The Present and Future State of Blended Learning in Workplace Learning Settings in the United States

Curtis J. Bonk
Indiana University, Bloomington

Kyong-Jee Kim
Portland State University

Eun Jung Oh
The University of Georgia

Ya-Ting Teng and Su Jin Son
The University of Illinois at Urbana-Champaign

This paper reports survey findings related to the present and future state of blended learning in workplace learning settings across the U.S. Surveyed in this study are 118 practitioners in corporate training or e-learning in various workplace settings. The findings reveal interesting perceptions by respondents regarding the benefits of and barriers to implementing blended learning. Respondents' predictions related to emerging instructional strategies, technologies, and evaluation techniques for blended learning are also reported.

Keywords: Blended Learning, Workplace Learning, Emerging Trends

With the emergence of Internet technologies during the past few years, there has been an explosion of nontraditional learning opportunities. This explosion is apparent in K-12 environments, higher education, and government and military training settings (Bonk & Graham, 2006; Cho, Park, & Wagner, 1999; MacDonald & McAteer, 2003). Such informal and nontraditional training approaches have also proliferated in corporate training (Cross, in press; Noe, 2003). However, various limitations of e-learning as a training method in corporate settings have led to innovative attempts to mix various delivery methods. Accordingly, the interests of blended learning which typically combines face-to-face training and online learning is rapidly increasing (Boyle, Bradley, Chalk, Jones, & Pickard, 2003; Duhaney, 2004; Thorne, 2003; Thomson NETg, 2003). Millions of learners around the planet, in fact, are actually learning in this fashion each day (Bonk & Graham, 2006) and blended learning estimates continue to climb. A recent survey indicates that the use of blended learning in all of training in the United States is projected to jump to nearly 30 percent by 2006, which is about double that of 2004 (Balance Learning, 2004). Furthermore, it is conceivable that 80-90 percent of college and corporate training classes will be blended by the end of the decade (Kim, Bonk, & Zeng, 2005) and that more than one billion learners around the globe will be advancing their skills in this fashion.

Although many organizations are recognizing the potential of blended learning to bring learning closer to employees, there are numerous issues to be addressed in delivering blended learning in workplace learning settings. First, there are a plethora of technologies and delivery methods that can be used for blended learning, but there is little known about the actual effectiveness of such blends (Rossett, Douglis, & Frazee, 2003). Second, there are many different blended learning models and approaches for delivering workplace learning (Bonk & Graham, 2006; Driscoll, 2002a; Rossett, Douglis, & Frazee, 2003; Valiathan, 2002). Such facts can lead to confusion for practitioners in deciding the optimal blended learning approaches and how to evaluate blended courses or programs. Given the many unknowns about blended learning, HRD professionals need guidance as to what the optimal blends are for delivering training in their organizations. Clearly, a study of the future of blended learning and its implications for the delivery of learning is warranted to help practitioners plan to implement blended learning in their organizations. In response to this need, a survey was conducted of HRD professionals (e.g., chief learning officers, training managers, trainers/instructors, and e-learning developers) in the United States. The purpose of

the present study is to explore the current state and future trends in blended learning in workplace learning settings around the United States. The research questions were:

1. How is blended learning being perceived and practiced in workplace learning settings today?
2. How is blended learning expected to be perceived and practiced in the next few years?
3. Are there cross-cultural differences in the current status and future trends of blended learning? If so, what are the differences?

The present study intends to provide a compass that can mark the direction and intensity of blended learning approaches in workplace learning settings.

Theoretical Framework

Blended learning is one of the most remarkable trends in corporate training (Graham, 2006; Rooney, 2003). Bunderson (2003), in fact, described blended learning as an "old friend with a new name" (p. 279); from this perspective, people have been extensively using blended learning for decades. Yet, blended learning has been used somewhat differently depending on how people understand what it means and what they blend. Graham (2006) identifies and categories three of the more prevalent definitions of blended learning currently used in the literature. First, one can blend instructional modalities or delivery media, such as using different technologies and activities (Bersin, 2004). Second, one can combine different instructional methods (Driscoll, 2002b; Rossett, Douglis, & Frazee, 2003). As Driscoll (2002b) stated, one "can combine various pedagogical approaches (e.g., constructivism, behaviorism, cognitivism) to produce an optimal learning outcome with or without instructional technology." Third, blended learning also commonly means a combination of online and face-to-face instruction (Bonk & Graham, 2006; Rooney, 2003). According to Graham (2006), this third perspective more precisely mirrors the historical background of the emergence of blended learning systems.

Researchers have also identified or suggested different blended learning models based on their experience and a review of the literature. Graham (2006) integrates the recent literature of blended learning in higher education and suggests a blended learning model based on four different levels in which blending could occur: (1) activity-level, (2) course-level, (3) program-level, and (4) institutional-level. From the corporate perspective, however, models are proposed with a different focus and angle. Valiathan (2002) identified three blended learning models based on the aims that drive learning: a (1) skill-driven model, (2) attitude-driven model, and (3) competency-driven model. Depending on how, what (i.e., content), and where (i.e., face-to-face classroom, online, and workplace) the activities are organized, Rossett and Frazee (2006) also characterize blended learning models, such as an anchor blend, a bookend blend, and a field blend. Additionally, Rossett, Douglis, and Frazee (2003) point out six factors that impact the decision regarding the design of blended learning experiences: (1) how stable the content is, (2) how much time one has for the development and implementation, (3) whether human interaction is essential for the learning goals, (4) how much the budget is, (5) whether the learning resource can be reusable and referenced in the future, and (6) whether the nature of the activities and learners' situation is individual or social. The present study is not grounded on any of the aforementioned specific models due to the exploratory characteristics of the study; however, the survey instrument was developed considering the complexity of the corporate training environment and based upon the assumption that organizations can implement different kinds of blended learning models due to their unique organizational context.

Research on blended learning is a very recent phenomenon and theories of blended learning have yet to be developed. Therefore, the theoretical framework that guided the research questions and the design of the research instrument for this study is based upon multiple conceptual frameworks related to advantages of and barriers to blended learning. Among many recognized benefits of blended learning in the prevailing literature, some theorists contend that the use of blended learning will result in improved pedagogy by taking advantage of the benefits of two different instructional settings (i.e., face-to-face and online settings). Osguthorpe and Graham (2003) state that "those who use blended approaches base their pedagogy on the assumption that there are inherent benefits in face-to-face interaction among participants as well as the understanding that there are some inherent advantages using online learning technologies in their teaching. Thus, the aim of using blended learning approach is finding a harmonious learning balance between online access to knowledge and face-to-face human interaction" (p. 228). In the same vein, the results of one particular research study indicate that employees who learned through blended strategies showed better performance on their real tasks than those who learned in other instructional formats such as instructor-led or self-study approaches (Thomson NETg, 2003).

The conceptual framework for investigating the factors impeding or hindering the use of blended learning in the present study was based upon a framework detailing several key barriers to e-learning by Mungania (2003). His study of 875 corporate employees on their perceptions of e-learning suggest that there are seven barriers in e-

learning: (1) personal barriers, (2) learning style barriers, (3) instructional barriers, (4) organizational barriers, (5) situational barriers, (6) content stability barriers, and (7) technological barriers. Therefore, it entails an investigation into whether such barriers exist in implementing blended learning.

Blended learning can also be deemed part of the continuing trends of nontraditional and distance learning. This movement emphasizes making learning available to learners in a variety of delivery formats and adaptable to myriad styles or preferences. Blended learning offers opportunities for authentic and self-directed learning avenues that have been espoused by nontraditional and distance learning experts for decades (Knowles, 1984; Wedemeyer, 1981). Charles Wedemeyer and other nontraditionalists recognize that emerging technologies offer the options and opportunities that adult learners need. Instruction must interest learners intrinsically, assist learners in self-development, address their learning preferences or styles, and exploit the resources of their respective institutions or organizations. Blended learning is a form of learning that does just that. However, it is uncertain the degree to which corporate training settings around the globe are taking advantage of such opportunities. The present study is meaningful because it helps both practitioners and researchers enhance the understanding of how U. S. corporations have recognized and taken advantage of such opportunities.

Study Description and Methodology

This survey was conducted of 118 HRD professionals employed in organizations of various types and sizes, including government, business, and not-for-profit organizations, across the United States. About 40 percent of the respondents were female and 60 percent were male. Our study participants were playing an active role in blended learning in their organizations. Half of the survey respondents indicated that they were designing, delivering, facilitating, evaluating, or supporting blended learning and another 40 percent noted that they were visioning or planning blended learning in their organizations. This survey took place between November 2005 and March 2006 using a Web-based survey tool, SurveyShare. This particular survey project was a part of a longitudinal study of the future of e-learning in corporate training and higher education setting that began a few years earlier (Bonk, Kim, & Zeng, 2006; Kim & Bonk, 2006; Kim, Bonk, & Zeng, 2005).

The survey instrument for the present study (i.e., a questionnaire) consisted of 31 items related to respondent demographics, the current status of blended learning in the respondent organizations, and future predictions related to blended learning in their respective organizations. Four investigators participated in developing the survey instrument. This instrument was constructed from a review of the literature and went through several revisions after receiving feedback from other investigators on our research team as well as from external colleagues to ensure the validity of the instrument. The questionnaire was then posted to several online forums and listservs for HRD professionals in the U.S. The participants visited our online survey site to participate in this survey study and they took the survey anonymously. Some descriptive analyses (e.g., frequencies) were conducted of the data using a statistical analysis tool provided in the online survey system used for this study.

Results

The results of the present study indicate that blended learning has become a popular delivery mode in workplace learning settings. Over two-thirds of those surveyed responded that their organizations were already using blended learning approaches for training their employees and another 14 percent of them indicated that their organizations were considering using it. In addition, 68 percent of our survey respondents predicted that their organizations' budget spending on blended learning would increase. When asked what is driving the increasing popularity of blended learning, a majority of the respondents reported that improving the availability and accessibility of learning and the quality of the learning experience were the key drivers, followed by cost reductions.

In spite of the clear indications of the increasing importance of blended learning in the future of workplace learning and performance, the results of the present study also indicate that there are obstacles in adopting blended learning (see Table 1). Our respondents viewed fast changing technology and insufficient management support and commitment as the most significant issues that needed to be addressed to implement blended learning successfully. Also, thirteen percent of our respondents viewed the lack of understanding of what blended learning was as the most significant barrier to implementing it. This finding is interesting because 64 percent of the respondents also indicated that blended learning was an important part of the strategic planning for training and development in their organizations for the coming years. Without a well-grounded understanding of what blended learning is, it will be unrealistic to lay out effective strategic plans for it.

Table 1. *The most Significant Issues or Problems with Blended Learning that Must be Addressed During the Next Few Years*

Answer	Responses	Ratio (%)
1. Fast changing technology	16	13.9
2. Insufficient management support and commitment	16	13.9
3. Lack of understanding of what blended learning really is	14	12.8
4. Learners lacking self-regulated learning skills	10	8.7
5. Organizational / cultural resistance	10	8.7
6. Limited bandwidth	9	7.8
7. Boring and low quality content	8	7.0
8. Limited organizational vision and planning	8	7.0
9. Learner resistance/hesitancy	6	5.2
10. Others	6	5.2
11.High costs of delivery	4	3.5
12. More hype than fact	4	3.5
13. Lack of quality instructors	3	2.6
14. Lack of standards	1	0.9
15. Unethical vendors	0	0.0
Total	115	100.0

One of the most often asked questions that arises when delivering blended learning, especially in training settings, is what the optimal blends are (Rossett & Frazee, 2006). Figure 1 illustrates the results of this survey regarding instructional strategies that are expected to be widely used for blended learning in the future. Our respondents predicted that instructional strategies that link learning and performance by providing a collaborative learning environment and authentic tasks would be used more often in the future. In contrast, in similarity to our previous studies on online learning in both corporate training and higher education (e.g., see Bonk et al., 2006; Kim & Bonk, 2006; Kim et al., 2006), didactic, lecture-based learning approaches and Socratic questioning were among the least favored. Clearly, Figure 1 reveals a trend in workplace learning that places an emphasis on learner-centered, problem-based, and team-based approaches over instructor-centered ones in a blended learning environment.

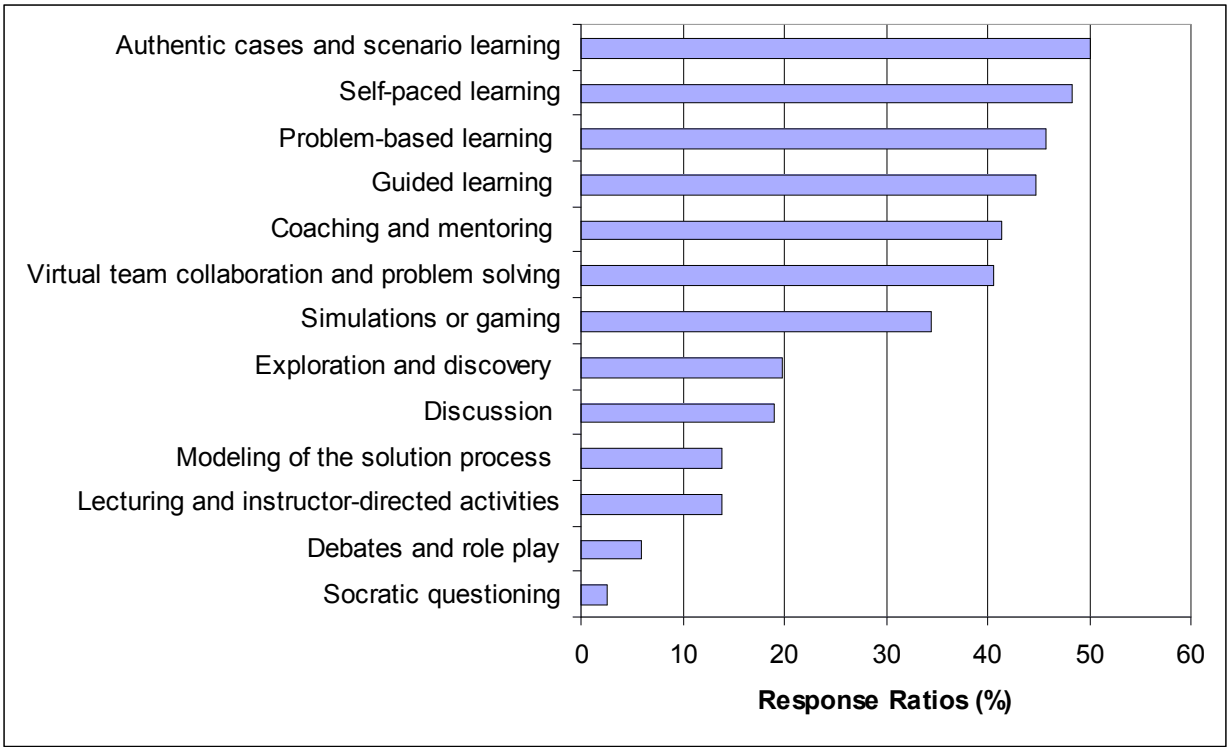

Figure 1. Instructional strategies that are expected to be used widely for blended learning in the next few years.

In another question, we listed thirteen technologies and asked the respondents to pick a technology that was expected to be used most widely for blended learning in the future (see Figure 2). About a quarter of those surveyed predicted that webcasting and video streaming would be used most widely in the future. Our survey respondents also predicted that technologies for just-in-time training or performance support, such as digital libraries or content repositories and knowledge management tools, would be widely used in the future. The respondents also predicted that wireless and mobile technologies would be used widely for delivering blended learning. Interestingly, only a small number of respondents predicted that some collaborative learning and learner-empowering tools, such as massive multiplayer online gaming, blogs, and wikis, would be used often in the future. This is a highly interesting finding given the exploding interest in such technologies in the media and in training related conferences and publications. This phenomenon is conceivably associated with corporate security restrictions, which are extremely critical in workplace learning (Ardichvili, 2002). It may also be related to the faith corporate trainers have in standard delivery of content, rather than allowing trainees or learners generate content on their own such as in their blogs and wikis. However, that is mere speculation and does not match the findings related to Figure 1 which heavily related to learner-centered instructional approaches.

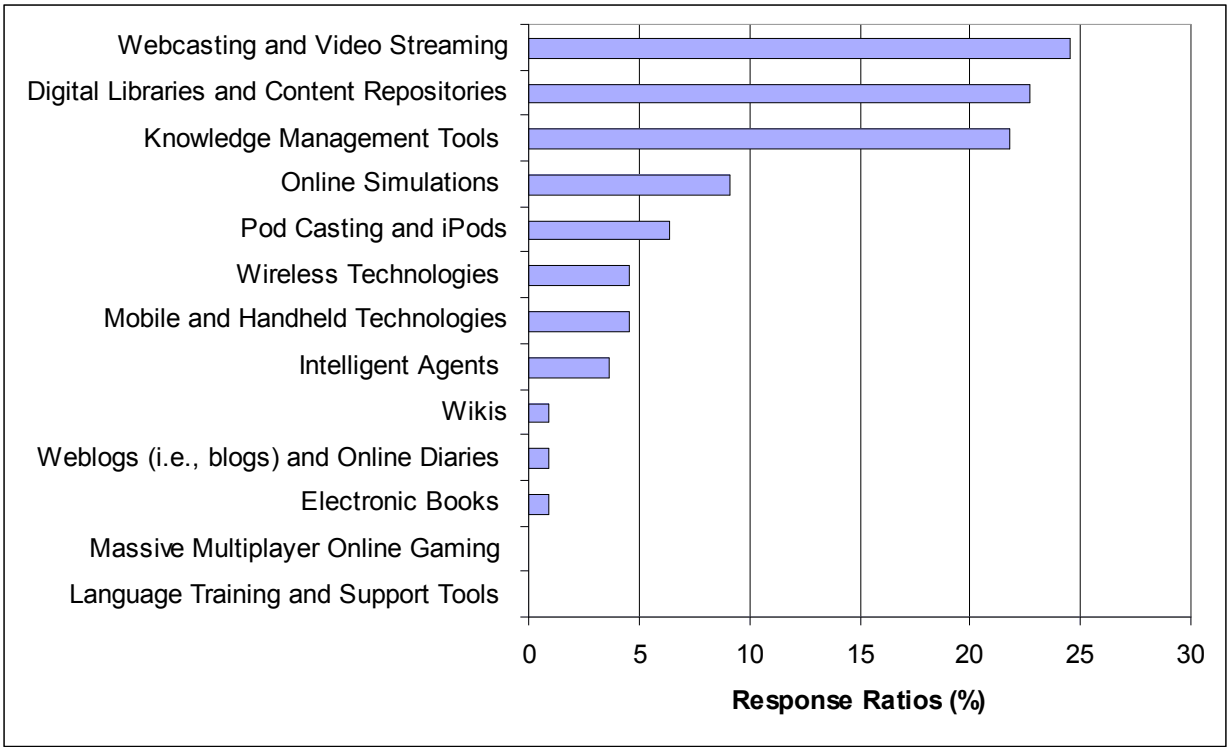

Figure 2. Emerging technologies that are expected to be used widely for blended learning in the next few years.

Another important question for delivering quality blended learning is how it will be evaluated (Rossett & Frazee, 2006). The results of the present study indicate that the quality of blended learning will be measured most often in relation to its benefits to their organizations such as employee performance, return on investment, and cost-benefit analyses (see Table 2). It is notable that there is a trend toward evaluating blended learning at higher levels of the Kirkpatrick's model which is commonly used for evaluating training programs (Kirkpatrick, 1994). However, it remains to be seen whether actually practices match these survey preferences and ideals.

Table 2. *Respondents' Predictions on Evaluation Methods to be Widely used for Blended Learning in the Coming Decade.*

Answer	Responses	Ratio (%)
1. Employee performance on the job	35	30.4
2. Return on investment (ROI) calculations	16	13.9
3. Comparison of learner achievement with those in face-to-face classroom settings	15	13.0
4. Cost-benefit analyses	12	10.4
5. Course evaluations	9	7.8
6. Employee performance on simulated tasks of real-world activities	8	7.0
7. Time to competency	8	7.0
8. Learner satisfaction questionnaires	6	5.2
9. Course completion rates	3	2.6
10. Computer log data of student usage and activity	2	1.7
11. Other	1	0.9
Total	115	100.0

Discussion and Conclusions

In parallel with other survey studies (eLearning Guild, 2003), the findings of the present study indicate that blended learning will become a popular delivery method in the future of workplace learning. Additionally, the results of this study shed light on the current state of blended learning in workplaces, where many organizations are still confused about what blended learning is and how to implement it. Apparently, there is a pressing need for training and HRD professionals on guidance regarding what blended learning means and how to implement blended learning in their organizations. Additionally, our survey respondents recognized fast changing technology as one of the most significant issues for them to implement blended learning. The findings of the present study regarding the emerging technologies provides practitioners a glimpse of emerging technologies for blended learning and help them plan for the adoption of such technologies for delivering blended learning in their organizations.

In terms of the future state of blended learning, our survey respondents expected that collaborative and authentic learning approaches will be more widely used for blended learning in the coming years. Additionally, our survey respondents also predicted that technologies that enable learners to engage in just-in-time training or performance support would be used widely for delivering blended learning. Respondents also predicted more use of technologies for delivering authentic and just-in-time learning for employees. These findings appear to provide a positive outlook for blended learning approaches as a means to deliver training that truly impacts business results by linking training and performance more closely than ever. It is recommended that the findings of the present study be used as guidance for organizations to create strategic planning on their training and development. Additionally, it is recommended that more empirical studies be conducted of effective blended approaches to guide practitioners on effective practices for implementing blended learning.

The results of the present study are particularly important because this survey directly questioned practitioners rather than scholars in the academe. Therefore, the findings of the present study are expected to provide the lens for researchers to look into the current and future state of blended learning from practitioners' perspectives. Additionally, the present study is different from other survey studies of blended learning in that this study aims to predict the future state of blended learning as well as the current one. Therefore, the findings of the present study can help practitioners become better informed on how blended learning will be designed, delivered, and evaluated for workplace learning in the future, thereby providing them with guidance for looking ahead and preparing for the future of blended learning in their organizations. The findings of the present study also have implications for researchers. Results of the study can provide direction for future research to help practitioners clarify confusions about blended learning that currently exist and to address issues that are expected to emerge from organizations attempting to successfully implement blended learning.

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