Forming Text in PDAs for Special Education Students

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Abstract: - Use of mobile technologies in education has given way to new learning environments and thus to new learning opportunities. There are fields like special education which benefit from the flexible structure of mobile technologies. This study explains the process of forming text within a PDA project carried out with special education students.

Key-Words: - Mobile Technologies, PDA, Special Education, Hearing Impairment, Reading, Forming Text.

1 Introduction
Mobile technologies offer significant opportunities both for learners and educators in the process of knowledge society. Mobile technologies have the structure of independency of time and place, so mobile technologies have found themselves an important use in e-learning supported by mobile technologies (m-learning). Information can be accessible, free from time and place, via mobile technologies which have an opportunity such as wireless communication. Based on their portability and wireless communication features, handheld computers, help special education students’ in their education for example, mobile technologies allow for deaf and hard of hearing students reach verbal and written communication and learning experience. This study reveals some stages of a project regarding forming text. The project is called Mobile Technologies for Students with Hearing Disability (İBEM), and it offers use of mobile technologies in educational settings for hearing impaired students and tries to pinpoint the difficulties faced in practice. In this Project, supported by The Scientific and Technological Research Council of Turkey (TÜBİTAK) course materials, assignment and drills were delivered via handheld computers. No sooner the project was planned than the reading comprehension issue became the main issue. The students were hearing impaired and their reading level was below the level of their normal peers so a strategically manner should be taken. This presentation is written to give way to academicians who would like to work with special education students and want to learn to form a text for m-learning.

2 Learning to Read and Technology
Learning to read is the predominant focus of reading instruction in grades 1-3. However, in grade 4 and beyond, the focus shifts to reading to learn. This comment made by Edyburn is further emphasized as;
“For most literate individuals, the challenges of struggling readers are incomprehensible. As fluent readers, typically little cognitive energy is required to recognize and understand the meaning of a given text. It is difficult to imagine the frustration, embarrassment, and difficulty associated with every encounter with text. Multiply these feelings several times within each class period, by the number of hours spent each day in school, over the number of years spent in K-12 education, and it is easily to understand the
eroded self-concept and associated personal costs that result from not being able to read.” [2].

Hearing impaired children follow the same processes followed by their hearing peers during learning, but, because of their impairment, their language acquisition, reading comprehension, and written production are later realized in comparison to their intact peers [6,7]. However, the majority of efforts by assistive technology specialists to make reading materials accessible have involved scanning textbooks into the computer and teaching students to use text-to-speech software so they can listen to information that they could not read independently [2]. Not every technology can be a solution to every problem. It is very important to schedule your priorities and follow them. In our case, IBEM Project, we saw our problem was due to limited comprehension so we acted accordingly. Edyburn, suggested some text modification strategies and we chose the strategy below to carry on with the project [3].

<table>
<thead>
<tr>
<th>If the reading problem is due to</th>
<th>...the functional difficulty is</th>
<th>...then, AT consideration should explore</th>
</tr>
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<tbody>
<tr>
<td>Difficulty understanding due to limited background knowledge</td>
<td>Poor comprehension</td>
<td>locate comparable content at a lower developmental level</td>
</tr>
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</table>

3 Selection and Use of Reading Texts

As Edyburn puts it there is little interest in how the child completes a task in reading, the emphasis is usually on functional performance [4]. However in our case we needed the reading as a tool not as a result so we had to be careful to form the texts for our purpose to be fulfilled. It is known that “untouched” texts may be difficult for low level readers to comprehend so we had to form texts regarding the students’ levels and needs.

A literature review of text shows that text is the whole of words composing format, narration and punctuation, or it is writing either part of writing that has meaning unity. Text can be as the whole part of a novel, a story, a poem or it can be a paragraph taken from a story or from an article but text must have a meaningful unity [1].

There are two types of text as, Story text and Expository text:

1. Story text: The purpose of story texts is not only to teach but also to create. These texts are not based upon the provable facts or facts known from past. The grammar of the story explains how it is formed. Story grammars are set of rules that explain how the stories are formed. These rules make out the parts of the stories, relations between the parts of the stories, types of information in parts.

2. Expository text: These are texts that explain a subject in a direct and comprehensible way. The purpose is; to make the subject to be explained, to teach the knowledge related to the subject. The author uses a way of narration that is based upon explanation instead of using a narration special to himself. The author’s subjects are about objects and real things, there is no place given to imaginary world. Essay, critique, article, textbook are in this kind of writings.

Our project course was computer instruction so the text were expository in nature however the material we needed to load into PDAS should be chunked into units and simplified. Two experts and one teaching assistant worked on he language of the commercial material the course book. As known with the literature, there are four criteria regarding the selection of a reading text whether you are forming it or picking up a commercial material [5,7].

- Students’;
  - age
  - level of linguistic knowledge
  - interest
  - other courses in touch

In this project, besides paying attention to the above four components, the experts rearranged the sentences, simplified the vocabulary, and considered the past experiences of students in reading. While doing so, the text were not narrowed but rather arranged to the needs and comprehension of the hearing impaired students. The hearing impaired students use the reading strategies as well, but not as productive as the normal students [7]. Therefore, the strategies were worked with students on one-to-one basis as well as group works. A pilot study of reading texts was conducted in a question-and-answer session.

4 Conclusion

The project IBEM has taught us that the use of a technology for special education students may regard a careful planning all through the process. Use of a technology on its own sake might be a story, but use of technology for a function is a real adventure. A careful planning of forming the text was the main achievement of the project. The project which is due in June 2009 has been a fruitful experience combining mobile technologies and special education field.

References:


