ELT Students’ Attitudes toward the Effectiveness of the Anti-Plagiarism Software, Turnitin

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ABSTRACT

Students assessment is one of the essential components of education to evaluate the effectiveness of a program and decision makings. Anti-plagiarism software packages are widely used in many universities and institutions to assess students’ performance in their assignments and papers and to give them feedback. This study attempted to investigate students’ background and familiarity regarding the concept and kinds of plagiarism, their reasons for plagiarizing, suggestions for avoiding it, and their attitudes toward effectiveness of the anti-plagiarism software Turnitin. Using survey and open-ended questions, followed up by interview, in this study we analyzed collected data from 42 university students in the department of English Language Teaching (ELT) in North Cyprus. This study triangulated data collection tools by using surveys and interviews, also the data were analyzed with SPSS 21.0. The results of survey revealed the students’ familiarity with the concept and kinds of plagiarism and their reasons for plagiarizing, open-ended questions concerned with ways of avoiding plagiarism, their attitude toward effectiveness of the anti-plagiarism software, specifically Turnitin and their previous formal studies about plagiarism. In additions, the interview focused on confirmation of survey and open-ended questions as well as the extent of intentionality of plagiarizing and their extra suggestion.

Keywords: ELT; Anti-plagiarism software; Turnitin.

1. Introduction

The crucial aim of education is improving students’ knowledge, but there are many barriers in this way. Plagiarism as one of these barriers is a concern of education, especially since the last two decades. Growth of technology and availability of information has made plagiarism easier than ever. According to Youmans (2011), “Widespread access to the internet and other electronic media has served as something of a double-edged sword with respect to plagiarism” (p. 750). To deter students against this unethical issue, academic community has used different anti-plagiarism softwares, among them is the recent and famous plagiarism checker Turnitin.

Plagiarism

The concept of plagiarism has been defined differently through literature. Plagiarism is defined by Park (2003) as literary stealing words or ideas of others and using it in one’s own work without
giving reference. According to Larkham and Manns (2002), most of the academic institutions consider plagiarism as kind of cheating. Moreover, although there is a consensus in academic field that plagiarism is an academic dishonesty, but again there is not any positive attitude in motivating researchers to follow plagiarism and it remains prohibited worldwide. One reason for considering plagiarism as an issue in academic field can be that students mostly misunderstand it (Scanlon, 2007). In the last two decades, there have been many studies on this area (Sims, 2002; Kenny, 2007; Stapleton, 2012; Pecorari & Petrić, 2014; Akçapınar, 2015). The concept of plagiarism for students of Asian countries differs from European students (Gerding, 2012). While European students see copying others’ work as honor, in Asian culture, students thought altering original work is a kind of disrespect to author (Stowers & Hummel, 2011). This issue may make the concept of plagiarism more complicated. Plagiarism can be copying whole work (Braumoeller & Gaines, 2001), some important portions of someone or even paraphrasing it without quotations or giving references (Warn, 2006). Braumoeller and Gaines (2001) mentioned that even though the original source is cited in copied or paraphrased pieces of work, inappropriate citation leads to considering it as plagiarism.

### Intentional and unintentional plagiarism

Although many people consider plagiarism as kind of academic cheating, intention of writers or students is not always clear. Plagiarism can be textual, which is unintentional copying or prototypical in which student or writer intents to deceive (Pecorari, 2003). In prototypical, the intention is clear, but in textual many causes may constitute plagiarism such as carelessness in writing reference, quotation mark, and page number, while the original author is cited. Moreover, if paraphrase is too close to the origin it may be considered as textual plagiarism (Stapleton, 2012). In her study, Shi (2004) identified categories and sub-categories of contextual plagiarism. According to her there are three levels; first without reference, second with reference and last with quotation. First and second categories have three sub-categories, which are exact copy of original work, slightly modified by deleting or adding some words and paraphrasing close to the original work.

### Anti-Plagiarism Software

One prevalent way of preventing writers and students from plagiarism is the plagiarism checker or anti-plagiarism software. When a certain work is uploaded, the software after quick whirling in its database which includes e-books, journals, magazines, online documents and students’ papers, shows matching and plagiarized parts and its percentage (Paulson, 2002). The software helps journals and institutions in detecting writers and students’ plagiarism, instead of manually searching in millions of documents. Moreover, with providing feedback, it can deter students from future plagiarism and at the same time improves their writings. There are different anti-plagiarism softwares with various abilities and detectiveness such as Turnitin, Safe Assign, Digital books Web browsers, Plagiarism Detect.com, Viper, EduTie, PlagiServe, iThenticate, and WCopyfind (Ali, 2013).

### Turnitin

*Turnitin* is one of the famous and prevalent anti-plagiarism software in faculty, which claims to be trusted by 15,000 Institutions in 135 countries and 30 million students (Turnitin, 2017). The Turnitin software detects matches between the uploaded paper and the content of its database Turnitin (2017) claims that, in a very short time period, institutions will be provided with a completely differentiated learning experience which can raise students’ outcomes and 77% of students confirmed their improvement in writing by feedback studio. In line with this claim, Rolfe (2011) in his work found that students’ use of Turnitin had significant impact on their writing. Moreover, originality report of students work by Turnitin may help them learn about ethical issue about dishonesty (Zeman, Steen, & Zeman, 2011). In addition, teachers growingly adopt Turnitin for online grading, in order to provide more significant feedbacks, enhance their learning process, and save their own time (Turnitin, 2017).

However, there is criticism on anti-plagiarism services, specifically on Turnitin. One of the
important criticism on Turnitin is the issue of keeping students’ previously submitted work without their consent and matching them with newly submitted work for making money (Doland, 2006). Jones and Moore (2010) point out that Turnitin in some ways (e.g. replacing the letter “I” with number “1”, which are the same in Times New Roman font, expected font of submissions) could be deceived, and disabled from detecting the similarities. Moreover, Turnitin cannot distinguish whether matching words are within quotation marks or not (Warn, 2006; Amin, 2017).

Previous studies considering plagiarism show that there is not enough research in Asian counties (Rezanejad & Rezaei, 2013). In addition, majority of these studies were in the field of medical science rather than social science (Macnab & Thomas, 2007; Sikes, 2009; as cited in Ahmadi, 2014) and only few studies (Mu, 2010; Rezanejad & Rezaei, 2013; Ahmadi, 2014) have been done in the field of ELT. In a recent study, Nemati (2016) who investigated the perception of students from different majors in Iran found out that low level of English and insufficient training regarding plagiarism is students’ reason for plagiarizing. In contrast, in a study of exploring students’ reasons for plagiarizing by Ahmadi (2014), results revealed that students did not show a negative feelings and attitude about plagiarizing. Following the literature, this study seeks to answer the following research questions:

1. Which predetermined definition of plagiarism is more preferable for ELT students?
2. To what extent are ELT students familiar with plagiarism?
3. What are the reasons behind ELT students’ plagiarism?
4. How can instructors help the ELT students avoid plagiarism?

2. Method

2.1. Participants

In total, 42 university students in the department of English Language Teaching (ELT) in North Cyprus (12 PhD, 15 Masters and 15 BA students) were participants of this study. Availability sampling (convenient technique in particular) was used for selecting the participants. According to Farhady (2008), in availability sampling, participants are selected based on their availability and willing to participate in the research. As Table 1 shows, their age ranged from 20 to 45, and they were from various countries, mostly North Cyprus, Iran, Iraq, and a number of Arabic and African countries. In each semester, ELT students, based on their degrees, are required to do various projects, which obligate them to write and submit those projects as soft copy or hard copy.

<table>
<thead>
<tr>
<th>Level</th>
<th>Number</th>
<th>Age</th>
<th>gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD Students</td>
<td>12</td>
<td>26-45 (average 29.7)</td>
<td>10 Females-2 males</td>
</tr>
<tr>
<td>MA Students</td>
<td>15</td>
<td>23-33 (average 26.2)</td>
<td>8 Females-7 males</td>
</tr>
<tr>
<td>BA Students</td>
<td>15</td>
<td>19-28 (average 21.2)</td>
<td>13 Females-2 males</td>
</tr>
</tbody>
</table>

2.2. Instruments

This study triangulated data collection tools by using surveys and interviews. Triangulation is “the use of two or more methods of data collection in the study of some aspect of human behaviour’ (Cohen, Manion, & Morrison, 2007, p.141) and helps to strengthen the validity of data (Briggs, Morrison, & Coleman, 2012).

The survey adopted from an article by Rezanejad and Rezaei (2013) in which they explored students’ perception and attitudes toward plagiarism. We revised some parts of the survey and added some open-ended questions, followed by a pilot study of the survey, apart from the focal participants (Appendix 1). To ensure its reliability and validity, the researchers modified some
parts based on results of the pilot study and the final survey consisted of 24 questions in three parts. The first part was concerned with familiarity of students with the concept of plagiarism and included six questions. The next six questions contained items to investigate the perceptions of students toward plagiarism. And in the last part of the questionnaire, 12 questions were designed to understand the reasons behind plagiarism.

2.3. Procedure

Before distributing the surveys, all the participants signed the consent form, and they were informed about their rights as volunteer participants and about the nature of study. Answering survey and open-ended questions took around 20-25 minutes. After collecting survey data, exploratory data analysis was used to analyze survey data to get an idea of what was there. In exploratory data analysis, attempts were made to identify the major features of a data set of interest and to generate ideas for further investigations (Cox, & Jones, 1981). For analyzing open-ended questions, thematic analysis was used. Thematic analysis gives “a rich description of the data set, or a detailed account of one particular aspect” (Braun & Clarke, 2006, p. 6-11).

After analyzing data from survey and open-ended questions, the researchers decided to revise the predetermined interview questions according to participants’ answers to survey and open-ended questions. Based on availability of the students (availability sampling), six of them (2 PhD, 2 Master, and 2 BA students) were chosen for interview to get more in-depth results, illustrate some ambiguous answers, and make the results more reliable. Each interview lasted about 15 minutes and it was audio-recorded with participants’ consent. The collected data from students’ interviews were transcribed immediately after each interview, and using the thematic analysis, the transcribed data were analyzed.

3. Results

Surveys were distributed among 42 ELT students and all answered the surveys. However, only 39 of them answered the open-ended questions. As mentioned before, after collecting data from survey and open-ended questions, six participants were interviewed and the results of the surveys and the interviews collectively were categorized into the following themes:

1. Preferable definition of plagiarism by students
2. Familiarity to the concept of plagiarism
3. Reasons for student plagiarism
4. Teaching about avoiding plagiarism
5. Ways to avoid plagiarism
6. Experience of anti-plagiarism software such as Turnitin and its effectiveness

The first three categories were based on survey and the last three were according to open-ended questions.

Results of Surveys

Descriptive statistics of the first part of the survey which consisted of 6 questions are shown in Table 2. In discussion of results strongly agree and agree are considered as agree and strongly disagree and disagree as disagree.

As Table 2 shows, all of the students agreed that first item which is using words of others as their own was a kind of plagiarism. For the second item, using someone else’s idea in their own work, more than 95% considered it as plagiarism and only two (4.9%) students had no idea about this item. Similarly, for third item more than 95% accepted that presenting results of others in their work is plagiarism; however, two participants (4.9%) did not consider this item as plagiarism. Unlike
other definitions of plagiarism in (items 1, 2, 3), more than 80% of students believed that getting their ideas from books is not plagiarism, whereas only about 12% (5 students) saw it as plagiarism and three (7.3%) students did not have any opinion.

Table 2. Preferable definition of plagiarism

<table>
<thead>
<tr>
<th>Definitions of plagiarism</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Plagiarism is using someone else's words as if they were your own</td>
<td>39 (95.1%)</td>
<td>2 (4.9%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>2. Plagiarism is using someone else's ideas as if they were your own.</td>
<td>37 (90.2%)</td>
<td>2 (4.9%)</td>
<td>2 (4.9%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>3. Plagiarism is using someone else's results as if they were your own</td>
<td>36 (87.8%)</td>
<td>3 (7.3%)</td>
<td>0 (0%)</td>
<td>2 (4.9%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>4. Plagiarism is getting your ideas from a text book</td>
<td>5 (12.2%)</td>
<td>0 (0%)</td>
<td>3 (7.3%)</td>
<td>17 (41.5%)</td>
<td>16 (39%)</td>
</tr>
<tr>
<td>5. Plagiarism is copying and pasting without acknowledging the original source.</td>
<td>37 (90.2%)</td>
<td>4 (9.8%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>6. Plagiarism is getting ideas from a source and paraphrasing them but without acknowledging the original source.</td>
<td>27 (65.9%)</td>
<td>4 (9.8%)</td>
<td>3 (7.3%)</td>
<td>1 (2.4%)</td>
<td>6 (14.6%)</td>
</tr>
</tbody>
</table>

In item number five like the first item, all students believed that copying something and using it without addressing the exact source is plagiarism. Although seven (17%) students rejected that if they paraphrase ideas of a source and use it without giving reference is a kind of plagiarism, 31 (75.7%) students acknowledged it and 3 neither agreed nor disagreed.

Results of Table 3 showed that except 2 students, who did not have ideas, all other students (95.1%) agreed that when there a joint assignment, only one of the researchers publish it only under his/her names is a kind of plagiarism. All of the students approved that copying the exact assignment of their friend is considered as plagiarism. In item 9, although majority of students (more than 90%) acknowledged a friend who copied their exact assignment is accused of plagiarism, four of them disagreed. All students in item 10 concurred that submitting works of others under their own names is plagiarism. Thirty-nine of students (more than 95%) believed that submitting an article with only their names, which is done by their friends or professors too, is plagiarism, while two of them did not consider it as plagiarism. Forty participants acknowledged that they will be accused of kind of plagiarism if they use survey of other articles and do not acknowledge its exact source, whereas only one student did not agree with this item.
Table 3. Kinds of plagiarism based on participants’ perception.

<table>
<thead>
<tr>
<th>Kinds of plagiarism</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>P</td>
<td>N</td>
<td>P</td>
<td>N</td>
</tr>
<tr>
<td>7. Submit an assignment produced as a joint effort but under your name only.</td>
<td>30</td>
<td>9</td>
<td>2</td>
<td>4.9%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>73.1%</td>
<td>22%</td>
<td>4.9%</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>8. Copy a completed assignment of your friend</td>
<td>37</td>
<td>4</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>90.2%</td>
<td>9.8%</td>
<td>0%</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>9. Lend a completed assignment to a friend who then copies some parts of it.</td>
<td>27</td>
<td>10</td>
<td>0</td>
<td>3%</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>65.9%</td>
<td>24.4%</td>
<td>0%</td>
<td>7.3%</td>
<td>1</td>
</tr>
<tr>
<td>10. Pass off someone else’s work as your own and for your own benefit</td>
<td>38</td>
<td>3</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>92.7%</td>
<td>7.3%</td>
<td>0%</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>11. You work on a term project with your classmates/professor and submit the article under your name only.</td>
<td>32</td>
<td>7</td>
<td>0</td>
<td>2%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>78%</td>
<td>17.1%</td>
<td>0%</td>
<td>4.9%</td>
<td>0</td>
</tr>
<tr>
<td>12. Take a survey from an article and work on it without acknowledging the source and writer.</td>
<td>36</td>
<td>4</td>
<td>0</td>
<td>1%</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>87.8%</td>
<td>9.8%</td>
<td>0%</td>
<td>2.4%</td>
<td>0</td>
</tr>
</tbody>
</table>

Based on the results of Table 4, all of the students agreed that the first reason for plagiarizing is that it is easy, which is first item (number 13). Thirty-two students (78%) chose item number 14, lack of competency in English, as the second reason. The third reason based on students’ perception with more than 73% agreement, was item number 17, consequences of plagiarizing.

Other important reasons with the same percentage (63.4%) were item 15, lack of time for doing their projects, and item and item 21, difficulty in changing original well-written text.

However, 28 students (68.3%) disagreed with item 18 and 22, respectively carelessness of professors about plagiarizing of students and lack of transparency in university rules regarding plagiarism. Moreover, students’ answers showed that the following items could not be reasons of students for plagiarizing:

- Item 19: There is not any difference between someone who plagiarized and others who did not (65.8% disagree).
- Item 20: Because others do it (61% disagree).
- Item 23: Irresponsibility of universities, regarding helping students avoid plagiarizing (58.5% disagree).
- Item 24: There is no consequence of doing plagiarism (61% disagree).
Table 4. Reasons of plagiarizing

<table>
<thead>
<tr>
<th>Reasons of plagiarizing</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. It is easy to plagiarize.</td>
<td>22</td>
<td>19</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>53.7%</td>
<td>46.3%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>14. They do not have a good command of English</td>
<td>13</td>
<td>19</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>31.7%</td>
<td>46.3%</td>
<td>22%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>15. They usually do not have enough time to meet the deadlines</td>
<td>13</td>
<td>13</td>
<td>0</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>31.7%</td>
<td>31.7%</td>
<td>0%</td>
<td>12.2%</td>
<td>24.4%</td>
</tr>
<tr>
<td>16. Professors do not pay much attention to detect plagiarism</td>
<td>1</td>
<td>5</td>
<td>9</td>
<td>15</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>2.4%</td>
<td>12.2%</td>
<td>22%</td>
<td>36.6%</td>
<td>26.4%</td>
</tr>
<tr>
<td>17. They do not know much about the severity of plagiarism and its consequences.</td>
<td>9</td>
<td>21</td>
<td>11</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>22%</td>
<td>51.2%</td>
<td>26.8%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>18. Most of the professors themselves do not care much about term projects, and they only think of our exam papers as a criterion for our final grades. I prefer to spend more time on reading for the exam rather than doing my term projects.</td>
<td>0</td>
<td>4</td>
<td>9</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>9.8%</td>
<td>22%</td>
<td>29.2%</td>
<td>39%</td>
</tr>
<tr>
<td>19. There is no difference in teachers’ evaluation of the plagiarized and non-plagiarized projects.</td>
<td>0</td>
<td>6</td>
<td>8</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>14.6%</td>
<td>19.6%</td>
<td>31.7%</td>
<td>34.1%</td>
</tr>
<tr>
<td>20. Everyone else is doing it.</td>
<td>0</td>
<td>12</td>
<td>4</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>29.2%</td>
<td>9.8%</td>
<td>19.6%</td>
<td>41.4%</td>
</tr>
<tr>
<td>21. They feel the original text is well-written and difficult to be changed.</td>
<td>5</td>
<td>21</td>
<td>11</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>12.2%</td>
<td>51.2%</td>
<td>26.8%</td>
<td>0%</td>
<td>9.8%</td>
</tr>
<tr>
<td>22. Because of the lack of clarity in university regulations.</td>
<td>0</td>
<td>4</td>
<td>9</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>0%</td>
<td>9.8%</td>
<td>22%</td>
<td>31.7%</td>
<td>36.6%</td>
</tr>
<tr>
<td>23. Universities do not take responsibilities for teaching students what is considered as plagiarism</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>17</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>19.6%</td>
<td>14.6%</td>
<td>7.3%</td>
<td>41.4%</td>
<td>17.1%</td>
</tr>
<tr>
<td>24. Because of the same treatment to those who plagiarize and those who don’t.</td>
<td>2</td>
<td>11</td>
<td>3</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>4.9%</td>
<td>26.8%</td>
<td>7.3%</td>
<td>22%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Results of open-ended questions

From 42 participants 40 answered the open-ended question for the interview part. Results were analyzed based on the following themes: a) Teaching avoiding plagiarism; b) Ways to avoid
plagiarism; c) Experience of anti-plagiarism software such as Turnitin and its effectiveness.

a) Learning about avoiding plagiarism

Results showed that although 25 students (61\%) acknowledged that they have been taught about plagiarism and ways of avoiding it during their BA and MA studies, they mostly noted that it was not enough. On the other hand, 16 students (39\%) claimed that they have not been taught about plagiarism and how to avoid it or it was insufficient. Overall, although most of the students answered with yes or no, their answers mostly were not clear cut because even when some of them answered with yes, later they complained their lack of information:

- Yes, but not in formal manner. The university had academic support service, where they would help us (Participant 14).
- No, I mean, no such detailed information was given or we haven’t talked about the “plagiarism” for on complete session. Each and everyone was responsible for learning it on your own, which generally ended up with “not caring about it” for most of the students (Participant 8).
- I’ve been warned but not taught! (Participant 22).

b) Ways to avoid plagiarism

Analyzing participants’ answers showed they mostly (more than 70\%) suggested formal training about ways of avoiding plagiarism and acknowledging the original reference is the best that help students avoid plagiarizing. Moreover, they pointed out that university and professors can do it through a complete course, seminars, conferences, or workshops. However, there were some suggestions for giving penalty and less grades for those students who plagiarized and giving more time for their projects.

- Students might not plagiarize if there is enough time for project submission… (Participant 26).
- Hard grading may raise awareness about plagiarism, -teaching techniques to avoid plagiarism (Participant 33).
- Specific courses of what plagiarism is and its consequences (Participant 3).

c) Experience of anti-plagiarism software such as Turnitin and its effectiveness

According to their answers, more than 90\% of participants (38 students) believed that plagiarism checkers such as Turnitin is effective. However, more than 80\% of them (33 students) complained about some defects of Turnitin such as detection of quotes as plagiarism, even when reference is given and probability of deceiving Turnitin.

- It is effective, however the results are sometime exaggerated (especially when considering references as plagiarized parts) (Participant 33).
- Anti-plagiarism is a good instrument for plagiarism check but not very effective in plagiarism prevention, because smart students have ways of going around the program, without being detected (Participant 26).

Results of Interviews

After cross-analysis of the interview with the collected data of survey stated after any questionnaire analysis, it was revealed that most of comments of participants were compatible with the survey data. There were also some questions in the interview that were not considered before in the survey and open-ended questions. They were categorized in two subtitles: Extent of intentionally and students’ suggestions.

a) Extent of intentionality

Results of the interview showed PhD students are less likely to plagiarize in their projects and most of their plagiarized parts based on Turnitin results is unintentionally and mostly due to quotation and referencing.
I always try to avoid plagiarism, but most of the time after submitting my projects I see that I have some amount of plagiarism in my Turnitin results. I think most of them is not my fault and is defect of Turnitin that shows quotations as plagiarism; also, if you write something like “Results of the study showed that” it detects as similarity because most of the studies use this phrase (Participant 40-PhD).

On the other hand, undergraduate and master students mentioned that sometimes they intentionally plagiarize and sometime it is because of their lack of knowledge and time for paraphrasing and acknowledging the original sources.

To be honest, sometimes I copy and paste some part of texts, especially when I don’t know how to paraphrase or I don’t have time to do it… (Participant 11).

b) Students’ suggestion

Students had various suggestions for avoiding plagiarism and improving their writings. Master and undergraduate students’ suggestions were about more training regarding correct ways of giving reference and paraphrasing, while PhD students suggested that it is better professors check the plagiarized parts to see whether they were intentionally or unintentionally; in addition, professors use Turnitin before submission of projects not for submitting project.

We need more training and information about how to give reference and how to paraphrase and it’s better that professors give us feedback … (Participant 36-undergraduate).

I think it is better that professors do not use Turnitin for grading; it should be a tool for helping students. They should use Turnitin before submitting final copy of project and just for helping students to see plagiarized parts and after correcting, submit them (Participant 25-PhD).

4. Conclusion and Discussion

This study tried to find students’ general perception toward the effectiveness of the anti-plagiarism software Turnitin through triangulating the data, using survey with some open-ended questions and interview. Regarding the first research question, responses of students in survey showed that all participants agreed using words of others as their own is plagiarism. There is a consistency between this finding and findings of Rezanejad and Rezaei (2013). Although the participants’ responses to the second research question which is relating the kind of plagiarism showed familiarity of participants with the plagiarism, copying assignments of friends and submitting works of others as your own were two more recognized kinds of plagiarism, similar to the results found in the study by Rezanejad and Rezaei (2013).

In the spite of the fact that the results of survey revealed that the easiness of plagiarizing was the first reason for all participants, the interviews showed that participants based on their academic levels had different reasons for their plagiarizing. Comparably, Ereta and Gokmenoglu (2010) and Nemati (2016) achieved similar results to this part of the interview, and the results of survey in this regard are in agreement with Rezanejad and Rezaei (2013). These findings could be a justified answer for the third research question.

The fourth research question concerned students’ previous learning about avoiding plagiarism. Based on the results of open-ended questions, majority of participants (61%) acknowledged that it was not enough what they had been taught about plagiarism and ways of avoiding it in their previous studies, On the other hand, 16 students (39%) claimed that they had not been taught about plagiarism and how to avoid it or it was insufficient. In contrast, in her study, Nemati (2016) found out that students did not have previous learning about plagiarism.

In the answer to the fifth question, participants agreed that providing students with enough pedagogical strategies regarding plagiarism is the best way of preventing students from plagiarizing; this is in the same line with studies such as Howard (2007) and Yamada (2003).

Although in some studies (Stapleton, 2012; Ali, 2013), including the current study, the effectiveness of anti-plagiarism softwares such as Turnitin were identified, there are some
suggestions based on the interview part of this study to use Turnitin before submitting their final projects and receiving feedbacks from professors based on the results of Turnitin. These results are compatible with Akçapınar (2015). Furthermore, similar to the findings of Ali’s (2013) study about ways of minimizing students’ plagiarism, some students in the interviews pointed out that Turnitin had some limitations such as detecting quotations as plagiarism.

In this study it was identified that anti-plagiarism software such as Turnitin could be an effective deterrent against plagiarism. However, in order to maximize its effectiveness, it is suggested that in order to decrease the anxiety of students, it is better for professors to give their students appropriate feedback before submitting their works, and as much as possible give them feedbacks based on the results of Turnitin, especially for master and undergraduate students. According to Koul, Clariana, Jitgarun, and Songsriwittaya (2009), there were significant differences between perceptions of female and male students regarding plagiarism, but as a limitation, in this study, perceptions of males and females were not investigated. Furthermore, number of participants in the pilot study, and main participants in both survey and interview, were not statistically enough. Future study about the effect of professors’ feedback on students’ results of Turnitin could be valuable.
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Appendix 1

Table 5 Breakdown of pilot study participants

<table>
<thead>
<tr>
<th>Level</th>
<th>Number</th>
<th>Age</th>
<th>gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>PhD</td>
<td>2</td>
<td>26-28 (average 27)</td>
<td>1 Female- 1 male</td>
</tr>
<tr>
<td>Masters</td>
<td>2</td>
<td>23-26 (average 24.5)</td>
<td>1 Female- 1 male</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>1</td>
<td>22</td>
<td>1 Female</td>
</tr>
</tbody>
</table>