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Teacher candidates’ use of questioning skills in during-reading and post-reading strategies

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Abstract

Reading is a complex cognitive process in which symbols are perceived through senses and interpreted. By using a set of strategies in pre-reading, during-reading and post-reading, individuals can achieve an effective reading process. To maintain the knowledge after the reading, post-reading strategies such as summarizing, answering comprehension questions about the text, combining and evaluating should be used. Questioning is one of the activities improving individuals’ comprehension and high-level cognitive processes in during-reading and post-reading. Questions asked after the reading are important since it facilitates comprehension by enabling the readers to synthesize new knowledge with the pre-existing one, enrich their imagination, and improve their creativity. The aim of this study is to identify Turkish language teacher candidates’ level of questioning skills in while-reading and post-reading strategies.

Keywords Teacher Candidates, Questioning Skills, Fictional Text, Informative Text

1. Introduction

Reading is a complex cognitive process during which symbols are interpreted by perceiving through senses. Reading can also be described as a complex emotional and cognitive activity consisting of elements such as seeing, attention, focusing, perceiving, recalling, sense-making, synthesizing, analyzing, interpreting, and pronouncing (Karatay, 2010).

Reading activity is an active process improving individuals’ information capacity, shaping their thoughts, beliefs, and personality. This process is an intellectual activity in which one’s biological, psychological, and physiological characteristics are involved. The primary aim of this activity is comprehension. There has been many definitions regarding the reading activity, but basically, they are based on comprehension (Epcacan, 2009).

For the purposes of a reading comprehension activity, individuals use some set of strategies before, during, and after the activity. Akkaya (2011) listed these strategies as: scanning, examining and making assumptions about the text before reading; defining words, making relations, visualizing them in mind, seeking answers and asking questions, focusing on the purpose and validating the assumptions, note taking, identifying complex points during reading; summarizing, answering the comprehension questions about the text, combining, and evaluating after reading.

The strategies used during reading help individuals stimulate their critical thinking and metacognitive skills. The curriculum of the Turkish Language Teaching program aims at improving students’ comprehension, ranking,
relating, categorizing, questioning, criticizing, predicting, synthesizing, interpretation and evaluation skills. In the program, through reading skills, students being able to read written texts encountered in daily life in an accurate and fluent way using appropriate techniques, and having a reading habit are the desired outcomes (Ministry of Education, 2006).

Today, educational programs are formed through a more socialized interaction. The importance of learning and teaching for thinking has increased, and the concepts of critical thinking, problem solving, and creative thinking have emerged (Buyukalan, cited in Can, 2006). The most crucial step of thinking is asking questions. Questioning is a technique that stimulates thinking process. In every setting that thinking takes place, there is real learning. More clearly, learning is being meaningful and quick in situations when individual’s mind is open to learning and when he tries to find answers for the questions he/she encountered (Robbins, 1995; Koray, Altuncekcic and Yaman, 2005).

Enabling more effective learning is only possible through producing questions towards all of the cognitive processes. Cognitive processes are used in identifying, recalling and interpreting information, in forming concepts and generalizations, and in verifying all these (Asici, 1998; Ozcelik, 1987; Ozbay, 2002; Aydemir & Ciftci, 2008). Questions leading to direct and simple answers do not improve students’ thinking skills. However, questions related to old and new information and which leads the individual to reach some particular values are beneficial for thinking skills.

In categorizing questions into lower order and higher order cognitive processes, Bloom’s taxonomy has been widely used (Koray et al, 2005; Can, 2006; Genç, 2006; Aydemir & Çiftci, 2008). In Bloom’s taxonomy, knowledge, comprehension and application represent lower level cognitive processes; analysis, synthesis and application higher level cognitive processes.

Teacher candidates need to be competent in using these processes in order to improve their future students’ cognitive skills. For this reason, it is important to identify teacher candidates’ use of cognitive processes.

2. Method

The aim of this study is to identify the cognitive level of questions teacher candidates prepared while using reading strategies. In the study, general screening model was used.

2.1 Sampling

The population of this study is 1080 students studying at the Turkish Language Teaching Department of Buca Faculty of Education, Dokuz Eylul University. The participants are randomly sampled 194 students in their 1st and 3rd years.

2.2 Data Collection Instruments

To gather data, as an informative text sample, Nurullah Atac’s article ‘The Function of Literature’ in Emir Ozdemir’s book ‘Critical Reading, and as a fictional text sample, a story by Ferit Edgu named ‘Ciglik’ were used in the study. The fictional text given to one group, and the informative text to the other group. They were asked to read these texts using reading strategies. During their strategy use, they were also asked to prepare five questions related to the texts. Afterwards, the texts were read by the researchers three times and the questions prepared by students were grouped according to Bloom’s taxonomy. After grouping, they were checked twice. Later, the data was analyzed using SPSS version 17.0.

2.3 Data Analysis Techniques

Frequency analysis was carried out to see the differences in terms of the levels of questions related to the texts among 1st and 3rd year students.
3. Findings

In this study, the questions prepared by 194 students studying Turkish language teaching related to the texts given to them were analyzed. Each question was categorized according to Bloom’s taxonomy. The findings from the six levels in the categorization were examined in Table 1, 2, and 3. Figure 1 shows the percentiles of the questions according to cognitive levels.

<table>
<thead>
<tr>
<th>Table 1. Distribution of the groups participated in the study</th>
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<tbody>
<tr>
<td><strong>N</strong></td>
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<tr>
<td>Statistic</td>
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<tr>
<td>1st Year Inf. Texts</td>
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<tr>
<td>3rd Year Inf. Texts</td>
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<td>1st Year Fict. Texts</td>
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<tr>
<td>3rd Year Fict. Texts</td>
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<td>Valid N (listwise)</td>
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Mean score of the distribution of the first year students’ questions for the informative text according to cognitive levels was 13,1042. Mean score of the distribution of the third year students’ questions for the same text type was 14,70832. This means that there is a difference between first and third year students in the level of questions prepared, but this is not a meaningful difference. In terms of cognitive level, these questions were close. The mean score of the questions for the fictional text prepared by the first year students was 13,4255. The mean score of third year students’ questions for fictional text was 15,4902. There is a meaningful difference between the levels of question prepared by these students. The third year students used more questions from higher level cognitive processes compared to first year students.

The categorization of the students’ questions for the informative text into cognitive levels is shown in Table 2.

<table>
<thead>
<tr>
<th>Table 2. The categorization of the questions for the informative text into cognitive levels.</th>
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<tbody>
<tr>
<td><strong>1st Years</strong></td>
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<tr>
<td>11</td>
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<tr>
<td>3rd Years</td>
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</table>
For the informative text type, the first and third year students prepared 240 questions each. There are no questions at the application and synthesis levels among the questions prepared by the first year students, and there is one question at the evaluation level. However, there are 11 questions at the knowledge level, 150 at the comprehension level, and 78 at the analysis level. Different number of questions at different levels can be found in the questions prepared by third year students. There are one question at the at the knowledge and application level, 135 at the comprehension level, 91 at the analysis level, 4 at the synthesis level, 8 at the evaluation level. However, the number of questions at the higher level cognitive levels are not satisfactory. In addition to this, the fact that there is no difference between first and third year students in terms of question levels shows that the year of studying has no effect on questioning skills.

The distribution of the questions for the fictional text according to cognitive levels is shown in Table 3. In the fictional text type, the first year students prepared 235 questions, and third year students 255 questions.

Table 3. The categorization of the questions for the fictional text into cognitive levels

<table>
<thead>
<tr>
<th></th>
<th>Knowledge</th>
<th>Comprehension</th>
<th>Application</th>
<th>Analysis</th>
<th>Synthesis</th>
<th>Evaluation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Year</td>
<td>26</td>
<td>131</td>
<td>-</td>
<td>57</td>
<td>11</td>
<td>10</td>
<td>235</td>
</tr>
<tr>
<td>3rd Year</td>
<td>3</td>
<td>123</td>
<td>-</td>
<td>112</td>
<td>9</td>
<td>8</td>
<td>255</td>
</tr>
</tbody>
</table>

Table 3 shows that none of the students asked questions at the application level. The first year students asked 26 questions at the knowledge level, 131 at the comprehension, 57 at the analysis level, 11 at the synthesis level and 10 at the evaluation level. The third year students prepared 3 questions at the knowledge level, 123 at the comprehension level, 112 at the analysis level, 9 at the synthesis level and 8 at the evaluation level. When the questions for the two text types are compared, it can be seen that the fictional text questions included more questions at the higher cognitive levels then the informative text questions. There is a meaningful difference in the distribution of questions to cognitive levels according to the text types.

In the figure above, the percentile distribution of the questions for both text types prepared by the first and third year students is shown. In the histogram, it can be seen that 60% of the questions are at the lower cognitive levels, 40% at the higher cognitive levels. This means that teacher candidates are not able to use their higher cognitive levels since most of the questions are at knowledge and comprehension level.
4. Discussion

The best way to make learning process more effective, lead individuals to critical thinking and producing information is to ask questions. However, questions are valuable if only they are at the higher cognitive levels. Questions at knowledge, comprehension and application do not require any cognitive activity rather than recalling. Questions at analysis, synthesis and evaluation level are more effective at comparing old information with new, reaching value judgments and creating new information.

The results of the study show that the teacher candidates participated in the study are not at the desired level in asking questions at the higher cognitive levels during the process of using reading strategies. The most frequent questions encountered are at the comprehension level. There are limited number of questions the higher cognitive levels of synthesis and evaluation. Many studies examining questions (Sagir 2003; Akbulut 1999; Cepni and Azar 1998; Mutlu, Usak and Aydogdu 2003; Cepni et al, 2001; Stokes and Milner, 2003; Harrop and Swinson, 2003; Karamustafaoglu et al, 2003; Genc, 2006; Koray et al, 2005; Aydemir, 2008) has found that students are not good at asking questions.

In order to stimulating students’ cognitive processes, teachers should feel themselves should feel themselves competent in this area. Particularly, it is a necessity for teachers to acquire these skills in pre-service term (Koray et al, 2005). The courses should include more activities related to asking and preparing questions to be able to produce higher level questions.

Although the higher level cognitive processes towards comprehension and learning are more intense in informative texts, the questions asked were found to be at the lower levels. For this reason, activities towards higher level cognitive processes in which students make analysis, synthesis and evaluations on articles and similar informative type of texts should be included in the courses.

References


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