A Survey of English Majors’ Attitudes towards Critical Thinking

Based on the discussion of critical thinking and related studies, this study conducted a survey of 104 senior English majors in a university by using questionnaire, and applied Excel to analyze the data and explored English majors’ attitudes toward critical thinking. The study found that most English majors do not have a clear concept of critical thinking, but they acknowledge the importance of critical thinking in learning and holds high expectation to be trained in critical thinking. The study indicated that English major students' attitudes need to be taken into due consideration in the development of critical thinking, this study provides suggestions and implications for training English majors’ critical thinking.

Keywords: critical thinking; attitudes; English majors

Introduction

Critical thinking (CT) has become a buzzword which is of great significance in modern education. The so-called spoon-feeding instruction and rote training have been outdated instead heuristic teaching, so the students rather than teachers are put at the center in the process of learning. In the context of new curriculum, students should dare to question, to put forward critical and developmental opinions, and practical ability and innovative spirit should be developed among them. The last few decades have seen the great changes in the approaches of education. As a certain level of proficiency in English becomes essential to be successful, it is crucial to equip ourselves with certain abilities such as reasoning and analyzing, which is absolutely critical to acquire English as a foreign language. It is as a result of thinking critically that the students have the ability in applying their previous knowledge, evaluating and assessing their own thinking and changing their behavior (Norris.1985).

Language learning and critical thinking are intimately integrated. In fact, language learners who have developed critical thinking skills are capable of doing activities of which other students may not be capable. Mahyuddin et al (2004) argued that language learners with critical thinking ability are capable of using their thinking skills and of understanding language or its content, and finally become intellectually, physically, emotionally, spiritually well-balanced. As Brown (2004) argued, enhancing CT skills among language learners should be the purpose of an ideal language program.
As Paul Stapleton (2010) claimed, the lack of CT skills appears to span in education around the world. And many schools have made documents that outline the educational aims in schools and regard CT as one of their goals, perhaps because of the pervasive concern over the deficient CT of their students. For example, in the UK National Curriculum, under a section entitled “Values, Aims and Purposes,” (National Curriculum, 1999), it states, “[b]y providing rich and varied contexts for pupils to acquire, develop and apply a broad range of knowledge, the curriculum should enable pupils to think creatively and critically, to solve problems and to make a difference for the better.” However, in China, the research still mainly focuses on the measurement techniques of critical thinking, the investigation of critical thinking disposition, the application of critical thinking in teaching, and the cultivation of such abilities (Zhang Wenlan & Liu Bin 2010). There are few studies investigating students’ attitudes towards CT.

Whereas engendering CT in students is considered necessary, the actual understanding of the term remains unclear. At present, few studies have been done in the area of students’ attitudes toward CT. To shed more light on this issue, with the purpose of providing recommendations and implications on the development of CT, this study is conducted to examine English majors’ attitudes towards CT and its place in English learning. This study consists of five parts. The first section introduces the current situation of CT. The second section reviews the definition of CT and the relevant studies abroad and in China. In the third part, the methodology of this study is introduced. The fourth illustrates the result and the discussion of the data from three aspects. The paper ends with the findings, implications and limitations of the study.

**Literature Review**

**Defining Critical Thinking**

CT has been elaborate in various ways and many definition of it has been born depending on different disciplines. Halonen (1995:75) believed that “critical thinking scholarship is in a mystified state and no single definition of critical thinking is widely accepted”. Halpern (1998) argued that CT is the use of those cognitive skills or strategies that increase the probability of a desirable outcome, while Facione (1996) said that CT is non-linear, recursive process in which a person forms a judgement about what to believe or what to do in a given context. As Ivie (2001) put it, CT is the ability that enables individuals to establish clear and logical connection between beginning premise, relevant facts, and warranted conclusions. According to Astleitner (2007; cited in Mall-Amiri & Ahmadi 2014:489), critical thinking is a higher-order thinking
skill which includes evaluating arguments, and is a purposeful, self-regulatory
judgement which ends in interpretation, analysis, evaluation, and inference.
Browne and Keeley (2010) define CT as evaluating arguments based on logical
principles.

Although there is not widely acknowledged and accepted theoretical
definition for CT, all these definitions have a great deal of common ground that
CT has actually influenced almost every discipline and career because it is
associated with abilities including problem resolving and decision making
(Barjestech & Vaseghi 2012). Besides, many educators who are interested in
CT believed that CT involves two aspects: skills and dispositions; skills
(abilities) are the cognitive aspect and dispositions (attitudes) are the affective
aspect of CT (Alopaili 2011). Many educators interested in the second aspect
of critical thinking, so a broader perspective has been sought. As Perkins &
Ritchhart (2004:352) argued, “what makes a good thinker is now a question
that must be answered as much in terms of people’s attitudes, motivations,
commitments, and habits of mind as in terms of their cognitive abilities.”
Siegel (1988:23) has defined CT in the way as involving these two
components:” the ability to assess reasons properly and the willingness, desire
and disposition to base one’s action and beliefs on reasons”. And he also
emphasizes the disposition of critical thinkers who seek evidence for their
beliefs and views critical thinkers as those who have the disposition to properly
assess the force of reasons, conceiving critical thinking requiring both the
mastery of epistemic criteria that reasons must meet in order to warrant claims,
and the tendency or attitude to value and seek good reasoning. Supporting the
importance of disposition, Norris (1992) carried empirical research to test if
disposition of critical thinking exists. Later according to the definition of CT-
“reasonable reflective thinking that focuses on deciding what to believe and
do” (Ennis 1987:10), an intentional and motivational aspect of CT is
underlined, which has been termed by other scholars as “critical thinking
disposition” (Fciome 1990a; Halpen 1998).

In summary, the critical thinking has two aspects. The first is the ability to
analyze the information systematically so that the matter could be understood
comprehensively and critically and the problems would be solved in a better
way. The second is the attitude that desires to experience, to reflect and to seek
the reasoning for the belief and action.

Related Studies on Critical Thinking

Related Studies Abroad

Considering the importance of CT in education, Shirkhani and Fahim
(2011) stated that learners who have developed CT skills were successful in
accomplishing the activities that the other students may not be capable. Fisher (2003; cited in Malmir & Shourcheh 2012) believes that students do not have enough thinking skills to handle the problems they might face in education or in their daily life.

Related literature revealed that the number of studies conducting the attitude of CT increased in recent years. Stapleton (2011) did a survey of attitudes toward CT among 72 Hong Kong secondary school teachers and concluded that while the teachers had some understanding of CT, it was narrow and a precise understanding was lacking. Moreover, the participating teachers expressed strong support for the inclusion of CT in the curriculum, while showing a tendency for training in terms of how to instruct CT. Fatemeh, A. & Abdorreza, T. (2015) conducted a survey of EFL teacher’s attitudes towards critical thinking instruction, and appealed to teachers to realize the importance of teaching learners how to increase their ability to think critically. According to Kablin (2000), learners are in need of textbooks that evoke CT and teachers need to be trained to change attitude toward CT instruction. In order to help learners to foster their CT and decision making ability, it is necessary for teachers to educate themselves ideally and be aware of their enormous responsibility in the classroom. Mahmoodi-Shahrebabaki, P. and Yaghoubi-Notash, M. (2015) studied teachers’ and learners’ attitudes towards critical thinking skills in the Iranian EFL context. Both teachers and students show positive attitudes towards the new syllabus including critical thinking skills.

These studies provide good example of research questions, research methods and research frameworks for this study, which help build up the basis of this study. On the base of the foreign studies about the attitudes towards CT, it is necessary to conduct the survey to explore whether the differences exist when the characteristics of Chinese students are considered.

Related Studies at Home

The studies about critical thinking in China is not as abundant as abroad, especially studies about attitude towards critical thinking. And most studies are mainly about critical thinking teaching, the cultivation of the ability of CT and the disposition of CT.

As Zhao Haiping and Yu Chunni (2007) said, the cognition of CT and the disposition of CT is two independent aspects, which should be highlighted in the set of critical thinking curriculum. Therefore, CT education should be strengthened so that the situation that the education focuses far more on knowledge than ability can be redressed and the more creative talents will be cultivated. Huang Zhaoyang (2010) and Gao Zhiyuan (2013) concluded that students’ disposition of CT is not really clear. So he suggested that characteristic cognition and emotion cultivation should get enough attention
when the practice ability was trained. Li Xueshu (2011) has argued that in order to cultivate students’ critical thinking, teachers should change teaching concepts and pay attention to inspire critical thinking, focus on psychological quality, and develop critical thinking habits. With the rapid development of information technology, its relationship with critical thinking is getting closer and closer. As Zhang Wenlan & Liu Bin (2010) claimed, how to make information technology promote the development of advanced thinking has become central points of pre-information education research. Research subjects need to pay more attention to the study on information technology and critical thinking.

Some studies at home are mainly about the development of CT skills. And when it comes to CT teaching, most studies tried to illustrate the methods from two main aspects: students’ requirement or ability and the demands for teachers’ performance. Very few studies focused on students’ attitudes towards CT though it is a significant part for CT development. Therefore, it is necessary to investigate the students’ attitudes and their recognition towards CT so as to find more effective and practical methods to improve students’ critical thinking.

Methodology

Research Questions

The present study investigates English majors’ attitudes towards CT in EFL context, endeavoring to explore the situation of CT development of college students. This study is to answer the following questions:

1) What are English majors’ general attitudes towards CT?
2) Is there any difference of attitudes towards CT between normal English majors and non-normal English majors?
3) Is there any difference of attitudes towards CT between arts students and science students?

Participants

104 senior English majors (9 males and 95 females) at Ludong University were selected randomly to explore their attitudes toward CT. Among them, there are 67 normal English majors, 37 non-normal English majors. And concerning the different subjects chosen in their high schools, 82 are arts students and 22 are science students. They all have studied English for 13 years since third grade in primary school and they all have passed TEM-4, so they
are almost on the same level of proficiency in English.

Instrument

The survey instrument consisted of an eight-item Likert-style questionnaire adapted from a survey of EFL teachers’ attitudes towards CT (Fatemeh, A. & Abdorreza, T. 2015), the reliability of which was 0.721 and this index was higher than the minimum required (0.70) suggesting that the reliability of this questionnaire was acceptable. The instrument was the questionnaire with close-ended items, which is described by a five-point scale ranging from ‘strongly disagree’ to ‘strongly agree’. But the scores of item 4 to item 6 are reversed. The questionnaires explored (1) the participants’ attitudes on the meaning of CT (Item 1 is related to this aspect), (2) CT’s position in their learning process, especially in foreign language learning (Item 2 to item 7 show the importance of CT), and (3) the perceived need for training to enhance learning techniques in CT (item 8).

Data Collection and Data Analysis

The main goal of this study was to explore English majors’ attitudes towards CT. The main instrument utilized to collect the relevant data was attitude questionnaires which were distributed among 104 English majors including normal English majors and business English majors. Before administering the questionnaire to the main sample, the reliability that was the internal consistency within the questionnaire items was estimated. The process of the data analysis is as follows:

After ensuring the reliability of the questionnaires, they were administrated to the participants. Their anonymity was guaranteed and they were asked to complete the eight items and choose one of the options based on five-point Likert scale (1=strongly disagree, 2=disagree, 3=not sure, 4=agree, 5=strong agree). Then the data was analyzed and reported including mean, standard derivation, and the detailed analysis of each item which includes the frequency and percentage of the five levels of agreement. The findings of this attitude questionnaire were analyzed to determine the participants’ attitudes towards CT instruction. The Excel software was used to provide a descriptive analysis of the closed items of the questionnaire. Items that produced mean scores most distant from the mid-point, 3, indicate the strongest viewpoints while those closest to 3 exhibit the weakest. And the standard deviation reflecting the degree of dispersion was calculated to ensure the reliability of the experimental results. The process of analyzing the data is put in certain sequence: firstly the overall analysis, secondly the differences of attitudes towards CT between arts students and science students, and thirdly the differences of attitudes towards
CT between normal English majors and non-normal English majors.

Result and Discussion

General Attitudes

As the results shows, English majors do not quite ensure that they have a clear meaning of CT, while they realize the importance of CT and have a strong desire to improve it with the teachers’ training. As table 1 shows, the total mean is 3.68, which means that in general students have positive attitudes towards CT. And the positive attitudes can be analyzed from three aspects: firstly, the English majors’ attitudes towards the meaning of CT, secondly CT’s position in their learning process, especially in foreign language learning, and thirdly the perceived need for training to enhance learning techniques in CT.

<table>
<thead>
<tr>
<th>Item</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.14</td>
<td>0.67433</td>
</tr>
<tr>
<td>2</td>
<td>3.85</td>
<td>0.65016</td>
</tr>
<tr>
<td>3</td>
<td>3.57</td>
<td>0.84491</td>
</tr>
<tr>
<td>4</td>
<td>2.25</td>
<td>0.77271</td>
</tr>
<tr>
<td>5</td>
<td>4.27</td>
<td>0.75338</td>
</tr>
<tr>
<td>6</td>
<td>4.13</td>
<td>0.81321</td>
</tr>
<tr>
<td>7</td>
<td>4.12</td>
<td>0.74139</td>
</tr>
<tr>
<td>8</td>
<td>4.13</td>
<td>0.88885</td>
</tr>
<tr>
<td>Total</td>
<td>3.68</td>
<td>0.68253</td>
</tr>
</tbody>
</table>

Firstly, students are actually not sure that they have a clear idea of what the meaning of critical thinking is. They may just know the incomplete idea from the teachers, but did not learn any concrete and specific definition of CT from their textbook. And as they do not know clearly what CT is and are deficient in CT, more training and teachers’ instruction are needed so as to lead the way to understand and improve CT. As table 1 shows, the mean of item 1 is 3.14, which shows that English majors do not really ensure the clear idea of CT. And this was equal to 71.2% (N=74) of the total participants. Only 28.9% (N=30) think they know what CT is. And their conception may be incomplete and narrow in many cases, which is similar to the statement in the interview conducted by Stapleton, P. (2011). Basically, English majors do not have a quite specific definition of CT.
Table 2. Item 1: I have a clear idea of what the term 'critical thinking' means

<table>
<thead>
<tr>
<th>Level of agreement</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Disagree</td>
<td>16</td>
<td>15.4</td>
</tr>
<tr>
<td>Not sure</td>
<td>58</td>
<td>55.8</td>
</tr>
<tr>
<td>Agree</td>
<td>29</td>
<td>27.9</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>104</td>
<td>100</td>
</tr>
</tbody>
</table>

Secondly, learning CT is really important for English major students. And the teachers did some CT exercises into class. Maybe teachers and students have all realized the important position of CT in the process of learning. The mean of item 2, item 3, item 6 and item 7 is 3.85, 3.57, 4.13 and 4.12, which shows that they agree with the ideas that CT is an important part of study. Except that, from another point of view, for item 2, 77.9% of the participants (N=81) shows agreement to the importance of CT for learning. Yet, 3.8% of them (N=4) disagree with the item 2 and 18.3% of the students (N=19) cannot make sure whether CT skills are important or not. And for item 7, there are 85.6% students (N=89) agree that CT is especially important in foreign language learning. Simply 4 of them (3.8%) disagree with the special function of CT in foreign language learning. It means the majority of English majors realize the importance of CT and its significant position in foreign language learning. And the minority of students (N=15/P=14.4%) need to be inspired to show more initiative to know the benefit and function of CT so as to realized its importance in the process of learning. In addition for item 3, 62.5% of the total responses (N=65) shows the agreement to the idea that teachers build CT exercises into most of lessons. But 12.5% of students (N=13) disagree this idea. For item 6, 86.5% (N=90) students disagree that it was not the job of teacher to teach CT in the classroom. Only 4 of them (3.8%) agree with this idea. The data indicate that the majority respondents has learnt some knowledge of CT in their most lessons and approve of the crucial role of teacher in the courses of teaching CT. Since the majority students agree the CT is significant, more exercises and explanations of CT should be designed into classroom and teachers need to utilize appropriate learning materials and alternative method that are appropriate to teach critical thinking skills. And steps should be taken towards implementing the concrete measures so as to give CT a central role.

From the above data, it is easy to find that English majors in general are not good at critical thinking and it is necessary to increase the role of critical thinking into the curriculum. They may have not learnt the relevant knowledge about CT and have not enough confidence when it comes to that, but they find it is really important in their life and are quite willing to know more about CT. As table 1 shows, the mean of the item 4 is 2.25 shows that the students tend to agree this
idea. In terms of the frequency and percent, 71.1% of the students (N=74) agree that Chinese students in general are not good at CT. Only 6.8% (N=7) of the students disagree with this idea. The mean of item 5 is 4.27, which shows that they disagree the idea that it is not necessary to increase CT into curriculum. And 90.4% of the students announce that it is necessary to increase the role of CT into the curriculum. 2.9% of the students (3) report that they disagree with it. It indicates that the majority of students are aware of their deficiency in CT and desire to learn relevant knowledge of CT in their curriculum. It means the curriculum should be designed with the purpose to improve students’ CT. As Paul (2011) argued, regarding the curriculum they should be regulated and revised with the aims to explicitly illustrate the types and the ways to improve CT. CT should be given more focus than ever before after the effectual curriculum is implemented. Overall, English majors in general are not good at CT, but they become conscious of the importance of CT, which urge them to turn to teachers and specialized curriculums.

Table 3. Frequency and Percentage of Attitudes towards CT

<table>
<thead>
<tr>
<th>Level of agreement</th>
<th>Item 2</th>
<th>Item 3</th>
<th>Item 4</th>
<th>Item 5</th>
<th>Item 6</th>
<th>Item 7</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>P</td>
<td>F</td>
<td>P</td>
<td>F</td>
<td>P</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>42</td>
<td>40.4</td>
</tr>
<tr>
<td>Disagree</td>
<td>4</td>
<td>3.8</td>
<td>12</td>
<td>11.5</td>
<td>6</td>
<td>5.8</td>
</tr>
<tr>
<td>Not sure</td>
<td>19</td>
<td>18.3</td>
<td>26</td>
<td>0.25</td>
<td>23</td>
<td>22.1</td>
</tr>
<tr>
<td>Agree</td>
<td>70</td>
<td>67.3</td>
<td>58</td>
<td>55.8</td>
<td>62</td>
<td>59.6</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>11</td>
<td>10.6</td>
<td>7</td>
<td>6.7</td>
<td>12</td>
<td>11.5</td>
</tr>
</tbody>
</table>

Thirdly, English majors need more training from teachers about how to develop critical thinking skills. They have not the ability to improve the CT skills by themselves as they do not know clearly what CT means. And they cannot find a better way to improve CT effectively. So the teachers’ assistance and guidance is important for them to enhance the ability to learn CT. As table 4 shows, the students agree that they need more training from teachers (4.13). 84.6% students (N=87) agree that they need more training from teachers about how to teach CT. Simply 5.7% students (N=6) think they do not need training of CT. It indicates that the majority of students are eager for more training and teachers’ help to learn how to improve CT skills. Though students does not completely sure the meaning of CT, they expressed unequivocal support for CT training in the curriculum and the strong desire for more training from teachers, which indicated that the specific direction on how to improve CT must be
designed. As the key role of teachers, it is necessary for teachers to educate themselves ideally so as to help learners to foster their CT and decision making ability. Overall, students expect their teachers to help them know more about CT and need more training to improve CT as they are not skilled in this area.

Table 4. Item 8: I need more training about how to teach critical thinking skills from teachers

<table>
<thead>
<tr>
<th>Level of agreement</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly disagree</td>
<td>2</td>
<td>1.9</td>
</tr>
<tr>
<td>Disagree</td>
<td>4</td>
<td>3.8</td>
</tr>
<tr>
<td>Not sure</td>
<td>11</td>
<td>10.6</td>
</tr>
<tr>
<td>Agree</td>
<td>49</td>
<td>47.1</td>
</tr>
<tr>
<td>Strongly agree</td>
<td>38</td>
<td>36.5</td>
</tr>
<tr>
<td>Total</td>
<td>104</td>
<td>100</td>
</tr>
</tbody>
</table>

In general, these results are similar to one in the survey of EFL teachers’ attitude towards critical thinking instruction (Asgharheidari, F. & Tahriri, A. 2015). They all agreed that they are not good at CT in spite of the fact that CT is important for them. Maybe they realized that CT is making the enormous difference to learning and teaching, though they may have not accepted the training if CT. However, they have the different attitudes to item 1 and item 6. As for item 1, 82% teachers thought they have a clear of what the CT is while 71.2% of students do not have the clear definition of CT. Maybe it is teachers’ more abundant experience and higher education, which makes teachers know more about CT. While 90.4% of students showed their disagreement on item 6, 93.3% of teachers agreed that it is not the job of teacher to teach critical thinking in the classroom. The one possible reason is that the teachers do not quite know how to teach critical thinking while the students do not know how to develop critical thinking except turning to their teachers. And maybe teachers thought handling the real problems outside is the better way to improve CT.

In conclusion, most English majors do not really understand what CT is, however, they consider it important that it should be taught by teachers and they had a strong desire for more training on how to develop CT. They think it is necessary to integrate CT into the curriculum, especially in foreign language learning.

Differences in the Attitudes towards Critical Thinking between Arts Students and Science Students

As the results show, in general, the differences in the attitudes of CT are
extremely small between arts students and science students. But there are some
differences existing in some aspects.

The vertical analysis is conducted to show the differences between arts
students and science students. In general, the science students (M=3.76) have
more positive attitudes towards CT than arts students (M=3.66). It is perhaps
because they have been exposed to different exercises and requirements of
different subjects in their process of study at high school. And their different
thinking patterns can also affect their attitude towards CT. As for the means of
art students, 4.22 (item 5) is the highest score and 2.18 (item 4) is the lowest
score. Compared to the art students, the science students have the highest score
4.45 (item 5) and the lowest score 2.50 (item 4). So the art students and the
science have almost the same attitude towards item 4 and item 5. They all agree
that Chinese students are in general not good at critical thinking and it is
necessary to increase the role of critical thinking into the curriculum.

Since the above paragraph shows the vertical analysis of attitudes towards
CT, this paragraph introduces the horizontal analysis. By comparing the each
item in terms of the three dimensions, some differences are found in certain
items. Firstly, in respect of the meaning of CT, arts students are clearer about
CT than those science students. As table 5 shows, arts students show more
agreement on their understanding of CT (M=3.17) compared to the mean of
science students (M=3.05). In their courses, the teachers may tend to lead them
analyze the historical and political event so they know CT clearer. Secondly, as
for items that show the importance of CT, arts students and science students
have different attitudes. And the science students have more forceful emotion
for the importance of CT. Regarding the role of CT as an important part of
study, science students have a clearer awareness of the importance of CT. As
table 5 shows, the science students show the stronger agreement on the
importance of CT for students in learning (M=3.95) compared the mean of art
students (M=3.82). Except that, with regard to the proficiency of CT, arts
students show more negative attitudes than science students. As table 5 shows,
comparing the mean of science students (M=2.50), art students expressed more
agreement on the idea (M=2.18) that Chinese students in general are not good
at CT. As well, concerning the necessity to emphasize the role of CT in the
curriculums, the science students revealed stronger viewpoints. As table 5
shows, the science students show the stronger disagreement over the idea
(M=4.45) that it is not necessary to increase the role of CT into the curriculum
when it is compared to the mean of art students (M=4.22). All in all, the
science students have clearer and stronger consciousness to the importance of
CT. As the feature of their course, they are lack of the knowledge of CT while
it is important in language learning. Thus they are aware of the urgent need to
learn CT. Thirdly, in the respect to the need of training about how to learn CT
skills, the science students expressed more agreement (M=4.27) that they need
more training from teachers to teach them CT skills when it is compared to the mean of arts students (M=4.09). As they realize the crucial role of CT, they require more training of CT from teachers so as to remedy for the deficiency in CT.

All in all, the art students are more sure the definition of CT but as for the importance of CT, it has a higher position in the science students’ point of view. And the science students express the stronger desire to get more training of how to improve CT skills. In general, they all show the positive attitude towards CT.

Table 5. Attitudes towards CT of Arts Students and Science Students

<table>
<thead>
<tr>
<th>Level of agreement</th>
<th>Arts students</th>
<th>Science students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>1</td>
<td>3.17</td>
<td>0.68141</td>
<td>3.05</td>
</tr>
<tr>
<td>2</td>
<td>3.82</td>
<td>0.68724</td>
<td>3.95</td>
</tr>
<tr>
<td>3</td>
<td>3.56</td>
<td>0.84762</td>
<td>3.55</td>
</tr>
<tr>
<td>4</td>
<td>2.18</td>
<td>0.75569</td>
<td>2.50</td>
</tr>
<tr>
<td>5</td>
<td>4.22</td>
<td>0.75357</td>
<td>4.45</td>
</tr>
<tr>
<td>6</td>
<td>4.15</td>
<td>0.78606</td>
<td>4.09</td>
</tr>
<tr>
<td>7</td>
<td>4.10</td>
<td>0.74717</td>
<td>4.18</td>
</tr>
<tr>
<td>8</td>
<td>4.09</td>
<td>0.93229</td>
<td>4.27</td>
</tr>
<tr>
<td>Total</td>
<td>3.66</td>
<td>0.78385</td>
<td>3.76</td>
</tr>
</tbody>
</table>

Differences in the Attitudes towards Critical Thinking between Normal English Majors and Non-normal English Majors

There exist some differences between normal English majors and non-normal English majors. The main reasons may be attributed to their different curriculums and professional goals. For non-normal English majors, the ability of negotiating and operating international trade affairs is emphasized. In the process of the internship, non-normal English majors realize it is crucial for them to have the ability of handling problems flexibly by using English properly. Therefore, they pay more attention to how English language can be used to solve the real problems in the intercultural communication. For normal English majors, the ability of utilizing pedagogy and firm language knowledge is more important. And with the goal of becoming a teacher, the normal English majors realize that they are in urgent need to improve their CT so that they can teach students to think in this manner in the future. Thus normal English majors and non-normal English majors have different attitudes towards the each item of CT.

The differences of attitudes towards CT between normal English majors
and non-normal English majors are analyzed from three aspects. Firstly, in regard to the meaning of CT, the non-normal English majors would be surer that they have a clear idea of CT. As table 6 shows, the non-normal English majors express more agreement on the clear meaning of CT (M=3.3) in comparison with the mean of normal English majors (M=3.06). Secondly, concerning to the items that shows the importance of CT, there exist the differences between normal English majors and non-normal English majors. As regards the matter that whether teachers build CT explanations and exercises into most of lessons, the normal English majors are stronger approved. As table 6 shows, the normal English majors expressed stronger agreement on this item (M=3.7) by comparison with the mean of non-normal English majors (M=3.3). The teachers of normal students may build the CT exercises more frequently. Except that, concerning the necessity to emphasize the role of CT in the curriculums, the non-normal majors revealed stronger viewpoints. As table 6 shows, the non-normal majors show the stronger disagreement over the idea (M=4.35) that it is not necessary to increase the role of CT into the curriculum in comparison to the mean of normal students (M=4.22). As well, in respect to the teachers’ responsibility to teach CT in the classroom, the non-normal English majors are more approved than normal English majors. As table 6 shows, the non-normal English majors show more agreement on the responsibility of teachers to teach CT (M=4.3) after making a comparison of normal English majors (M=4.04). And as for the importance of CT in foreign language learning, the non-normal students have the more forceful attitude to the irreplaceable position of CT. As table 6 shows, the non-normal English majors show more agreement to the special function in foreign language learning (M=4.22) in comparison to the mean of normal students (M=4.06). All in all, the non-normal English majors expressed more agreement with the CT’s importance in the curriculum and in teachers’ job, especially in foreign language learning. Thirdly, concerning the desire to get more training from teachers about how to learn CT skills, the normal English majors have the stronger desire to improve CT. As table 6 shows, the normal English majors show stronger yearning to get training of CT from teachers (M=4.19) by comparison of the mean of non-normal English majors (M=3.97). They show more urgent need for the improvement of CT with the teachers’ help.

On the whole, the students show their positive attitudes towards CT. The non-normal English majors keep more clear idea of what CT is and hold a stronger belief that the teachers and the relevant curriculums are all important to develop CT. The normal English majors have the stronger desire to get more training about CT.
Table 6. Attitudes towards CT of Normal Students and Non-normal Students

<table>
<thead>
<tr>
<th>Level of agreement</th>
<th>Normal students</th>
<th>Non-normal students</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>1</td>
<td>3.06</td>
<td>0.7152</td>
<td>3.3</td>
</tr>
<tr>
<td>2</td>
<td>3.84</td>
<td>0.61784</td>
<td>3.86</td>
</tr>
<tr>
<td>3</td>
<td>3.7</td>
<td>0.72306</td>
<td>3.3</td>
</tr>
<tr>
<td>4</td>
<td>2.28</td>
<td>0.7549</td>
<td>2.19</td>
</tr>
<tr>
<td>5</td>
<td>4.22</td>
<td>0.83159</td>
<td>4.35</td>
</tr>
<tr>
<td>6</td>
<td>4.04</td>
<td>0.81264</td>
<td>4.3</td>
</tr>
<tr>
<td>7</td>
<td>4.06</td>
<td>0.87789</td>
<td>4.22</td>
</tr>
<tr>
<td>8</td>
<td>4.19</td>
<td>0.7564</td>
<td>3.97</td>
</tr>
<tr>
<td>Total</td>
<td>3.68</td>
<td>0.76455</td>
<td>3.69</td>
</tr>
</tbody>
</table>

Conclusion

Major Findings

This study explores English majors’ attitudes towards CT. After the analysis and discussion of the data, three main findings can be concluded. Firstly, most of the English majors were not really clear about CT, which implies a need to improve the understanding of the concept of CT among students, but they realize that CT is important for them to study especially to learn foreign language and most of them express the need for more training in how to learn CT skills. Secondly, arts students are clearer about CT, but CT has a higher position in the science students’ point of view and science students express the stronger desire to get more training on how to improve CT skills. Thirdly, non-normal English majors are clearer about CT and hold stronger viewpoint that improving CT plays an important role in English learning, while normal English majors hold stronger desire to get more training about CT.

Implications

The findings can be taken as indicators that the development of CT should take students’ attitudes towards CT into due consideration. It is significant to know what they are interested in and what they need in the process of teaching CT. The development of CT skills and the attitude towards CT are both crucial. And besides, as the teachers play a key role in the training of CT, they need to utilize appropriate learning materials and alternative methods that are appropriate to teach critical thinking skills. Moreover, it is necessary for
teachers to educate themselves ideally so that they could have in depth knowledge of critical thinking and understanding of how to incorporate this into their lessons. And if teachers could compress the class time of the skill class and reform the teaching method, it is possible for the English majors to acquire critical thinking ability while strengthening the basic skills such as listening, speaking, reading, writing and translation. In addition, in order to improve teachers’ capability for teaching CT, schools and institutions must provide them with required time and resources which are necessary for professional development to occur. Finally, teachers should teach students in accordance with their aptitude, which requires teachers fully consider the characteristics of students, the differences between arts and sciences and differences in different professional specialisms.

Limitations and Suggestions for Future Research

This study analyzes the understanding of critical thinking cultivation among English majors, and to provide valuable data support for critical thinking cultivation of English majors. This study mainly analyses the differences of attitudes towards CT between arts students and science students, and differences of normal English majors and non normal English majors. Future research can further determine students’ attitudes towards CT from other perspectives such as gender and grade. In addition, this study only uses the questionnaires as instrument to conduct the survey, and future research can be combined with interview investigation to make further demonstration. Finally, the research subjects are English majors. The results are only suitable for the English majors’ attitudes towards CT. Future research can further explore students’ attitude towards CT by comparing to other majors, which can make the research results more universal.

References


赵海平（Zhao, Haiping）、于春妮（Yu, Chunni），2007，护理本科生批判性思维认知技能和态度倾向性的相关性调查[J]，《护理研究》(5): 1158-1162。

黄朝阳（Huang, Zhaoyang），2010，加强批判性思维教育 培养创新型人才[J]，《教育研究》(5): 69-74。

朱新秤（Zhu, Xincheng），2002，论大学生批判性思维培养[J]，《高教探索》(2): 62-64。

李学书（Li, Xueshu），2011，批判性思维培养的思考[J]，《教育学术月刊》(1): 13-15。

高志远（Gao, Zhiyuan），2013，应用型本科大学生批判性思维倾向现状调查[J]，《高教探索》(2): 129-133。