Using Internet-Based Materials to Enhance Non-English Majors’ Reading Comprehension

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Abstract
The use of Internet-based materials in English language learning is not new; however, to the best of the researchers’ knowledge, the application of these to teaching and learning English in Vietnam in general and at Ha Noi University of Industry (HaUI) in particular is still limited. Focusing on reading skills, this action research aims at making the best use of the Internet-based reading materials to improve students’ reading comprehension. The research was carried out within the context of Class K5-VNH 1 (or Vietnamese Studies 1 in English), Faculty of Technical Teacher’s Training & Tourism, HaUI. The data were collected during the second term of a school year, with the contribution of thirty students. The data collection instruments namely tests, questionnaires and reading worksheet were utilized to obtain the necessary information for the study. It was revealed from the research that the students improved their reading comprehension significantly thanks to Internet-based materials. The students’ overall responses were also relatively positive towards the use of such materials. To achieve this result, students need some basic computer skills to download and work with the materials. Moreover, the material is necessarily evaluated after use for better future implementation. Future studies can be carried out with the focal point on other language skills with larger settings.

Keywords
Action research, Internet-based materials, reading comprehension, non-English majors.

I. Introduction
Reading is a difficult and critical skill for any English language learners. A widely recognized problem faced by learners throughout the ESL/EFL world is that of reading with little comprehension, as in [9]. As a result, the low comprehension as well as time-consuming reading-learning process may discourage students from learning it with high motivation. This situation also happens to non-English major students at Hanoi University of Industry. They seem to be reluctant and passive in English reading lessons. Their lack of basic reading skills, poor background knowledge as well as slow information processing rate lead to the inability to hold enough details in short-term memory to permit decoding of the overall message of the text. Inefficient reading or reading with little comprehension in this case is one of the most common manifestations of reading problems, as in [17]. Besides, students’ low level of English proficiency also contributes to this negative attitude towards reading. However, it is not only the learners’ attitude but also the learning materials to be blamed for. The topics in the current course book are not always familiar and stimulating enough to them. Also, extra materials were inadequately provided for students in the University.

With the development and improvement of technology, the Internet has been widely exploited as a valuable source for language teachers and learners thanks to its ability of hypertext to satisfy a wide range of learning styles and needs. Based on previous research, it is believed that Internet-based learning, or Internet-based materials are a “remedy” to improve students’ language ability due to some advantages over the others, as in [21]. Firstly, the materials are continuously updated, reflecting the rapid change of life and society. Secondly, they are often written for native speakers; therefore, the language used is authentic and illustrates real communications. This is different from textbooks whose languages are usually simplified and modified. Thirdly, because of the authenticity, these materials might be good sources of interesting topics to the lessons. Students, as a result, can learn English and get real-life information and world news at the same time. Finally, the reason why IBM is chosen as a treatment in this study is because of its feasibility. Teacher can download the content of the materials and present them in printed version which is particular suitable in this research situation where students and teachers do not always have access to the computer and the Internet in class.

With above presented advantages of IBM and the current difficult situation of students at the Faculty of Technical Teacher’s Training & Tourism (FTTTT), Hanoi University of Industry (HaUI) are facing in reading skills, the researchers were urged to carry out a study on the use of Internet-based reading materials as a tool to improve students’ reading skill. The two following questions are going to be addressed:
1. To what extent do the Internet-based materials help improve students’ reading comprehension?
2. What are the students’ attitudes toward the new reading program?

II. Literature Review

1. Reading comprehension
Among reading skills, reading comprehension is an important part in teaching and learning a foreign language in general and teaching and learning reading in particular. Reading comprehension can be defined in different ways by different researchers. Reference [4] considered reading comprehension as the process of decoding language to thought or working out the meaning of a reading.

“Reading comprehension, by definition, is the process of re-dating new or ration to information already stored in memory. Readers make connections between the new information on the printed page and their existing knowledge. They must allow the new information to enter and become part of their knowledge store”, as in reference [12].

Reading comprehension can be defined in different ways, however, in this study, reading comprehension is meant when reader can get out of the text the message the writer put into it
2. Authenticity and Internet-based materials

Authentic materials are the texts designed for the native speakers which are real and not initially designed for language learners, as in [12]. Reference [13] considers authentic texts as texts which are not produced for teaching purposes but for a real communicative purpose.

No matter what definitions were used in particular research; the similarity is that authentic materials are the language that is used in everyday life of people, native or non-native, to serve the real purpose of communication. Thanks to authentic materials, learners are enabled to interact with the real language and content rather than the form. Hence, learners feel that they are learning a target language as it is used outside the classroom, a means of communication rather than an object to be learnt.

For teaching and learning reading, the Internet has become a very useful tool for exposing learners to online authentic materials, as in [1] or provides authentic reading materials that encourage students to read more and it offers a rich variety of authentic, low-cost and easy accessible input in target language, as in [14].

Everything has both sides and Internet-based (IB) reading materials are not exceptions. Users have to face a number of challenges to conquer and make it serve their specific needs. The greatest challenge learners need to cope with when working on the Internet is the risk of getting lost in the cyberspace and the threat of distraction, as in [7]. Also, as mentioned, authenticity of IBM is a plus, but it can also cause much difficulty to learners at lower level. The overload of new vocabulary, grammar structures can easily lead to learners’ frustration and disappointment, as in [11]. Reference [18] also brought up various concerns about IBM including the consistency of instructional support, material delivery. This situation can be explained by the fact that as students can access the materials both in class and at home, the instructional support at home is limited as the teacher is not always available.

To conclude, the benefits that Web brings about are many, yet the challenges are not few to overcome, among which are technical issues, prior knowledge on computer, digital scepticism, credibility of websites, distraction, and teachers, institutions’ acceptance of the Internet as a useful tool for language learning, as in [22].

3. How to integrate Internet-based materials into the curriculum

Reference [5] gave a detailed description of steps to develop IBM. The preparation stage to adapt IBM include: firstly, perform a needs analysis and specify goals and objectives; second, determine the available resources and needs; then secure commitment from all participants and identify and address potential barriers to implementation; after that, encourage active learning self-assessment, reflection, self-directed learning, learner interaction and feedback. Finally, assessment on students’ learning outcome and satisfaction is inevitable.

In an effort to provide guidance to teachers and curriculum developers, reference [2] described three approaches to integrate Internet-based reading materials into a foreign language curriculum. The design of an Internet-based lesson is largely determined by a teacher’s pedagogical approach, her/his technological expertise, and the students’ language proficiency.

As in [2], first approach known as teacher-determined lessons, the reading activities and materials are comparable to the computer as an online electronic workbook. The teacher prescreens and selects reading materials or cultural readings from Internet-based or other resources, designs comprehension activities, and makes them available through his/her Web page. The pedagogical strength of this approach lies in the text-specific approach to exploring authentic cultural (textual or images) resources. By pre-selecting and preparing the readings, the instructor tailors the contents and tasks to the students’ proficiency level. He/she scaffolds the reading tasks by guiding the learners through the texts. However, this approach requires great efforts of teacher. The development of reading lessons in this approach may be time consuming and cumbersome; Teachers need skills and expertise in language pedagogy and instructional design. As a result, in the circumstances of the researcher (regarding to students, facilities of the university, the students’ IT knowledge), applying this approach to the reading program is surely challenging because of many drawbacks.

In the second approach, namely “teacher-facilitated” lessons, the instructor determines a particular topic and set of goals for his lessons. The readings are pre-screened or selected by teacher to ensure complexity and appropriateness of its content for pedagogical goals. Through a particular task design, the instructor facilitates the students’ reading process and guides the learners to explore a variety of pre-selected resources, thus providing a clear goal to be accomplished by the students. Despite the restriction, the learner has some autonomy as the tasks provide the learner a choice in the sites he or she accesses and explores. Task types usually include comparisons, gathering factual information, descriptions, and short summaries. The outcome of the student assignments is clearly defined, but open-ended. The teacher’s role can best be described as a guide and facilitator. The students follow the teacher’s lead but get to explore the contents themselves. Reference [2] also pointed that when pre-screening and selecting sites and designing exploration tasks, instructors need to pay special attention to the linguistic complexity and cognitive processes involved in processing the instructional materials. Through a clearly focused task design and carefully chosen sites, the instructor can control the navigational scope that helps the learners from getting lost or overwhelmed.

The third approach, namely Learner-determined lessons integrates IB sources that is entirely learner-centered. The learners determine the topics, reading materials, and the way they go about exploring themselves. The students take on the roles of self-directed and autonomous learners. The teacher only gets involved in the role of a facilitator offering support and guidance throughout the process as much as necessary. Types of assessment may include teacher-, self-, or group-assessment. IB projects can be carried out intensively over a short period of time or extended over a few weeks. Generally speaking, this approach of integrating Internet-based materials lends itself to long-term assignments with intermediate and advanced language learners in the target language.

Base on the researcher’s teaching context, the students’ language proficiency, the second approach or Teacher-facilitated lesson was applied for the whole reading program. Since the first approach requires so much the support of modern technologies as well as software programs which are beyond the circumstances of the university’s teaching and learning. Moreover, the development of reading lessons may be time-consuming and cumbersome. Meanwhile, the level of the students’ language proficiency is not an advantage for the third approach to be carried out.
III. Methodology
In this study, Action Research (AR) is selected as the research method. There have been some different models on AR procedures given by different researchers such as reference [16] and [19]. Reference [15] also suggested that an AR should follow 8 steps which could be presented as:
1. Identifying a focus of interest of a problem
2. Collecting data
3. Analyzing data generating hypothesis
4. Planning action steps
5. Implementing action steps
6. Collecting data to monitor change
7. Analysis and evaluation
8. Spiral to the next circles
AR procedures can be different but the core steps are basically similar. In the study, the researcher followed the action research procedures suggested by reference [15]. The first 7 steps were selected and grouped in 3 main phases to carry out in 13 weeks. Tests, questionnaires and worksheet were instruments to collect data. A pre and post TOEIC test were used to find out the learners’ progress after the action plan implementation. To figure out students’ problems, causes of the problems and the reading topics of their interest, the 10 items Pre-action Questionnaire adapted from reference [21]’s research was delivered at the beginning of the research. The Post-action Questionnaire consisting of two main parts unfolded students’ opinions on the reading materials, tasks assigned and the effectiveness of IBM on learners’ reading comprehension, respectively. The third tool was the Internet-based Reading Worksheet (IRW) adapted from [6]. Students had to complete it before class and hand it in to teacher. This form aimed at getting concrete information on their opinions about the materials’ content, their attitudes towards the IBM, reading exercise as well as difficulties they meet while dealing with such material. There is a summary task in each sheet to let teacher checks whether students read the news or not. Teacher can check students’ summary by giving comments through email or asking them to present the summary in class.

IV. Participants
The subject of the study includes thirty second-year students whose age ranges from 18 to 21 in class VNH 1 (or Vietnamese Studies) of the Faculty of Technical Teacher’s Training & Tourism. They must achieve at least 450 out of 990 TOEIC band mark score as a fundamental requirement for graduation. The school year is divided into two academic terms and the research is conducted in the second term. English subject is taught two lessons every week, each lesson consisted of three periods. The course book used was “International Express” at elementary level in the first term. In the second term. English subject is taught two lessons every week, each lesson consisted of three periods. The course book used was “International Express” at elementary level in the first year and pre-intermediate level in the second year. The subjects thoroughly took part in the research from beginning to the end. Their English knowledge is at pre-intermediate level. They are willing to join this thirteen-week research.

V. Findings and Discussions
1. Initial data
Pre-action Questionnaire
The ten-item questionnaire was used to identify students’ background information about reading as well as their attitudes towards the use of IBM. After analysing items 1,2,3,7,8,9 and 10, the researcher found that although most students had learnt English before participated in the research, most of them got low reading comprehension and motivation. The cause of this might be that they felt bored with the reading texts in the course book. This data revealed that most of them agreed to read teacher’s pre-screened and selected IBM then let them do at home. The students showed that there were few or even too few readings (70% and 23.3% respectively) in the course book. The time for reading session was also claimed not adequate. Another feature found from the initial data was that all students could get access to the Internet. Moreover, all of them had experience in sending and receiving attacked files through email.

The following questions which directly showed students’ attitudes towards the readings in the book and their willingness to read more were analysed in more detail.

Question 4: What are your opinions about the readings you learnt in International Express (Pre-intermediate) course book-pack A.

<table>
<thead>
<tr>
<th>Opinions</th>
<th>Number of choices</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>The readings are interesting</td>
<td>6</td>
<td>20%</td>
</tr>
<tr>
<td>The readings are suitable to my level</td>
<td>7</td>
<td>23%</td>
</tr>
<tr>
<td>The readings are normal</td>
<td>9</td>
<td>30%</td>
</tr>
<tr>
<td>The readings are boring</td>
<td>19</td>
<td>63%</td>
</tr>
<tr>
<td>The readings are non-authentic</td>
<td>25</td>
<td>83%</td>
</tr>
<tr>
<td>The readings are not suitable to my language level</td>
<td>20</td>
<td>66%</td>
</tr>
<tr>
<td>I don’t like the reading topics</td>
<td>23</td>
<td>76%</td>
</tr>
<tr>
<td>Others</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Most of the students agreed that the readings in the course book were non-authentic, boring, and not suitable, equivalent to 25 (83%), 19 (76%), and 20 (66%) respectively. Concerning the reading topics, there were only a few students having positive opinions about them. Overall, the reading text as well as the reading topics in this book might be interesting to other non-majors in the University but not to most of these students of Tourism in the researcher’s class.

Question 5: Do you want to have readings about tourism to read at home to improve your English reading comprehension?

Table 2: Students’ willingness to read more to improve reading comprehension

<table>
<thead>
<tr>
<th>Students’ willingness to read more to improve reading comprehension</th>
<th>Number of students</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>27</td>
<td>90%</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>10%</td>
</tr>
</tbody>
</table>

It can be seen from the table that nearly most of the students wanted to have more readings about their major at home to enhance their reading comprehension skill. Only 3 out of 30 students were not eager to have extra reading material because they did not have much time. In question 6, they also specified what certain topic they would like to read about.
The pre-test
A Pre-test was given to students then being analysed using the Statistical Package for the Social Sciences (SPSS) version 16.0. The total question was 20. One point was given to each correct answer. Then the results were counted in range of 0 to 10. The test results showed that the lowest score was 2.5 whereas the highest score was 8. The mean score is 4.45 (n=30). The standard deviation is 6.63507.

The test result indicated that more than half of the participants had the results below average (60%) and there were differences in their reading ability. The results of the pre-test also showed that these learner’s knowledge of language was very poor and needed to be taken into consideration. During the course, they only learn reading through short and difficult texts in the main course book. There are no suitable supplementary reading materials for them.

2. Data from Reading worksheets
Figure 1 showed how students self-rate their reading comprehension during 6 weeks when action was implemented.

![Students' self-rate of reading comprehension](image)

Fig. 1: Students’ self-rate of reading comprehension

As can be seen from the graph, there was an upward trend in the students’ self-rate of reading comprehension over the treatment period. In the first two weeks, they almost defined themselves as poor readers but this changed positively in week 3 and kept increasing until the last week. Surprisingly, there were no students getting very low and low news’ RC at the end of the program. To sum up, the treatment or IBM seemed to have good effects on students’ RC, since they gradually self-rated their RC better and better.

In line with this above positive feature, the number of learners who complained about the difficulties of the reading materials in term of language level decreased gradually week by week thanks to teacher’s better selection of reading.

Figure 2 illustrated a positive change in learners’ attitudes towards this new reading material throughout the application time.

![Students' positive attitude towards IBM](image)

Fig. 2: Students’ positive attitude towards IBM

In the first two weeks, only 10 and 12 learners correspondingly had positive attitudes towards the reading materials, but there were 21 learners actually felt like reading the texts and articles in week 4. Especially, in week 5, none of the participants mentioned that the IBM were boring for them. The graph in Figure 2 showed that the number of learners who had good attitudes to reading increased week by week.

3. Post data
RQ1: To what extent does the Internet-based materials help improve students’ reading comprehension?

In this part, the comparison of the pre-test and post-test will be presented to answer the first research question. Test scores were computed using SPSS version 16.0 and it provided us with output displayed in Table 3 below.

<table>
<thead>
<tr>
<th>Table 3.1: Paired Samples Correlations</th>
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<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>Pre test</td>
</tr>
<tr>
<td>Post test</td>
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</table>

Table 3.2: Paired Samples Statistics

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre test</td>
<td>5.1667</td>
<td>30</td>
<td>1.50478</td>
<td>.27473</td>
</tr>
<tr>
<td>Post test</td>
<td>6.2833</td>
<td>30</td>
<td>.98858</td>
<td>.18049</td>
</tr>
</tbody>
</table>

There was an obvious difference in the learners’ scores when the action plan was implemented. As can be seen in Table 3.1, most of the learners got higher scores in the post tests. Table 3.2 showed that mean of the pre-test was 5.16 and that of post-test was 6.28. It is noticeable that the learners in the post-test show higher mean scores than in the pre-test. The standard deviations of pretest and post-test were 1.50 and .988 respectively.

In order to determine if the difference in means of two tests is significant at \( p < 0.05 \), a paired sample t-test was conducted. The result of the t-test showed in table 3.3 indicated that the critical value of \( p \) for a pair-sample test is 0.000. This can be said that the difference in means of two tests is considered to be significant, \( t = -6.746, p < 0.05 \). Therefore, it can be concluded that the performance of the learners in the post-test was on the whole better than in the pre-test. This study provided a strong case for the conclusion that IBM had positive effect on students’ reading comprehension.
The second Research Question was answered clearly from the results of the Post-Action Questionnaire. The first nine items unveiled the impact of the reading tasks and activities on the subject’s motivation and interest in the study, the other 5 items showed the appropriateness of the reading materials and its effects on the learners’ language abilities.

According to the results shown in Table 4.1, the sub grand mean of items related to the reading activities was 3.6. The majority of the subjects indicated that the reading activities are useful. They enabled them to comprehend the Internet-based reading materials better, improve their writing skill, speaking skill and motivate them to read. The number of students who indicated IBR helped them gain more self-control was considerable. The participants were satisfied with the comments and guidance given by the teacher, the reading activities, and would like to be assigned to the same reading activities next time.

The results presented in Table 4.2 showed the students’ positive attitudes towards reading materials. And for the subjects’ evaluation of IBM in relation with their language abilities, it was surprising to find that all of them confirmed that the IBM helped to improve their background knowledge and enrich their vocabulary. Their answer was relevant to the findings in 4.2 which show that their post-test results were significantly higher than pre-test. And more than 70% thought that IBM improved their cultural understanding.

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and fulfilled their needs. Motivation and attitude are critical factors determining the success in a learning process. It is believed that during the lengthy and often tedious process of mastering a foreign/second language (L2), the learners' enthusiasm, commitment, and persistence are key determinants of success or failure. After the treatment, though a large number of students show improvement in their vocabulary knowledge, attitudes, and comprehension skill, some of them did not achieve progress. That might be the students did not like the reading materials selected by the teacher. However, it was almost impossible to choose materials to suit all participants in this study, who were at different levels of proficiency.

VI. Conclusion
Over the past 20 years, a rich body of research has been conducted on IBM. The accelerating diffusion of technology in language teaching and learning, together with the increased naturalization of computer-mediated communication promises that the aspect will remain a critical area for research. This research with a positive outcome which is consistent with many previously done ones will contribute to the literature a good treatment to certain types of language learners. Although results are noticeable, limitations are inevitable. The source of IBM which is suitable with learners' language level at HaUI is still limited. Therefore, it seems to be a challenge for the researcher to select reading materials which are appropriate for all of the learners. Furthermore, the fact that post-activities were not varying should also be considered. These problems could be minimized if the teachers in the Faculty of Foreign Language at HaUI work together on selecting, designing more tasks for the post-activities.

VII. Recommendations
For teachers, they should orient students more carefully in term of the procedures as well as some computing skills before the action implementation phase to get them fully ready. Besides, teacher should invest more time to provide timely support and give detailed feedback on students' assigned tasks. Teachers may ask other colleagues and students to help while preparing the materials and evaluating learners' tasks. For learners, it is advisable that students should refuse the way of using dictionary while reading. "Translation-reading" habit can limit the speed at which students reads. Additionally, it is a good idea for learners to expand their reading comfort zone. When learners create a reading a habit, they read more and more and their reading comfort zone should expand. Finally, learners should find their own ways, take charge of their learning, and make their own opportunities for practice in using the language inside and outside the classroom.

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