The Effect of Blogging on Field-Dependent and Field-Independent Students’ Critical Thinking

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EXTENDED ABSTRACT

Introduction

In education, the rapid development of blogs has been considerable (Chen & Bonk, 2008). Compared to other Web 2.0 tools like wikis, Facebook, and podcasts, blogs facilitate individualized teaching and learning styles in a variety of settings and give an equal chance to all students to participate in various class activities (Duda & Garrett, 2008). One of the main reasons of making blogs attractive to EFL/ESL educators is its positive effects on learners by inducing them to think critically in a learning environment (Johnson, 2004). Research shows that blogging can facilitate users’ share of information and collaboration, and engage students in an in-depth meaningful interaction which may lead to promoting critical thinking (CT) (Wang et al., 2009, Johnson, 2004).

Despite the increasing interest in and need for blogging (Shahsavar & Tan 2013, Blackstone et al., 2007), very little research has been conducted on students’ cognitive styles particularly their field dependency and their achievement in an online learning environment. In the following sections, I initially discuss the effects of blogging on students’ CT. I further define field-dependent (FD) and field-independent (FI) students and explain the role of learners’ field dependency in an online learning environment.

Blogging and CT

Gooding and Morris (2008) believe that blogging gives students a chance to reflect on their own and others’ writing that provides the opportunity for them to create, publish, and share their thoughts. These activities force students to think more analytically and more critically (Oravec, 2002) which may promote their CT (Richardson, 2004). Other research shows that sharing information and discussing on blogs can promote students’ writing skills and their CT abilities (Lai & Wang, 2008). Along the same line, researchers have recently shown that students will become more independent, responsible, and careful when they blog. In this case, blogging gives students a chance to think more to analyze their writing (Kajder & Bull, 2003; Shefler, 2006). In spite of the need for improving students’ CT, it seems essential to consider learners’ cognitive styles such as field dependency (Rudd et al., 2000). However, the research in this area is limited.

FD and FI Students

Witkin et al. (1971) believe that FD and FI students are not two different types of people but rather individuals who prefer particular learning characteristics to perceive and memorize information. FD students have global perception which enables them to solve cognitive problems globally and perceive objects as a whole (Witkin et al., 1971). They pay more attention to social cues and they are better at getting along with other people. They tend to be more sociable, insistent, and perceptive of others’ feeling and thoughts (Brown, 2007). They can easily
recall social information like conversation and relationships (Altun & Cakan, 2006). Conversely, FI students are more superior to FD students in learning (Aristoklis & Xenia, 2011). They tend to be more autonomous, competitive, self-reliance, self-confident, and inner-directed (Witkin et al., 1971; Brown, 2007). They are more sensible in learning, relying on internal references (Chen & Macredie, 2004), and better at solving cognitive problems analytically than FD students (Witkin & Goodenough, 1981).

Recently, many studies emphasize students’ cognitive styles in an online learning environment (e.g., Bocchi et al., 2004). Some researchers believe that learners with particular cognitive styles performed better than others (Swan, 2004). The literature seems to show some apparent contradictions between matching cognitive style and teaching method in an online learning environment (Mampadi et al., 2011). For instance, Boles et al. (1999) stipulate that students constantly perform better if computer-based instruction is matched with their cognitive styles. The result is consistent with Oh and Lim’s (2005) idea that paying attention to students’ cognitive style is the key role in an online learning environment. Conversely, Summerville (1999) claims that matching or mismatching of computer-based instruction with students’ cognitive styles had no effect on students’ performance. This paper attempts to investigate if blogging made a difference on FD and FI students’ CT.

**Method**

The participants were an intact class of tertiary level students enrolled in a compulsory course. All students had home or dormitory Internet access. Most of them were familiar with blogging and had used blogs for posting assignments, keeping diaries, updating their postings, sharing thoughts and information, giving comments, and reading others’ blog posts. Students were trained in multiple aspects of CT skills namely induction, deduction, observation and credibility, and assumption (Ennis et al., 2004) and asked to apply CT skills in their blogging. The blog was set up at www.blogger.com.

The instruments consist of the Group Embedded Figure Test (GEFT) developed by Witkin et al (1971), and the Cornell CT Test Level X (CCTT-X) developed by Ennis and Millman (2005) to classify students’ field dependency and measure their CT abilities respectively. In the analysis of the data, the paired-sample t-test was conducted to compare students’ CT before and after training CT skills. Also, independent samples t-test was used to compare FD and FI students’ CT in both pretest and post-test.

**Results and Discussion**

A significant mean difference in the overall score of students’ CCTT-X before and after CT skill training ($t(39) = -2.83, p < .05$) shows the higher positive criticalness in students’ CT ability after they were trained in CT skills. While, looking at pretest scores in the CCTT-X test did not show a significant mean difference between FD and FI students’ CT ability before training CT skills ($t(37) = -.69, p < .05$). In addition, the independent samples t-test on post-test scores in the CCTT-X test and students’ field dependency reveals no significant mean differences between FD and FI students CT ability after training CT skills ($t(37) = -.45, p < .05$).

As Table 1 presents, blogging enhanced both FD and FI students’ CT; however, no significant mean difference was shown between FD and FI students before and after they were trained in CT skills. The result may support Summerville’s (1999) idea that both FD and FI students are able to adjust themselves to online learning. Another interesting finding is that FI students applied more CT in their blogging despite being insignificant (see Table 1). This finding may support previous research that FI students seem to set their own learning paths more than FDs in online courses (Shahsavar & Tan, 2011) and the course blog as a non-threatening learning environment can cause a positive perception change to promote all students’ CT, specially FI students who are not as sociable as FD students (Brown, 2007).
### Conclusion

This study reports that blogging can enhance both FD and FI students’ CT. Although FI students applied more CT aspects in their blogging, no significant mean difference was shown between FD and FI students in using different aspects of CT. The study suggests that all students are able to promote their CT equally well on their blogging, regardless of their field dependency.

### References


### Table 1: Results of t-test in Using Different Aspects of CT

<table>
<thead>
<tr>
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<th>Pretest Score</th>
<th>Posttest Score</th>
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<td></td>
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<td>Mean</td>
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<tr>
<td>Induction</td>
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