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Academic Resilience and Achievement: Self-Motivational Resources That Guide Faculty Participation in Instructional Technology Training at a Mexican University

Virginia Montero-Hernandez[1], John Levin[2], and Maribel Diaz-Castillo[3]

Abstract

This study uses narrative analysis to understand the ways in which Mexican university faculty members used their self-motivational resources to persist in an instructional technology training program within adverse work conditions. The methodology included interviews and participant observation. Findings suggest that faculty's academic resilience was based on faculty's self-definition as permanent learners and innovators, the perception of instruction as a field of reflection-in-action and systematization, and the caring instructional approach used by training instructors.

Resumen

Este estudio usa análisis de narrativas para entender las formas en las cuales profesores universitarios mexicanos, en condiciones adversas de trabajo, usaron sus recursos de auto-motivación para persistir en un programa de entrenamiento de tecnología educativa. La metodología incluyó entrevistas y observaciones de participantes. Hallazgos sugieren que la persistencia académica de los profesores estaba basada en su autodefinición de aprendizaje continuo e innovación, la percepción de la

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instrucción como un campo para la reflexión-en-acción y sistematización, y el método de instrucción cuidadoso usado por los instructores.

Keywords
faculty training, higher education, technology, resilience, qualitative

Since the creation of the World Wide Web in 1990s, universities and colleges around the world have become dual-mode institutions that offer on-campus and online courses. At present, distance education and e-learning (learning processes that use Information and Communications Technology [ICT] to mediate the management of learning) are constitutive elements of higher education both in developed and developing countries (Muirhead, 2005; White, 2007). Several reasons encouraged colleges and universities to add ICT to their curriculum: enrichment and improved efficiencies in learning, widening access to higher education, and cost containment, including per-capita cost reduction (Tham & Werner, 2005; Trow, 2001; Van der Wende, 2003). Furthermore, some argue that ICT accentuates administrative control over faculty and may lead to de-professionalization (Noble, 1998; Slaughter & Rhoades, 2004; Stromquist, 2002).

In low-technology countries, distance education is a promise to disperse education to rural areas, provide access to minority groups, increase the quality of education, and reduce educational costs (Eastmond, 2000). However, the characteristics of the technological infrastructure that developing countries possess impose unique challenges for universities and colleges to adjust their curricula and include the use of ICT. In México, the use of ICT is lower than other countries that are members of the Organization for Economic Co-Operation and Development (OECD; 2006). México is ranked in the 52nd position among 152 countries that report levels of access to broadband Internet: Only 11.4 out of each 100 inhabitants have broadband Internet access in México (Pérez-Jácome, 2012). In urban areas in México (71% of the nation), 40% of the population has computers at home, and only 30% have Internet access. In rural areas, 6% of the population has computers at home, and 3% have Internet access. Access to technology is not a prevailing condition among Mexicans. In addition, those who have access use Internet to look at different types of information and for social communication. Neither education nor training is listed by users as priorities to access the Internet (Pérez-Jácome, 2012).

Although the implementation of virtual learning environments and distance education has increased among higher education institutions in México, the participation of students and faculty in e-learning has evolved slowly (SESIC, 2003). México's pioneer actions in distance education can be traced to the 1940s (Álvarez et al., 2003); however, in the last two decades, the federal government in México has encouraged, more actively, the development of programs to implement the use of ICT in elementary and middle schools and higher education institutions (OECD, 2006; SEP, 2007). International and Latin American agencies provide frameworks for schools and universities to create

their own initiatives and training programs to promote technology literacy among faculty members and students in developing countries such as México (Economic Commission for Latin America [ECLA], 2005; UNESCO, 2011); however, it is not clear whether educational practices and learning opportunities have improved through the use of technology. There is thus some tension between expectations and outcomes.

Problem and Purpose

Faculty participation in the implementation of different modalities of distance education (e.g., online, hybrid, and interactive) is a central component to accomplish the integration of ICTs in higher education institutions (Hanson, 2009; Tabata & Johnsrud, 2008; Trow, 2001). However, universities and colleges struggle to engage academic staff with e-learning to any significant extent (Adamy & Heinecke, 2005). Among the reasons that explain faculty resistance to the implementation of technology are faculty's lack of ability to use technology, the increased workloads of faculty, and the lack of support structures to engage faculty in training and induction programs for instructional technology (Tham & Werner, 2005). In addition, faculty's participation in the implementation of distance education within a context of limited technological resources and limited institutional support can lead to additional frustration and stress (Adamy & Heinecke, 2005; Tabata & Johnsrud, 2008).

Although studies do report both problems with and solutions to faculty experiences with regard to the implementation of technology (e.g., Adamy & Heinecke, 2005), more needs to be known about the processes and subjective factors that enable faculty members to engage in distance education in low-technology countries such as México where infrastructure is weak and faculty members' motivation to initiate changes at the organizational level is key.

At the University of Central México (UCM), which is a pseudonym for an actual Mexican university, the initiatives to provide multiple modalities of distance education began in 2005. Professional schools were among the first academic units that implemented distance education programs at the undergraduate level. From 2006 to 2011, the Department of Faculty Training and Professional Development at UCM designed and delivered several lectures and short workshops (from 2 to 3 days) to socialize faculty in the use of technologies. In 2008, UCM began the development of the first institution-wide project to foster the use of technology through the implementation of a hybrid modality of distance education programs. The purpose of this institutional project was to diversify educational choices, integrate the use of ICT in the teaching and learning process, and increase student enrollment mainly. In the academic year 2009-2010, less than 50% of the total number of applicants was admitted at the university (4,379 out of 8,839 students; Zorrilla-Abascal, 2012), suggesting that demand exceeded university capacity.

In 2009, the first instructional technology training program was delivered to help part-time and full-time faculty members become online instructors at UCM. Only faculty members in departments with high student demand received an invitation to participate in the training program. The training program used a hybrid format that

consisted of a series of face-to-face and online sessions delivered during a 4-month period. The program included three main topics, introduced in three stages: principles about online tutoring (30 hr in 3 weeks), design and creation of web-based courseware (50 hr in 5 weeks), and integration and editing of online courses (40 hr in 4 weeks).

Since its initiation, the faculty training program exhibited low completion rates. According to the most recent institutional report on the implementation of online education at UCM, during the first half of 2011 (January-June), only 42% of faculty members (both part-time and full-time) who enrolled in the program finished the course satisfactorily. According to the director and leaders of the training program, faculty dropped out the training course because of two interconnected factors: (a) the department's incapacity to provide instrumental support (e.g., agreement to release faculty from regular activities to attend training activities) for faculty members to respond to training program demands within their work hours and (b) the inability of faculty to sustain their regular workload at the same time that they complied with extra time demands related to the training activities and homework. Faculty members who dropped out of the training course had to negotiate an arrangement and agreement with the director of their faculty: They could either enroll in the training program later in the academic year or find a colleague who was willing to finish the design and implementation of the online course assigned to them initially. There were neither follow-up studies nor available information in the faculty training department about the further decisions made by faculty dropouts once they left the training course.

In considering the factors that could have limited faculty progression in knowledge and skill acquisition within the instructional technology training program, we were interested in understanding what motivations and behaviors engendered the persistence and achievement among those faculty members who, without optimal institutional conditions, completed the training program. We were interested in learning the ways in which individuals' motivational resources influenced faculty learning and the innovation of instructional practice when professionals find limited or no institutional support to redefine their work. As Latin American universities have been characterized as exhibiting institutional paralysis or dysfunction, which refers to poor process and product quality, poor system equity, and internal efficacy problems (Orozco-Silva, 1996), it is important to understand the development of the motivational resources of faculty members who become achievers within constrained organizational and institutional contexts.

Although this investigation focuses on the study of faculty who were able to complete the instructional technology training program, we realize the necessity to conduct future investigations that examine the specific reasons and conditions that led the rest of the faculty members to drop out the training program. It should be emphasized that faculty members who decided to withdraw from the training program were not necessarily less persistent or interested in responding to demands of performance and innovation in their profession. A detailed exploration of faculty dropouts' stories can let us identify alternate approaches in the ways in which faculty both make decisions

and define a rationale to guide their practice and look for learning opportunities and strategies to innovate their practice.

Theoretical Framework

To understand faculty members' persistence in training, we use three theoretical constructs that help us understand the subjective factors that influence faculty members' decisions to invest in their professional practice. We use the notion of the self-as-doer to understand the ways in which specific self-definitions are connected to the development of motivational resources that guide performance (Houser-Marko & Sheldon, 2006). This theoretical construct stems from self-motivational theories (Eccles & Wigfield, 2002); it suggests that having an identity as a "doer of action or goal helps people to persist in their goal-directed behavior, even in the face of boredom, difficulties, or failure" (Houser-Marko & Sheldon, 2006, p. 1037). Although the construction of the self-as-doer is a motivational resource potentially available to everyone, the development of this cognitive and affective structure can take considerable effort and discipline to develop (Houser-Marko & Sheldon, 2006).

In addition to understanding the relationship between self-definition and persistent action, we wanted to understand the specific dynamics through which the self is constructed within a professional discourse. We know from professional identity theory that the construction of identity in the workplace includes individuals' self-definition as both a member and agent of an occupational or professional group (Kleinman, 1981; McKeon, Gillham, & Bersani, 1981; Pratt, Rockmann, & Kaufmann, 2006). The construction of a professional identity is a fluid and negotiated process through which individuals develop multiple narratives that represent their role functions and reflect their responses to the challenges and demands of their workplace (Assaf, 2008; Fine, 1996; Volkmann & Anderson, 1998).

We use a third construct to make sense of the reasons that lead individuals to persist in the midst of adverse and stressful conditions. The concept of resilience helps us understand the mechanisms involved in the development of specific forms of self-perception and persistent action within adverse conditions. Resilience refers to "a dynamic process encompassing positive adaptation within the context of significant adversity" (Luthar, Cicchetti, & Becker, 2000, p. 543). Although the notion of resilience has been, in the main, used to explain the patterns of behavior among stigmatized people, victims of traumatic events, and those in extremely disadvantaged conditions (Borman & Overman, 2004; Jarrett, 1997; Peres, Moreira-Almeida, Nasello, & Koenig, 2007), the notion of "resilience" can help us understand the protective mechanisms individuals build to navigate stressful and challenging conditions in their contexts. We understand the notion of resilience as a dynamic developmental process instead of a personality characteristic of individuals (Luthar et al., 2000). As a process, the development of resilience involves constructing protective mechanisms such as strategic interpretations of the social environment, focusing on the negotiation of multiple identities, establishing and maintaining self-esteem and self-efficacy, and creating new opportunities for attainment (Jarrett, 1997; Rutter, 1987; Shih, 2004). The enactment of protective mechanisms to overcome

difficult situations in life lead resilient people to realize outcomes such as academic achievement, sense of belonging to a certain community, perceived self-efficacy, self-empowerment, intrinsic motivation, and internal locus of control (McMillan & Reed, 1994; Sagor, 1996). One noted environmental factor in the development of resilience is the presence of mentors and/or role models outside of the family, such as teachers, coaches, or neighbors who exhibit caring behaviors, attention, and respect for others (Bondy & McKenzie, 1999; McMillan & Reed, 1994; Sagor, 1996).

Method and Research Design

To understand the ways in which faculty members engage in instructional technology training as part of their professional practice and demands, this investigation addressed two questions: (a) What self-motivational resources allow faculty members to persist in a training program to become online instructors within a low-technology context and with increased workloads? (b) In what ways do faculty members develop the self-motivational resources that help them persist in a training program under working conditions that are not optimal?

To answer these questions we use an interpretative methodological approach aimed to understand the characteristics of social events on the basis of interactional patterns, individuals' perspectives about their actions, and the features of the context (Denzin & Lincoln, 2005). We use narrative analysis as a method to examine the ways in which faculty members use their linguistic resources both to perform and to describe their subjectivity and experiences (Riessman, 2002). We examined both the content and style of faculty narratives as a way to understand the ways in which faculty made sense of themselves as instructors of and participants in an instructional technology training program. We view narratives as a particular communicative style (Labov, 1999) and as performance of the discursive self (Young, 1999). In the production of a narrative, certain episodes are chosen and conveyed to represent the authenticity of a specific self (Cameron, 1999; Greenhalgh, 2002; Young, 1999). Greenhalgh (2002) suggests that "the self is a discursive construction that is actively constituted by individuals out of the discourses or scripts available in their environments" (p. 42).

The narratives we examined belonged to a group of faculty members (part-time and full-time) who, without optimal working conditions and institutional support (e.g., no release time, no technological infrastructure, no previous training on educational principles), endeavored to respond to the demands and assignments of a training program aimed to help faculty learn how to become online instructors and design web-based courseware.

Data Collection

We use semi-structured interviews as our main data sources. The analysis of interviews allowed us to understand the ways in which interviewee and interviewer co-constructed a social encounter and produced narratives in which language was used to represent a specific type of self (Rapley, 2001). To contextualize faculty narratives,

we also relied on data gathered during a 4-month period of participant observation (Burgess, 1984) through which we followed faculty involvement in face-to-face and online sessions that shaped the training program (delivered from September to December 2011). By August 2011, 48 faculty members had enrolled in the training sessions; however, by the end of the training program, only 19 faculty members (39%) were able to develop the necessary skills (e.g., to communicate learning goals clearly, define instructional activities, and design evaluation strategies) and finish the design of their online course satisfactorily. Our sample consisted of 13 full-time and part-time faculty who completed the training program and whose work and performance during the training was deemed successful on the basis of the final products they delivered and the training instructors' assessment. Only 13 out of 19 faculty members answered to our invitation to participate in the study. In the interviews with faculty members, we explored four dimensions: skills and use of technology, participation and program activities, practice and learning, and working context (see Appendix A). The average age among participants was 48 years. All of them had more than 7 years working as instructors in face-to-face courses. Eight faculty members were affiliated with professional-oriented Faculties (three in Law, two in Education, one in Medicine, one in Kinesiology, and one in Management), one with the Humanities (Literature), and six faculty members were affiliated to Science-oriented Faculties (five in Chemistry). As the institutional goal was to use online education as a strategy to increase student enrollment in the highest demanded careers, there was a greater number of faculty members from professional-oriented Faculties who were required to enroll in the technology instructional training. There were seven part-time and six full-time faculty members in the sample. Three faculty members out of 13 had previous experiences in the implementation of online instruction and other forms of technology-based instruction. Only two faculty members had formal training in Education, which allowed them to understand issues of curriculum design, evaluation of learning, and instructional techniques. One faculty member in the sample was a former dropout; after a year, she decided to enroll again in the program to finish the design of the online course she had to implement in her Faculty.

We also interviewed three out of six training instructors and relied on their advice to select those faculty members who complied satisfactorily with the objectives established in the training program (i.e., design of an online course). Instructors' average age was 28 years; they were experts in instructional technology. Two of them had a Master's degree in Education with a specialization in learning and technology. The other instructor had a Bachelor's degree in Educational Technology. The instructors had worked at the university since 2009 to support the implementation of a hybrid modality of distance education programs at UCM. Through the interviews with instructors, we sought to understand the ways in which faculty members worked to comply with assignments and the kind of social and instrumental support faculty needed to deliver the assignments of the program (see Appendix B).

Through interviews and participant observation, we aimed to know faculty members' views about the course, self-perceptions as instructors and learners, interactions

with instructors of the training program, characteristics of the face-to-face and online learning activities, the ways in which they managed to comply with all the assignments required during the course, the reasons that encouraged them to continue the training program in spite of their stressful and adverse conditions, and their perspectives about their instructional practice and the use of technology.

Data Analysis

The systematization and interpretation of empirical data were based on the analysis of the episodes and structures of faculty members' narratives (Riessman, 2002; Watson, 2006; Young, 1999). We identified topics and articulated themes suggested through interviews that encouraged faculty members to create specific narratives that allowed them to make sense of their selves and experiences in the instructional technology training program. In a first phase, we used Atlas.ti software to codify data and identify the structure of faculty members' narratives. Codification helped us identify the main themes in participants' narratives and the behaviors of faculty associated with these themes (e.g., stress, self-definitions, work conditions, experiences of success, difficulties in the process of learning, and inadequacy of technology background). In a second phase, categorization included the use of our theoretical framework to understand the components and structures of, and relationships among, the stories of persistence and adaptation that faculty members recalled within three broad areas: (a) the ways in which they viewed themselves as participants of the training program, (b) the ways in which they understand their practice as instructors, and (c) the ways in which they interacted with others as part of their participation in the training program.

Finally, in a third phase, we formulated a series of questions aimed at our data to understand the ways in which differences and similarities in the content and structure of faculty members' narratives pointed to academic resilience and development of self-motivational resources: How are faculty members representing themselves through their different narratives? How are the stories connected to explain the case of academic resilience within this context? How does the focus of each story provide reasons for the development of faculty members' academic resilience? Through the process of categorization and thematic integration, we used data from interviews with training instructors and participant observation, as both contextual and confirmatory evidence to enrich our interpretation of faculty narratives.

Findings

Three findings explain the relationship between faculty members' use of self-motivational resources and their patterns of participation in the instructional technology training program. First, faculty members defined themselves as persistent learners (i.e., resilient-doer self) who endeavored to engage in educational experiences that included the use of technology to redefine instructional practices. Second, faculty members decided to persist in the instructional training course as they were interested in engaging in two central conditions: reflection on their practice and systematization of their

teaching. Third and finally, continual support from training instructors nurtured faculty members' resilient-doer self.

Participation in Faculty Training: Taking the Challenge of Doing Extra Work

Part-time and full-time faculty, who completed the training course, perceived their participation in the instructional technology training program as an additional burden on their work activities. The adverse conditions that our participants had to overcome to persist in the training program were related to the level of stress and lack of organizational support for these faculty members. All talked about working conditions that challenged the stability of their mental and physical health as a result of the excessive work they had to perform on a daily basis. Lack of organizational support included infrastructure problems that hindered the use of technology for educational and learning purposes among faculty and students. According to institutional documents that analyze the level of technological infrastructure available in this university in 2010, UCM had hardware deficiencies (e.g., there were 13.3 students per computer and 3.4 faculty members per computer), connectivity problems, insufficient technical support, and minimal software and web resources.

It should be noted that none of the participants received additional payment or compensation to their salary as a result of their participation in training. Although part-time faculty members were informed by university officers that they could gain a US$300.00 payment if they concluded the training program, none of the part-timers in our sample received any money. Typical conditions for all faculty members were challenging, including limited time available and institutional malfunctions.

> There was a lot of suffering with the lack of time. Most of my colleagues said, "I only have time to work on the assignments after 10:00 pm" . . . [H]ere [at the university] we could not do any assignment because the wireless connection is always problematic; it comes and goes during the day. One cannot have permanent Internet access . . . [I]n one way or another, one ends neglecting oneself, family, and partners in the name of work. Yet we have to do it . . . [A]t the end, it was satisfying to realize that we made it. There was a moment in which most of us said, "It is enough, I cannot do it anymore." Many of us were tempted to quit . . . [I]t was gratifying to realize that I was able to learn a lot of new stuff and finish. (Male, part-time, School of Law)

All faculty members emphasized their difficulty in finding time and energy to do the quantity of work required by the instructors of the training program. Full-time faculty were officially required to comply with expectations for 40 hr of work every week. Part-time faculty worked approximately the same number of hr or more depending on the number of courses they taught and the locations of these. Part-time faculty's work included preparing classes, teaching at different institutions, and grading assignments. Among full-time faculty, their work schedule consisted of teaching (preparing classes, delivery of content, and grading), research (research design, grant seeking, fieldwork,

writing and submitting papers, research project management, conference presentations), tutoring and participation in examination committees, and service (participation in committee work). All faculty members emphasized that they worked more than 40 hr per week to comply with their regular functions. Participation in training programs was enacted within the set of extra hours that faculty devoted to comply with their daily work demands. Participants shared the experience of having to work after midnight on several occasions for up to 3 or 4 hr to finish their assignments in the training program.

> We struggled to finish the assignments in time. There were many assignments to do. I am a full-time faculty and I also had to comply with teaching, research, and service. I had to turn in my assignments one or two days after the deadline . . . [I] worked weekends and nights to upload all the resources and activities for the online course . . . [O]ur department should have provided some sort of support, for example some time release. They did not allow us to cancel any of our regular activities. I continued with my classes and research as usual. Doing the training program was definitely lots of extra work. (Male, full-time, Faculty of Medicine)

All faculty members described themselves as professionals who struggled to manage their time and use organizational resources to comply with the demands and assignments derived from the training program. However, in spite of their excessive workload, they endeavored to comply with required assignments and finish the instructional technology training program.

Narratives of the Resilient-Doer Self: The Permanent Learner and Innovator

All faculty members who performed adequately in the activities and assignments of the training program constructed a positive self-definition that worked as a foundation for their resilience in the academic setting. Literature that addresses self-motivational theories indicates that students' self-beliefs of efficacy to regulate learning strategically play an important role in academic self-motivation (Zimmerman, Bandura, & Martinez-Pons, 1992). We found that when faculty members enacted the role of students in the training program, the beliefs and understandings they constructed about themselves were a factor that encouraged their persistence in the task. All part-time and full-time faculty members had positive perceptions about themselves as persistent or resilient learners and doers within the academic setting. Faculty members' resilience in the academic setting was supported by their permanent interest in learning and personal attitudes such as stubbornness, responsibility toward the job, perception of difficulties as challenges, and dedication to achieve goals. Through their narratives about work experiences over several years, faculty portrayed themselves as people who were continually persisting and making an effort to learn in spite of the multiple constraints they encountered. Faculty members perceived themselves as resilient doers who enjoyed learning and integrating new elements into their practice as instructors. Participants' self-definition as resilient doers was based on their persistent interest in

learning and implementing new orientations and skills into their practice. Faculty members chose to overcome obstacles and to tolerate adverse conditions in their workplace to learn and renew their practice.

> I am a committed and constant person. I did not attend all the face-to-face sessions of the training but I turned all my assignments. A couple of times I fell behind with work; however, it was not too bad. I always had clear in my mind that I would finish the training. I was aware of my responsibility. I am very persistent. [To do the assignments], I searched for additional information. If I did not understand something I emailed the instructor and she helped me solve my doubts . . . [I] kept going because I want to keep learning . . . [S]ome times, I felt very frustrated, I only wanted to have a little bit more time to sleep . . . [I] was teaching six courses at two universities, helping with administrative processes at this university, and taking the training course. Yet, I said "yes" to the training; now I had to get to the end. (Female, part-time faculty, Faculty of Chemistry)

Faculty members were aware of their shortcomings; however, they were self-confident enough to overcome the obstacles they faced as part of their participation in training. Through their participation in face-to-face and online activities, faculty members sustained their self-definitions as resilient doers by complying with assignments, offering their opinion and reflection both in online forums and face-to-face meetings, showing initiative to contact instructors and formulate questions, and searching for information that helped them make sense of educational principles to design their online course.

Faculty members' self-definition as resilient doers in their profession was constructed on the basis of two themes they communicated through their narratives: innovation and lifelong learning. Participants both viewed and understood themselves as persistent doers of actions that were oriented to achieve innovation and permanent learning as part of their profession. Faculty members viewed learning as a central component of their status as a professional. They viewed themselves as individuals who enjoyed the opportunity to acquire knowledge. Learning was a critical activity in which faculty members engaged to sustain their professional self and their self-perception as resilient doers. Faculty members described themselves as efficient and permanent learners.

> I had no problem to enact the role of student during the training program. I always tell my students that I am still a student. As a researcher, one never stops learning. I keep studying, attending seminars, [and] conferences . . . [I]n the training sessions one is required to be open to learn new stuff. It is challenging to learn when the subject matter is different from the themes one is used to read as part of one's specialization. During the sessions, we had to learn about educational concepts; you know, other kind of language . . . [I] learned a lot in this program. (Male, full-time faculty, Faculty of Medicine)

Among part-time and full-time faculty members, to be a resilient doer involved undertaking activities or engaging in processes that allowed them to gain relevant knowledge to their profession. Faculty members knew that learning was a critical

process of their academic endeavor; therefore, they described themselves as individuals who viewed learning as a valuable and satisfying process. Instructors of the training programs described our participants as committed learners who valued the opportunity to acquire new knowledge to improve their instructional practice.

> It was very satisfying to work with some faculty members. They were enthusiastic about learning what we were teaching. They were willing to engage in the program. They wanted to learn new ways to do their work. We also had some professors who were disengaged. (Male, Instructor in the training program)

Faculty members viewed not only learning but also innovation as a critical component to sustain their resilient academic self. Part-time and full-time faculty noted that their desire to acquire new knowledge and to include new elements in their instructional work were conditions that led them to commit and persist in the training program.

> I was interested in the training program because technology is one of the main components that promotes social innovation . . . [W]e wanted to develop a new online program, adopt new teaching-learning strategies, and implement new evaluation mechanisms . . . [W]e know what the tendencies about technology integration at the national and international level are; therefore, we need to create new opportunities for students. (Male, part-time faculty, School of Law)

Faculty members viewed the use of communication and information technology as an innovative way to redefine their instructional practice. Among part-time and full-time faculty, to become an online instructor was an opportunity to acquire new abilities and to work with students differently.

> I wanted to undertake the training program to learn new instructional formats. There are many students who are familiar with the use of technology. We, as teachers, need to be as knowledgeable as our students. We need to give them new tools and help them use computers in strategic ways . . . [I] wanted to show something new to my students (Male, full-time faculty, Faculty of Medicine)

Faculty members valued the opportunity to innovate their practice through the use of technology. By learning how to use technology for instructional purposes, faculty members viewed themselves as innovators who could provide new learning conditions for students.

Narratives of Practice: Reflection-in-Action and Systematization of Instruction

A decisive factor in strengthening resilience entails the way in which individuals perceive their experience and develop frames of interpretations to make sense of their conditions and actions (Shih, 2004). Individuals' narratives about themselves, their

practices, and experiences tell us about the frames of interpretation they construct (Watson, 2006). Participants in our sample developed two types of narratives about their interests and reasons why they decided to participate and persist in the instructional technology training program in spite of their lack of time and the inadequate infrastructure to comply with training demands, including work assignments.

Whereas the narratives of innovation and permanent learning were themes that faculty members created to reflect the basis of their self-definitions, the narratives we describe in this section were constructed by faculty members to explain their interests in enriching their instructional practice. To be a resilient doer, faculty understood persistence in the training program as a necessary action to improve their practice through the processes of reflection-in-action (Schön, 1983) and the systematization of their instruction. Faculty members noted that learning how to design online courses was an opportunity to reflect-in-action (Schön, 1983), which involved halting their work, temporarily, observing their practice, and reflecting on its effectiveness. Faculty members' persistence on the task was encouraged by faculty realization that learning how to use technology for instructional purposes helped them reflect on their practice, develop self-awareness about the nature and effects of their performance, and grow professionally. As part of the program sessions, training instructors and faculty members discussed both the meaning and implementation of teaching- and learning-related concepts such as competencies, collaborative learning, curriculum design, lesson plans, assessment, and constructivism. Discussions about these topics were necessary so that faculty members could understand the pedagogical principles underlying the implementation of online instruction. Exposure to educational theories and concepts allowed faculty members to question their teaching approaches and the rationales behind these.

> I realized that the teacher–student relationship changes. When the communication is online, it seems to be a more egalitarian relationship. We are all connected through the Web and we can share information with each other . . . [V]irtual communication allows students to communicate with the teacher and peers at any time . . . [W]hen they [the instructors] asked me to design my sessions for the course, that was the moment when I realized the complexity of teaching . . . [O]n-line teaching forces us to think carefully how to explain and talk to students. One has to be very clear with the messages, content, and the instructions that are uploaded . . . [M]any things have to change in order to be instructors in the virtual environment . . . [W]e have to engage in some sort of permanent evolution . . . [M]y perception about how to teach has changed. (Male, full-time, School of Law)

Through learning about technology implementation and online education, faculty members came to realize the complexity of instructional design and reflected on several dimensions of teaching: teacher–student relationships, authority negotiations, instructional material and resources, and forms of communication. One faculty member who dropped out of the training program the first time she enrolled had to quit as the workload she had to handle made it impossible for her to comply with extra work. After a year, she decided to take the challenge again to complete the course this time.

Through this process, her interest in learning how to teach online advanced. This particular case illustrates that faculty members' construction of a resilient self was not a spontaneous product but the result of individuals' stories of persistence in the improvement of their practice

> The training made me think about my course; I made several adjustments to the ways in which I had given my course before: the order of the themes, the purpose, and the bibliography. When I reviewed the readings I had from previous semesters, [I realized I had to reformulate] my course. I asked myself, "What do you really want to get out of this theme? What do you need to achieve what you want?" . . . [I] realize that I have to be very precise in everything I ask my students to do in my course . . . [T]his experience allowed me to be more aware of what I am doing. (Female, part-time, faculty of medicine)

The implementation of online education included components and values that part-time and full-time faculty members had to incorporate into their practice to be better instructors. The new language, abilities, tools, and contexts that faculty members discovered through the training programs compelled them to question their traditional ways of teaching and to redefine their role as instructors. Faculty members persisted in the training program because the experience of learning how to become an online educator allowed them to reflect on the characteristics and efficiencies of their past and present practices as instructors. As resilient doers, faculty valued the opportunity to identify weak areas of their work to strengthen these.

Faculty members articulated other areas of improvement for their instructional work in the organization and planning of teaching and learning activities. Participants described the use of a platform in online courses as a tool to register, monitor, and assess both faculty and students' participation in learning experiences.

> What new technology brings is order. We cannot skip steps or procedures; otherwise, it would be chaos. The design of online courses demands that we be careful about what is uploaded and how it is used in the platform. It means more work but it is good because everything is registered in the platform and everyone can see how things were designed. (Male, full-time faculty member, School of Law)

Faculty members noted that the use of technology would reduce improvisation in their teaching and provide a data base for assessment of student performance. As resilient doers, faculty valued the possibility to design an organized series of activities, materials, forms of communication, and assessment mechanisms.

> To work in the platform is a very well-organized way to have things under control. Everything has to be organized and prepared in advance. It does not allow you to prepare things at the last minute . . . [I] like the formats we have developed with the instructors to design our courses. I have incorporated the use of that planning format to organize my face-to-face courses. Now, I have my lesson plans with the kind of materials I need, the activities, the rubrics. Everything has order . . . [I] also can keep record of students' participation because everything is registered at the platform. (Female, part-time faculty, Faculty of Medicine)

Resilient faculty members engaged in face-to-face and online activities that helped them reflect on their instructional practices and systematize these. As part of the training activities, faculty members participated in online forums to discuss, along with their classmates, questions such as, "How am I teaching now? Is my current instructional practice similar to the criteria suggested by instructors? How do I visualize my role as an online instructor?" Through online forums, faculty members posted their comments and responded to each other on their experiences. Their answers and comments mirror the narratives they communicated in the interviews: They emphasized changes in the perceptions of their instructional work, their desire to implement new ways to teach students, and their commitment to improve their professional practice.

Sustaining the Resilient-Doer Self: Training as a Form of Caring

Faculty members defined themselves as resilient doers who wanted to persist and achieve according to the program's demands; however, faculty also experienced moments in which their self-confidence was threatened by their lack of technological competency, limited time, and excessive workloads. When faculty doubted their capacity to achieve, the companionship and guidance from training instructors were critical. Instructors in the training program used a caring approach and supportive words to help faculty members regain confidence and to persist through the learning process. Faculty members learned to respect their instructors' specialization in the use of technology for pedagogical purposes and their patience to guide them through the acquisition of web and computer-based abilities.

> My relationship with the instructor was pretty nice. She knew the entire educational lingo and she helped me make sense of it . . . [S]he was attentive to answer my questions . . . [T]he most difficult thing to do was the design of the lesson plans for the whole semester. The instructor gave it back to me probably 20 times because I was not getting it right. I think I did not understand the assignment entirely at the beginning. My instructor met with me and we worked together on the lessons plans . . . [T]here were times when I struggled to turn my assignment but my instructor was empathetic. (Female, part-time faculty, Faculty of Administration)

Although faculty members described themselves as self-confident learners who could overcome obstacles to achieve their academic goals, they welcomed the support they could gain from instructors. According to training instructors, the majority of faculty members who engaged in the training program possessed limited technology-based abilities. Therefore, they experienced frustration when they viewed themselves as lacking knowledge or strategies to combine technology and curricular design. Instructors were critical agents who helped faculty members overcome frustration and make sense of educational concepts and principles.

> I never felt alone through the training. I am really glad to have met my instructor. She helped me a lot. She answered all my questions. She was always ready to help me solve my doubts. She was very supportive . . . [I] soon realized that they [instructor] always did

> more than they were expected to do officially. I liked that my instructor gave me some encouraging words to keep me motivated . . . [I] worked with her as a team . . . [S]he helped me to discover the answers to do my assignments . . . They were very patient. (Female, full-time faculty, Faculty of Chemistry)

Instructors monitored online activities and forums in which faculty members participated during the training. In the online forums, instructors provided feedback and comments on the basis of the dialogue and questioning among faculty members. Training instructors helped faculty members by undertaking six practices that intervened in the process of developing or maintaining resilience (Henderson & Milstein, 1996): increasing social bonding, setting clear and consistent boundaries, teaching life skills, providing care and support, setting and communicating high expectations, and providing for meaningful participation.

Conclusion

This investigation addressed the ways in which faculty members used their available self-motivational resources to overcome the challenges they experienced in the process of faculty training and implementation of distance education within a university whose level of technology appropriation was limited. We explained faculty adaptation to adverse and stressful conditions within their work context as a case of academic resilience or resilience toward learning (Borman & Overman, 2004). The characteristics of the adversity that faculty members experienced included lack of institutional support to engage in faculty development activities (e.g., no time release from regular activities), inadequate working conditions to participate in the training programs effectively (limited access to Internet and computers), and heavy workloads that stemmed from the multiple role demands placed on faculty members. In spite of the constraining effects of the workplace, faculty members pursued learning opportunities and persisted in the appropriation of new knowledge and skills that helped them adjust their practice to new demands.

As a process, resilience involves the development of protective mechanisms and strategies of action that individuals use to preserve their self-confidence and engage in social and academic practices successfully (Jarrett, 1997; Luthar et al., 2000; Rutter, 1987). We found that the construction of a resilient-doer self among our participants was not a spontaneous creation derived from their participation in the instructional technology training program but the product of multiple factors: the support they received as part of the training program, their personal stories and traits, and their practice-related interests. As reflected in the literature (Houser-Marko & Sheldon, 2006; Shih, 2004), faculty members' resilience in the academic setting was based on a positive self-definition, the construction of interpretative frameworks to perceive and redefine experience, and the provision of social support. Our findings suggest that faculty members' development of resilience within the context of instructional technology training was based on three facets: (a) a self-definition created and sustained by narratives that emphasize learning and

innovation as critical features of the professional self, (b) the interpretation of instruction as a practice that demands reflection-in-action and systematization, and (c) the development of a caring relationship with training instructors.

The notion of resilience has been explored largely as a factor to understand student development and academic achievement among individuals with disadvantaged backgrounds and traumatic experiences (Blocker & Copeland, 1994; Borman & Overman, 2004; Jarrett, 1997). The use of this concept to understand the motivational life of faculty members has not been discussed in detail. By using the concept of resilience, we seek to make visible the levels of distress and emotional investment that are associated with the construction of faculty members' decision-making and learning opportunities aimed to innovate their practices, particularly within constraining workplaces. This examination is particularly relevant for academics in Latin American contexts where universities function within reduced budgets, low levels of rationalization in their operations, and lack of organizational flexibility (Brunner, 1989; Kent, 1993; López-Guerra & Flores-Chávez, 2006; Orozco-Silva, 1996; Sutz, 2003; Torres & Schugurensky, 2002). Academics have to respond to not only local but also international demands of innovation and productivity; therefore, faculty members seek to achieve higher levels of professional competence that make them comparable with other professionals in the region and around the world.

We found among our participants a strong concern for knowledge gains and skills development to be competitive and to respond to national and international trends about innovation and the use of technology. The concept of resilience helps us understand the personal investment that academics enact to construct their profession in spite of the constraining effects that they experience. Although there are studies that emphasize an increase in the levels of stress and job dissatisfaction among academics across the world (Jacobs & Winslow, 2004; Neumann & Finaly-Neumann, 1990; Olsen, 1993; Perlberg & Keinan, 1986; Thompson & Dey, 1998; Thorsen, 1996) and the organizational factors and reward structures that influence faculty's motivation to satisfy demands of research productivity (Bess, 1998; Tien & Blackburn, 1996), there are no in-depth studies that examine the specific ways in which faculty members redefine their practice and develop new skills in spite of the high levels of stress and frustration they experience. Through the use of self-motivational theories and the concept of resilience, this investigation addressed gaps in the literature and contributed to the understanding of the development of faculty members' motivational resources that enhanced their professional practice, specifically instruction, in a context where the use of technology had become a pressing demand on faculty.

We found that faculty members' self-perception as resilient doers and their resilience toward learning in the context of technology implementation is mediated by the narratives they built to enrich their profession and the coaching they receive through training programs. This investigation contributes to understanding which self-motivational theories can be used to explain the ways in which faculty members' professional performance is both constructed and sustained within a challenging work context.

Implications for Practice

Evidence from this investigation suggests that there is a significant percentage of faculty members who are eager to renew their practice in spite of the constraining factors of their workplace; however, an institution-wide transformation of instructional practices through the implementation of online education cannot rely exclusively in faculty members' investment of their motivational resources. Based in the testimony from our participants, it is clear that the adjustment of organizational practices and guidelines can facilitate faculty participation in professional development activities. Modifications in the components of faculty members' workplace at UCM can reduce the percentage of faculty who drop out of the training program. Our findings provide relevant insight to make adjustment in two areas: the design and delivery of instructional technology training programs and the adjustment of organizational structures and procedures. We found that faculty members' engagement in training activities was enhanced by the caring approach that training instructors implemented in the program. Based on our participants' affirmations, responsive training programs have to provide personalized attention, continual monitoring, open communication, and permanent feedback. The implementation of such conditions in the instructional format of the training program was critical to help faculty overcome insecurities and fears related to their lack of computer-based skills.

With regard to organizational structures and procedures, the likelihood of faculty participation and persistence in instructional technology training programs can increase if the following conditions are created: (a) orientation sessions or preparatory courses that help faculty to achieve an initial approach in the use of technology and the development of computer-based skills, (b) expansion of the period of time during which faculty can learn about curriculum design, online instructional techniques, and computer-related functions, (c) service learning programs through which undergraduate students, from areas such as Education, Psychology, Communications, among others, can assist faculty members in the design of online course, (d) learning communities in which faculty members can work together in the design and implementation of online courses, (e) reward structures that legitimize the participation of faculty members in training activities and the outcomes generated by their engagement, and (f) forums where faculty can talk about their experiences and ask for specific forms of instrumental and social support to participate in training activities effectively.

Appendix A

Interview Guide to Be Conducted With Faculty Members

Preliminary issues

- Researcher's self-introduction
- Explanation of the research project (general characteristics and objectives)
- Questions or concerns expressed by participants before starting the interview

Identifying information

- Occupational status
- Years of experience in the institution
- Major responsibilities in the workplace
- Educational/disciplinary background

Skills and use of technology

- How do you perceive yourself with regard to your computer skills?
- Have you had a chance to teach online before or is this your first time?
- How proficient are you in the use of computers, software, and Internet?
- Was it difficult for you to engage in the computer-based activities that the program included?

Participation and program activities

- Why did you decide to enroll in the instructional technology program?
- Did you set a goal for yourself as part of your participation in the program?
- Are there colleagues of yours who enrolled in the program?
- How would you describe the participation of some of your colleagues in the program?
- Did you achieve the goals set by the program?
- How would you describe your experience as a participant in the program?
- Were there activities that you enjoyed the most (or the least) throughout the program?
- What kinds of challenges and problems did you experience?
- How did you address or overcome those challenges?
- How did you work with the program instructors? What did you enjoy (or did not like) about working with them?
- Was it difficult for you to persist in the program?
- How did you organize your professional and personal life to be able to comply with the demands of the program?

Practice and learning

- How would you describe yourself as a professional?
- Has your understanding about instructional practice been modified as a result of your participation in this program?
- In what ways has your instructional practice changed?
- How did your role as instructor change after you finished the program?
- How do you understand your relationship with your students and their learning process after your participation in the program?

- Has your practice become either easier or more difficult as a result of your desire to become an online instructor?
- What kinds of professional skills have you acquired as a result of your participation in the program?

Contextual factors

- Did you have the necessary conditions in your work context to respond to the demands of the program?
- Did you experience some particular issues with regard to institutional support and resources related to your participation in the program?
- What kinds of elements facilitated your participation in the program?
- If you could change your work context, what would you change to facilitate the participation of faculty members in programs like this?

Appendix B

Interview Guide to Be Conducted With Program Instructors

Preliminary issues

- Researcher's self-introduction
- Explanation of the research project (general characteristics and objectives)
- Questions or concerns expressed by participants before starting the interview

Identifying information

- Occupational status
- Years of experience in the institution
- Major responsibilities in the workplace
- Educational/disciplinary background

Characteristics of the program and context

- Can you describe the main goal and characteristics of the program in which you participated?
- What kinds of outcomes are expected from faculty members who enroll in the program?
- What kinds of resources does the program provide for faculty members to learn what is expected as online instructors?
- Do you think that faculty members' working conditions were beneficial for them to engage in the program?
- Did faculty members rely on their departments' dean's support to participate in the program in addition to their regular workload?

Work activities and challenges

- How was your experience working with faculty from different disciplinary backgrounds and occupational status?
- How do you work with faculty members to help the transition into becoming online instructors?
- Did you experience some challenges or problems during you work with faculty? If any, can you describe them?
- How did you overcome the difficulties of your work with faculty?
- What kinds of strategies you use to facilitate faculty transition into becoming online instructors?
- How do you characterize your relationship with faculty members throughout the development of the program?
- When faculty members were about to drop out, what did you do to encourage faculty member to continue in the program?

Perception of faculty

- How would you describe faculty members' attitudes toward and proficiency in the use of technology?
- What kinds of problems did faculty experience during the work they did with you?
- What kinds of demands or complaints did faculty member communicate to you during the program?
- How would you describe faculty members' participation and disposition to learn in the program?
- What kinds of learning activities were most challenging for faculty to achieve?
- Did faculty members change their perspectives on and understandings of teaching and learning?
- What do you think are the factors that influence either faculty persistence or faculty withdrawal in the program?

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