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Increasing the Efficacy of Educators Teaching Online

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Abstract**—**In order to provide and maintain effective pedagogy for the burgeoning virtual reality community, it is vital to have trained faculty in the institutions of higher education who will teach these courses and be able to make full use of their academic knowledge and expertise. As the number of online courses continues to grow, there is a need for these institutions to establish mentoring programs that will support the novice online instructor. The environment in which this takes place and the factors that ensure its success are critical to the adoption of the new instructional delivery format taught by both seasoned educators and adjunct instructors. Effective one-on-one mentoring promotes a professional, compassionate and collegial faculty who will provide a consistent and rigorous academic program for students online.

Keywords**—**Mentoring seasoned faculty, staff development, online pedagogy, online andragogy.

I. Introduction

TODAY, the majority of institutions of higher education offer online courses. The rapid growth of global technology requires universities to have the necessary instructors to support the growth of this evolving learning society. This represents a major change in pedagogical foundations, and creates a radical disruption [1]. Educators are frequently confronted with integrating new and unfamiliar technology into their instructional processes [2]. Without necessary preparatory training, many faculty are encouraged to teach courses online [3]. There is a great deal of pressure from college administrators for faculty members to embrace technology, in order to increase the number of students served, to improve the quality of instruction, and to reach students in areas not served by traditional classroom instruction [4].

The pedagogy in online courses is dramatically altered from that of face-to-face teaching and completely unfamiliar to many instructors. Teachers must rethink how they teach, and how they will assist and educate students. Faculty need assistance dealing with the transition from the classroom to the online formats for courses [5]. Training and supporting instructors in the proper use of web-based delivery mechanisms is of vital importance. Seasoned faculty attitudes toward utilizing this form of technology run from sheer terror to mild indifference and from passive acceptance to overt hostility. Older adults generally exhibit a greater anxiety toward computers than younger adults, and have more negative attitudes [6]. In general, people are resistant to change for a number of reasons. Change usually represents more work, with no new benefits. Usually, there is no financial support or extra time provided for their change efforts, nor are there any other incentives or motivational factors [5]-[4]. This change toward teaching classes online is occurring too rapidly for many university faculty. Their lack of knowledge or expertise leads to their resistance. There are many reasons why people resist change, ranging from organizational to personal. The change innovator must get beyond the resistance. The key to success in this area is to be mindful of the needs of the people involved [5].

The purpose of this study was to examine the concerns of seasoned faculty regarding teaching online courses, their perceptions of the existing staff development to further such technology usage, and models of mentoring to provide one-on-one support to help the dinosaurs evolve into online dynamos. A search of the literature revealed a large number of studies related to online learning and teaching in general. A limited number of studies related to online teaching and mentoring in general. None of the studies investigated related to the one-on-one mentoring of seasoned higher education faculty by their trusted colleagues in teaching online courses.

II. Background

Those who enter the field of teaching have a tendency to be conformists, and are not particularly innovative [5]. To educators not familiar with online presentation, the effective utilization of this media represents a steep learning curve [6]. Evidence indicates the predominant cause of reluctance on the part of educators is due to their insufficient training. This technological change can be hindered by personal anxieties as well as organizational issues. Computer comfort is often generational, meaning faculty from an older generation were not raised when computers were readily available and are reluctant to use them [7]-[6]. There is also a need for realistic expectations among faculty regarding the results of using technology. Educators need a model, or guide, to reinforce their acquisition of unique skills and to assist them in navigating the complex online format and to perform ongoing troubleshooting and support [8]. The number one concern educators have expressed regarding incorporating new

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technology into their pedagogical processes is insufficient training [2]. In an informal study, two searches on the Internet of educator concerns using technology yielded fourteen million hits on each search, with the major emphasis being insufficient teacher training [2]. The key to effective technological professional development is to make the utilization of this media a motivating challenge, rather than a threat. Professional development involves a variety of components. Among other things, it includes the responsiveness to the specific needs of each individual, as well as the continuity of training to reinforce skills [5]-[6].

Staff development is necessary to support this anytime, anyplace flexible learning environment. Faculty must be able to adapt quickly to changes and innovations. The irony here is that universities have a traditional lack of interest in higher education faculty staff development [9]. Many faculty are simply told they will have to teach online, and have to self-educate with a manual or an online training program. The manual typically leaves out many of the aspects of the online course platform, and the training could be sketchy and ineffective. Even taking the online training program twice may not leave the instructor with a sense of competency. These practices are more the norm than the unique.

There is an urgent need for change. New educational policies must be created to deal with the new technologies. Professional development should be designed to prepare as well as support educators. It should include techniques for developing further expertise in the application of technologies. Individual improvement will ultimately lead to organizational improvement [5].

Many seasoned faculty members are encouraged to teach courses online. However, there is a crying need for help to make research-based decisions dealing with the andragogy of how to teach online courses. It is important that instructors and administrators be able to assess effective outcomes in course management, the learning environment, and course evaluations [3]. There are many theories, but very little has been based on actual research.

III. Need for Effective Faculty Development for Online Teaching

To prepare faculty to effectively meet the demands of teaching in the online environment, institutions of higher education must work to develop the expertise needed to teach in online platforms. There are readily available resources for faculty on how to teach online. What is missing is the pedagogy, or "art of teaching" online [7]. Faculty spend significantly more time teaching online than teaching onsite. Training faculty in the proper use of Web-based delivery mechanisms is extremely important [10]-[11]. Administrators must be able to deal with the fears and concerns seasoned faculty have of technology, the constraints of faculty time, and the limits of university budgets [12]. Attitudinal issues of how people perceive and react to technology are even more significant in influencing the use of technology than the physical technological obstacles [12].

Two significant obstacles which provide possible technology users with compelling reasons to avoid teaching online are comfort zone and self-concept [13]. Comfort zone relates to a presumed lack of technical competence and the resultant anxiety. This lack of self-efficacy transcends gender and age, and can be paralyzing [13]. Self-concept refers to the vision adult learners have of themselves as the type of person who teaches online courses. The enactment of this role may not be part of their preconceived selves [13].

Wilson [14] conducted a case study to determine faculty attitudes toward the utilization of technology, and specifically, online teaching. Data was derived from three sources. One was the mining of documents. Another was a faculty needs assessment survey, given to 1,500 faculty at nine Kentucky institutions of higher education. The third was through interviews conducted with more than 60 administrators and faculty. Results showed the institutions were under pressure to offer distance education programs. Responses indicated the faculty was unwilling, unprepared, unrewarded and unsupported by the university administration [14].

The survey respondents indicated a positive attitude toward distance education. However, they were not happy with the idea of their personal involvement. For faculty training purposes, they indicated the most effective form of instruction was one-on-one [14]. In regard to computer skills, the faculty responded that they felt comfortable with using the computer for word processing, e-mail, and the Internet. They felt moderately comfortable with installing software, using a spreadsheet, and using PowerPoint. Faculty felt uncomfortable with all instructional methods associated with instructional technology or distance education [14]. Adults learn best with meaningful, hands-on experiences that permit them to construct knowledge for themselves. This type of training in a supportive and comfortable adult learning environment can serve to eliminate their fears [6].

In addition, faculty noted that using technology was not rewarded, and therefore had little or no value in relation to yearly reviews, promotion, or tenure. There was no monetary incentive. Time was a barrier to learning and using technology. Online teaching requires significant preparation and organization. Grading and other course components take longer than expected. Another significant barrier was the lack of support for the neophyte technology users [14]-[10]. A problem with teaching online is that it requires a familiarity and a level of comfort with technology. Faculty are the content experts, not the technology experts [12].

Chizmar [15] conducted a survey to determine what faculty want from instructional technology. The survey yielded several recommendations for staff development. One is that institutions of higher education need to create venues for faculty to meet to share and trade techniques, experiences, and hints. This would enable them to share both content and technology aids. Another recommendation is that in order to be effective in learning the technology and teaching online courses, faculty do not need motivation. They need support. Instructors have many duties and little time. Universities must decide what to emphasize, and provide incentives according to their priorities [15].

Cellante [16] raised the question of how to encourage faculty to embrace technology. What could be done to help faculty overcome their fears, prejudices, and uncertainties?

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The researcher cited a 2001 study by Kagima and Hausafus indicating faculty are not supported with in-depth staff development or follow-up activities. As a result, there is little integration of technology skills in their teaching. This is a major challenge instructors face in dealing with the use of technology to teach online courses in higher education. Educators are reluctant to replace familiar techniques, methods and strategies learned over several years that have worked successfully for them [17]-[7]-[10]. Seasoned faculty do not find it easy to accept new technologies. Their lack of competence in this area is a major barrier. Existing attitudes, skills and working habits affect their acceptance, manners of implementation, and final outcomes regarding the use of electronic communication strategies [17]. The study showed that although institutions of higher education are making efforts to provide training for faculty in the use of technology, the major barriers to success are lack of appropriate training, lack of support, and lack of tenure and promotion rewards [17]. Numerous other research studies support these findings [15]-[10]-[7].

In an action-research, descriptive study conducted by the writers of this paper (2006), 52 seasoned adjuncts were surveyed to determine factors relating to their hesitancy of online teaching.

Two different surveys were group administered to 52 seasoned adjuncts: 11 who had taught online and 41 who had never taught online. Of the instructors who had taught online: only 1 had a mentor assigned to them, 2 had received no assistance or training, and 4 respondents reported that they had taken an online training course and observed an actual online course as a teaching assistant. Their stated motivations for teaching online were: more teaching opportunities, personally more convenient, and they enjoyed the online teaching environment. All of them indicated that as a result of teaching an online course they had learned additional and also new: navigational skills, instructional strategies and specific web-based programs.

The results from the 41 instructors who had never taught online revealed that 39 considered themselves computer literate. They indicated that they could: send email, create a word document, use the edit functions and could send and open a Word attachment. The results of the survey revealed that they essentially had the necessary skills to teach an online class. The survey then asked for the reason(s) they had not taught online. Many responded that "no one had asked them," others that they don't believe online teaching is an effective learning environment, and they were not confident with their level of computer literacy. When asked would they consider teaching an online course with specific support, their responses revealed: 11 wanted small group hands-on training, 7 wanted to be a teaching assistant to observe an online class, 10 wanted an "how to" teaching manual, and 5 wanted a one-to-one mentor assigned to work with them. However, 13 of the seasoned adjuncts wanted all four supports to be available to them.

From all indications based on the survey, the major concern faculty had was figuring out the "bells and whistles" of the online courses, and the fear of lack of technical support. They wanted to be physically shown how to use the teaching platform and be able to ask questions and get instant responses as they worked.

IV. Mentoring and Mentoring Programs

Little research exists on the mentoring of older adult learners in the teaching of online courses and the necessary technical training involved to enable them to become effective in utilizing that mode of delivery. With the adult learner, Witte [18] determined it is best to use a facilitative approach in technology courses. The adult learner experiences different developmental stages than a young learner, with different attitudes and perceptions regarding change, curriculum, collaboration, and the learning process in general [7]-[18]. There is a lack of consensus on the exact definition of mentoring in higher education. Possible definitions are guide, sponsor, advocate, preceptor, advisor, or role model [19]. Witte [18] defines mentoring as a collective practice that facilitates and guides the learner's educational growth and development. A mentor assists a mentee, or mentoree, to become professionally competent. Usually an older person advises a younger one, although this is not a necessary criteria. Cotugna conducted a study where students mentored faculty. However, the concept also applies to faculty mentoring faculty as equals, or as a junior member working with a senior member. There is little research on the learning diversity of midlife and older adults in regard to their receptivity and the effectiveness of different teaching techniques [20]. Faculty may exhibit a variety of teaching styles. Adult learning theories espouse interactive learning principles, and faculty must be comfortable with these various teaching styles in order to successfully teaching online [7].

In an article in *NEA Today*, teacher Johnette Davis shared that serving as a technology mentor was like helping her friends. It was a supportive role, not like being an instructor. Since she did not have too much knowledge, people did not feel stupid or intimidated asking questions [21]. Superintendent Max Walser of North Carolina Davidson County Schools advocated that technology move forward, and felt it was important to make teachers feel comfortable using this new medium [21]. A teacher competent in the use of technology can be a good trainer for another teacher, creating a positive relationship and a sense of trust. The mentoring program was successful, because instructors had an openness to other educators with different levels of technological knowledge [21].

A peer mentor program can be an effective means to help college faculty with technology in teaching. Chatel [22] conducted a survey to determine faculty concerns regarding the use of technology, and from the findings determined that faculty did not have time or success working with the tech support people on instructional issues. The training workshops for technology were slow and the information was general. Teachers wanted intense sessions specific to their needs. They wanted short workshops of half an hour to an hour. Educators complained that tech support was not readily available, and the tech support providers often seemed annoyed at their questions [22]. As a result, a technology

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mentor position was created. This mentor was a faculty member with specialized knowledge and an awareness of the academic mission. The concept was received with the full support of the faculty and the college administration [22].

Faculty, as an informal group, can provide peer support. They can share developments and challenges, and issues with the use of technology and teaching online. In addition to sharing innovative efforts, they can offer quiet encouragement to each other [23]. In one university, a group called COWS (Campus Online Workshops) was created. They held three-day gatherings, and combined peer interaction with technological expertise. Peers shared their experiences, successes, and impediments with each other. This was a collaborative approach, which made sense to the other faculty, and was applicable to their needs [23]. With peer learning, faculty share the responsibility for participating, which results in greater pleasure, mental stimulation, and overall satisfaction [20].

The COWS faculty was encouraged to teach online for additional compensation. This provided an incentive for the inexperienced faculty to teach online, and for the technologically experienced faculty to develop new offerings and to continue to teach online. In addition to this significant financial reward, faculty were awarded recognition for excellence in teaching online and recognized for their efforts [23].

A successful faculty development program should be designed to expand the confidence and the abilities of education professors and encourage them to become motivated to use technology in their teaching. However, the majority of faculty do not feel qualified in the use of technology [24]. In a survey of faculty needs, results showed it was desirable for seasoned faculty to have several forms of technology support. Instructors needed help in online course management. They preferred small group sessions or one-on-one personalized instruction. Many requested informal sessions with two-way dialogue with a facilitator who understood educational settings [24]. The ideal program was to have small groups, with a relaxed and interactive atmosphere, led by a colleague. These adult learners preferred to learn new skills among their colleagues in an education context [24]-[25]. They wanted hands-on seminars led by faculty members who had success in using technology and were willing to share their experiences.

Bump and McGhie [26] conducted a study for one semester with two faculty members and two PT3 (technology grant) team members teaching technology. The results were quite disparate. One segment showed the extent of technological learning during one semester with an open-minded and enthusiastic professor. The other segment showed a different approach with a less enthusiastic professor. The outcome of the study indicated that it is necessary to have different strategies for different instructor proficiency levels and enthusiasm and energy levels [26]. It is vital to present technology skills in a way that is relevant to the needs of the individual educator. A technology person guided each professor through the process, and the comfort and understanding level of the learner was high and understanding was guaranteed. The outcome was the transformation of the educators, who had gained important technological tools for effective teaching. The approach was individualized for each professor [26]. Learning can occur as continuous change or as incremental levels of growth. It is most likely to occur in individuals willing to explore different learning possibilities [14].

Savage [27] stressed the need for collegiality in mentoring programs, and referred to the study by Naisbitt and Aburdene (1990) indicating that human response is vital to counterbalance the introduction of technology into society. A human lens is needed to evaluate technology and enable people to embrace technology in a manner that preserves humanity. Research on university mentoring programs is scarce [27].

Faculty mentoring programs are important for faculty development, for retention of faculty, for achievement of academic goals, and for the achievement of institutional goals. Both protégés and mentors benefit from the mentoring relationship [28]. Certain mentor attributes are necessary if the programs are going to work. Mentors must be concerned with the learning styles and needs of the mentees [18]. They must possess wisdom, commitment, caring, humor, integrity, and have high expectations. The mentor acts as a catalyst. The mentor must be generous in sharing time with the mentee, be willing to learn, open to the limitations of another, have the ability to trust, and have the good judgment to offer appropriate encouragement and praise [28]. An effective mentor must permit the learner to set the pace, and provide support, a technology lifeline, and a challenge [18]. It is important for a mentor to have the ability to detect qualitative changes in the mentee rather than immediate competency. The mentor should be able to recognize the potential of another, and encourage and nurture that potential strength.

The benefits for a mentor are a renewed approach to academic work, enhanced self-esteem, and an increase in job satisfaction. The benefits for a mentee are an increased likelihood of success and a smoother transition into the use of technology. Disadvantages for the mentor are time constraints and the possibility of not being taken seriously, which can lead to frustration. A disadvantage for the mentee is that the mentor might not want to let go and give the mentee independence after the training period [28].

There are certain skills and dispositions needed to effectively use technology. In mentoring, faculty work one-on-one with other university faculty. Training sessions are individually tailored to the needs of the mentee. Just-in-time assistance is advantageous for those who find technology intimidating [29]. Mentoring is time-consuming, and requires synergy. A mentor must be committed to the role [18].

V. NEED FOR ONE-ON-ONE MENTORING

Western Kentucky University, College of Education and Behavioral Sciences, received an Innovation Challenge Grant referred to as the e-train express [30]. This was a commitment to advocate the use of instructional technology to enable faculty to help their peers. This broke the mold of traditional staff development of one-time, one-method, trainer-driven, with no follow-through. Most educators do not learn

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technology use from taking courses, or attending seminars or workshops which are the substance of traditional professional development programs. Therefore, the implementation of this grant was a team effort, in order for the training to be effective for technological learning. Coaches and facilitators worked to guide understanding and were active participants in the learning process. The training sessions were social and goal-oriented. They lasted one hour and were scheduled frequently. These sessions were inquiry-based. Trainees first synthesized the information, then applied the new technology skills immediately, then integrated these new skills into their pedagogy [30].

Training is essential for the successful integration of technology in higher education. Faculty prefer one-on-one or small group training to the traditional classroom training sessions [4]. O'Quinn [10] found one of the most significant factors motivating faculty participation in distance education and teaching online was to provide mentors for the novices. Faculty requested training and exposure to distance education. They feel there is a need for faculty mentors to guide them through the process of delivering online courses [10]. Adult learners exhibit specific andragogical characteristics [10]-[31]. Faculty can work together to be mentors for each other for distance education. These trainers or facilitators have mutual respect, encourage openness about new concepts not grasped easily, and are supportive of peers learning new skills [10]-[32]. Education for older adults is empowering. It is a means to gain control in the adjustment to technological change, and provide greater self-fulfillment for the faculty [33].

It is important for professional development training to be offered at appropriate skill levels for individual faculty members, so that they are not overwhelmed or bored. Support while learning new technological skills is mandatory. Mentoring involves meeting with peers to share experiences, seek solutions, reteach specific skills and improve usage [34]. In order to facilitate twenty-first century learners, it is necessary to have effective technological integration, which includes mentoring faculty.

Individual training involves individual mentors and technology helpers. Individual technology assistance is necessary. Faculty members have a wide range of technological skills and needs, and this cannot be covered by group technology workshops. The focus must be on what learners actually need to do. Tailor-made training enables the mentor and mentee to determine the correct next step, and individually direct the learning process [35].

VI. RECENT AND FUTURE DEVELOPMENTS

Clearly, one-on-one mentoring is the technological training of choice among seasoned faculty at institutions of higher education. It is the key to increasing the efficacy of educators teaching online. Training and supporting instructors in the proper use of Web-based delivery mechanisms is of vital importance for faculty to be able to effectively teach online courses and make full use of their academic expertise. In addition to the available research, anecdotes from practitioners support this concept. Madelon Alpert, professor at National University in Costa Mesa, California, says, "I vowed I would never, never teach an online course. It was just not for me. I was terrified at the thought of it! Our campus onsite classes were frequently canceled due to low enrollment, as more and more students were taking classes online. Then my Department Chair informed me that in order to meet my teaching load, I would have to teach online. Panic! The month I was scheduled to teach my first online class, two colleagues and I had planned to attend a conference. I took my laptop computer with me. One of my colleagues roomed with me, and when I had questions about how to manipulate the online format, she was right there to help me and explain what I needed to do. My other colleague visited our room, and shared additional insights with us on how to effectively manipulate the technology. We all learned from the experience! Miraculously, I taught the class online! This dinosaur became an online dynamo!

A technique Marilyn Koeller, professor at National University in Costa Mesa, California uses to mentor faculty teaching online is to have them enroll in an existing online class as a teaching assistant. That way, they can be a "cyberfly on a wall" and observe what the instructor is doing to facilitate the class. This provides a pathway to teaching online, rather than "jumping in the deep end" and navigating the format without any insights. When Marilyn was planning to teach her first class, this is what she did, in addition to telephonically speaking with the instructor, a trusted colleague from another campus. When she began teaching online, Marilyn called her colleague with questions and got immediate responses.

Daniel Cunniff, professor at National University in Fresno, California, uses the iLinc platform to mentor faculty teaching online classes. "First, I train them on the job (OJT) on how to use the online system. Even though they may have had an orientation, it's the "hands on" that sets their understanding. Prior to the class, I review the syllabus, outline, introductions, announcements, grade book, drop box, e-mail feature and the special features that I install such as the Journal, the Virtual Office and the Student Lounge set up for them to discuss non-academic areas of interest (E-college platform)." "In mentoring new faculty online, I have them sign on with me as a teaching assistant. They can then enter the threaded discussions and get the "feel" for the class. This is just like them sitting in on an onsite class."

Roxann Humbert, Professor and Director of Learning Technologies at Fairmont State College in Fairmont, West Virginia, quotes a professor of 30 years in teacher education who is now teaching online, who tells everyone he is proof "You can teach an old dog new tricks!" Fairmont State has a faculty mentoring program where faculty are paid a three-hour course overload per semester to help other faculty one-on-one in their departments or schools with online learning. Mentors go through a six-week online class and a Boot Camp on the course management system and have follow-up professional development.

When teaching online courses, Sam Marandos, professor at National University in Stockton, California invites several adjuncts to come and observe him working online with his class. "I have encouraged a number of adjuncts to brave the new world of technology and they have jumped aboard with

the understanding that I will be available to them while they teach their classes. This has proven invaluable to them because several of them keep coming back for support and ideas. One of them became so enthused about teaching online that every time he sees me he hugs and thanks me over and over again for guiding him in that direction."

VII. CONCLUSION

The key word is continuation: to provide faculty with the opportunity for lifelong learning through developing new skills and interests [9]. The dynamic nature of communication is that as conversation continues, understanding develops and widens. This is the helix of communication, with no start or end point. The helical approach to staff development emphasizes long-termism, creativity, and strategic dissemination [9]. Professional development for educators is only successful if educators themselves drive the content [36]. Faculty want people who have had experience teaching online courses to share their best practices. Those competent in the technology processes can mentor others in their department. It is not productive to learn technological skills without help, and it can be a waste of time. Educators would like to be able to ask a colleague to drop by for quick verbal assistance with teaching an online course. Faculty need help when they need help. Informal chats are social opportunities where people pick up tips and tricks. Instructors do not want to read to learn how to teach online, they want a personal visit and a demonstration. They want a private tutor, face-to-face, one-on-one.

Creating one-on-one mentoring programs for seasoned faculty provides an innovative model for the successful transition to teaching online courses. The mentor can address technical skills as well as university policy concerns and create an "how to" dialogue with a trusted colleague. Effective one-on-one mentoring promotes a professional, compassionate and collegial faculty who will provide a consistent and rigorous academic program for students online.

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