

Using Discussions to Promote Critical Thinking in an Online Environment

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Abstract

This paper examines how the discussion tool is used to promote critical thinking in an online environment at Marshall University. The significance of critical thinking in higher education has been brought to attention at both national and local levels. The paper studies the use of discussions as an approach to promote critical thinking in a number of English as a Second Language (ESL) courses offered by Marshall University's Graduate School of Education and Professional Development (GSEPD) program. At the end of the semester, a qualitative survey was developed to identify the effectiveness of such discussions, and the opportunities for improvement. The survey was sent to all students in these three classes. These students were all full time teachers in Elementary and Secondary schools in West Virginia. Out of 21 students, 15 of them have responded to the three questions asked in the survey. Almost all the respondents have found discussion helpful in enhancing learning and critical thinking. Most students support the involvement of an online instructor in the online discussion, and faculty members involved in these discussions function as helpers in the development of critical thinking skills.

Key words: critical thinking, online discussion

Why Critical Thinking?

Critical thinking is of critical significance in the world we live in. National Commission on Excellence in Education (1983) describes the United States as a "nation at risk" because Americans "are failing to provide the most essential component of education – instruction that fosters the development of the ability to think" (cited in Halpern, 1997). Brookfield cites a number of prominent national publications such as *New York*

Times to promote the development of critical thinkers, and he goes on to conclude that the development of critical thinkers as "a national priority for both civic and economic reasons" (Brookfield, 1987, p. 3).

At local levels, this need is also strongly felt. A 2005 survey of school boards across the nation indicates that critical thinking and problem-solving follow basic academic skills (20%) as the second most important goals boards except from schools. Critical thinking is thought of as being more important than social skills and work ethic (12%), citizenship (11%), physical health (9%), emotional health (8%), the arts and literature (9%), and preparation for skilled employment (11%) (Rothstein and Jacobsen, 2006).

Institutions of higher education also have an important role to play in the shaping of critical thinkers. Institutions of higher education are traditionally viewed mainly as factories of knowledge. Yet when we reflect on the "knowledge" and "thinking" as two constructs, we see them overlapping, as Resnick (1985) has pointed out: "Knowledge is no longer viewed as a reflection of what has been given from the outside; it is a personal construction in which the individual imposes meaning by relating bits of knowledge and experience to some organizing schemata."

The need to promote critical thinking is also reflected in the coming of the information age, which has changed the way we perceive process and evaluate information. Roberson (2006) states that "the medieval sacredness of information clashes with the modern deluge of information." This results in what Roberson calls the "Insanity of the modern university course" in which we "press harder and harder to teach more and more information, while students achieve less and less." If institutions change gears towards the promotion of critical thinking instead, better learning outcomes are possible. More

importantly, institutions have to get the students into the habit of life long learning, of which critical thinking is an essential part. Turn on your TV, read a newspaper, listens to an advertisement on the radio, and you will notice how many dubious claims are out there that cannot sustain the scrutiny from minds accustomed to critical thinking. Critical thinking is widely applicable “across all the curriculum” (Halpern, 1997), especially in problem solving processes (Halpern) and decision making processes (Halpern; Epstein, 2003). Critical thinking skills can be grounded in all real world situations such as political analysis judgment about television reporting (Brookfield, 1987).

Thinking skills can also be nurtured. Halpern believes that there is “a considerable body of evidence that thinking skills courses have positive effects that are transferable to a wide variety of situations” (Halpern, 1997, p. 7). The importance of critical thinking is also found in the ways critical thinking can be applied. Just by looking at the term “critical thinking”, one would be tempted to gravitate towards the “critical” quality of the term. However, “being critical” is only a small portion of what constitutes critical thinking. More importantly, it is a process to develop a rational position or attitude, to achieve a goal, or to solve a problem. Critical thinking helps us to become better problem solvers and more rational decision makers.

What is Critical Thinking?

Many terms have been associated with Critical thinking, such as “critical analysis, critical awareness, critical consciousness, and critical reflection” (Brookfield, 1987, p. 11). Similarly, there have been many definitions of critical thinking. It is essential to define critical thinking in order to make sure that we all are on the same wave length.

According to Scriven and Paul (n.d.), critical thinking is “the intellectually disciplined process of actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action. In its exemplary form, it is based on universal intellectual values that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness.”

From a practical perspective, Haskins (2006) defined critical thinking as “a process by which we use our knowledge

and intelligence to effectively arrive at the most reasonable and justifiable positions on issues, and which endeavors to identify and overcome the numerous hindrances to rational thinking.”

Halpern defines it as “the use of ... cognitive skills or strategies that increase the probability of a desirable outcome. It is used to describe thinking that is purposeful, reasoned, and goal directed.” This definition sheds some light on the way we perceive “critical thinking”. It is not just being critical. It involves “a desirable outcome”. It utilizes “skills and strategies”. It is “purposeful, reasoned and goal-oriented.” In other words, it is not a mysterious process or activity. As a matter of fact, we might even find ways to develop it.

A review of the other definitions of critical thinking reveals similar insights. We performed a Google search using key words “define: Critical Thinking”, and it produces a great number of definitions. A few themes appear frequently. The most evident is that it is often considered as a “process”. Just like any other human processes, we hypothesize that if guided, the process can be more efficient and effective. Another frequently occurring theme is “skill”. Once again, skills can be developed with increasing exposure and practice. The skill and the process may not be separate from each other. With a structured, conscious use of a thinking process, the skill can be enhanced. Similarly, enhanced skill will guide thinkers throughout the thinking process, and increasingly, help them to become more comfortable and natural users of the process.

The “critical” aspect of “critical thinking” is shown in critical thinkers’ ability to be evaluative and discriminating in accepting an opinion or a conclusion. A review of the literature also indicates that a commonly noticed factor in critical thinking is the ability to examine underlying assumptions or claims (Brookfield, 1987; Epstein, 2003), or the ability to “distinguish bias from reason and fact from opinion” (Brookfield, 1987, p. 11-12).

Brookfield (1987, p. 26) summarizes these considerations in what he calls the “components of critical thinking”:

1. Identifying and challenging assumptions is central to critical thinking;
2. Challenging the importance of context is crucial to critical thinking;
3. Critical thinkers try to imagine and explore alternatives;
4. Imagining and exploring alternatives leads to reflective skepticism.

Critical Thinking in an Online Environment

There has been an ongoing discussion about the ways to develop critical thinkers in the higher-ed context. Bean

(1996) writes a seminal work guiding teachers to integrate writing, critical thinking and active learning in classroom. The strategies he proposes include designing problem-based assignments, use of small groups, and encouraging engagement and inquiry in research papers. Active learning is promoted as a valid way to train students to become critical thinkers. To effectively engage students in critical thinking, King (1994) generated a list of thought provoking questions that aim to train students on specific thinking skills such as application, prediction, hypothesizing, analysis, inference, activation of prior knowledge, activation of relationship (cause-effect), analysis, analysis of significance, comparison-contrast, rebuttal argument, evaluation and provision of evidence, synthesis of ideas, and taking other perspectives. This list is highly useful for teachers and designers of courses when they think of ways to promote critical thinking.

Based on our experiences teaching and designing online course, the authors realize that most of these questions can be presented and discussed in online discussion format. Yet not many studies have been done to associate the facilitation of online discussions with critical thinking skills. The authors searched the EBSCOHOST database with key words "Online discussion critical thinking" and the search resulted in nothing. This prompted us to investigate into the possibilities to promote critical thinking through online discussions.

The Marshall Case Study

Marshall University is an accredited regional public university that has been vigorously promoting online education as some potential students are constrained by their geographical locations in the mountainous state of West Virginia. Currently, there are over 180 fully online courses being offered each semester, enrolling 2000-3000 students each semester, and the number keeps growing. For the last five years, the number of fully online courses at Marshall University grows by over 30% each year.

As adoption of e-learning increases, the University's management also wants to push towards greater effectiveness in online education. One signature initiative by the Marshall University President Kopp is the development of critical thinking skills for its students. Marshall University has offered Critical Thinking workshops to its faculty and staff, including the management team of its distance education program. Faculty members already involved in teaching e-courses are actively exploring the use of discussions as a way to improve

the effectiveness of their courses. The Marshall University Faculty Committee on Distance and Multimedia Instruction (FDCOMI) reviews newly developed e-courses based on a rubric that is identical to the one used by electronic campus initiative of the Southern Regional Education Board (SREB). The same rubric is used to review courses that have been taught for two years so that best practices are recommended and incorporated. Recently, the committee has recommended all newly developed courses to have a component for interaction. Discussion tool is on the top of their list in recommending strategies for promoting interaction between faculty members and students, and among students themselves.

Both authors of this paper are involved in the Faculty Success Initiative aimed at developing awareness of, and best practices for, teaching e-courses at Marshall University. The authors chose to focus on the development of critical thinking through online discussions as a way to improve the general quality of e-courses at Marshall University. Discussion has been vigorously used in this course since the very beginning of the course development. This study has very practical value for other teachers of the course because it explores what is critical thinking that is hailed to be of critical significance for educators, how it can be operationalized, and how it can be cultivated using tools that are already available to us.

Method

Marshall University's Graduate School of Education and Professional Development offers an ESL licensure program in an online format. The addition of this endorsement allows an individual holding a valid teaching certificate to add an endorsement to teach ESL in grades K-12. The program consists of six a graduate level course (18 credit hours) in which discussion is used as an important part of course activities. For every discussion question directions are provided.

In the design of these questions, a conscientious effort is made to stimulate student discussions through the use of grades, and mandatory requirements for students to contribute towards each other's posts so as to explore different perspectives. The questions are designed to encourage students to challenge assumptions (question 1), explore alternatives (questions 2, 4, 6), relating to contexts (question 3 and 5). All of these are believed to be components in the critical thinking process (Brookfield, p. 26). Importantly, the requirement of peer feedback makes it possible for students to examine their own perspectives from other students' perspectives.

Towards the end of the semester, a qualitative survey was developed to identify the effectiveness of such discussions, and the opportunities for improvement. The survey was sent to all students in these three classes. These students were all full time teachers in Elementary and Secondary schools in West Virginia. Out of 21 students, 15 of them have responded to the three questions asked in the survey. The three questions were:

1. Is the discussion tool helpful? Please explain.
2. Is it better if the instructor involves in the discussion or just steps back and facilitate the discussion without involving in the discussion?
3. Do you have any suggestions that would help improve the interaction between the instructors and the students and promote critical thinking?

Analysis

Advantages of discussion:

As far as the discussion tool is concerned almost all the respondents have found it helpful to enhance learning. In response to the first question, one of the respondents says, "Yes it is. I enjoy responding to the task and then reading how others responded. Sometimes we are right on the mark together and other times, well we aren't. Everyone is kind to each other and the points made are well taken". This response reflects the diverse views of students on same issue. Another respondent further elaborates the above idea by saying, "I have truly enjoyed this course and feel that I have learned a tremendous amount regarding the ESL program. Yes, the discussion tool is helpful! It brings together teachers who are in different classroom settings with different perspectives on the topics that we discuss. Using the discussion tool allows everyone to bring their ideas to the table and spark ideas in other teachers, all while improving our knowledge of the topic being discussed!" Likewise, another respondent answered the question as "I do like the idea of the online discussion. The other students' ideas have given me other wonderful ideas to expand on. It is easy working with the online system. I only have positive feedback about the discussions." Similarly, another respondent comments: "I have enjoyed reading the discussions, getting ideas from others and most importantly viewing things from others perspective. It has helped me professionally as well as helping me with completion of the course work and better understanding the subject". To be able to see things from others' perspective is in deed a great step forward in widening one's perspective.

As discussed earlier, the ability to identify and challenge assumptions is central to critical thinking. The respondent's

answer testifies to the validity of using discussions to promote such challenging effort.

Another respondent answers the question a little differently, "The discussion tool is helpful. It enables us to make links of what we are learning to our personal thoughts and experiences as well as read other perceptions and thoughts". This respondent emphasizes the importance of linking once thoughts and experience with the question at hand. Since all of the students have different backgrounds, it is natural to have different views regarding English as a Second Language (ESL) learner. This respondent's reply also reflects another of the main components of critical thinking: the ability to challenge the importance of context. Having the discussions in class help students to see things beyond the specific context that they are comfortable with. Other students' feedback may help him or her to reflect on what could be done differently in their past practices.

One other respondent confirms there is a link between the use of discussion tool and the development of critical thinking. This respondent says, "I have taken many WebCT courses, some of which have been excellent. I believe the best part of these classes is the dialogue between students and the instructor. Discussion questions and scenarios are great ways to help promote critical thinking!"

Most of the respondents value the importance of the discussion tool. They particularly value the responses they read from fellow teachers who actually teach ESL students. Here is how one of the respondents put it, "I think the discussion tool is very helpful. I've learned a lot by reading all of the postings of people in different positions in the schools. I do enjoy the interaction with others to gain more useful tools and approaches in working with ESL learners. It is also helpful to hear from others who have actually experienced working with an ESL learner first-hand. Their ideas and approaches seem to be the ones I gravitate to most because chances are, if they are offering these ideas it must have been something they themselves tried and were successful with".

"The discussion tool has been one of my favorite parts of the classes I have had so far", said one of the respondents. Furthermore, the respondent said, "I actually like the format and I've learned as much on line as I have in any of my other master-level coursed from Marshall because I'm doing the work myself and not just listening". It is very important to note that the discussion tool, as the above respondent stated, made

the students do the work themselves and develop the sense that they are in control of their own learning. After all that is the main purpose of teaching: to make students take the responsibility to do the learning by themselves. The ability of critical thinking is a crucial part of such independent learning process.

Instructor's involvement:

Brookfield develops the concept of a "helper" in promoting critical thinking. "Helpers are all those people who assist us to become critical thinkers....Helpers are important to the development of our critical thinking capacities, because they assist us in breaking out of our won frameworks of interpretation"(Brookfield, 1987, p. 29). Faculty members play the role of helpers by becoming involved in the discussions. We asked the students how well their involvement has helped. Here is a brief analysis and discussion of the findings.

The question we asked is about the level of instructor's involvement and various views have been reflected. One of the respondents says, "I feel either way is good. After posting the statement for the response, it might be good to see what the instructor thinks. Many times I wonder if I am on the correct track or not. But at the same time, instructor responses may be so different that I would be intimidated. So, I really don't have a strong feeling either way". This respondent is neither in favor nor against instructor's involvement in discussion.

Nevertheless, there were strong views in support of instructor's involvement in online discussion.

The following comment, for instance, supports the involvement of an online instructor in the online discussion, "I think the instructor should help facilitate the discussion and become involved if the student(s) need guidance on how to respond or need support in extending their thinking".

Another respondent supports instructor's involvement by saying, "I think it is better when the instructor is involved in the discussion because he/she may have more knowledge about a particular topic and can guide the discussion in a different direction if an important aspect of the topic is not being discussed. Also, the instructor has more experience than the students, therefore, bringing more knowledge to the learners". Instructor's knowledge and experience have been mentioned as the basis for supporting the instructor's involvement in the discussion.

Almost for similar reasons, the following respondent

favors instructor's involvement in the discussion, "I think the instructor needs to be right in the discussions... or it is going to be the 'blind leading the blind'. If anything, there should be more opportunities to have the instructor involved in the discussions, so we would have more tools besides reading in the Survival Guide".

Here is another reason why an instructor should be involved in the discussion, according to one of the respondents, "Sometimes when the instructor does not respond, I wonder if I doing my work correctly". Even though, student's grade reflects whether they are on the right direction or not, still the instructor's involvement is appreciated by this respondent.

It is important to note that students expect instructors to play an active role in guiding them in their thinking process, instead of just providing feedback and encouragement. The following respondent gave a cautious support for instructor's involvement in the discussion. "Maybe the instructors can give us a little more feedback that would be great! Not always saying this is great, but encourages us to expand our ideas about the questions/assignments". The following respondent appreciates instructor's involvement in discussion so that students know that the instructor had read their postings. This respondent said, "I did appreciate the comments of the instructor from time to time. It wasn't too often, but just enough to know that the discussions are being read and comments made as needed".

Yet other preferences are suggested. According to one respondent, it is better for the instructor to step back for the following reason, "You have separated yourself from any "perfect answer" and have permitted us to filter out our own thoughts."

Suggestions for interaction:

It seems that most students are comfortable with the current format. One of the respondents said, "I like the way it is. I sometimes have time to respond to each colleague's response but not always as we really do work independent of each other and all in our own time".

Another responded added, "I think how it has been is effective. I know I use critical thinking when responding". "For me there would be no changes, just a little more feedback from the instructors. Great Class!" said a third respondent. The next comment reflected the importance of getting feedback in

online format, "I wish I had someone communicate to my posts if they were correct, or if there could be more added to them."

When the class size is much smaller, according to the following respondent, students could run into shortages of ideas, "I have gotten several good pointers from discussion answers, but I find that most of us, including myself, do the minimum required, responding only once. We're such a small group so there aren't many answers on which to comment and the replies tend to be rather stiff".

To promote discussion and critical thinking may be tools such as web log might be helpful. The following respondent suggested a similar idea: "If the capability for a more open discussion format exists in WebCT, it would be helpful to me to for the instructor to comment on various points made in the discussion answers". The latest version of Vista has the capability to create web log.

Limitations of Discussions:

In an online environment students are not required to have synchronous communication with the instructor or other students. As one of the respondents stated, "The limitations of WebCT may be such that a chat room type of discussion isn't facilitated".

The following suggestion reflected the importance of having live meetings. "I liked having the first face-to-face meeting and feel that maybe just one more as a discussion mid-way through the course would have been helpful to see that I was on the right course with my thinking and ideas. I'm not sure others felt this way. I do though enjoy doing all of the work on-line at my own leisure instead of having to meet every so often. So I am a little torn on this thought".

While "T-courses (Technologically Enhanced) at Marshall University allow up to four live meetings in a semester, the "E-courses (Electronic)" do not require students to have live meetings.

The following student has perfectly understood the problem associated with having asynchronous communication, from students perspective, in his statement, "I like the discussion tool, but would like it more if we had direct feedback-live feedback. This is probably too hard to accomplish because of everyone's work schedule, etc".

"Another thought would be to have "Live" discussions, however, finding a time where everyone is available could be a

challenge!" adds another respondent.

I believe it would be beneficial if the instructor managed the feedback responses. I would actually log in more and become more active online if I knew I would receive IMMEDIATE feedback. Distance learning is a wonderful tool but is only as effective as the communication is between instructor and students.

While some students respond to discussion questions timely, others don't. The following feedback clearly manifests what the students feel when they submit discussion postings late, "However, I get frustrated when time is close to being up and I have no one to respond to. I feel certain that others feel the same way".

Conclusion

To sum up, students in this qualitative research have liked the format currently being used to teach and enhance critical thinking. The respondents differ in their opinions about the level of the instructor involvement in the discussion. However, there seem to be a general consensus that faculty should be involved as long as they help students to develop skills in their higher-order thinking skills. This shows that faculty members can indeed play the role of helpers in the development of their cognitive skills.

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