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Classroom Trainer Resistance to E-Learning

Literature Review

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CHAPTER TWO

LITERATURE REVIEW

Online workplace training offers many benefits, including reduction of employee time away from work and elimination of travel expenses. Yet industry reports and anecdotal evidence show that many trainers resist using e-learning even when it would ease their own workloads and enhance the effectiveness of their time spent in the classroom. In seeking to understand barriers to change, a number of theorists (Fullan, 1991; Cuban, 1993; Watzlawick, Weakland & Fisch, 1974) have classified them as either first-order or second order. First order barriers refer to those that are extrinsic to the individual, such as organizational support or access to equipment. Second-order barriers involve more emotional, fundamental, personal issues related to personal beliefs and attitudes. This study is an exploration of the underlying, second-order causes of resistance to e-learning among classroom training practitioners. The research regarding those resistant to technology and online learning has been conducted most frequently with academic (Kindergarten—Grade 12) teachers and university faculty. Information regarding second-order barriers falls into several categories: concept of work role, beliefs about practice, beliefs about quality of e-learning, personality factors, and vision of technology as a support tool rather than an enabler and enhancer of learning. These areas are explored in detail below.

Work Roles

E-learning brings with it a shift from the traditional trainer-learner hierarchy (Berge, 2003). Where the classic view of "teacher" tends to be that of oracle, authority and expert (Berge, 2003; Ertmer, 1999; Gasco, Llopis & Gonzalez, 2004; Humbert, 2005; Yang, 2005; Zhao & Cziko, 2001), e-learning demands some rearrangement of positions, with trainers moving to the role of guide, and learners to that of explorer. Gasco et al (2004) articulate this as the shift of trainers from "the exclusive owners of a set of knowledge and wisdom to…facilitators who see the student as someone who also helps them to learn" (p. 375). Other researchers examined the threats this shift can bring. Ertmer (1999, p. 2), says, "Many teachers and training practitioners, relishing the thought that they are imparting wisdom, fear the weakening of their professional status and position as 'expert', while Fullan (1991) notes that "there are some deep changes at stake, once we realize that people's basic conceptions of education and skills are involved—that is, their occupational identity, their sense of competence, and their self-concept" (p.40). Wallace (2002) described university faculty, some with titles like "Professor", who felt they were being relegated to the roles of production worker, simply typing out content to be put online, and customer service representative, available 24/7 to help students with technical problems. Another role-related issue arose as the faculty, once able to create and deliver their instruction entirely on their own, found themselves dependent on information technologists, graphic designers, and other support staff. The advent of online learning thus found the lines between faculty and support staff beginning to blur— which staff liked, but faculty didn't.

Also at issue are feelings of loss: apart from the loss of routine and the 'old way' of doing things are factors associated with the role of expert, particularly efficiency and control. The classroom trainer, once responsible for everything from configuring seating arrangements to deciding what time class will break for lunch, is asked to surrender that independence. Harvey (1999) says, "It is crucial to remember that for every change proposed or achieved, someone loses something" (p.6).

A final area of concern regarding concept of role rests in the fundamental fear of being replaced by technology. Hodas (1993) addresses this as a "complex anxiety" (p. 13). Saying that no one wants to lose his or her job, Hodas comments:

> the notion that it would be possible to be replaced by a machine cuts
>
> deeper, to the heart of teachers' identity and self-respect… The suggestion
>
> that [tasks] teachers are called upon to perform might be better performed
>
> by machines calls this self-image into question in a manner that is
>
> painfully direct (p. 13).

<div align="center">Practice and Beliefs about Teaching</div>

Several researchers (Cuban, 1994; Honey & Moeller, 1990; Pederson & Liu, 2003; Zhao & Cziko, 2001) have shown that instructors regarded as 'high tech', as evidenced by use of technology and online learning approaches, tended to utilize constructivist strategies such as inquiry learning and collaborative work. They additionally tended to plan instruction to meet the needs of individual students, and further discussed wanting to instill in learners a sense of curiosity and desire to learn. As described by Honey and Moeller, "these practitioners downplayed the teaching of facts in favor of an inquiry-based or discovery mode of learning…The goal is not to give out a lot of information but

to equip learners with tools to find answers" (p.4). Additionally, these instructors were more likely to modify their practice in response to student needs, saw practice as changing and evolving over time, and described excitement when trying new methods of instruction (Honey & Moeller; Zhao & Cziko). Finally, they were more willing to participate in professional development opportunities, including taking graduate courses even without incentive (Vannatta & Fordham, 2004).

Conversely, those most resistant to new approaches and technologies tend to be instructors working from a more teacher-centered perspective (Honey & Moeller, 1990; Pederson & Liu, 2003). Seeing themselves as "the sole source of knowledge" (Zhao & Cziko, 2001, p.18), Honey and Moeller describe resistors as "fearful that technology might alter their relationship of control and authority" (p.3). Where the student-centered instructors utilized more freely-structured lesson plans and discovery learning techniques, those who subscribed to a more instructor-centered approach concentrated on following the textbook and lesson plan, with emphasis on passing a final exam (Honey & Moeller; Pederson & Liu). Gallant describes this as the "transmission model" of teaching (p. 74). Thus the prospect of e-learning proffers a wide-reaching disturbance for the trainer operating from this traditional, behaviorist stance. Honey & Moeller remark, "For teachers whose educational beliefs and practices are traditional, there exist different and much more complicated barriers for technology interpretation. In order to integrate technology into their curricula, as the high-tech teachers have done, the very nature of their practices would have to change" (p. 15). Khitrykh & Nelson (2003) sum it up, perhaps brutally, by saying, "e-learning focuses on learners' needs rather than on trainers' abilities" (¶ 2).

Beliefs about Quality of E-Learning

For instructors, the advent of e-learning challenges many basic notions about adult learning and what constitutes 'good' teaching (Ertmer, 1999). Citing Fullan and Stiegelbauer (1991), Ertmer says that implementation of new technologies often "requires challenging one's belief systems and…notions regarding what constitutes content and content coverage, what comprises learning and engaged time, and even what behaviors define 'teaching'" (p.2). Instructors also express concerns that the quality of online education is inferior to that provided in the traditional classroom setting (Yang, 2005; Butler & Sellbom, 2003). As noted by Humbert (2005), concerns here may also be attributed to the fact that many instructors have never experienced a quality online experience and thus have no real standard of comparison.

Additionally, Smith and Bierema (2000) discuss an issue that does not appear in the literature addressing technology use in the K-12 realm: the need to maintain the integrity of the adult learning program while simultaneously enabling the organization to respond to market conditions.   There is a strong business case for the use of e-learning in the workplace, such as reductions in travel, classrooms, and instructor costs, and the reduction of learner time away from the workplace. Smith and Bierema note the importance that the quality of the learning experience be maintained and content not simply be dumped into Web pages for the sake of providing it online.

Personality Factors

In instance after instance (Binney & Williams, 1996; Honey & Moeller, 1990; Maguire, 2005; Wallace, 2002; Vannatta & Fordham, 2004; Wolcott & Betts, 1999; Zhao & Cziko, 2001) the literature reveals discernable patterns in personality traits and

approaches to work relative to the use of technology by instructors. Successful integrators are described as "pioneers", (Zhao & Cziko), "explorers" (Binney & Williams), and "risk-takers" (Honey & Moeller; Vannatta & Fordham). Going beyond the perhaps best-known classification of "early adopter" (as defined in Roger's *Diffusion of Innovations,* 1962), the literature on instructor integration of technology into practice further describes the successful integrator as finding excitement in trying a new way of working and perceiving use of a new approach as an intellectual challenge (Honey & Moeller; Vannatta & Fordham). Perhaps more significantly, unlike the resistor's need to appear in control and competent (Honey & Moeller; Zhao & Cziko), the successful integrator exhibits a tolerance for ambiguity and willingness to make mistakes. One participant in the Honey and Moeller study said, "I'm not so worried that something is glitch-free. We'll work it out together" (p. 4).

Vision

The final area addressed by literature is the presence, among those educators using e-learning, of a vision of a changing future for education and training. Ertmer, Addison, Lane, Ross, and Woods (1999) describe instructors with an imagined enhanced curriculum made stronger by the integration of new approaches and technologies. In a 2001 study of teachers making what the authors defined as "exemplary use" of technology in teaching, Ertmer et al (2001) reported, "what was most common across teachers was the belief that technology provided a valuable tool for achieving their visions of teaching and learning". This was in keeping with an earlier report in which Ertmer et al remarked,

Perhaps because these teachers had such strong visions of classroom

technology use, they did not appear to be easily frustrated by common

implementation barriers. In fact, many of these teachers had achieved high

levels of use despite the lack of equipment, training, or time. Teachers

tended to approach barriers with no-nonsense attitudes…All of the

teachers we interviewed faced barriers, yet none of them permitted the

barriers to halt their efforts. Their unwillingness to give up in the face of

difficulty allowed them to overcome barriers that typically keep others

from proceeding (p. 3).

Ertmer et al. (1999) reported that instructors who viewed technology as a

presentation tool, or "add-on" (p.3), rather than the means of enhancing practice, were

far more likely to report barriers. In a dramatic report of findings, the instructors with a

vision of technology as the means to facilitate an emerging, improved curriculum

reported *no* second-order barriers.

<div align="center">Summary</div>

In seeking to understand the reasons for resistance to e-learning on the part of

classroom trainers, the existing literature points us toward inquiry across several

dimensions. Areas explored in this study include conceptions about roles, beliefs about

practice, beliefs about quality of e-learning, and the existence of vision in using e-

learning.

Chapter three provides information related to the population and sample, research

design, data collection procedures, validity and reliability, and procedures for analyzing

the data.

References

Argyris, C. (1982). *Reasoning, learning, and action: Individual and organizational.* San

Francisco: Jossey-Bass.

Ashby, W. (1956).   *An introduction to cybernetics*. London: Chapman & Hall.

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavior change.

Psychological Review, 84 (2), 191-215.

Bozarth, J. (2002, August). No time to panic: overcoming classroom trainer fears of e-

learning. *Training 39* (8), 44-48.

Brickner, D. (1995). *The effects of first- and second- order barriers to change on the*

degree and nature of computer usage of secondary mathematics teachers: a case

Carr, A. (2001). Understanding emotion and emotionality in a process of change. *Journal*

of Organizational Change Management, 14 (5), 421-434.

Cuban L., Kirkpatrick, H. & Peck, C. (2001). High access and low use of technologies in

high school classrooms: explaining an apparent paradox. *American Educational*

Research Journal 38 (4), 813-834.

Ertmer, P. (1999). Addressing first- and second-order barriers to change: strategies for

technology integration. *Educational Technology Research and Development, 47*

(4), 47-61

Ertmer, P., Addison, P. Lane, M., Ross, E. & Woods, D. (1999).   Examining teachers'
    beliefs about the role of technology in the elementary classroom. *Journal of
    Research on Computing in Education 32* (1), 54-71.

.Fullan, M. & Stiegelbauer, S. (1991).*The new meaning of educational change.* New
    York: Teachers College Press.

Gallant, G. (2000, Winter). Professional development for web-based teaching:
    overcoming innocence and resistance. *New Directions for Adult and Continuing
    Education* 88, p. 69-78.

Honey, M. & Moeller, B. (1990). Teacher's beliefs and technology integration: different
    values, different understanding. *CTE Technical Report 6*. Education Development
    Center, Inc. Center for Children and Technology. Accessed 10/10/2005 at
    http://www.edc.org/CCT/cchome/reports/tr6.html

Lewin, K. (1951). *Field theory in social science.* New York: Harper.

Rogers, E. (1962). *Diffusion of innovations.* New York: The Free Press.

Scheetz, N. & Gunter, P. (2004). Online versus traditional classroom delivery of a course
    in manual communication. *Exceptional Children 71* (1), 109-120.

Shepherd, C. (2003). Making e-learning work. Fasttrack Consulting Newsletter.
    Retrieved September 28, 2005, from
    http://www.fastrak-consulting.co.uk/tactix/Features/work/work.htm

Wallace, M. (2002). Managing and developing online education: issues of change and
    identity. *Journal of Workplace Learning 15* (5), p. 198-208.

Watzlawick, P.,Weakland, J. & Fisch, R. (1974). *Change: principles of problem
    formation and problem resolution.* New York: W.W. Norton.