

MAKING PEOPLE COMPETENT: SUCCESSFUL TIPS FOR IMPLEMENTING BLENDED LEARNING APPROACH IN EDUCATION AND TRAINING

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ABSTRACT

This paper examines a variety of issues associated with area of blended learning in education and training. Blended learning involves the combinations of both face to face instruction and e-learning to deliver instructional material in a cost-effective, productive, suitable manner. Blended learning has merged as a viable instructional delivery option for training and higher education. The evolutionary nature of blended learning has become a focal point in several universities and organizations. While much research has been devoted to producing learning program and to constructing e-learning content, less attention has been paid to using technology to improve the learning process in terms of depth and scope. This paper is targeted at filling this gap by considering learning support from an online as well as regular classroom perspective. This paper investigates how these two worlds can be brought together to result in optimal learning. It focuses on conceptual modeling of successful blended learning processes. It highlights strategies and presents tips on implementations and delivery of learning. The conclusion of this paper is that blended learning has added value only if designed thoughtfully and accompanied by high interpersonal skills of instructors.

KEYWORDS

Blended learning, flexible learning, e-learning, higher education, blended learning strategy, blended learning trends.

INTRODUCTION

The aim of this paper is to examine blended learning within a higher education context. The paper will examine blended learning origins and its relationship to e-learning. Implications, limitations, and future trends of blended learning are also elaborated in this paper. The paper is also aimed at training managers as well as higher education decision makers who are actively considering the deployment of e-

learning solutions for their organizations. The paper will also serve as a useful instrument to academic and training institutions with an interest in alternatives to fully online instructions or traditional methods of instruction.

The emergence of the Internet technologies attracts attention to what trainers know and on how to collect, stir, store, and refresh that knowledge. The effort to enable this is known as blended learning. It is a learning approach for making best practices and ideas available to be delivered both face-to-face and electronically to the right learner at the right time and place. In the context of training, blended learning is concerned with delivering the needed knowledge, skill, and attitude to improve employee's performance. Blended learning can be a great tool that assists learners to obtain multiple perspectives related to their professional development. Shukla and Koh (2004) contend that blended learning is a viable alternative for attending on campus courses. According to Hentea et al (2003), the term blended learning covers a wide set of applications and processes, including distance education. They encourage the investment in the quality of educational programs by carefully considering blended learning programs which in return offer the basis for achieving the great promise of quality and expectations of educational and training programs.

Concepts such as the learning organizations, corporate university, Open University, and the need for constant and cost-effective training and learning have made blended learning an interactive proposition to many organizations. According to Bersin (2004), some of the economic benefits of implementing blended learning over traditional instruction or many other methods of delivery is quite obvious. Derntl and Motschnig-Pitrik (2004) states that educational institutions and organizations have the desire to utilize pros of blended learning, but success requires more than moving education and training to the web. A viable and sustainable blended learning solution requires the formulation of an appropriate blended learning strategy involving appraisal of training needs, successful implementations of blended learning solution, and continuous evaluation and revision.

This paper focuses on describing the basic elements and structure of blended learning programs and relating that to the learning process for adult learners. It introduces the fundamental terms, concepts, and methods for designing and developing a successful blended learning course. Considerations to the technical requirements as well as instructional requirements are deeply discussed. The benefits of blended learning over e-learning, such as social and cultural factors, are highlighted.

Since blended learning is relatively recent and still evolving, it has a few established models, frameworks, or standards. Therefore, an extensive library review was carried out to determine the current status of blended learning its limitations and future trends.

1. BASICS OF BLENDED LEARNING

Quemada et al (2004) views blended learning as an approach that combines e-learning with other learning strategies including face to face instruction. It increases learning opportunity by enhancing flexibility through e-learning and other methods of delivery. Since blended learning is a subset of e-learning, it utilizes both e-learning characteristics and classroom environment characteristics. Therefore, blended learning is still continuous. Employees learn for their current or future work. When they work, they also continue to learn to improve their performance in the job. Thus,

work becomes learning and learning becomes work. In addition, blended learning is personalized. It is tailored to the current knowledge, career goals, personal preferences, and learning styles of the learner. Not all employees share the same interest when they enter a training program. Furthermore, blended learning is dynamic. It is adjustable to the current demands of organizations and educational institutions.

Consequently, many training organizations tend to extend or enhance but not replace classroom training by web based training (Bade et al, 2004). The underlying concept behind the success of blended learning in organizations is the integration of the learning program and implementation of a feedback channel between students and tutors as well as the training organization (Thorne, 2003).

Blended learning approach extends its uses to cover different areas other than being limited to be described as an instructional strategy. Bade et al (2004) discuss the integration of blended learning in certification process of the training development and human resources development plans. For large organizations to qualify its employees or partners, a process of testing can be followed in two sequent forms. This process of qualification consists of two exam, one is the theoretical part which can be taken online and the other is the practical exam which can be taken in the classroom.

1.1 Blended learning related terminologies:

- Learning materials

Units of content that can be stored and transferred in digital or non-digital format. They include not only books and other tapes, multimedia CD-ROMs, and other supportive content learning management systems used by learners, but also by educators to support their instructional activity.

- Learning activities

Services that is provided in order to support the accomplishment of a specific educational objective achieved through a creation of learning environment consisting of educators , educational materials, communication infrastructure, meeting places, and other situational environment. The aim of blended learning activities is to work on the enhancement of knowledge or skills.

- Facilitators

The blended learning facilitator is responsible for assisting the learner to acquire the basic skills for accessing the course materials online which will enable them to gain the required knowledge and skills of the given course at one end. The blended learning facilitator is then responsible for relating online course with classroom meetings.

- LMS

Packaged of learning include elearning packages such as learning space, white board, WebCT, etc. They are systems aimed at supporting learners in their learning process or at supporting instructors in the learning activities under their control. LMS supports

both the exchange of reusable educational materials based on open standards as well as the collaboration of instructors over the network in the realization of educational activities.

1.3 Blended learning characteristics

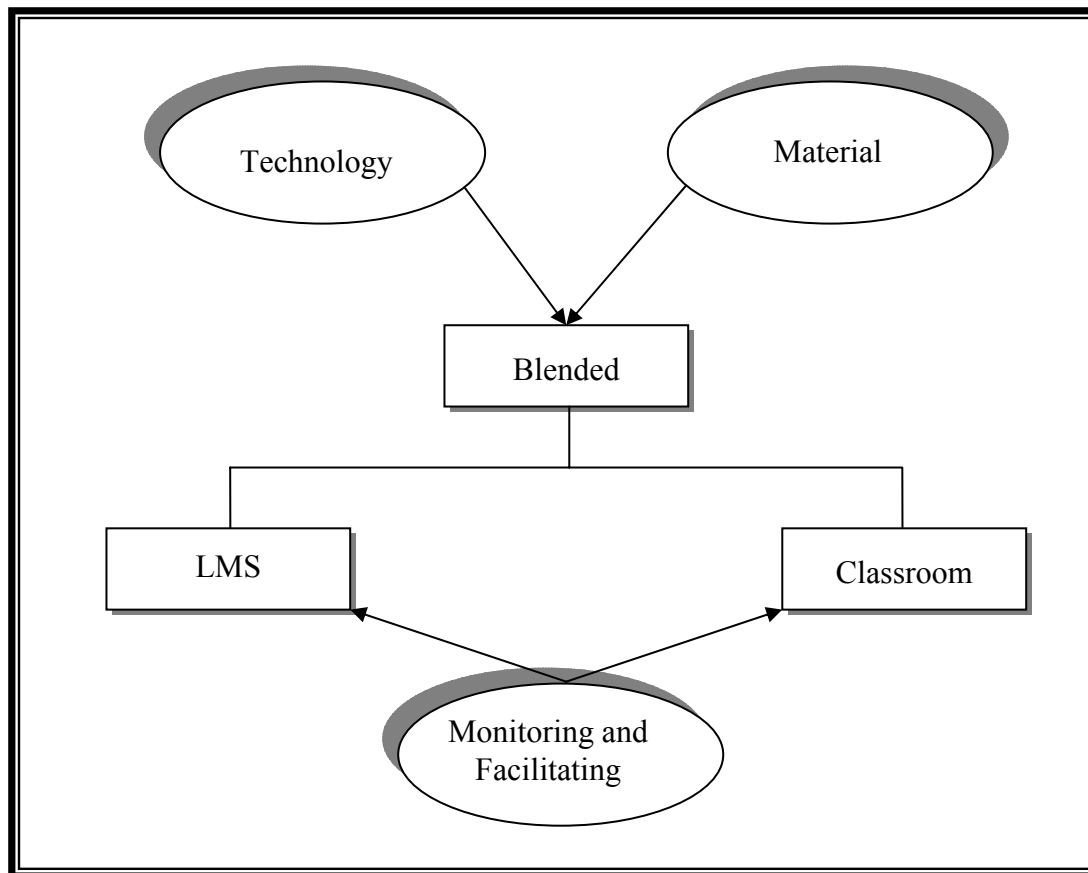
Blended learning allows individuals, pairs, or groups do the following:

1. Focus on the current entry levels of the trainees, not the levels specified by the instructor or the institution.
2. Take advantage of the net: work concurrently at a learning site, anywhere, anytime and relate that to classroom meetings.
3. Enrich classrooms meetings through brining shared experiences from the online collaborations.
4. Learn systematically through questions and activities, by incorporating more than one learning method, e.g. classroom meetings, simulation, and individual instruction (self paced).
5. Incorporate administrative functions such as testing, monitoring, progressing, registering, etc.
6. Improve their performance through obtaining feedback and coaching.

1.4 Technical requirements of blended learning

There are three fundamental criteria for blended learning:

1. Networked classroom. CR-ROM lacks the networkability that enables information and instruction distributed and updated instantly.
2. Computers using standard Internet technology. TCP/IP protocol and IP over satellite meet this requirement, but not TV-satellite or net-to-phone.
3. Blended learning goes beyond the traditional paradigms of learning. It is not limited to the delivery of instruction as the case in WBT. It includes the delivery of information including e-learning tools that improves performance.



2. OPTIMAL PACE OF BLENDED LEARNING

The use of blended learning approach in education and training extend the implications of elearning. One of the problems of entirely adopting online learning is the lack of sufficient attention to the social and personal needs of online communities (Henning & Westhuizen, 2004). Therefore, blended learning approach including elearning fulfills the needs of the learners to trust technology through supportive face to face meetings. According to Magenheim and Scheel (2004), although online learning proved to be an appropriate method of learning, fully online learners are less motivated to reach most of the learning objectives of a course of instruction. Online learning, however, is not a substitute for instructor-led instruction. Thus, blended learning is a solution to complement classroom instruction. E-learning alone does not grantee effective learning. Learning takes place in and out of the regular classroom. Learning should be available to any learner at any time and any where.

2.1 Support adult learning

Learning is an ongoing process that takes place as knowledge is consumed regardless of the place and time. Accessing daily information at work to help individuals perform their tasks is an example is learning. Thus, learning does not have to be a formal training course in which employees are introduced to experiences in order to learn. Consequently, many can learn without attending courses. Adults learners would prefer to not sit in a classroom rather than sharing experiences. Winston Churchill the British Prime Minster once said “I am always ready to learn, although I do not always

like being taught” (Waller, 2005). In the light of this argument, Knowles (1996) describes adult learning in relation to the term "andragogy." He perceives that learning can take place if learners become self-directed. In this context, learners are responsible for their own learning progress to help them to meet job needed skills and knowledge. They are characterized as being conscious about their lack of knowledge, skills, and attitude to survive in the workplace. This feeling is important to both organizations and individuals in organizations.

For learning to take place in any organization, specific environmental conditions should be met. Learners need to be supported by their organizations to make them ready to learn. Once they are ready, they can learn. Also, adult learners become more ready to learn when they find the appropriate information for their job. Most adult think that learning is important when it improve their performance and have effect on their function. Achievement is another important factor for adult learning. Performing better in the job, should result be appreciated internally and externally.

The problem with training courses in general is that sending employees to attending training that irrelevant to their work. Some organizations select the wrong people for the wrong training course. Adults have the feeling of their valuable time as well as competitive organizations in today's market. E-learning courses still lack the considerations of social interactions between the instructors and the learners and among the learners themselves. This pitfall of online learning makes training is not fun. Therefore, most organizations turn away from online training because their employees are not interested in online learning anymore and prefer face-to-face instruction. Blended learning is a solution to this problem where learners can acquire the basic knowledge and skills online and save the face to face time for the interactions and problems posing. So this process will empower the effect of training while still gaining the advantage of online training.

2.2 Individual differences

Blended learning supports individual needs to provide customized learning with adequate instructional methods. Blended learners are responsible for their own learning. Like online learners, accountability becomes a major characteristic of the e-learners. They are able to manage and implement their own learning and development plans. Unfortunately, many educational or training designers impose fixed, inflexible training and development plans, where employees are sent to training programs without analysis of their needs. However, blended learning programs can provide the training programs designers with flexible system to ensure that employees receive legitimate training. E-Learning technology can make learning more creative and fun while still being manageable. Although e-learning has shown to be *cost-effective*, it is too new to judge its ability to have learning gains.

Research shows that blended learners can learn *faster* compared with solely instructor-led training; it enhances the retention of materials (Thorne, 2003). E-learning technologies can augment live classroom instruction when use 3-D visualization and animation. In this context, the mouse becomes an extension of the fingertips. Learners can complete exercises by dragging, inserting, clicking, etc.

In addition to raising the quality of *individualized* distance instruction, content via e-learning medium can be updated concurrently making information more *accurate* and *updated*. Furthermore, employees are encouraged towards professional development,

because it is convenient. They can receive training at their best time (in case of asynchronous delivery). This feature can be easily adapted to blended learning approach, which makes the learning process relevant to the needs of the learners. Also, employees can receive training at their own classroom.

One of the main obstacles that face organization delivering training online is relevancy of the course. Blended learning extends e-learning applications. One of the reasons why traditional e-learners training programs' attendees hesitate to participate in training course is because of its irrelevancy to the workplace and expectations of the learners. Since blended learning training program allows for self-development plan and classroom interactions, learners are encouraged to set up the order and type of their courses to enhance their job related skills and knowledge. Furthermore, blended learning courses assist employees to gain *competitive* skills and knowledge.

Effective blended learning solutions allows educational institutions to improve performance and productivity by responding to the demands of the learners and making learning available 24 hours a day, 7 days a week, and all year long while still be in the classroom. This approach will surely generate high return on the investment; in addition, attitude towards learning will increase.

Blended learning responds to employees' just-in-time needed skills. Free access for the learning system encourages learners to involve in professional discussions with other colleagues. Also, they can gain new skills to help them perform their job successfully. Even coaching techniques can be utilized in e-learning environment. Blended learning can promote learning in many ways. It:

- Enables lifelong learning.
- Enables independent learning.
- Receive updated and widely distributed information.
- Generate new ideas and practical experiences.
- Receive individualized learning.
- Interact with subject matter experts.
- Control their own learning experiences.

3. REDUCTION OF INTERACTION BARRIERS

Lanham and Zhou (2003) suggested blended learning approach as solutions to accommodate different learning styles and create a flexible learning environment for all learners with different cultural types. According to Henning and Westhuizen (2004) two factors might affect the adaptation of e-learning:

3.1 Cultural background

Several studies have shown that culture plays an important role in embracing the online environment. The acceptance mixed methods of instructions requires smart design of flexible courses that allows for several levels of learning style (xxxx, xxx). Lanham and Zhou (2003) contend that blended learning accommodate cross cultural values that provide the learners that they are not offended, and they are responsible about their learning. The use of blended learning is becoming the solutions for some of the weakness associated with online learning; for instance, the lack of social presence. Christner (2003) indicates that social interaction is usually associated with physical classrooms. Henning and Westhuizen (2004) stress the importance of social

and cultural experiences for e-learners. They criticized the ready made e-learning training programs which adopt western way of instruction in the light of totality and global learning.

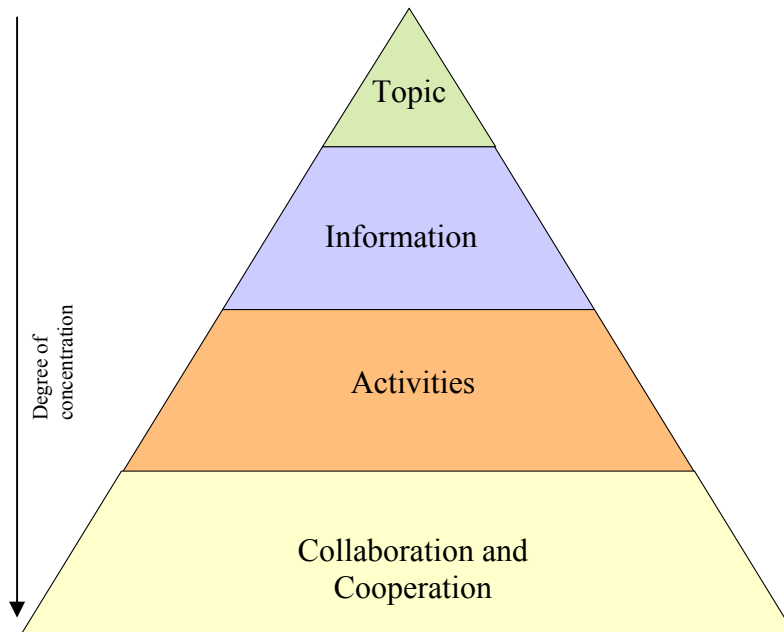
3.2 *Learning styles*

Learners should be able to choose the best most comfortable learning method to enable them to achieve the objectives of the given course. Blended learning enables the instructors to monitor the learners' progress continuously with higher considerations to learning styles (Dagada & jakovlievic, 2004). In their study of blended learning and online learning experiences and learning styles, Dodero et al (2003) compare two learning experiences developed with different styles during an academic semester in two universities. The objective of the study was to test the advantages of the blended style of learning in terms of students' participation and initiative in the learning process. The study revealed that information technologies improve students' participation during traditional classroom-located teaching, but do not help to increase their participation when the learning process is completely online and not complemented by regular classes.

4. FLEXIBLE COURSE STRUCTURING

One of the main characteristics of blended learning that it is a flexible approach. It provides high quality skills to maintain individuals' learning and increase their productivity. It also leads to national recognized qualifications. Making learning flexible for today's employees encourages the competitiveness of enterprises and their contributions to national's economic position. The structure of blended learning allows for integrating the use of new technologies to improve communications, skills development through accessible learning, and real life practices.

The simplest formula for blended learning course structure is that it merges between e-learning and traditional methods of delivery. The main characteristic of blended learning course structure is that it is flexible in terms of the use of responsive learning strategies ranging from totally online to variations of blended learning strategies. This process involves planning, developing, and facilitating a range of learning strategies that meets the needs of individual learners. According to Lanham and Zhou (2003), considering international cultural difference during the course design and layout prevent reluctance among the learners.



Classroom and technology (infrastructure) are the two major components that comprise blended learning. Content varies from basic html pages, fully interactive simulations, to classroom meetings. Technology, on the other hand, is responsible for enabling this content through creation, distribution, tracking, and administering the learning content. E-learning technology infrastructure consists of three main elements, which are learning management systems (LMS), collaboration, and services. The LMS delivers and support the content by providing the ability to track, manage, and report the learning activity. The second element of e-learning technology is collaboration. It allows for peers and instructor communication. It can be self-paced (asynchronous) or real-time (Synchronous). Most importantly, collaboration must provide departure from traditional distance learning such as books and CD-ROM. There are different types of services which should be available to help the designer implements adequate e-learning solution. For example, content development services help the designer choose optimal strategies for delivering content. There are also consulting services that provide guidelines and instruction for using and preparing learning strategies and implementations. Hosting services is required for deploying e-learning systems.

E-learning content is structured into hierarchy, starting with simulation, then topic unit, then reusable learning object, and lastly the information object. However, the instructional designer is the one who should decide the display and distribution of the course content based on many factors, which will be discussed later in this paper.

A blended learning environment generally includes self-paced instruction, simulation, collaboration, face-to-face instruction, assessment, customization, authoring tools, and resources.

5. DEVELOPMENT OF BLENDED LEARNING

There are no specific blended learning strategies that people can follow or adopt to ensure effective learning. However, applying adequate design and applications ensure

good e-learning training program. ADDIE model of instructional development can be utilized as a general guideline for building an e-learning course.

Blended learning development is not an easy task. The minimum time needed for initial e-learning course development with only PowerPoint and hands out for classroom instruction is at least 30 hours. Defining the characteristics of the employees who are entering the training program helps the developers to obtain important information on how the content and the instructional method are classified and used. Selecting the program objectives and defining the technological availability are important at this stage, which is the *analysis* stage.

The second stage in the e-learning development cycle is instructional *design*. Use instructional strategies in e-learning teaching such as experiential learning. For example, the instructor should consider using multimedia elements to help learners have hands on skills. Other learning methods and strategies need to be taken into account. Questions and answers and cooperative learning can be easily implemented in blended learning. The instructor can pair the learners (trainees) to facilitate the class discussion. Afterward, the learners get into real time interaction to direct questions and answers or exchange ideas on the white board among each other.

Presentation method of teaching is used often in a regular classroom setting even with the use of technology. For example, PowerPoint is used in a traditional classroom setting. Learning involves interaction (doing); on the other hand, presentation involves listening or watching. In the United Kingdom, the IT-training accreditation from the Institute of IT Training fails if you spend more than 5% presenting than really interacting, like asking questions.

Collaboration and simulation are two important instructional methods that enhance the quality of any training program delivered via e-learning system. They fit the characteristics of adult learners because they learn by doing. Collaboration can also be integrated into classroom setting either joint problem-solving or discussion among study groups via discussion groups and chat rooms.

During instructional design stage, the preferred learning styles can be easily integrated into the e-learning system. Experiential learning is one of the most preferred learning styles for adult learners. Blended learning provides learners with more opportunity to work together, share ideas, and make group presentations, which is another preferred learning style. Therefore, blended learning specialists should include various kinds of elements to accommodate various learning styles. Some of these elements are:

1. Screens combining text and still images or animations.
2. Recorded demonstrations.
3. Guided practice in a simulated environment.
4. Practice in a simulated environment but without guidance.
5. Practice in a real software environment.
6. Self-assessment and summaries

Delivery of training is the third stage of the blended learning. During the delivery of the program, blended learning developers should consider both the role of the instructor and the role of the learners.

The role of the instructor should be clearly identified. The instructor should act as a facilitator, not as information provider. He/she should ask and comment on discussion question, contact students who have fallen behind, and try to stay available online.

Instructor should guide the discussion towards the stated objectives of the training program. Effective designers should allow the trainees to:

1. Learn what needed no more and no less.
2. Receive just-in-time learning.
3. Learn anytime and anywhere.
4. Collaborate with others in different ways.
5. Receive self-pace learning.
6. Control the learning process.
7. Involve with group projects with other colleagues.
8. Share classroom and teaching experiences and practices.

The last stage in the blended learning development cycle is *evaluation* of the effectiveness of the e-learning program. This step can be achieved through rapid prototyping techniques. The developer should try out how the program works and revise it before involving in an actual training program. This technique reduces frustration and emergence of negative attitude towards blended learning.

Furthermore, not all learning objectives are suitable for the e-learning environment. Thus, the developers should select only the goals that could be achieved via this medium. For example, cognitive-based objectives can be effectively delivered via e-learning. However, the psychomotor-based objectives and the affective-based objectives are difficult to attain or even assess via an e-learning system.

6. CHOOSING BETWEEN DIFFERENT INSTRUCTIONAL STRATEGIES

There are no specific, constant strategies to build successful and effective blended learning course. However, there are general guidelines and models that blended learning designers can follow to obtain optimal training programs. Blended learning in education and training enable collaborative learning environment and enable learners to realize strategies of self-directed learning to support learning online (Magenheim & Scheel, 2004).

Online learning encourages cooperative and collaborative learning. With the availability of online facilitator the effect of online learning can greatly influence the learning process; for example, virtual community engages learners to be involved in sharing of experiences and practices. Online learning supports interactive learning among the learners, between the learners and the facilitator, and between the learners and the tutorial. One of the best online learning strategies that support individual understanding and needs is individualization, which makes instruction more interesting and relevant, and effective. It accommodates certain elements of personalization (Dagada and Jakovljevic, 2004). The philosophy of the active nature of learning that has implications for online learning is constructive learning. It encourages growing out of learners' knowledge through experiences. In this type of learning, the construction of knowledge is the responsibility of the learner.

Blended learning facilitator utilizes advantages of different learning strategies that supports by both traditional and online methods of instruction. It allows for access for instructor's notes. It is a flexible learning approach to use various learning strategies from online instruction to instructor-led depends on the content and the given concept. They can use tutorials, simulations, and drill. For example, the facilitator uses drill and practice strategy when wanted the learner to acquaint with the speed and accuracy of performing certain tasks.

7. USING EXISTING TOOLS INCLUDING E-LEARNING

The mixture between different types of learning tools is a systematic approach in blended learning approach. Christner (2003) contends that the availability of different channels of learning increase interactions among the learners themselves, with the instructor, and with the content. The tools include communication tool, assessment tools, class management tools, content management tools, and several others. Shukla and Koh (2004) online learning has a u

nique ability for allowing learners to assist their current knowledge and skills through attempting to repeatedly practice online quizzes. In this case, the blended learning instructor should utilize the existing tools available in e-learning packages to support the learning process. Shukla and Koh (2004) found that learners prefer course material available online more than traditional course materials; they reported that 77% of the surveyed subject found online course material useful for their learning. They additionally suggest four elements to make online course material useful are: 1) adding more practical components; 2) making it more interactive; 3) adding more graphics; and 4) increasing bandwidth to reduce access time. When there is a possibility of having a slow access to online material, then a choice of classroom material is more useful.

CONCLUSION

The use of information and communication technologies supporting or complementing effective as well as cost-effective education, which can be considered as a variety of blended learning, is considered each time more as a key element of the education and training of the future. Throughout this review the author notes the significant educational and training opportunities for blended learning, while recognizing the immaturity of the fields in terms of strategy, pedagogy, and therefore the weakness of delivery in terms of technology infrastructures and services. The implications are then that e-learning should take the form of blended learning, at least until learners are advanced enough to trust technology and avoid isolation modes.

For corporations and institutions considering investments in blended learning, this paper presents careful considerations that must be made to:

- Strategy.
- Implementation.
- Facilitation.
- Delivery.
- Course structure.

Adopting blended learning should focus strongly on Instructional strategies and Interchanging among different learning strategies including e-learning, while ensuring not reinforcing the traditional methods of instruction and devaluing innovation.

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