Critical Reading as a Means of Scaffolding Textile Productivity

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Abstract: Interaction between readers and written sources provides opportunities to have innovative ideas for productivity. In the process of interaction, critical reading permits readers to interpret, analyze, synthesize and evaluate the author’s argument to think beyond what are stated in the written sources. The design of the study was also mixed type: qualitative and quantitative. To collect data from instructors and trainees, questionnaire and interviews were conducted. In selecting samples from the subjects, random sampling method was employed. The finding of the study proved that critical reading is prominent to make instructors’ and trainees’ creative that can indirectly enhance the productivity of textile institute of Ethiopia. It is proved that critical reading provides opportunities for instructors and trainees to interpret, analyze, synthesize and evaluate the written sources of technology for further improvement of textile products in the institution. 0.005 sig (level of significance) showed that the null hypothesis was not supported. The data proved that instructors and trainees confirmed critical reading has tremendous indirect effects in scaffolding the productivity of textile institute of Ethiopia via innovative manpower. And, instructors had better understanding than trainees in viewing the importance of critical reading in creating innovative manpower that indirectly leads to textile productivity.

Keywords: Critical reading, indirect productivity, textile institute

I. INTRODUCTION

Developing countries, including Ethiopia, are not capable enough in producing textile garments in their textile institutions for their own use. Due to this fact, textile products are frequently imported to these countries. However, now a day, developing countries have worked to have a good effort in producing textile garments by their own via textile institutions. It is true that Ethiopia has started producing textile products for its use and for the level of export. However, still the efficiency of textile institutions in Ethiopia has not been as much as effective. To this effect, critical reading can be an indirect way to make instructors and trainees innovative in increasing textile productivity in textile institute of Ethiopia at Bahir Dar University.

Language and creativity are inseparable entities in view of social cognitive theory (Bandura, 2009). Bandura (2009) also stated that, in the assumption of social cognitive theory, humans’ critical thinking has developed through uninterrupted efforts of human communication through language. From this thought, language proficiency advancement and the creative nature of human beings go together inseparably. Day to day interaction among people opens the path for our world development and advancement (Treffinger, Isaksen, & Stead-Dorval, 2006 cited in Patankar et al, 2016). In a similar manner, the productivity of textile institute of Ethiopia needs day to day creativity, innovation and interaction. Creative thinking involves searching for meaningful new connections by generating many unusual, original, and varied possibilities that can enhance the productivity of technologies (Treffinger, Isaksen, & Stead-Dorval, 2006 cited in Patankar et al, 2016). The skills of critical thinking from critical reading support human power to analyze, organize, refine, develop, prioritize, evaluate, or select options from the set of possibilities they have at hand (Treffinger, Isaksen, & Stead-Dorval, 2006 cited in Patankar et al, 2016).

To success diversified interests of users, the products of the institution need to be modern and sustainably developed. To ensure the high productivity of the institution, critical reading has paramount indirect effects to make human power creative and innovative. In view of Bandura (2009), critical reading provides opportunity to human power to think something new to offer and incorporate this new idea for technology advancement. Critical reading provides opportunities for the institution instructors and trainees to generate ideas for promoting the productivity of the institution. NCF (2002) cited in Patankar et.al (2016) stated that critical reading promotes the skills of critical thinking that can activate the efficiency of the institution through effective participation of day to day innovative activities.

To have transformed products in the textile institute of Ethiopia at Bahir Dar University, instructors and trainees need to read innovative written sources of technology critically. Critical reading is a way to have communication between the reader and the author’s argument for further transformation or advancement (www.shodaganga.infibnet.ac.in). Higher order reading is used to have advanced communication and negotiation for the sake of promoting the productivity of the institution (NCF, 2000 cited in Patankar et.al, 2016). To strengthen the aforementioned view, Morris (1968) cited in Patankar et.al. (2016) argued that “The school curriculum has to help to generate and promote new innovations among the learners”. To generate ideas for promotion, critical reading makes communication occurs to have sense full meanings of sources that can transform what is happening at the present in textile institution (www.shodaganga.infibnet.ac.in).

Active instructors and trainees worry for how they promote the institution productivity, strengthen their performance as
well as empower them for a change via critical reading (http://googleweblight.com). Duties and responsibilities of instructors and trainees of textile institute of Ethiopia can be ensured with the help of critical reading. As critical readers they come to know expected duties for restructuring the institution for the better enactment. As the concerned bodies of the institution, they are responsible for thinking deeply about technology centered written sources

“Critical reading plays a vital role in twenty-first century”(Patankar et.al, 2016: 48). On the help of critical reading, instructors and trainees of textile institute of Ethiopia can develop logical reasoning skills and they are able to think outside of the box for innovation. Therefore, Critical reading and critical thinking are very foundation of true learning for personal as well as institutional development (Patankar et.al, 2016).

The Views of Constructivism for Productivity:

In the theory of constructivism, instructors and trainees in textile institute of Ethiopia can construct knowledge and skills from experience. Through critical reading about what is written, the ongoing experiences of the institution are critically analyzed and evaluated for further productivity. Critical reading encourages for critical reflection to obtain input how the processes of the institution can be restructured. In view of constructivists, participants in textile institute of Ethiopia are available in refining and adapting knowledge from textile technology sources critically read (Piaget, 1971 cited in Patankar et.al, 2016). In view of constructivists’ philosophy, there is a belief that knowledge is not a gift given but gained through experience with the help of critical reading that leads to critical reflection (Piaget & Inhelder, 1969; Vygotsky, 1978). As humans’ mind develops, there are qualitative changes in their ability to think logically about experiences through critical reading for innovative changes.

In view of constructivists’ philosophy, critical reading, critical thinking, and active instructors and trainees of the institution can create opportunities to make meaningful connections between new material and previous experience. Critical reading is the theoretical assumption of constructivists. Different activities of critical reading help concerned bodies in the institution to be critical and successful in their future. Critical reading makes these bodies socially, mentally and personally responsive that can help to construct textile institute of Ethiopia in a manner of innovative. The skills of critical reading help instructors and trainees aware their own responsibilities for the outgrowth productivity of the institution.

Therefore, the aforementioned assumptions encourage the present researcher to have a research project on the indirect importance of critical reading as scaffolding the productivity of textile institute of Ethiopia.

However, textile institute of Ethiopia cannot ensure innovative products effortlessly. Instructors and trainees at Textile Institute of Ethiopia in Bahir Dar University were not analytical or critical while they were reading different sources in related with their profession; rather they tended to use surface level processing of the reading sources in similar with the views of Kadir, et.al. (2014). In the researchers’ survey study, instructors and trainees in textile institute of Ethiopia at Bahir Dar University were not eager for critical reading. And, they did not consider critical reading is the way to progress productivity as it was proved from survey assessment conducted.

Therefore, the present study had a plan to study on assessing the indirect importance of critical reading to make textile institute of Ethiopia productive at Bahir Dar University. To confirm how much critical reading is indirectly important for the productivity of textile institute of Ethiopia, the researcher raised the following research questions:

- What are the indirect benefits of critical reading in enhancing the productivity of textile institute of Ethiopia at Bahir Dar University?
- Are instructors’ views different from trainees’ on the indirect benefits of critical reading to enhance the productivity of textile institution at Bahir Dar University?

II. REVIEW OF LITERATURE

2.1 What is Critical Reading?

Critical reading can be defined as the process of applying critical thinking to written texts by analyzing and evaluating what are read for further overcoming (Academic Skills, nd). Critical reading worries for evaluating and judging what are stated in the written sources and the soundness of the reasoning that leads to conclusions for further overview (http://sass.queensu.ca/ learning strategies). Critical reading considers underlying assumptions, the argument, and evaluating an argument. The process of argumentation helps to persuade others to accept claims forwarded by critical readers. Critical reading is the way background knowledge, attitudes, and values of readers have contributions in promoting ones institution performance (Behrens & Rosen, 2005).

2.2 Why Critical Reading?

Critical reading promotes analysis, synthesis, and evaluation skills of readers (Kadir, et.al, 2014). Through analysis, synthesis, and evaluation skills of critical reading, readers can identify cause and effect or comparing relationships. This situation leads readers to be critical thinkers - critical reading comes before critical thinking (Hudson, 2007). Readers who are involved in critical reading to understand the text critically through reading between and beyond the lines or reading for deeper meaning can have good comprehension skills that can help students analyze, synthesize, and evaluate the text (Kadir, et.al, 2014).
2.3 The Indirect Link Between Critical Reading and the Productivity of Textile Technology

Harries and Sipay (1975) cited in Patankar et.al, (2016) showed that critical reading can be used to analyze the written sources of technology. To analyze sources through critical reading for further advancement, the purpose of reading need to be decided. By deciding the purpose of reading for critical reading, the institution instructors and trainees can indirectly promote the qualities of textile products.

Critical reading provides opportunity to have reasonable arguments to evaluate and analyze textile technology based written sources for the productivity of the institution. “The aim of critical reading is not to find fault but to assess the strength of the argument”(Patankar et.al, 2016:47). Critical reading in the context of textile institute of Ethiopia can have indirect benefits to overcome weaknesses that can affect the productivity of the institution. With the help of critical reading, readers can provide interpretations that lead a first step towards formulating the way to enhance the productivity of the institution. In the process of critical reading, posing questions contributes to instructors and trainees at the institution for promotion of reasoning. In view of cognitive constructivism, justifiable reasoning from instructors and trainees poses the challenges and offers the support to the institution for a better outsourcing (Chaille, 2008)

Critical readers figure out the purpose of the institution beyond what is going on through the process of evaluation what is critically read and the present products. Instructors and trainees’ critical reading helps them to introduce the ways of collecting and processing data and information that can improve productivity. It is true that frequent critical reading helps readers in arriving at conclusions for further improvement and generating new insights and knowledge in the process of textile garments production (NCF, 2000 cited in Patankar et.al, 2016). When readers are exposed to critical reading they get the chance to see the cause and effect or comparing relationships between what is read and the process undergoing for further productivity. “In other words, critical reading skills lead to critical thinking skills’ (P. 47).

The major purpose behind critical reading is to understand technology-focused texts critically, reading beyond the line or reading for a deeper meaning for further enhancement. “Critical reading means scrutinizing the style and structure of the meaning” (P. 47).

2.4 Critical reading for Active Instructors and Trainees at Textile Institution

Active workshop instructors and trainees relate to how they can promote the institution productivity and strengthen their performance as well as empower them for a change via critical reading (http://google weblight.com). Duties and responsibilities of experts and trainees of textile institute of Ethiopia can be ensured with the help of critical reading. As critical readers they come to know expected duties for restructuring the institution for the better enactment. As the concerned bodies of the workshops, they are responsible for thinking deeply about technology-centered texts. “Critical reading plays a vital role in the twenty-first century”(Patankar et.al, 2016: 48). On the help of critical reading, instructors and trainees of textile institute of Ethiopia can develop logical reasoning skills and they are able to think outside of the box for innovation. Therefore, critical reading and critical thinking are very foundation of true learning for personal as well as institutional development (Patankar et.al, 2016).

III. METHODOLOGY

Research Design: The study used mixed type of research design: qualitative and quantitative. Questionnaires for instructors and trainees were conducted and the data were analyzed quantitatively. Furthermore, semi structured interviews were held to strengthen the data of the questionnaire. Data from interviews were analyzed in a qualitative way thematically. In a clear sense, survey type of research design was used to assess the importance of critical reading as scaffolding the productivity of textile institute of Ethiopia.

Subjects of the Study: To confirm the reliability and validity of the questionnaire, 5 instructors and 10 trainees were involved in the pilot study. This study provided opportunity for the researcher to modify unclear questions. In addition, to check the clarity of semi structured interview open ended questions, 2 instructors and 2 trainees participated in the pilot study. For the main study, 10 instructors and 15 trainees at Bahir Dar University Textile Institute of Ethiopia were taken as subjects to be involved in the questionnaire in the study. And, 5 participants were involved in interviewing to crosscheck the data found from questionnaire. The main target of the study was to survey the importance of critical reading for the indirect productivity of textile institute of Ethiopia. Therefore, instructors and trainees were taken as subjects of the study to assess the overall importance of critical reading at the institution.

Sampling Techniques and Sample Size: In Textile institute of Ethiopia at Bahir Dar University, there were 36 instructors, 29 males and seven females, in the department who run teaching and learning to make the textile institution productive. Among the subjects, ten instructors, seven males and three females, were selected as samples to collect data through questionnaire. To select these samples, simple random sampling method was used. And, out of twenty six participants, four instructors, three males and one female who were not involved in the questionnaire were again selected for interview by using simple random sampling method. And, participants of the pilot study were selected with convenient non random sampling method.

Furthermore, there were 158 trainees in the faculty first to fifth year. Among them, 7 males and 8 females were involved in the questionnaire. Stratified random sampling was appropriate to provide the chance for different batch trainees.
Having decided the number of samples in each year, simple random sampling method again used to select the appropriate numbers of samples decided. By excluding trainees who participated in giving data through questionnaire, 5 samples were taken for interview. Having used stratified random sampling method to give equal chance to different batch trainees, the researcher applied simple random sampling method to select the numbers decided.

**Data Gathering Tools:** Questionnaire and interviews were used as data gathering tools. Questionnaire was used as the main data gathering tool because it had contributions to collect data from large samples for data reliability and validity. Therefore, instructors and trainees were involved in responding the questionnaire. Similar questionnaire was provided for instructors and trainees to assess the importance of critical reading as scaffolding the productivity of textile institute of Ethiopia if responses were varied or not.

Interviews were conducted for instructors and trainees in the second step to strengthen the data of the questionnaire. Semi structured interview was conducted to collect data about the importance of critical reading. Most importantly, the interview provides opportunity for interviewees to forward their own views because questions of semi structured interview were open to say what interviewees wanted. This can be taken as the main advantage of the interview.

**Procedures of Data Gathering:** Pilot study was conducted in the study. Therefore, the researcher collected data to measure the reliability and validity of the instruments. First, questions of the questionnaire were checked whether or not they were confusing to samples of the study. And then, interview was conducted to confirm the clarity of open ended questions of semi structured interview. And, remedial actions were taken for the reliability and validity of data gathering tools for the clarity of the main samples of the study.

Then, questionnaire was set and administered for instructors and trainees at textile institute of Ethiopia because it was used as the main data gathering tool. The researcher went round to get the selected participants to dispatch the questionnaire. On, the same day, after the participants filled the questionnaire, the researcher collected back the papers they responded. Questionnaire was administered first for instructors and trainees because it was the main data gathering tool. Then, interviews were conducted. To conduct the interviews, first, semi structured interview questions were set and the researcher went into the selected participants to interview. The data what was interviewed was documented for further analysis. At the end, the researcher thanked participants who filled the questionnaire and were involved in the interviews.

**Data Analysis:** The data collected from the questionnaire and the interviews were analyzed through quantitative and qualitative methods of data analysis. The questionnaire was ordered with five rank orders. And, independent paired-samples were involved in filling the questionnaire. For these data, the test of Mann-Whitney non parametric data analysis was employed because two independent paired samples: instructors and trainees participated in filling the questionnaire and the numeral data were not assumed to have normal distribution (not standardized).

However, data from interviews were analyzed through thematic type of qualitative method of data analysis. Different views of the interviews from interviewees could be organized into categories in their themes to make the data clear and precise. Thematically organized data were analyzed by using word description. Data from the interview were again organized into different themes.

### IV. RESULTS

Data from instructors and trainees’ questionnaire were analyzed by using Mann-Whitney non parametric test. This test of data analysis provides opportunity to analyze their awareness difference between two independent samples about the importance of critical reading as scaffolding in promoting the productivity of textile institution. This Mann-Whitney non parametric test of data analysis helps to analyze which sample group has better awareness in relation with the importance of critical reading as scaffolding in facilitating the productivity of textile institution. To calculate Mann-Whitney’s test of data analysis, SPSS was used to show the result of the study clearly. Furthermore, the data could show whether or not critical reading is important to facilitate the productivity of textile institution. The proposed null hypothesis of the study was that critical reading does not have any importance in enhancing the productivity of textile institute of Ethiopia. It was calculated again through SPSS.

**SPSS output on rankings for the Mann-Whitney U test**

<table>
<thead>
<tr>
<th>Ranks</th>
<th>N</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratings</td>
<td>-instructors</td>
<td>10</td>
<td>14.72</td>
</tr>
<tr>
<td></td>
<td>Trainees</td>
<td>15</td>
<td>11.17</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1: Descriptive statistics of Mann-Whitney U test

**Test Statistics**

<table>
<thead>
<tr>
<th></th>
<th>Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney U</td>
<td>25.000</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>161.000</td>
</tr>
<tr>
<td>Z</td>
<td>-2.810</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.005</td>
</tr>
<tr>
<td>Exact Sig. [2*(1-tailed Sig.)]</td>
<td>.007</td>
</tr>
</tbody>
</table>

a. Not corrected for ties.

b. Grouping Variable: education status

Table 2: Mann-Whitney test statistics

Because of 0.05 or less than 0.05, we can conclude that the null hypothesis (‘there is no statistically significant difference
between the response by the different groups according to their educational status is not supported, and that the results vary according to the educational status of samples in relation with the importance of critical reading to enhance the productivity of textile workshops at Bahir Dar University: Faculty of Textile Technology.

The response by instructors and trainees is statistically significantly different and that the null hypothesis is not supported. The data of SPSS showed that instructors have better awareness than trainees about the importance of critical reading in scaffolding the productivity of textile workshops. From this, we can conclude that the null hypothesis which was focused on critical reading did not have any importance in scaffolding the productivity of textile workshops is not supported. Therefore, on the contrary of the null hypothesis, the result or less or equal to sig. 0.05 showed that critical reading is important in scaffolding the productivity of textile institute of Ethiopia.

When the Mann-Whitney Wallis statistic was calculated to determine whether there was any statistically significant difference in the response of the two groups (U = 25,000, p = 0.005), a statistically significant difference was found between the instructors and trainees about the importance of critical reading as scaffolding in promoting the productivity of textile institute of Ethiopia. A cross tabulation found that instructors have better awareness than trainees about the importance of critical reading as scaffolding in increasing the product of textile institute of Ethiopia.

Data Analysis of Instructors’ interview: The main issue of the interview was assessing the importance of critical reading to scaffold the productivity of textile institution. To analyze the data clearly, instructor interviewees were given code numbers: T1, T2, T3, and T4.

In relation with the importance of critical reading, instructors were interviewed to view through semi structured interview. T1 (Teacher 1) and T4 (teacher 4) forwarded their thoughts as follow:

T1: “As far as I am concerned, critical reading is important to interact with the texts written. Again, it can motivate readers to be eager to get innovative ideas to their institutions.”

T4: “Critical reading provides opportunity to readers to develop their critical thinking skills. Through critical thinking, it can be true that once institution can transform its traditional ongoing procedures.”

T2 and T3 did not have clear views on the importance of critical reading to scaffold the productivity of the institution.

Data Analysis of Trainees’ interview: In a similar manner, the researcher collected and analyzed data from trainee interviewees in relation with the importance of critical reading in enhancing the productivity of textile institution. Students were represented with S1, S2, S3, S4, and S5.

S2: “I am in doubt. I guess critical reading might have importance to enhance the performance of the institution.”
S3: “Any type of reading can have benefits to upgrade know how that can increase the productivity of any institution.”
S4: “critical reading can activate humans mind in every aspect of work. Then, it has paramount benefits to promote the productivity of textile institute of Ethiopia at Bahir Dar University.”
S5: “I think critical reading might have an advantage to transform the institution to further improvement.”

However, S1 forwarded his view that he does not know what critical reading is and the benefits of it.

V. FINDINGS AND DISCUSSIONS

The result of the study proved that critical reading has paramount advantages in facilitating the productivity of textile institute of Ethiopia at Bahir Dar University. Data collected from questionnaire and interview showed that critical reading has tremendous importance in enhancing the productivity nature of textile institute of Ethiopia at Bahir Dar University.

The result of the present study proved that critical reading has tremendous importance in promoting textile institute of Ethiopia. Critical reading:

- creates a room for interaction between the reader and the written text
- provides new innovative ideas that can scaffold textile productivity
- helps readers to compare and contrast the views of readers and the text written
- promotes critical thinking skills to scaffold the institution productivity
- encourages readers for critical reflection to evaluate what is going on
- Critical reading can activate readers to learn a lot to scaffold once institution and human power.
- It can support trainees as well as instructors to upgrade the product of their institution.

Huijie (2010) stated that critical reading encourages the ability to read for analysis and judgment with a high level of reading process. “Critical reading is a way of bringing more rigorous analysis to problem solving or a textual understanding and a way of developing more critical distance from the writer (Pennycook, 2001:4). To strengthen the aforementioned stated idea, Pirozzi (2003) added his view as follow:

It can help a reader to evaluate textbook material and other types of reading, to uncover motivations and assess arguments, to consider options, products, advertisements and commercials, and to judge policies and programs offered by the various levels of government (P.197).
Critical reading and problem solving skills promote the ability of readers to reason effectively, ask critical questions to solve problems, analyze and evaluate alternative points of view and reflect critically on decisions and processes (Pacific Policy Research Center, 2010). Developing creativity and innovation skills is often based on a practice of critical reading. Critical reading encourages questioning, openness to new ideas, and learning from mistakes and failures. Critical reading can boost productivity that can set and meet goals, prioritizing needs, managing time, working ethically, and collaborating and cooperating with colleagues and clients (Pacific Policy Research Center, 2010)

VI. CONCLUSION

The results of Mann-Whitney test of data analysis proved that critical reading is important in scaffolding the productivity of textile institute of Ethiopia. Level of significance $p=0.005$ shows that the null hypothesis is not supported. The concept of the null hypothesis was that critical reading does not have any value in scaffolding the productivity of the institution. However, this issue of null hypothesis is not supported according to the test of Mann-Whitney nonparametric data analysis. It means that critical reading can play a role in scaffolding the productivity of textile institute of Ethiopia. In addition, Mann-Whitney test of data analysis showed that instructors and trainees are familiar on the importance of critical reading in enhancing the productivity of textile institution. The result of Mann-Whitney nonparametric test of data analysis proved that instructors had better understanding than trainees about the importance of critical reading in facilitating textile institution productivity.

The results of the interviews again witnessed that critical reading has paramount effects in scaffolding the institution to make them productive. Instructors and trainees proved that there is a limitation in practicing critical reading in the faculty although it has benefits to activate the product of textile garments at the institution. Interviewees suggested the following benefits. Critical reading can

- facilitate interaction between the readers and written source to go further beyond
- motivate critical reflection for further improvement
- increase critical thinking to see the world of textile technology in different eyes
- provide opportunity to find best practices that can be adopted

REFERENCES

[13]. (www.shodhaganga.infibnet.ac.in).