

Expanding the Possibilities of Discussion: A Strategic Approach to Using Online Discussion Boards in the Middle and High School English Classroom

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Abstract

This paper focused on whether the use of online discussion boards can enhance the quality of interaction in the middle and high school English classroom, covering both the characteristics of online discussion boards and potential negative effects of their features. The features of online discussion boards, their effects, and how these boards relate to the forms of communication facilitated by Web 2.0 technologies are discussed, and recommendations are provided for using online discussion boards in the English classroom.

Developments in technology have provided today's students with numerous opportunities for communication. Technological innovations have allowed young people to express ideas without making face-to-face contact and to exchange information in a variety of ways (Kim & Kamil, 2004; Lenhart, Madden, & Hitlin, 2005). These innovations pose challenges for teachers interested in incorporating technology but also intent on making sure the activities in their classes reflect their instructional goals and desired outcomes.

In this paper, I describe an approach to using online discussion boards to enhance class discussions in the middle and high school English classroom. I recommend that teachers consider carefully how and why online discussion boards may be used and the benefits of this technological tool in relation to their pedagogical goals. I examine how online discussion boards accomplish purposes that face-to-face discussions may not and encourage teachers to reflect on the features of online discussion boards when considering their use. While previous work has addressed the importance of carefully considering the use of technology (Pope & Golub, 2000; Richards, 2000; Young & Bush, 2004), I apply this strategic perspective specifically to online discussion boards and look at ways they can provide useful alternatives to face-to-face discussion.

The instructional standards of the National Council of Teachers of English (NCTE), International Reading Association (IRA), and the International Society for Technology in Education (ISTE) are aligned with possible uses of online discussion boards. The NCTE/IRA's (1996) *Standards for the English Language Arts* (1996) called for students to "use a variety of technological and information resources (e.g., libraries, databases, computer networks, video) to gather and synthesize information and to create and communicate knowledge" (p. 29). ISTE's (2007) *National Educational Technology Standards for Students* expanded on the NCTE/IRA's recommendation by emphasizing communication and collaboration: "Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others." In this paper, I explain how online discussion boards can facilitate the communication and collaboration described in these standards.

The recommendations and cautions offered in this paper are intended to be useful to in-service middle and high school English teachers, preservice English teachers, and teacher educators who prepare future middle and high school English teachers. In-service teachers may be able to add to the ways they already integrate technology and to think in greater depth about the purposes they have for doing so. Preservice teachers will have the opportunity to examine some reasons for teaching with technology and may compare those reasons with their existing beliefs about the uses of technology in the classroom. This examination may help them as they develop their own education philosophies. Teacher educators may see opportunities to explain and model the thoughtful use of technology with their students. Discussing the recommendations, cautions, and ideas in this paper with their students may foster conversations about how and why English teachers may effectively use technology.

Online discussion boards have a number of characteristics in common with face-to-face discussions but also have substantial differences. The asynchronous nature of online discussion boards allows for students to comment without being interrupted, to have responses accumulate over time, and to read and respond to others' comments. Grisham and Wolsey (2006) characterized online discussion boards as "interactive, like discussion, but thoughtful, like written discourse" (p. 652).

The focus on middle and high school English classrooms in this paper is based in part on the influence technology has on literacy itself. Through technological innovations, students read and write in different ways than they would when dealing with exclusively print media, making use of New Literacies, which Leu (2002) described as forms of reading and writing that emerge from new technologies. By incorporating online discussion boards, students can use components of technology in the literacy-related practice of discussing the texts and topics that are relevant to the study of English.

As forms of technology develop and related New Literacies emerge, teachers are faced with difficult decisions about what aspects of technology to include and why to include them (Bruce & Hogan, 1998). The intentional nature of technology use is important, because it calls for teachers to reflect on the goals of technologies that are used and consider if the forms of technology being utilized are appropriate to achieving these goals. Literacy practices incorporate technology in a number of ways, but those focused on in this paper involve how students in middle and high school English classes communicate.

How Online Discussion Boards Can Be Used for Class Discussions

Online discussion boards present alternative opportunities for class discussions to take place. They provide more opportunities for sharing one's opinions than does a face-to-face conversation, reducing the control that teachers have over a discussion (Larson & Keiper, 2002), and utilizing the technological communication with which many adolescents are familiar (Kim & Kamil, 2004) and are often eager to adopt (Lenhart et al., 2006). Online discussion boards represent a means of including the voices and perspectives of a variety of participants and allow for the democratic class discussions that Larson and Keiper (2002) described. Grisham and Wolsey (2006) depicted these online discussion boards as places where students can "process ideas about the reading," collaboratively make sense of texts and concepts, and "build group coherence" (p. 652) by communicating with each other.

The typical classroom discussion in elementary, middle, and secondary schools is "not really a discussion at all but a teacher-centered discourse pattern" (Grisham & Wolsey, 2006, p. 650). Grisham and Wolsey contended that this discussion format does not provide students with many opportunities to share their thoughts and makes it difficult for teachers to maximize their students' learning experiences. They claim that such discourse patterns "are harmful to the intent of most teachers, that of empowering students to become more competent at academic literacies and more engaged with this particular community of practice" (p. 650). This statement suggests that students with more opportunities to participate can increase their engagement and competence. Forms of discourse that revolve around the teacher may not allow for as much student ownership and growth as those that provide students with opportunities to shape and influence discussions.

Characteristics and Effects of Online Discussion Boards

The asynchronous nature of these discussion boards may have a positive impact on the quality of discussion in the middle and high school English classroom: They can provide students with extra time to consider each others' ideas, build on the insights of their fellow students, enable increased awareness of others' opinions, and limit comments unrelated to the discussion (Grisham & Wolsey, 2006). The threaded nature of the discussion boards may not only help keep students' responses related to a certain topic, but also facilitate students' abilities to discuss a topic in depth.

Online discussion boards present alternatives to face-to-face conversations, and they provide an authentic audience that writing solely for the teacher may not. Grisham and Wolsey (2006) discovered that students who wrote about literature on threaded discussion boards may were likely to use higher order thinking skills than those who wrote only for the teacher. They compared the responses to literature that middle school students wrote in their journals (which were only read by the teacher) with the responses that students composed for the discussion boards and found that students benefitted from the peer audience discussion boards provide: "In the social environment created in the electronic learning space of threaded discussion, students found a voice, developed perspectives, made meaningful predictions, connected the literature with other media, and established the motivation to read as only peers can" (p. 654). Grisham and Wolsey explained that students' discussion board posts included inferences, predictions, and connections, while their journal responses "consisted largely of summaries of the reading" (p. 654).

In addition, online discussion boards allow students to incorporate numerous technological components of Internet-based communication, such as Web 2.0 tools,

which are technological features that can “change how individuals collaborate and interact online” (Doering, Beach, & O’Brien, 2007, p. 41). Students who make use of Web 2.0 technologies when posting on online discussion boards can integrate a variety of links to texts and images in their responses (Doering et al. 2007) and may, therefore, utilize the web-based communication that plays major role in many adolescents’ methods of communication (Kim & Kamil, 2004). Although not all middle and high school students will have the same levels of experience with the technological possibilities of online discussion boards, the strategic incorporation of these discussion boards into the classroom can allow for students to use these forms of communication in academically meaningful ways that can provide opportunities that face-to-face discussions may not (Grisham & Wolsey, 2006).

Online discussions may provide benefits that face-to-face discussions do not, as they can allow students to reflect on topics in depth using higher order thinking skills, carefully consider others’ responses (Grisham & Wolsey, 2006), integrate multimodal links (Doering et al., 2007), and use other web-based communication practices that are part of many adolescents’ everyday lives (Kim & Kamil, 2004). These effects do not establish the superiority of one discussion form over another, but do provide a more developed context for understanding the uses of online discussion boards. In addition, this information can be used by teachers who are interested in maximizing the benefits of online discussion boards. By strategically implementing this technological resource, teachers can provide students with enhanced technology in appropriate situations.

Benefits of a Strategic Approach to Using Technology

An awareness and understanding of technology’s influence on communication is crucial for teachers interested in using online discussion boards in the English classroom. As suggested in my discussion of the various effects of online discussion boards, the optimal use of technology is aligned with specific instructional goals. The specific characteristics of a discussion determine whether online discussion boards would provide an added benefit to that experience. For example, short, in-class discussions in which the instructor wants to reveal specific facts would take a different shape than those in which the goal is to for students to incorporate higher order thinking skills while analyzing a topic.

Technology is best incorporated into the English classroom “with an explicit understanding of why we want to do it and how it will affect students, instruction, and curricular goals” (Young & Bush, 2004, p. 9). Because of the various applications of technology in literacy instruction, a careful evaluation of the use of technology is integral to maximizing the experience for both students and teachers. Pope and Golub (2000) offered a rationale for why teachers should strategically evaluate technology use: “The goal of this critical analysis of technology integration is to articulate and internalize a process for questioning and probing both the how and why of infusing technology through various applications, programs, web sites, methods, or communication tools” (p. 93).

The emphasis Pope and Golub placed on the how and why of technology integration suggests the importance of context as a guiding force in instructional decision making: “Different methods, whether electronic or not, should be determined based on the context of the students, their needs, and the assignment” (p. 93). This attention to specific circumstances emphasizes the importance of teachers being aware of students’ needs and responding accordingly. As Pope and Golub indicated, such thoughtfulness can be incorporated in a variety of teaching situations, not just those centered on technology.

In addition to promoting student-centered, responsive instruction, a strategic approach to the use of technology has other benefits for students: It can model how to determine when technology is useful and can help students consider the positive and negative aspects of specific forms of technology. Given the widespread use of technological communication in the lives of young people today, it is especially important that middle and high school students are equipped with the skills to make decisions about its use.

Pope and Golub (2000) predicted that students who are comfortable with technology “will not rely solely on the teacher but will use the Internet and electronic tools and media to gather information and gain insights” (p. 95), explaining that this change “demands that the teacher’s role change from that of an ‘information giver’ to one of ‘designer’ and ‘director’ of instruction” (p. 95). Under this new role, teachers will design problems and projects and provide guidance as students navigate various tasks. Given these changes in how students will learn and in the function of the teacher in construction of that learning, it is especially important that teachers model sound use of technology. By thinking strategically about their technology choices, teachers will lead by example and guide their students to thoughtful applications of technological principles.

Recommendations for the Use of Online Discussion Boards

Teachers interested in integrating technology into their instruction “need to understand not only how to use these technologies, but also the benefits and costs their adoption and integration into English language arts and literacy teaching have the potential to create for teachers, students, and the broader community” (Swenson, Rozema, Young, McGrail, & Whitin, 2005, p. 212). Online discussion boards may enable the kinds of discussions that face-to-face interactions do not, but teachers must consider whether these discussions are in the best interests of the students they teach and the objectives for their discussions.

Swenson et al. (2005) emphasized the importance of specific situations and contexts in strategically evaluating the use of technology, providing suggestions rooted in the idea that “teachers, individually and collectively, have the capacity and the responsibility to influence the development, modification, adoption, and/or rejection of newer technologies” (p. 211). The capacity of teachers as reflective practitioners is highlighted in these suggestions, which address topics for teachers to consider as they attempt to determine if the use of online discussion boards will enhance the conversations in their classrooms.

The following recommendations are offered for the use of online discussion boards in the middle and high school English classroom based on suggestions offered in the relevant theoretical and empirical literature, as well as the advice in practitioner-oriented articles and position papers:

1. Use discussion boards to promote thoughtful responses.
2. Use discussion boards to establish an authentic audience.
3. Use discussion boards as opportunities to utilize Web 2.0 technologies.
4. Use discussion boards as formative assessments.

In the following sections, each of these recommendations is described, along with the literature that supports them. They are evaluated based on the questions Richards (2000) outlined for evaluating technology use. Richards provided guidance for English teachers considering integrating technology into their instruction by encouraging them to respond to the following questions:

- Will this use of technology enhance the conversation of the classroom?
- Will it validate the work of the classroom?
- Will it validate the individual?
- Is it worth the time and effort? (p. 38)

Richards recommended that teachers make sure they can answer yes to at least two of the questions before adopting a technology-related practice.

Recommendation 1: Use Discussion Boards to Promote Thoughtful Responses

The act of posting to an online discussion board is structured differently than contributing to a face-to-face discussion. In online discussions, there is unlimited capacity for all members of the class to contribute. Students' abilities to respond are not hindered by a lack of class time or the need to move to another topic. Markel (2001) described the thoughtfulness made possible by the characteristics of online discussion boards, explaining that students can "read other student responses and interpretations and compare these with their own thoughts," which helps create an environment in which "the learning is deeper and more long lasting and students refine their thinking and their voice" (para. 9). These assertions suggest that the acts of reading, comparing, and refining enabled by the online format can produce more thoughtful learning experiences, resulting from an increased quality of response.

When comparing this component of online discussion boards with Richards' (2000) criteria, one can infer that the use of online discussion boards to promote thoughtful response validates the individual. Since students are able to take more time for their responses, the class becomes increasingly focused on individual experiences and allows for students who process information more slowly to still take part in the deepened learning that Markel (2001) described.

An online discussion board can function as a tool that allows for a wider range of students to enter into dialog and respond thoughtfully to the topics discussed in class, therefore, fulfilling the criteria of being worth the time and effort. Reflective responses associated with deep, long-lasting learning have a definite benefit for individual students. Enhancing this learning process and allowing students to take more from the material can allow for both immediate and long-term learner benefits.

Recommendation 2: Use Discussion Boards to Establish an Authentic Audience

Grisham and Wolsey's (2006) finding that students wrote more in-depth responses about the novel they were reading when they wrote for an online discussion board read by the entire class leads to some conclusions about the possible use of discussion boards to establish authentic audiences. The authors posit that since the students were not writing exclusively for teachers they may have felt increased motivation in sharing their work with their peers. Student writing done for an audience other than the teacher can be especially motivating, and technology can function as a tool for making this audience possible (Rowen, 2005).

The concept of an authentic audience fits Richards' (2000) criteria of validating the work of the classroom. Through opportunities to share their work with others, students' motivations to produce quality, meaningful work may be increased. By increasing the audience that has access to their work, students may see their responses to written prompts as more meaningful and relevant.

While face-to-face discussions also allow students to share their responses with a larger audience than the teacher, using online discussion boards can incorporate the benefits of written responses—such as increased time and opportunity for reflection—with the audiences provided by online discussion boards. The idea of also giving students opportunities to share their ideas with other online audiences with similar interests provides another way to validate what students do in school.

In addition to validating what students do, providing students with an authentic audience can enhance the class's conversation. Since students are able to write responses that will be read by each other, they can refer to their online discussions in face-to-face conversations and vice versa (Grisham & Wolsey, 2006). If students are motivated by an authentic audience, they are likely to produce better quality responses on online discussion boards (Rowen, 2005). All members of the class who read these comments will benefit from the ideas and insights of their fellow students.

Recommendation 3: Use Discussion Boards as Opportunities to Utilize Web 2.0 Technologies

In a discussion of Web 2.0 technologies, Doering et al. (2007) emphasized the collaborative nature of these technological innovations. The authors described the ways Web 2.0 technologies can permit individuals to use specific technological innovations when communicating with both local and distant audiences, depicting the Web 2.0 model as one in which students use the Internet as a tool for creating and “producing multimodal digital texts” (p. 41) that can be shared with others. Students who use online discussion boards have the opportunity to use technological tools to enhance and support the ideas that they would otherwise be able only to describe.

The use of Web 2.0 technologies can validate the individual and the work of the classroom. Allowing students opportunities to compose multimedia texts can appeal to their out-of-school interests and provide them with opportunities to share ways of technology-based composition and communication they already use: “The use of Web 2.0 tools has also resulted in an increased emphasis on multimodal digital communication in allowing adolescents to readily mix images, video, music, and print texts” (Doering et al., 2007, p. 43)

Although student facility in creating and mixing these forms of multimedia may vary, providing opportunities for students who are skilled in this area to utilize their talents may motivate them and allow them to share their skills with the other members of the class. Students who are less comfortable with multimedia would have the option of including links and pictures in their discussion posts in order to support or add to their ideas. In either situation, students would have opportunities to share their out-of-school interests through multimedia to the extent they are comfortable. The act of including aspects of multimedia to support a point or provide additional resources can validate the work of the classroom by forging connections between the class discussion and the forms of technology students' use in their everyday lives.

Recommendation 4: Use Discussion Boards as Formative Assessments

The discussion records provided by online discussion boards are useful for teachers looking for formative assessment data on their students (Larson & Keiper, 2002). Although face-to-face class discussion is sometimes used for formative assessment, this discussion is “limited to only those students who talked” (p. 11). Records of student postings give teachers “a very accurate approach for determining who is participating,

and to assess the quality of the interactions” (p. 11). Larson and Keiper noted that reading entire class discussions online can be time consuming, but can inform teachers’ future instruction with the whole class or with specific students.

This recommendation combines the motivation and learning benefits of online discussion boards with the records they can provide for teachers. The work of the individual is validated because students’ individual responses can be used by the teacher to assess what students know and adjust instruction based on their needs. If student responses provide teachers with useful formative assessment data, then the teachers may conclude that the discussion boards are likely worth the time and effort and, therefore, satisfy that aspect of Richards’ (2000) criteria. The data generated by posts to online discussion boards can allow teachers to achieve a greater understanding of students’ strengths and weaknesses, thereby providing opportunities for teaching and learning that may not have been noticed otherwise.

Cautions Related to the Use of Online Discussion Boards

Although there are a number of possible benefits in using online discussion boards to enhance communication in English classes, there are also important areas of caution as well. Teachers should be aware of possible negative consequences and be equipped to guard against them.

Caution 1: Communication Issues

One reason that online discussion boards can be beneficial to class discussions is they can increase the ability and comfort of students to communicate with each other (Grisham & Wolsey, 2006). However, this method of interaction can also increase the likelihood of miscommunication between students. “Caution is warranted ... [when students interact online] because these forms of communication lack important features that are present in face-to-face interactions” (Hacker & Neiderhauser, 2000, p. 55).

Swenson et al. (2005) explained, “Unlike face-to-face communication, digital communication does not allow for nonverbal signals such as voice tone, facial expression, or body language, to help the writer clarify intended meanings” (p. 228). By calling attention to this possibility, teachers can help their students reflect on ways to avoid miscommunications by coming up with strategies to limit their occurrences.

An increased awareness of the possibility of misinterpretation may encourage students to read their classmates’ responses closely before reacting and to phrase potentially misinterpreted statements as clearly as possible. When such miscommunications do occur, teachers can handle them by emphasizing the limitations of digital communication and providing students with opportunities to clarify their responses.

Caution 2: Access Issues

Pope and Golub (2000) recommended that teachers are aware of variations in students’ levels of access to technology, both in and out of school. They call for teachers to “consider this variability in their class assignments, opportunities for use in the school day, and homework expectations,” describing a teacher “who works to provide everyone in her class an equal opportunity to use the three computers available in her middle school classroom” (p. 95). The specific steps teachers may take to promote access will depend on the needs of the students and the resources available at the school and in students’ home lives. Teachers may want to talk with students, parents, and

administrators to develop a sense of how much access students have to technology at home. If many students do not have access to online discussion boards at home, or if there is considerable disparity in access levels, then teachers should limit the use of online discussion boards to in-class activities, where all students have equal access.

Access issues can be a major challenge in using a technology-oriented approach such as online discussion boards, but teachers should not let these challenges deter them from implementing technology. As technology continues to be used for more purposes, it is important that students have access to it and are able to use it in a variety of ways. Students who have limited or no access to technology at home may be among the greatest beneficiaries of using it in the classroom.

Caution 3: Time Issues

Using online discussion boards as a substitute for face-to-face conversations can take more time for students (Grisham & Wolsey, 2006; Meyer, 2003), since reading others' postings and typing thoughtful responses generally results in a greater time commitment than does speaking in class (Meyer, 2003), especially since many adolescent students can vary in the amount of time they take to read, process, and write information. Consider Richards' (2000) fourth question about using technology: "Is it worth the time and effort?" (p. 38). Class discussions using online discussion boards to achieve learning goals that are important to class objectives and that cannot be achieved during a face-to-face conversation may be considered worth the time and effort.

Conversely, discussions that incorporate technology in ways that are not in accordance with learning goals or major benefits would likely not be considered worth time or effort. As teachers consider these factors, they can structure their classes and the amount of time dedicated to online discussion boards accordingly.

Suggestions for Future Research

While the use of online discussion boards is becoming a frequently addressed topic in research and practitioner literature, future research can contribute to the current knowledge base in a number of ways, including (a) conducting more empirical studies on adolescents' experiences with online discussion boards, (b) exploring the quality of online discussion, and (c) doing research that applies the principles and suggestions outlined in published position papers.

Much of the literature on adolescents' experiences with online discussion boards and other forms of technology is presented as anecdotal evidence from individual teachers' experiences (Rowen, 2005), or as action research rooted in specific teachers' practices (Grisham & Wolsey, 2006). Many studies that examine the differences between face-to-face conversations and exchanges on online discussion boards have investigated the experiences of adult populations, such as graduate students (Meyer, 2003; Wang & Woo, 2007) and preservice teachers (Larson & Keiper, 2002). Future research could build off of these studies and fill a gap in the literature by examining the experiences of middle or high school students using online discussion boards.

Future research on this topic could explore the quality of online discussions. The existing literature suggests that online discussion boards increase opportunities for students to comment (Larson & Keiper, 2002), allow for increased collaboration among students (Grisham & Wolsey, 2006), and provide additional time to respond using higher order thinking skills (Meyer, 2003). While these topics provide information about students'

experiences with online discussion boards, they also suggest a need for a closer examination of the quality of discussions students have online. Studies that investigate the quality of students' comments and responses would make a valuable addition to the existing research on the use of online message boards in class discussions and increase teachers' abilities to make informed decisions about their use.

The current body of literature on technology and English instruction includes a number of position papers that offer guiding principles, pedagogical frameworks, and other suggestions for in-service and preservice English teachers and teacher educators seeking to incorporate technology in their instruction effectively (Pope & Golub, 2000; Swenson et al., 2005; Young & Bush, 2004). Future research should also examine the experiences of teachers and students in classrooms where the instruction is guided by the principles and suggested practices described in these articles. Studies such as these will allow for a deeper understanding of how these suggestions influence the experiences of students and teachers.

Conclusion

Online discussion boards can provide teachers and students in middle and high school English classes with opportunities for rich exchanges of information. They offer numerous benefits when used in accordance with pedagogical goals and can provide opportunities for students to share information that may not be available in a traditional face-to-face classroom interaction. Of paramount importance, however, is that teachers evaluate why they are using online discussion boards and the benefits they expect their students to receive from the use. A final word of caution, then, could be for teachers to avoid using technology merely for the sake of doing so (Pasternak, 2007; Young & Bush, 2004). Although general benefits come from students being familiar and comfortable with technology, a strategic approach to using technology in the classroom is preferred. Young and Bush (2004) asserted that one of the things technology should not do is, "replace complex language and developmental goals with more simplistic 'learn technology' goals" (p. 12).

Teachers must be aware of the context in which their students are using technology. Teaching with technology is often valued in the general sense by learning standards and teacher evaluation protocols (Young & Bush, 2004). A consideration of the specific aspects of a given situation, however, is integral for implementing online discussion boards in a way that enhances the class's discussion. The benefits of using this or any form of technology can most frequently be achieved when used in an intentional way that utilizes the technological features with a specific goal or end in mind. If a possible benefit of incorporating technology does not align with the instructor's goals for the class, then the technological component may be better incorporated in another lesson (Pope & Golub, 2000).

Richards and Lockhart (1996) advised teachers to question their practices actively, and he contended that doing so will enable them to "look objectively at teaching and reflect critically on what one discovers" (p. 2). Using online discussion boards purposefully and strategically considering their positive and negative attributes for specific situations will allow for their optimal use in the middle and high school English classroom.

References

- Bruce, B. C., & Hogan, M. P. (1998). The disappearance of technology: Toward an ecological model of literacy. In D. Reinking, M. C. McKenna, L. D. Labbo, & R. D. Kieffer (Eds.), *Handbook of literacy and technology: Transformations in a post-typographic world* (pp. 269- 281). Mahwah, NJ: Erlbaum.
- Doering, A., Beach, R., & O'Brien, D. (2007). Infusing multimodal tools and digital literacies into an English education program. *English Education, 40*(1), 41-60.
- Grisham, D.L., & Wolsey, T. D. (2006). Recentering the middle school classroom as a vibrant learning community: Students, literacy, and technology intersect. *Journal of Adolescent & Adult Literacy, 49*(8), 648-660.
- Hacker, D. J., & Niederhauser, D. S. (2000). Promoting deep and durable learning in the online classroom. In R. E. Weiss, D. S. Knowlton, & B.W. Speck (Eds.), *Principles of effective teaching in the online classroom* (pp. 53–64). San Francisco, CA: Jossey-Bass.
- International Society for Technology in Education. (2007). *National educational technology standards for students*. Retrieved from <http://www.iste.org/standards/nets-for-students.aspx>
- Kim, H.S., & Kamil, M.L. (2004). Culturally responsive practices for youth literacy learning. In T. Jetton & J. Dole (Eds.), *Adolescent literacy research and practice* (pp. 351-368). New York, NY: Guilford Press.
- Larson, B.E., & Keiper, T.A. (2004). Classroom discussion and threaded electronic discussion: Learning in two arenas. *Contemporary Issues in Technology and Teacher Education, 2*(2), 1-22. Retrieved from <http://www.citejournal.org/vol2/iss1/socialstudies/article1.cfm>
- Lenhart, A., Madden, M., & Hitlin, P. (2005). *Teens and technology: Youth are leading the transition to a fully wired and mobile nation*. Washington, DC: PEW Internet and Family Life.
- Leu, D.J. (2002). Internet workshop: Making time for literacy. *The Reading Teacher, 55*(5), 466-472.
- Markel, S.L. (2001). Technology and education online discussion forums: It's in the response. *Online Journal of Distance Learning Administration, 4*(2). Retrieved from <http://www.westga.edu/~distance/ojdl/summer42/markel42.html>
- Meyer, K. A. (2003). Face-to-face versus threaded discussions: The role of time and higher order thinking. *Journal of Asynchronous Learning Networks, 7*(3), 55-65.
- National Council of Teachers of English & International Reading Association. (1996.) *Standards for the English language arts*. (1996). Retrieved from <http://www.ncte.org/library/NCTEFiles/Resources/Books/Sample/StandardsDoc.pdf>
- Pasternak, D.L (2007). Is technology used as practice? A survey analysis of preservice English teachers' perceptions and classroom practices. *Contemporary Issues in*

Technology and Teacher Education, 7(3), 140-157. Retrieved from <http://www.citejournal.org/vol7/iss3/languagearts/article1.cfm>

Pope, C., & Golub, J. (2000). Preparing tomorrow's English language arts teachers today: Principles and practices for infusing technology. *Contemporary Issues in Technology and Teacher Education, 1*, 89-97. Retrieved from <http://www.citejournal.org/vol1/iss1/currentissues/english/article1.htm>

Rowen, D. (2005). The write motivation: Using writing to engage students in writing across the curriculum. *Learning & Leading with Technology, 32(5)*, 22-43.

Richards, G. (2000). Why use computer technology? *English Journal, 90(2)*, 38-41.

Richards, J.C., & Lockhart, C. (1996). *Reflective teaching in second language classrooms*. New York, NY: Cambridge University Press.

Swenson, J., Rozema, R., Young, C.A, McGrail, E., & Whitin, P. (2005). Beliefs about technology and the preparation of English teachers: Beginning the conversation. *Contemporary Issues in Technology and Teacher Education, 5(3/4)*, 210-236. Retrieved from <http://www.citejournal.org/vol5/iss3/languagearts/article1.cfm>

Wang, Q., & Woo, H. L. (2007). Comparing asynchronous online discussions and face-to-face discussions in a classroom. *British Journal of Educational Technology, 38(2)*, 272-286.

Young, C.A., & Bush, J. (2004). Teaching the English language arts with technology: A critical approach and pedagogical framework. *Contemporary Issues in Technology and Teacher Education, 4(1)*, 1-22. Retrieved from <http://www.citejournal.org/vol4/iss1/languagearts/article1.cfm>

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