far the target learners are able to read simple words in English. The test consisted of two activities using a set of ten three to four letter words from the class 3 English textbook and another set of ten non-words with

corresponding sounds. It was found that most of the learners tried to read out each word letter by letter and were able to read out the first three words 'ten', 'bee', and 'pat' but a majority of them failed to read the non-word pairs having similar sounds with these three words, for example, 'wen-nen'. Although the learners were able to read the consonant sounds, they failed to read the vowel sounds in words, for example, most of the learners pronounced the word 'home' as /hɒm/. Although some of the learners knew several vowel sounds, they found it difficult to recognise the letters that make those sounds, for example, the word 'pat' was read as /pɒt/. Most of the learners in both the schools failed to read the consonant letter 'y', for example, the non-word 'yat' was read as /wet/. It was predicted that since the learners are familiar with some of the sounds (e.g. /b/and /w/) in their mother tongue, they tried to translate this knowledge while reading the letters of the words and non-words in English. However, they failed to relate the exact sounds with the corresponding letters. It was felt that the target learners lacked the ability to read the simplest words in English.

3.5. Semi interview protocols

All the interview questions were asked to the teachers after the observation of classes. Due to some practical reasons the interviews could not be scheduled earlier. Therefore, interviews of the teachers were carried out immediately after the observation of classes. The answers of the teachers were recorded immediately and later transcribed. Since all the questions were asked after the observations of classes, the interview became semi- structured.

Data from the interview with the Anganwadi teacher showed that a majority of learners coming to the Odia medium schools belong to low socio-economic groups, where the parents are neither conscious of the value of education nor aware of the importance of literacy. Although the government of Odisha has been trying to create awareness in society to increase the literacy rate, it seems as if it has not yet achieved this goal. There are several reasons behind this problem which is clear from the teacher saying:

‘We regularly go into the village to call these children to participate in school activities, but the results you can see here. The government is providing every kind of help and organising programs to raise awareness among the mothers to send their children to schools. But majority of the mothers of these children go to other villages in search of work in the morning to support their family. They leave their children at home. Therefore, they never come to school.’

3.6. Phonemic awareness intervention

The phonemic awareness training consisted of seven types of phonemic awareness activities: letter identification, grapheme phoneme knowledge, identification of initial, medial and final sounds, phoneme blending, phoneme segmentation, phoneme deletion, and phoneme manipulation. Several three to four letter words were introduced through stories, pictures and examples. The sounds of the letters of those words were practised through repetition, elicitation, claps, and examples of words having similar sounds. These words were read aloud in each activity by giving stress to the individual sounds. Some of the major findings from the training are presented below.

The 26 letters of the English alphabet and their corresponding sounds were introduced to the sample learners through stories, picture and letter cards, word cards and examples of animals, fruits, and objects. After making the learners remember words through repetition, the similarities between the beginning sounds of those words were explained. It was found that initially the learners failed to recognise and pronounce the vowel sound /æ/ in words. For example, they pronounced the /æ/ sound in the word ‘apple’ as /e/. However, this was corrected through repetition of the sound /æ/ and the words several times. Then the learners were introduced to the sounds of the orthographic representations to find the interrelationship between the letters and their sounds (e.g. ‘This is letter /e/. What letter is this?’) The difference between the letter names and their corresponding sounds was also explained (e.g. ‘This is letter /e/.

It makes the sound /æ/ in the word apple’). It was found that the use of stories, picture and letter cards, and repetition of the letter names and their corresponding sounds individually as well as in words helped these learners remember the letter names and their sounds.

The skill of phoneme identification was taught by making the learners repeat the individual sounds of the words several times by giving a clap to each sound and asking them to count and say the number of claps they had given (e.g. ‘/h/ (clap)! /e/ (clap)! /n/ (clap)! How many claps we gave for hen?’). It was noticed that the learners’ repetition of the words and the individual sounds of those words by giving claps to each sound, then counting and saying the number of claps they gave helped them understand that they had given the claps to the sounds of a particular word and to remember the number of sounds in the words. The activities on repetition of sounds by pointing at the corresponding letter on the whiteboard helped the learners understand what letter makes what sound in a particular word.

The skill of phoneme blending was taught by making the learners read words and repeat their constituent sounds several times by giving a clap to each sound. The aim was to enable the learners to remember the individual sounds of these words that would be further helpful for them to blend those sounds to say the whole word (e.g. ‘/d/ (Clap).../ɔː/(Clap).../r/(Clap)! What word we got!’). It was noticed that introducing the words to the learners through pictures, writing them on the blackboard, and making the learners repeat the words helped these learners remember the words. The learners’ repetition of the individual sounds of each word by giving a clap to each sound helped them know that a word can be divided into sounds. This further helped them remember the sounds and blend those sounds to say the whole words when asked to do so in another situation. This is evident from the fact that after the completion of the phoneme blending task the learners were able to identify those words from the list of words from the blackboard.

The skill of phoneme segmentation was taught by reading aloud words to the learners and

asking the learners to say the individual sounds they heard in those words. Findings showed that initially it was difficult for the learners to recognise the vowel sounds in words. For example,

T- Say the sounds you hear in the word /pen/
L1- /p/...umm... /n/

Although the learners could manipulate the initial and final consonant sounds, it was difficult for them to manipulate the middle vowel sounds. However, this was corrected through repeated practice and claps. The phoneme deletion skill was taught by auditory segmenting words into onsets and rimes and making the learners repeat the word parts several times. The initial sound of each word was deleted and the learners were asked to say the remaining part they heard (e.g. 'If I take away the /b/ from /bæt/ what will remain?'). It was found that it was difficult for the learners to differentiate between the vowel sounds /e/ and /æ/, for example, the /æt/ in the word 'bat' was recognised as /et/.

Phoneme manipulation activities focused on helping the learners form new words by changing the initial sounds. Three beginning sounds for

each word were provided for practice (e.g. 'If we take away the /m/ from /mæt/, what will remain? If we put a /b/ in place of /m/ what new word will we get?'). It was found that the use of visual images of the words on the blackboard, the learners' repetitions of the sounds by erasing the corresponding letters, the teacher's explanation of the difference between the orthographic representation of a letter and the sound it produces in a particular word (e.g. letter 'r' is pronounced as /ar/ and it makes /r/ sound in 'rat') helped the learners manipulate the sounds in new words and make a new word by adding a new sound at the beginning.

3.7. Test scores

In order to identify the target learners' levels of phonemic awareness before training, a pre-test was administered that consisted of nine phonemic awareness tasks. The post-test (identical with the pre-test) was administered to assess the effects of the phonemic awareness interventions.

Table 1 shows the number and percentage of correct responses of the learners in each of the nine items on the tests.

Table 1: Results: Phonemic awareness pre- and post-training tests

Results of pre- and post-training tests					
Sl. No.	Item	Test results			
		Pre-training		Post-training	
		No. of correct responses	% of correct responses	No. of correct responses	% of correct responses
1	Letter identification	11	55	20	100
2	Grapheme phoneme knowledge	4	20	18	90
3	Phoneme identification (initial sounds)	5	25	18	90
4	Phoneme identification (medial sounds)	4	20	18	90
5	Phoneme identification (final sounds)	5	25	20	100
6	Phoneme blending	2	10	18	90
7	Phoneme segmentation	0	0	17	85
8	Phoneme deletion	1	5	20	100
9	Phoneme manipulation	4	20	17	85

The letter identification and grapheme-phoneme tasks required the learners to identify the orthographic representations of the letters of the English alphabet and their sounds in letter cards. The phoneme identification task assessed the learners’ ability to identify the beginning, medial and final sounds of three letter words (e.g. ‘Say the word “cat”! Say the sound you hear at the beginning “cat”!’). In a phoneme blending task the learners were asked to blend sounds to say the whole word. The phoneme segmentation task assessed the learners’ ability to segment a spoken word into its constituent sounds. An example of phoneme segmentation could be reading aloud the word ‘pen’ and asking the learners to say the sounds they hear in the word. The phoneme deletion task required the learners say the remaining part of a word by deleting the beginning sound (e.g. ‘If I take away the /p/ from /pen/ what will remain?’). The learners’ ability to read words was assessed by asking the learners to form new words and read them aloud by changing the initial sounds. For example, given the letter cards of c, a, and t and being read aloud the sounds of these letters, the learners had to arrange those letter cards according to the sounds they heard to form the word ‘cat’. Again replacing the letter ‘c’ with the letter ‘b’ the learners had to read the new word (bat) they formed.

A comparison of the pre- and post-training test (Figure 1) results showed a significant improvement in each of the skill categories tested. The greatest gains were realised in the letter identification, identification of final sounds, and phoneme deletion tasks. A significant improvement was also found in the phoneme manipulation task that aimed at assessing the learners’ ability to read words by manipulating the individual sounds.

It was felt that this change in the number of correct responses might be due to the gradual development in identifying the individual sounds in spoken words through repeated practice. It was predicted that this may have been a result of explicit teaching of the phonemic awareness skills that the learners had not received before.

4. Conclusions

The aim of this study was to investigate the reasons behind the Odia medium school learners’ problems in reading English and evaluate the effectiveness of PA training on these learners’ reading development. After reviewing the literature on the topic of PA and analysing the results of the study, it appears that interventions that focus on PA can be beneficial to the Odia medium school learners with low levels of reading

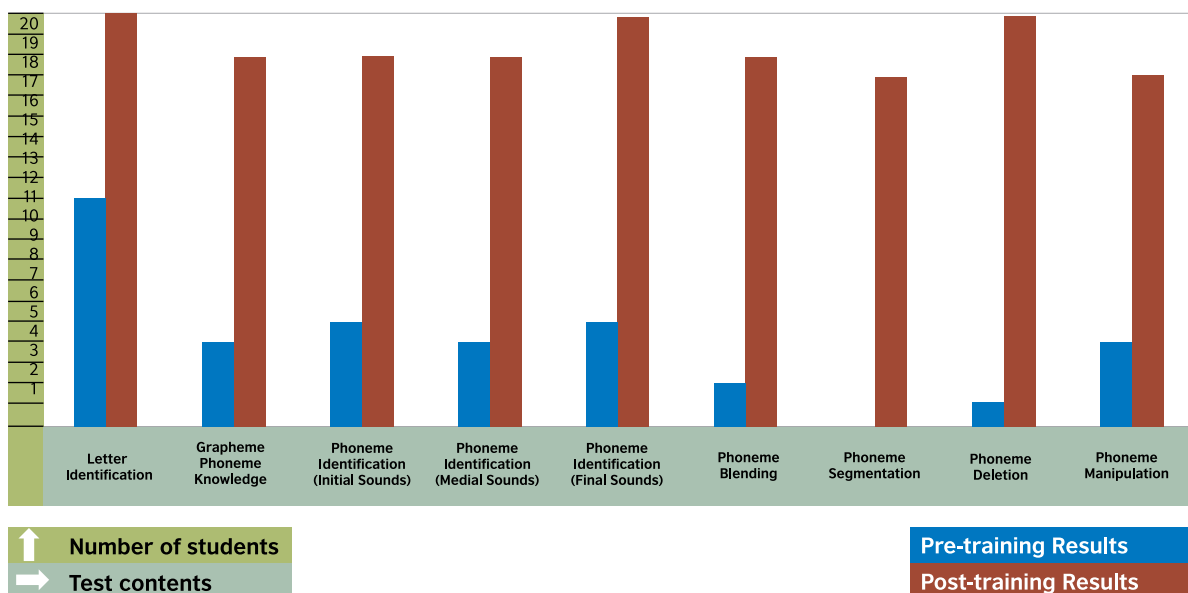


Figure 1: A comparison of the pre- and post-training test results

skills. To answer the first research question, it was felt that the target learners lack the minimum skills required for reading in English.

The English textbook of the target learners also lacks an adequate number of PA activities that may help these learners learn the sound structure of English and develop their skills in reading. The methodology for teaching reading in these schools also does not focus on developing the learners' PA. Research in the field of reading acquisition (see Section 1.2) provides evidence that PA is the strongest predictor of future reading success and can be integrated with other forms of instructions on reading. Therefore, it makes sense to train these early learners to develop PA in order for them to be able to read well.

To answer the second research question, it was found that explicit training on phonemic awareness through stories, pictures and games can help the target learners develop skills in reading. The emphasis on teaching phonemic awareness is thus essential for the enhancement of the Odia medium school learners' skills in reading in order to build the strong foundations for overcoming reading difficulties. Combined with other forms of reading instruction PA may assist these learners reach the ultimate goal of reading i.e. comprehension. Due to time limitations, training could not be provided with all the other aspects of PA. Therefore, it is suggested that it is necessary to conduct more research covering all aspects of PA to validate the effectiveness of PA training in the Odia medium schools context.

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Appendices

Appendix 1: Sample of textbook evaluation

Class -III	Title: 'My English Book'	Publishing Details: Manuscript developed by the Directorate of Teacher Education and The State Council of Educational Research and Training, Odisha. Published by the School and Mass Education Department, Government of Odisha. Year: 2013-14	
S. No.	Activity	Approach	Comment
1.	Activity 3: Teaching Rhyme Instructions: Step 1. The rhyme is read aloud to the learners line by line with action. Step 2. The learners listen to each line and repeat it three times with action with the teacher. Step 3. Teacher says one line and learners say the next line in chorus. Teacher and learners interchange the lines.	Whole Word	The aim of the activity seems to be making the learners memorise the rhymes through repetition and performing action. The entire rhyme is supposed to be repeated several times till the learners remember it and say the rhyme without the help of the teacher. The whole task seems to be based on repetition and memorisation and no reading takes place.

Appendix 2: Sample test

Read the following words aloud:

WEN	NEN
DEE	KEE
YAT	KAT
RUEEN	MUEEN
HINE	KINE

Appendix 3

Sample semi- structured interview protocol

Researcher: I wanted to know how reading is introduced in Odia. How do they learn the letters of the Odia alphabet and their sounds?

Odia teacher: We did not have any training for how to teach Odia alphabets. We have drawn a diagram of how we teach. As per the training, we divide our class into six parts.

English Teacher 1: In this lesson I followed the instructions that were given to us during the training. We have to complete three activities within 45 minutes in each lesson. This is compulsory for every lesson. How did you feel about the class?

English Teacher 2: This will take six to seven periods to teach them the alphabets from A-Z. When they have a full control over the alphabets we will proceed to word reading. The government is providing TLMs not only in English but also in all other subjects. Apart from these materials the teachers also prepare several other materials.

Appendix 4: Sample phonemic awareness pre-test lesson plan: Letter identification

Provide each learner with a table containing 26 letters from the English alphabet that are not in order. Ask them to see what is there in the handout. Then show this table to the learners on a large cardboard. Read a letter from this table and ask the learners to identify that letter by making a circle around it.

C	R	M	K	B	W	O
S	Y	T	A	U	D	Q
X	L	G	E	Z	N	J
P	H	V	I	F		

Appendix 5: Sample phonemic awareness activity

Step 1

Collect picture cards of 'bat', 'hen', 'pig', 'dog', and 'pug'. Put these pictures in a container. Ask one learner to take a picture from the container and show it to others to say its name. Show all the five pictures in the same manner and write the names on the blackboard. Help the learners in case they fail to say the name.

Step 2

Tell the learners that they are going to be read aloud the words from the blackboard. They are to listen carefully and repeat after the teacher. Read aloud each word several times by repeating the individual sounds and ask the learners to repeat, e.g. '/b/-/æ/-/t/.../bæt/!'

3

An empirical study of the impact of project-based learning (PBL) approach on technical writing skills

Shahila Zafar and Zaved Ahmed Khan

1. Introduction and research questions

1.1. Technical writing in English and project-based learning (PBL)

Over the last two decades, most institutes of higher learning in India have integrated technical communication into their curriculum as components of their English language courses. One of the main reasons behind this inclusion is that multinational corporations (MNCs) and other potential employers are looking for graduates with basic skills in information technology and technical and professional communication in English. However, a report by *The Economist* for the British Council (2014) states that only 38.2 per cent of recent technology graduates in India are employable and approximately 70 per cent of engineering graduates in India have been found to be not 'job-ready'. One reason among many for this low level of graduate employability can be attributed to their low proficiency levels in communication skills in English, especially in technical writing in English (Sinha, 2014). This may be a result of a lack of effective instruction in technical writing skills despite their increasing importance in enhancing students' employability. A flawed teaching methodology can demotivate students from learning.

1.2. Incorporating project-based learning into language teaching

To successfully deliver technical communication skills, adopting a learner-centred approach and focusing on communicative language teaching may be the key to facilitating the learning process and enhancing the communication competence of a learner (Deckert, 2004). Green (1998) suggests that learning by means of working on a project is likely to increase motivation and give students a sense of satisfaction. In a learner-centred approach like PBL, the focus of activity shifts from teachers to learners, thus paving the way for co-operative, collaborative learning.

PBL can be defined as an 'instructional approach that conceptualises learning by presenting learners with problems to solve or products to develop' (Moss and Van Duzer, 1998). The theoretical basis of project-based learning lies in constructivism that argues that knowledge cannot be taught but must be constructed by the learner (Benson, 2005). Through the PBL approach, the learners are involved in individual as well as collaborative learning. Learner-centred language learning takes place through real-life experiences and is facilitated by the language teacher (Brown, 2006). In this role of a facilitator, he or she, thereby, does not hinder the individuals' thought process. The learners take full responsibility

for their learning. The main goal here is to give learners a general competence in project work and an awareness of the problem-solving methods that can be used. During this self-directed learning, they work together in groups, discussing, reviewing, comparing, etc., and developing and utilising their problem-solving skills. Orevi and Danon (1999) specify the advantages of PBL from the learners' point of view – it develops collecting and presenting data skills, develops thinking skills, suits personal learning styles, enhances motivation and develops independent learners.

Moss and Van Duzer (1998) in their analysis of the role of PBL in the specific context of language learning state that PBL:

- builds on previous work
- integrates speaking, listening, reading and writing skills
- incorporates collaborative teamwork, problem-solving, negotiating and other interpersonal skills
- requires learners to engage in independent work
- challenges learners to use English in new and different contexts outside the class
- involves learners in choosing the focus of the project and in the planning process
- engages learners in acquiring new information that is important to them
- leads to clear outcomes
- incorporates self-evaluation, peer evaluation and teacher evaluation.

In project-based learning, learners learn meaningfully through the process of exploring, scaffolding, interpreting, negotiating and creating products, in addition to preparing and presenting oral and written reports required in their project work (Musa, Rozmel, Mufti and Amin, 2011).

1.3. Research questions

We sought answers to the following research questions through this study:

1. What attitudes do learners have towards technical writing?

2. Why are learners motivated to study technical writing?
3. What impact does the PBL approach have on the overall quality of technical writing skills of these learners?

2. Literary review

2.1. PBL and language learning/teaching

Though much research has been conducted to study the role of the PBL approach in engineering education (Esche and Hadim, 2002; Frank, Lavy and Elata, 2003; Helle Tynjälä, Olkinuora and Lonka, 2007; Lipson, Epstein, Bras and Hodges, 2007), very little evidence of PBL research is available in the field of language instruction. Also, despite there being plenty of conceptual and theoretical discourse available on the application of PBL as an instructional strategy for language learning (Abdullah, 1998; Mathews, 2007), there is little reporting on the empirical research on the effectiveness of this approach (Anthony and Kadir, 2012: 52). Most research available reports a focus on the application of PBL to language learning in general, and mostly at high-school level (Stoller, 2002; Smith, 2005). Previous research on the application of the project-based approach for delivering technical writing skills, especially at tertiary level, has been rare, though reports of a few studies conducted in academic writing/English for specific purposes (ESP) (Foulger and Jimenez-Silva, 2007; Musa et al., 2011; Poonpon, 2011; Anthony and Kadir, 2012; Thitivesa, 2014) and in the specific context of the motivation levels of English for technical communication (Parulekar, 2004; Tatzl, Hassler, Messnarz and Fluhr, 2012) are available.

2.2. PBL and motivation to learn English

According to Tatzl et al. (2012), since motivation is a complex requirement for successful learning and difficult to achieve through traditional teaching methods, collaborative learning methods of PBL can develop the required level of motivation for language learning. Tatzl et al. (2012) also find collaborative group projects well suited for tertiary education because they foster learner autonomy and teamworking skills, as

learners need to contribute to the group results with individual strengths and combined efforts.

In their research on PBL, Snow and Brinton (1988) found that learner motivation in the class increased in direct proportion to the relevance of the course activities. They concluded that learner success reflected the effectiveness of the language instruction. In her study of the application of PBL for teaching non-English majors, Ke (2010) reported that participants were motivated to meet the challenges of the project because they thought they might encounter similar problems in their future careers. Similarly, Anthony and Kadir (2012: 69), in their case-study based research, found that ‘the use of PBL approach in the ESP field appeared to offer advantages regarding learner motivation, attitude, confidence, engagement, and enjoyment compared to the traditional, lecture-led or lecturer-centred delivery.’

In the specific context of writing skills, Tessema (2005: 22) argues that since writing is a difficult skill to master, learners, especially second language learners, often experience a lack of motivation. She believes that a classroom project, when well planned, is a good way to motivate learners to write because it offers the opportunity to match tasks with interesting topics that are relevant to the learners. In her study, she found that her students succeeded in writing projects because they were motivated by the relevant topics and the opportunities for collaboration and interaction with others.

If we agree with Leong, Hu and Boucher-yip (2014) that learners in technical writing classes are usually passive receptors of teachers’ instructions, it can be argued that their motivation to do well and to come up with professional pieces of technical writing can be enhanced through their exposure to real-world situations as used in the PBL approach (Zafar, Feleciya and Khan, 2014).

Despite the well-recognised role the PBL approach can play in motivating learners for successful language learning, no empirical study has been conducted in India so far to investigate

the effects of PBL, specifically on technical writing skills, since PBL is still not commonly used in India (Shrivastava et al., 2013). Our study aims to fill this glaring yet significant research gap by empirically investigating the various aspects involved.

2.3. Self-determination theory

The self-determination theory (SDT) (Deci and Ryan, 1985, 2000) is the theoretical foundation on which the current study rests. Deci and Ryan propose that self-determination involves a true sense of choice, a sense of feeling free in doing what one has chosen to do (Guay, Vallerand and Blanchard, 2000: 176). Listed on a continuum from high to low levels of self-determination, these motivations are intrinsic motivation, extrinsic motivation and amotivation (Deci, 1971). Here, intrinsic motivation (IM) refers to the motivation that an individual has for doing a task for the pleasure of doing it whereas extrinsic motivation prompts one into action for external rewards like better marks, better career, etc. Extrinsic motivation is further marked with two types of behaviour regulations: external regulation (ER) and identified regulation (IR). Here, external regulation represents the least internalised types of behaviour regulation, characterised by control and coercion, whereas internal regulation represents a greater level of perceived autonomy. Behaviours are performed because they are deemed personally important and are coherent with a person’s overarching values. Amotivation (AM) is the hallmark of depression and feelings of incompetence akin to learned helplessness (Deci and Ryan, 2002, as cited in Blanchard, Mask, Vallerand, de la Sablonnière and Provencher, 2007: 856). Individuals who are amotivated are neither intrinsically nor extrinsically motivated (Blanchard et al., 2007: 856). Greater levels of IM and IR represent high levels of self-determination whereas greater levels of ER and AM represent lower levels of self-determination.

3. Research methodology

3.1. Participants

The study involved 122 participants (67 female, 55 male): 71 science and engineering postgraduate students from Vellore Institute of

Technology (VIT) University, Vellore, in the Fall semester 2015 and 51 science and engineering postgraduate students from the Central University of Punjab, Bathinda (CUPB), in the Winter semester of 2016. At VIT, the participants studied a course called Professional and Technical Communication (ENG 601), and at the CUPB, the participants studied a course called Introduction to Communication Skills in English (ENG 518). Both the syllabi contained technical writing related topics, report writing and email writing, which were selected for the project work in the class.

At VIT, the participants were randomly assigned to two batches of the course. Since we could not choose the total number of learners per batch, the first batch, Batch 1, comprised 30 learners and Batch 2 comprised 41 learners. The participants were involved in the study in the Fall semester (August–December 2015). Since the researcher later shifted to the CUPB, the data was obtained from two batches of learners, 25 (Batch 3) and 26 (Batch 4) each in number, in the Winter semester (January–April 2016) and the Fall semester (July–November 2016). During each of these semesters, the learners were taught for 30 teaching hours per semester, two one-hour sessions per week as per the requirements of a two-credit course, at both VIT University, Vellore and CUPB.

3.2. Instrument: Situational Intrinsic Motivation Scale (SIMS)

The surveys during the study were conducted using a modified version of the Situational Intrinsic Motivation Scale (SIMS) developed by Guay, Vallerand and Blanchard (2000). The SIMS is a 16-item self-report inventory, based on the self-determination theory, used to measure four types of motivation: intrinsic motivation (IM), identified regulation (IR), external regulation (ER), and amotivation (AM). Each type of motivation involves four items/statements. Participants needed to circle a number from 1 to 7 (1=corresponds not at all to; 7=corresponds exactly) to say how closely the description provided by the items matches their reasons for participating in the activity. A higher number indicates a higher motivational level for the activity (Sian and Tan, 2012: 91).

3.3. Data collection and data analysis

For data collection, a mixed-method approach used for triangulation (Mills, 2007) to compare different data sources (experiments, surveys, informal interviews and observations) to cross-check the reliability and validity of data was used.

Quantitative data, collected through SIMS-based surveys, was tabulated using frequency tables. The 16 items of SIMS were reduced to four sub-scales (IM, IR, ER and AM) and each sub-scale consisted of four items. The internal consistency for each of the four sub-scales was determined using the Cronbach alpha technique (Cronbach, 1951). This data was calculated using statistical tools such as mean, standard deviation, Cohen's effect sizes, *t*-test, and correlation, the Self-Determination Index (SDI) to identify the relationships between different variables involved.

Qualitative data was interpreted to highlight the specific features of the use of traditional and PBL approaches in the instruction of technical writing. It was also used to corroborate the findings from the quantitative data for a comprehensive understanding of the attitude and motivation of the participants.

3.4. Procedure

At the beginning of the semester, Batches 1 and 3 were marked as experimental groups (EG), and Batches 2 and 4 were considered control groups (CG). Surveys using SIMS were administered to all the batches at the beginning, middle and end of each semester to ascertain the participants' motivation types and motivation levels at that stage.

In their classes, both the groups studied the same topics of technical writing (writing reports, emails). However, control group learners were taught and assessed using the traditional PPP (Presentation, Practice, Production) approach (British Council, 2015) whereas the learners of the EG were instructed using the PBL method by giving them mini technical writing-based projects to work on. They were asked to form teams of three to five participants each (depending upon the

specific project). These teams were required to conceptualise, collaborate, design, create, write, edit and present their project work in the class, as well as to demonstrate leadership qualities while applying analytical and problem-solving skills. For this group, in accordance with the requirements of the PBL approach, the teacher’s role was that of a facilitator. Once the process of data collection was over, the work of both the groups was assessed based on the ‘criteria for good technical writing’ (Gerson and Gerson, 2007).

Towards the end of the semester, participants presented their project work to the class and shared their experiences. Four randomly selected participants from each batch were also interviewed, using open-ended questions, to gauge the details of their experiences with the classes/projects. Additionally, the researchers continually observed the classes and frequently took oral feedback from the participants regarding the PBL method.

4. Findings

4.1. Reliability and internal consistency

The scores of SIMS sub-scales were found to be normal, and showed a high level of internal consistency as determined by a Cronbach’s alpha of .81.

4.2. Means, standard deviations and effect size of Self-Determination Index

The results, as represented in Table 1, provide the means and standard deviations for the Self-Determination Index (SDI), and effect sizes across different groups (control and experimental).

Significant differences between post-teaching SDI level of learners taught using the PPP method and learners taught using the project-based method indicate that the EG ($M=6.65, p=.005$) was more self-determined (more intrinsically motivated) than the CG ($M= 4.22, p=.005$) by the end of the experiment. Very large effect sizes for the second and the third survey ($d=3.1$ and 4.4 respectively) indicate that the significant differences in the mean between the groups were not random, but were brought about by a very strong effect of autonomy on participants’ situational motivation. This suggests a positive role the PBL method played in enhancing motivation levels of the experimental group as the course proceeded.

4.3. Situational motivation response

To better understand the effect of the PBL method on the learners’ motivation, the average means and standard deviations (SD), significance levels and effect sizes for the four sub-scales (IM, IR, ER, AM) across learners of the PPP method and PBL method were calculated and listed in Table 2.

Significant differences across group means can be observed for IM ($M=6.02$ vs 4.92 and 6.2 vs $4.34, p < .001$, for CG and EG respectively) with very large effect sizes ($d=1.7$ and 3.7) indicating a strong influence IM has on situational motivation. This confirms the significant role played by the use of PBL method in enhancing learners’ motivation; the higher levels of IM and IR suggest a more autonomous learner, a key feature of PBL. However, it is important to note the very small difference in group means for ER and AM for CG and EG. Also, these differences have small effect sizes suggesting that both groups started and ended the semester with almost the same

Table 1: Means and standard deviations of Self-Determination Index and their respective effect sizes

Survey No	Control		Experimental		Effect Size
	Mean	SD	Mean	SD	
SIMS Survey 1	3.9	0.57	3.7	0.48	-.38##
SIMS Survey 2	3.56	0.67	5.52	0.59	3.1###
SIMS Survey 3	4.42	0.49	6.55	0.48	4.4###

* $p < .005$

Medium effect; ### Very large effect

Table 2: Means, standard deviations of SIMS sub-scales and respective effect sizes for control and experimental groups

Factor	Survey No.	Control		Experiment		Effect Size
		Mean	SD	Mean	SD	
IM	SIMS Survey 1	4.34	0.56	4.5	0.53	0.29 [#]
	SIMS Survey 2	4.92	0.65	6.02	0.59	1.7 ^{###}
	SIMS Survey 3	4.34	0.56	6.1	0.56	3.1 ^{###}
IR	SIMS Survey 1	5.7	0.49	5.63	0.65	-0.12
	SIMS Survey 2	6.01	0.69	5.6	0.44	-0.7 ^{##}
	SIMS Survey 3	5.16	0.66	5.6	0.47	0.76 ^{##}
ER	SIMS Survey 1	3.95	0.23	3.93	0.78	-0.04
	SIMS Survey 2	4.49	0.57	4.49	0.67	0
	SIMS Survey 3	4.17	0.38	4.1	0.59	-.14
AM	SIMS Survey 1	2.7	0.45	2.79	0.45	0.2 [#]
	SIMS Survey 2	2.93	0.49	2.98	0.5	0.1
	SIMS Survey 3	3.32	0.29	3.3	0.36	-0.06

* $p < .001$

Small effect; ## Medium effect; ### Very large effect

levels of ER and AM that had little effect on their learning process.

4.4. Student *t*-test for report writing and email writing

For the two types of technical writing samples used for evaluation during the study (report writing and email writing), the results of the mean of assessment scores for CG and EG are shown in Tables 3 and 4 respectively.

Tables 3 and 4 show significant differences between CG and EG in average scores in report writing and email writing tasks, the EG scoring much higher ($M=20.18$, $SD=2.0$, $t=7.9$, $p < .001$ and $M=20.35$, $SD=20.57$, $t=7.1$, $p < .001$ respectively) for both the projects. Thus, the data shows that the PBL method seems more effective

in enhancing the learners' overall writing skills for both the tasks in the experimental group.

4.5. Bivariate correlations between test scores and indices of situational motivation for the experimental group

To investigate the relationships between the EG participants' mean scores and the indices of situational motivation, correlations between various variables were calculated, as presented in Table 5.

The results in Table 5 show that internal motivation is positively and significantly correlated ($r=.63$ and $.59$, $p < .001$ and $< .05$ respectively) to report and email writing scores; whereas external regulation and amotivation have weak to moderate negative correlation ($r=-0.22$

Table 3: Student *t*-test – Report writing

	N	Mean	SD
Control	67	15.23	4.27
Experimental	55	20.18	2.01
$t=7.9622$; $df=120$; $p < .0001$			

Table 4: Student *t*-test – Email writing

	N	Mean	SD
Control	67	14.583	5.723
Experimental	55	20.357	2.153
$t=7.1305$; $df=120$; $p < .0001$			

Table 5: Bivariate correlations between test scores and indices of situational motivation for experimental group

Factor	Report writing	Email writing
IM	0.63***	0.59**
IR	0.49	0.38
ER	-0.22**	.15**
AM	-0.52	.18**
*** $p < .001$; ** $p < .05$		

and -0.52, $p < .05$) with scores for report writing and weak positive correlation ($r = .15$ and $.18$, $p < .05$) with the scores for email writing. This is a strong indication of the role internal motivation played in enhancing learners' performance in report and email writing.

4.6. Learner responses and instructor observation

The researcher/instructor closely observed the classes throughout the semesters to identify students' responses/reactions to various aspects of PBL. Learner feedback was collected through semi-structured interviews conducted at the end of the semester in addition to the feedback received during the final presentations of project work by the experimental groups. Overall learner feedback for learning through working on projects was positive. Initially, the participants reported confusion about the role of a 'project' in learning technical writing in English, as they had, until then, exposure only to those projects that were either purely technical or scientific in nature. Participants also found it difficult initially to form groups as they wanted to form groups only with their friends in the class. However, the instructor divided the groups by the sequence in which they were enrolled, thus bringing randomness to the group formation, and gradually they mingled better with each other.

Participants were free to choose the topics of their report writing projects, and for the email writing project they were asked to write emails to their potential supervisors/employers. However, since they were also asked to give reasons for the usefulness of their choices, most of them chose topics that interested them, were relevant

to their immediate academic/social life and at the same time were research-oriented. The topics included, among others, 'The impact of VIT on the neighbouring eating joints', 'Comparison of VIT University website with the websites of other universities', 'Effectiveness of computer science as an interdisciplinary course', etc.

While participants reported experiencing a strong sense of autonomy and growth of team skills, they also reported facing difficulties in certain aspects of data collection and writing the report such as phrasing questions for the survey questionnaires, wherever required for their research projects, data entry and calculations in Excel sheets, etc. However, they found solutions to most of these problems through collaboration with each other. In addition, the instructor also provided scaffolding every time the participants were not able to resolve an issue. Problem solving through collaboration problem solving and negotiating was reported to be the most favoured aspect of PBL, as supported by previous research (Tessema, 2005; Anthony and Kadir, 2012; Tatzl et al., 2012).

With respect to the technical writing skills, participants reported a perceived enhancement in their writing and drafting skills, vocabulary usage, presentation skills and confidence levels.

5. Discussion and conclusions

The findings of the study provide empirical evidence in support of the application of the PBL method. The use of the PBL method significantly enhanced the IM and ER of the learners, whereas regular teaching did not seem to have much effect on the motivation levels of the learners, probably because of their passive reception of

teachers' instructions as discussed by Anthony and Kadir (2012) and Leong et al. (2014). The results showing enhanced IM supported Noels, Clément and Pelletier's (1999) findings that learning a language skill for a reward or because of some pressure does not support sustained effort or eventual competence. However, in this regard, we cannot negate the role played by external motivation, as the internal regulation component of external motivation seems to play a role here too. This was the case probably because, as participants reported, they found the tasks relevant to their future careers and were able to focus on learning the skills involved. These findings support the conclusions drawn by Snow and Brinton (1988) and Ke (2010) that learner motivation in the class increases in direct proportion to the relevance of the course activities that they thought might be useful in their future.

Based on review of previous research in the area, it was anticipated that, because of the influence of the PBL method, the participants of the experimental domain of the study would develop a better understanding of the intricacies of technical writing and would perform better in the final assessment of technical writing skills. Empirical results from the study supported these expectations. The participants of EG outperformed the participants of CG in learning better technical writing skills by the end of the semester. As confirmed by Ritz (2014), this happened because learning became an enjoyable, rewarding and motivating activity through the PBL, thereby making it easier for learners to understand the tasks since they were actively involved in the process of learning.

The far better performance of the learners in the EG in report writing and email writing tasks could also be the result of motivation and interest generated by choice of relevant topics and the opportunities for collaboration and interaction with others that PBL provided. It could also have been supported by exposure to real-world situations that took place through the PBL approach (Green, 1998; Tessema, 2005; Zafar et al., 2014). Project work could be viewed as the natural language learning context, in

which language learning – writing, in particular – is contextualised and presented in a way that learning becomes integrated with the task of communication focused on a theme.

Surprisingly, the results were found to be statistically significant only in some specific motivational domains. While they showed that PBL contributed in enhancing the learners' general motivation levels, it seemed to make a maximum significant contribution in internally motivating them in the process. The results related to external regulation (ER) and amotivation (AM) were not found to be statistically significant.

Although additional studies with more rigorous experimental designs are necessary to verify the causal relationships, the results of this study attest to the predictive utility of internal and external orientations. Learners are expected to become more intrinsically motivated when they develop competence through self-regulated learning (Cohen, 1990). As shown by the results of correlation analysis, the PBL approach seems to contribute to better learning and better final products, by providing greater autonomy, self-reliance, chances for collaboration/contribution/open communication with little interference from the instructor. At the same time, learners seem to benefit when the instructors provide constructive information necessary to develop their competence while encouraging them to regulate their learning behaviour.

Future research, longitudinal in nature and with a bigger sample size, might bring out results that are more diverse in implications. In addition, a similar study in future investigating aspects of other language skills (reading, speaking, and/or listening) may highlight the overall effect of the PBL approach on the language learning process.

Many linguistic and non-linguistic factors are responsible for effective technical writing proficiency. While high-level self-discipline, in addition to fairly good language proficiency, is required, motivation is a major factor behind learning to produce effective technical writing. Efforts must be made to enhance learners' motivation for better outcomes in the process

of learning this skill, especially when technical writing is also perceived as a 'dry' subject for which very little creative freedom is permitted. Despite the weaknesses of small sample size, the findings of our study demonstrate how, by using the PBL approach, a balance between the

disciplinary requirements of technical writing and the creative needs of the learning process can be achieved. It is hoped that this study will contribute to a better understand of the efficacy of the PBL approach in improving technical writing skills.

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