

## Valuing the Adult Learner in E-Learning: A Conceptual Model for Corporate Settings

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*The framework describes that e-Learning engagement, learning and transfer within corporate settings can possibly be achieved if antecedents such as needs assessment, learner analysis, for example, and moderators such as return on investment, learning theories, for example, are adhered. The realization of antecedents and moderators, however, are dependent on championing factors such as leadership, learning culture, technology infrastructure and finance.*

Keywords: adult learner, e-Learning, corporate settings

E-Learning has become a significant component of training and development within the corporate environment. Learning anywhere, anytime and having the flexibility of occurring just-in-time at a lesser cost than face-to-face training has been and continues to be attractive to companies. Ensuring, however, that e-Learning facilitates the acquisition of knowledge and skills can be challenging if the e-learning teams do not assert competency in creative applications of learning theories and technology. While how to value the adult learner in online courses in the academic environment has received some attention (Johnson & Aragon 2003; Chu, 2002; Lee, Owens & Benson, 2002), very little is known about the how the adult learner in e-Learning is valued within corporate settings.

This conceptual model is important to the e-Learning teams within corporate settings as it provides an opportunity for critical reflection on how the adult learner is valued in their e-Learning efforts. Figure 1 indicates that valuing of adult learner does not start with course design, but that it includes a business framework, a learning culture and thorough front-end analysis and most importantly an e-Learning team's expertise with technology, return of investment, learning theories, and creativity. This conceptual model gives e-Learning professionals a guide that they can use to diagnose their approach to valuing the adult learner.

### Conceptual Framework

When looking at valuing the adult learner in the e-Learning environment the relevance of adult learning theories are primary. While learning theories are critical, valuing of the adult learner in e-Learning especially in corporate settings demands more. The application of front-end analysis, return of investment, technology, and creativity are also critical. The application of these processes, however, requires vivid advocacy from leadership in the areas of learning, technology and finance. The following discussion provides an overview of some major factors that may play a crucial role in valuing the adult learner in e-Learning within corporate Learning settings.

#### *Antecedents*

Factors that influence valuing the adult learner in the e-Learning environment can include needs assessment, learner, work, work setting, content, and task analyses. Needs assessment, in particular, is about understanding the nature of the performance problem and its links to training and development and organization development. The needs assessment process can guide e-Learning designers to ensure that their efforts are meaningful and that they will engage adult learners in relevant experiences (Morrison, Ross & Kemp, 2004).

Learner analysis can reveal information such as education levels, learning styles, aptitudes, background to a specific topic (Rothwell & Kazanas, 1998) and most importantly, technology skills, which for the e-Learning environment can be a major deterrent for learning success if not dealt with appropriately. Developing the technology-related knowledge, skills and attitudes can be a major prerequisite for performance and self-efficacy among adult learners.

Needs assessment, work and task analysis can help to identifying case studies, and scenarios that are most relevant to the targeted performance problem. Using case studies and scenarios that are relevant to learners' experiences can heighten the learners' motivations to engage in the learning process and can also trigger transfer of knowledge and skills to the workplace.

Content analysis can help to identify the sequence and chunking of information to assist with attention span and retention. Work setting analysis, on the other hand, can occur at the individual and organizational levels. Thorough

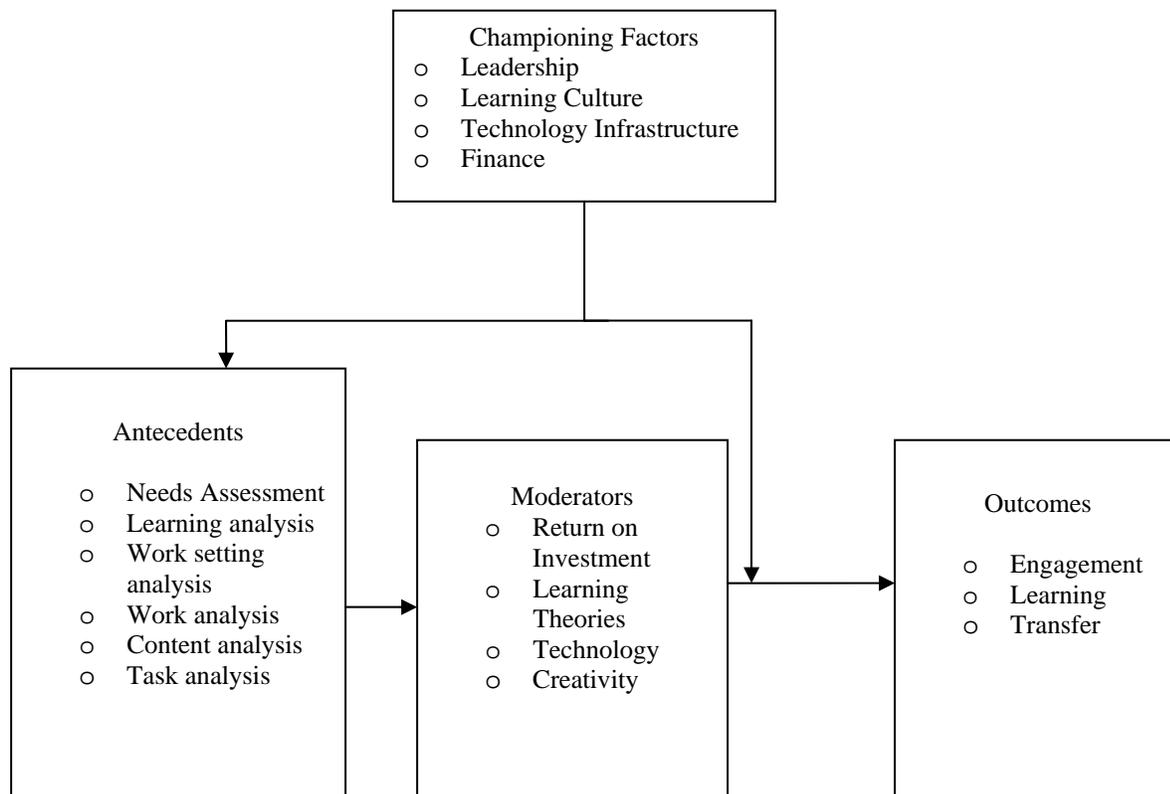
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analysis of technologies available for design, development and delivery must be conducted to ensure the operability and usability of the e-Learning product. Lee, Owens and Benson (2002) shared that analysis of technologies relating to communication; performance support, assessment, distribution and delivery tools are critical. While these antecedents are not exclusive, they represent the first phase of the instructional design process, which if implemented well and creatively by e-Learning teams can create relevant, meaningful and authentic beginning for adult learners.

#### *Championing Factors*

While Chute, Thompson & Hancock (1999) identified the learning process, people and technology as critical areas for the success of distance learning, we propose that e-Learning in the corporate setting requires four major championing factors; they are leadership, the learning culture, technology infrastructure and financial support. Like distance learning, we agree that e-Learning depends on the effective integration of all championing factors. The effective integration of the four factors can provide support to e-Learning teams in their efforts to apply return on investment (ROI) of e-Learning, adult learning theories, technology and creativity.

Figure 1: Valuing the Adult Learner in E-Learning within Corporate Settings



#### *Moderators*

In addition, to the antecedents mentioned above, the e-Learning team must have related competencies in ROI, learning theories, technology and creativity in order to approach e-Learning as a business solution that can value the adult learner and impact performance at the individual, group and organizational levels.

*Return on Investment.* Knowledge on the return on investment of e-Learning gives e-Learning teams a business approach to their efforts. E-Learning teams that conduct needs assessments to better understand the performance problem, for example, focus on business needs that are relevant to the performance of the business unit or department, the target audience and ultimately to maybe a lesser but nonetheless, important degree, the functioning of the overall organization.

Knowledge on return on investment also forces e-Learning teams to financially account for their development and design time, which sometimes can drive the creative urge to develop quicker, cheaper yet learner centered

approaches for designing and developing courses. Morrison, Ross & Kemp (2004) identified design and development time, materials and supplies, equipment, staff benefits, administrative and trainer salaries as possible factors when calculating program cost. Program cost is just but one of the variables used to calculate ROI. Wentling & Park (2002) surmised that three major factors are usually the focus of e-Learning program evaluation: cost efficiency, learner satisfaction, and learning resources. Philips & Philips (2002) stated that economical, theoretically sound, use of correct ROI formula and credibility, for example, would be descriptors for an effective return on investment. Knowledge, skills and value for ROI can create a culture, among e-Learning teams, which supports the transfer of knowledge, skills, attitudes and behaviors on the job and focusing on the impact of e-Learning on performance.

Recognizing, however, that ROI is time and money dependent (Phillips & Phillips, 2002), it is important that ROI resides not only with the e-Learning team but also with business units or departments and the organization as a whole. In essence a value for ROI dispels a front-end urgency for relevance, effectiveness and efficiency; all of which are necessary to value the adult learner within the corporate e-Learning environment.

*Learning Theories.* Like ROI, a strong foundation in learning theories is highly desirable of an e-Learning team. The learning theory foundation will be reflected in the type of instructional strategies that will be used to design e-Learning courses. Andragogy, self-directed learning, critical reflective, cognitive theory and social learning are theories that can be used to inform the design of an e-Learning course. Andragogy is defined as the art and science of helping adults learn (Knowles, 1980). Andragogy posits that adult learners are autonomous, self-directed, motivated, goal oriented, practical and have rich experiences.

Self-directed learning is a process of learning in which people take primary initiative for planning, carrying out and evaluating their learning experiences (Merriam & Caffarella, 1999). Critical reflection theory is based on a learning process that engages the learner in reflection of self-images, norms, assumptions, and behaviors (Brookfield, 1986). Cognitive learning theory relates that the perceptual features of the problems given to learners are important conditions of learning, and that how knowledge is organized should be taken seriously by the designer (Hilgard, 1966). In addition, cognitive learning theory proposes that learning is culturally relative and that importance to meaningfulness of the learner's environment should be adhered. Cognitive theory also underlines the importance on the type of feedback that is given to learners and that goal setting can motivate learning.

Social learning emphasizes that learning occurs by observing other persons (models) whom are perceived to be credible and knowledgeable (Bandura, 1977, 1986). Social learning theory also proposes that behaviors that are reinforced and rewarded tend to get repeated and that learning is also influenced by a person's self-efficacy. Self-efficacy relates to a person's judgment about whether they can successfully learn knowledge and skills. Social learning also shares the belief that new skills and behaviors come from directly experiencing the consequences of using behavior or skills or the process of observing others and seeing the consequences of their behavior (Noe, 2002).

All these adult learning theories emphasize the learner as a focal point of the learning process and provide fundamental principles that can be used to design online courses that will impact learning and performance. Johnson and Aragon, (2003) shared that quality online programs should be made up of elements of behavioral learning theory (for example, using positive reinforcement and repetition); cognitive learning theory (for example, addressing multiple senses, presenting information in motivating ways, limiting the amount of information presented, and connecting new information to prior knowledge); and social learning theory (for example, encouraging group interaction, peer assessment, and personal feedback).

*Technology.* As a primer to any e-Learning initiative it is important to understand the organization's and e-Learning team's technological readiness. Assessing the organization's technological readiness for e-Learning may include asking information about web access, bandwidth limitations, relationship between the departments of information technology and training and development, e-Learning portal, e-Learning strategy, learning management system, and availability of the right e-Learning talent are crucial.

The American Society for Training and Development in their e-Learning courseware certificate program has identified four clusters of certification standards to guide the design, development and evaluation of web-based and multimedia courses. The four clusters include: interface standards that address the relationship between the learner and the courseware; compatibility standards that address the relationship between the courseware, the operating system, and related applications; production quality standards that examine the quality of the courseware text, graphics, grammar and visual presentation; and instructional design standards that examine the relationship between the course purpose, objectives, instructional content, instructional methods and the learner (Lee, Owens & Benson, 2002). In addition to these standards it is important to consider the type of technologies available for synchronous and asynchronous communication, collaboration, and assessment. In specific, considerations should be given to technologies that can be used for learner-content, learner-learner and learner-instructor interactions.

When addressing the e-Learning delivery, it is important to identify a learning management system (LMS) where by learners can plan, access, launch and manage their learning. Rosenberg (2001) identified 11 capabilities that are crucial to a LMS; they are: common online course catalog; common online registration system; competency assessment tool; ability to launch and track e-Learning; learning assessments; management of learning materials; integration of knowledge management resources; organizational readiness information; customized reporting; supporting collaboration and knowledge communities; and systems integration. Overall the technology infrastructure is one major resource that can fuel the creativity among e-Learning designers.

Lastly, the technology-related competencies of the e-Learning team will play a major role in the simple to complex type of course designs. Williams (2000) shared that computer hardware, technology operation, graphic, media selection and publisher, for example, would be important for e-Learning designers. Kruse and Keil (2000) identified project manager, subject matter experts, instructional designer, writer, graphic artist, programmer, audio and video producers, quality reviewers and administrators are core roles of e-Learning teams. Technology-related skills will be instrumental to creatively apply learning theories to the e-Learning environment.

*Creativity.* With a return on investment mind frame, a strong learning theory foundation, a technology infrastructure, the creativity of e-Learning designers will be instrumental to integrating learning, technology and adult learner. Creativity is defined as the development of ideas, outcomes, products or solutions that are judged as a) original and novel and b) appropriate and potentially useful for the situation (Amabile, 1996; Oldham, 2002; Zhou & Shalley, 2003). For creativity to occur, however, e-Learning designers will be dependent on leadership, autonomy, resources and time. Tierney & Farmer (2002) in their study on creative self-efficacy and its potential for creative performance found that both personal and contextual factors come into play when employees formulate work-related self-efficacy judgments. The study found that job self-efficacy was the strongest predictor of creative self-efficacy. Tierney and Farmer added that this finding highlighted the importance of managers providing the training and experience opportunities necessary for employees to develop the sense of general job mastery, a foundation for subsequent creative work. Creativity needs diverse teams (Payne, 1990), supportive leaderships, ample resources (Tierney, Farmer & Graen, 1999), environments that promote autonomy and risk taking and external competition (Gilson & Blum, 2000) the social network (Perry-Smith & Shalley, 2003), and external stimuli such as conference presentations, and research-practice partnerships. Overall, an organizational culture that is supportive of creativity and innovation will be important for e-Learning designers to progressively improve their value for the adult learner in their course designs.

#### *Outcomes*

Engagement, learning, and transfer are three major outcomes that can be achieved with e-Learning if the described antecedents and moderators are adhered. Engagement of the learner with the e-Learning medium and with the courses is important to motivate learners for learning. Learners that can quickly access and navigate courses and see the relevance of what they are learning with their jobs will be more likely to become engaged with e-Learning. The types of analyses that are conducted at the beginning of the e-Learning solution can help to create learning experiences that will make the learner feel comfortable, and motivated to learn. If learners' lack of basic skills (computer skills, reading skills for example) and their belief that they cannot be successful (low self-efficacy) has not been uncovered via analyzes, the likelihood that learning and transfer of learning on the job may occur could be minimal. Ensuring, then, that adult learners and performance problems are explored within their contexts is critical to providing the best e-Learning solution.

Learning is another outcome that could occur with the creative integration of learning theories and technology. Johnson & Aragon (2003) shared that powerful online learning environments need to contain a combination of these principles: (1) address individual differences (2) motivate the student (3) avoid information overload (4) create a real-life context, (5) encourage social interaction, (6) provide hands-on-activities, and (7) encourage student reflection. An e-Learning solution that is built with these types of principles has the potential to fuel learning.

Transfer of learning on the job can also be a result of e-Learning solutions that capitalize on analyses, return on investment and the creative application of learning theories and technology. Transfer of learning on the job has a likelihood of occurring when e-Learning courses have identical elements to the work environment, principles and their applicability to various problem situations are explained, reinforced and assessed and if the content is meaningful and is presented without causing information overload. Additionally, transfer can occur when e-Learning designers, and business or department managers can work hand in hand to identify performance problems, target audiences, assessments, for example, that can strategically be tied to the performance of individuals, groups and organizations.

## Conclusion

The antecedents, moderators and outcomes discussed in this paper reflect a conceptual model that can be used to guide the e-Learning teams in their attempts to valuing adult learners in their e-Learning designs. Underlying the framework, however are championing factors (leadership, learning culture, technology infrastructure, finance) that need to be in synch with each other in order to support the realization of the antecedents, moderators and outcomes. The antecedents reflect front-end analyses that are crucial to creating relevant, meaningful and authentic learning experiences. The moderators reflect expertise on return on investment, learning theories, technology and creativity which all combine to further establish authentic and meaningful learning. The moderators can also provide opportunities for supporting transfer on the job. This model posits that if adherence is given to the antecedents and moderators and that if both are supported by the said championing factors, the results can reflect engagement, learning and transfer.

## Implications

The conceptual model offers the HRD field a synthesis of major concepts and their relevance to valuing the adult learner in e-Learning designs within corporate settings. This conceptual model offers opportunity for testing the pathway used in corporate environments to value the adult learner in Learning. The testing of the conceptual model could also lead to theory building about valuing the adult learner in e-Learning within corporate settings. Overall this paper presents a conceptual model that can be tested, revised and theorized.

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