

# The rise of the teleworker: false promises and responsive solutions

Heather Kanuka · Kam Jugdev · Robert Heller · Dan West

Published online: 11 September 2007  
© Springer Science + Business Media B.V. 2007

**Abstract** The purpose of this exploratory study was to gain a better understanding of how to provide learning opportunities to improve teaching practices for the increasing numbers of academics who are choosing to work online from remote offices, sometimes called e-academics, remote workers, or teleworkers. The objectives of the study were twofold: (1) to explore structures that can encourage the improvement of teaching practices and (2) to do so in ways that will overcome many of the unique participation barriers for teaching practitioners (e.g., academics, tutors/adjuncts) who are working off campus. Through descriptive and factor analyses, the results of this study provide suggestions for structures and practices which can be managed skillfully to create an environment that provides continuous learning opportunities to improve teaching for the rising numbers of e-academics.

**Keywords** Continuous learning opportunities · Online distance education · Teaching development in Canada · Teleworkers

## Introduction

Institutions of higher education that provide open and distance learning (ODL) are currently being challenged by increasingly complex changes, including new demands for networked participation, postmodern ways of knowing, demands for emphasis on learning instead of teaching and content, and the rapid development of new communication technologies. This has given rise to questions regarding changing roles and competencies required to effectively facilitate technology-mediated distance delivered learning activities and, in turn, the ongoing need for continuous learning opportunities (Barker 2002; Bennett and Marsh 2002; Thorpe 2002). Complicating this issue is the increasing number of full time academics who are choosing, like their students, to work off-campus. Recently

---

H. Kanuka (✉) · K. Jugdev · R. Heller · D. West  
Athabasca University, Peace Hills Trust Tower, 1200, 10011-109 St, Edmonton, Canada T5J 3S8  
e-mail: heatherk@athabascau.ca

academics working from remote offices have been referred to as e-academics. Prior to the tendency to attach the ‘e’ to all activities related to web-based technologies, remote workers were referred to as teleworkers. For those who are choosing to be teleworkers, there are barriers to accessing continuous learning opportunities normally offered on-campus (Jones 2004). In our own institution the number of academics who have opted to be teleworkers now exceeds 50%.

The purpose of this study was to gain a better understanding of how to provide continuous learning opportunities to improve teaching practices for academics who are teleworking. While this study draws data from our own institution (a distance-education and online university in Canada, serving approximately 32,000 students per year), the results have implications for on-campus universities elsewhere who are also exploring teleworking options for their academics and/or experiencing a deepening segmentation of academic labor into tenured professors and contract academics (Bauder 2006)—many who are also teaching online distance delivered courses from their home offices.

### The rise of the teleworker

Institutions of ODL normally partition the delivery of the learning activities (delivered by tutors) from the development of the curriculum (developed by instructional designers and subject matter experts) in order to create economies of scale. Tutors are employed on part-time, temporary contracts, and work from a home office—often called ‘teleworking’. More recently, some ODL institutions have begun to offer teleworking options for their full-time staff in efforts to retain their best academics, as well as recruit promising new academics. Teleworking can be an attractive opportunity for both the institution and the employees. Flexibility in personal and family scheduling is cited as a major reason for telecommuting from home particularly among dual-career couples (Pinsonneault and Boisvert 1996). Elsewhere, it has been reported that teleworkers have: more positive views about family and personal life than employees working in an on-site office (Hill Ferris and Martinson 2003); increased productivity and work quality; less distraction and fewer interruptions; an ability to work during the most productive part of the day; time saved from commuting, and; an increase in perceived job satisfaction (Ng 2006; Pinsonneault and Boisvert 1996).

### False promises

As with most opportunities, though, it has tradeoffs. One troubling drawback to teleworking is that it creates a potentially vulnerable situation for teleworkers arising from the lack of contact between colleagues and a lack of identification with the institution. Research has shown that as identification with an institution and commitment decreases so does the contribution to the institution and job satisfaction (Mael and Ashforth 1992; Meyer and Allen 1997; Meyer et al. 2002), as well as an increase in turnover intentions (Beyth-Marom et al. 2006). Other research has shown that the lack of contact and being out of sight limits opportunities for promotion and organizational rewards (Cooper and Kurland 2002), including access to employee development activities. Fouche (2006) reminds us that, while researchers and theorists have acknowledged that online distance learning is an isolating experience for students, overlooked have been investigations about online distance teaching as an isolating experience for the instructors.

## Strategies and structures for teleworkers

Research by Fouche (2006) revealed that feelings of isolation can be significantly decreased when there is regular contact and collaboration amongst colleagues. The most effective contact activities are those that revolve around the provision of regular training and continuous administrative support—with the most recurring theme being skills development. Elsewhere, Wheeler (2004) (see also Lockwood and Latchem 2004; Schrum and Ohler 2005) has noted that, while continuous learning opportunities provide those individuals involved in the design and delivery of the learning materials with essential information on new methods, technologies and applications, it also provides opportunities to have contact with, and collaboration among, colleagues in ways that support identification with the institution while at the same time defraying feelings of isolation.

While the provision of continuous learning opportunities can address some of these issues (i.e., isolation), in agreement with Kirkwood and Price (2006) it cannot effect change in a vacuum: “Institutions need to review and investigate the factors facing them, and use the evidence to develop appropriate policies and practices to address them in a holistic manner” (p. 9). One of these factors in ODL institutions is the need to achieve and maintain economies of scale.

## Dealing with economies of scale

Achieving economies of scale in most ODL institutions is necessary for continued existence. Most ODL institutions effectively achieve economies of scale by adopting an industrialized model of distance education. This model requires a separation of the preparation of materials and resources for teaching and learning from the interaction of students with those materials and with their instructor. In the industrialized model—which has been successfully used for more than three decades—the center of focus is on the construction of the learning and teaching materials rather than on the process of learning (Harris and Holmes 1976). The development of the teaching and learning materials in this manner results in high quality course content, but requires little or no active involvement on the part of the learners (Kirkwood and Price 2006). Thirty or so years ago when many ODL institutions were being created, focusing on the delivery of quality content was, generally, considered an acceptable practice. In more recent times, this approach (the focus on the transmission of content) has been widely criticized for encouraging students to be passive and approach their learning in a superficial way (e.g., Entwistle and Ramsdon 1983; Gibbs 1992; Laurillard 2002; Prosser and Twigwell 1991).

While acknowledging the limitations of the industrialized model, most ODL institutions justifiably continued to use it because alternative two-way communication technologies available at the time (e.g., multi-point audio and video conferencing) were expensive and created additional temporal and situational barriers for targeted student populations—especially in comparison to paper-based and one-way technologies (e.g., audio and video tapes). However, within the last decade rapid advances in information and telecommunication technologies (e.g., Internet, satellite, and mobile telephone technologies) have become affordable and ubiquitous—rendering past justification for the industrial model inadequate. In particular, it has become difficult to justify the transmissive style of delivery (e.g., solitary and passive) in an increasingly networked society (Kirkwood and Price 2006).

Movement toward increased uses of learning centered approaches and information and communication technologies is an aim for most ODL institutions; however, it requires teaching and learning support services. Without ongoing learning activities on alternative teaching methods and curriculum development, existing educational developers and instructors remain unaware of the changes in educational approaches and technologies. Regrettably, access to participation in on-campus continuous learning programs is not feasible, or even possible, for the rising numbers of teleworkers who are working from their home office.

## Methodology

### Survey development

When the aim is to improve university teaching, there are two issues to consider. One issue focuses on good teaching. The other issue focuses on the environment that makes good teaching possible (Harrison 2002). When institutions do not deal with the second issue (the environment), the first issue (good teaching) has little chance of success. “Unless the structures and policies are in place to support teaching innovation, to recognize teaching effort and, especially, to reward performance, the culture of universities will remain largely unchanged” (Harrison, p. 4).

An extensive literature review conducted by Harrison (2002) identified the structures and practices that can encourage the improvement of teaching practices. Based on Harrison’s findings, we developed a survey which was then piloted by a small number of colleagues. After minor revisions were made based on the pilot, the survey was then hosted at Zoomerang®, which is Internet-based software provided by Market Tools Inc®. On average, the survey took 10 min to complete.

There were six sections in the survey, which were used as the primary measures of interest: delivery methods (eight questions focused on preferred delivery models for teleworking); teaching resources (16 questions on current and proposed services); strategic planning (11 questions on directions for future planning); teaching beliefs (three questions), workplace satisfaction (six questions on collegial relations and professional development support); and demographic data (age, sex, teaching experience, workplace location, position classification, program classification, and year of hire).

## Results

### Participants and response rate

The survey was sent to 609 staff members who were involved in the design and delivery of course materials. One hundred and eighty-seven participants completed the survey for a 31% response rate. An additional 22 participants started the survey but discontinued prior to the halfway point. Of the 187 respondents, 85% (or 161) reported themselves as teleworkers (remote academics working from their home office). Respondents reporting that they were not teleworkers were removed from the sample. Table 1 displays the demographic data for this group.

**Table 1** Demographic data

	Frequencies	Percentage
<i>Gender</i>		
Men	48	29.8
Women	108	67.1
Missing	5	3.1
<i>Age</i>		
<40	32	19.9
40–49	41	25.5
50–59	70	43.5
60+	16	9.9
Missing	2	1.2
<i>Position</i>		
Academic	53	32.9
Tutor/Adjunct	107	66.5
Professional	0	0
Missing	1	.6

## Primary measures

### *Delivery methods*

Table 2 displays the results of preferred delivery methods. The first column describes the method and the second column provides a weighted summary of importance as expressed on a five-point Likert-type scale where higher numbers indicate higher importance.

The eight questions were analyzed in a oneway repeated measure analysis of variance (ANOVA) and there was a statistically significant effect of Delivery Method  $F(7,1078) = 38.279, p < .001$ . Pairwise comparisons were performed among the methods, the least preferred method being “print-based teaching resources housed in the institution’s physical space” (Q1) was significantly lower than all other methods (with each of Bonferroni adjusted  $p < .01$ ), the most preferred method, “digitally-based teaching resources located on the institution’s web space” (Q2), was significantly higher than all other methods (with each of Bonferroni adjusted  $p < .001$ ). The remaining methods were clustered between 3.39 and 3.59 and not significantly different from each other.

A principal components analysis (PCA) with Varimax rotation was completed on the data in order to reduce the items into underlying constructs. The resulting structure, shown in Table 3, revealed two factors. The first factor accounted for 42% of the variance and consisted of all the online delivery methods and could be described as *Technology Mediated Delivery*. The second factor accounted for 26% of the variance and consisted of the remaining three items on face-to-face meetings and accessing print materials and best described as *Face-to-Face Mediated Delivery*.

Based on the PCA, the questionnaire items associated with each factor were averaged to create an estimate of the two underlying constructs. A paired  $t$ -test indicated a statistically significant difference between these two subscales,  $t(159) = 4.467, p < .001$ . *Technology Mediated Delivery* ( $M = 3.68$ ) was rated higher than *Face-to-Face Mediated Delivery* ( $M = 3.28$ ). There is a weak correlation between these two subscales (Pearson’s  $r = .210$ ,

**Table 2** Preferred delivery methods

Delivery methods <i>Question leader: I would...</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Q2: access digitally-based teaching resources located on the institution's web space	155	4.37	.822
Q6: attend face-to-face teaching workshops facilitated by invited experts in distance-delivered teaching	155	3.59	1.091
Q8: attend synchronous teaching workshops facilitated by invited experts in distance-delivered teaching using Web-based conferencing tools	155	3.56	1.057
Q5: attend synchronous teaching workshops facilitated by the institution's academic staff using web-based conferencing tools	155	3.55	1.039
Q3: attend face-to-face teaching workshops facilitated by the institution's academic staff	155	3.50	1.107
Q7: attend online asynchronous teaching workshops facilitated by invited experts in distance-delivered teaching using threaded discussions	155	3.46	1.089
Q4: attend online asynchronous teaching workshops facilitated by the institution's academic staff using threaded discussions	155	3.39	1.083
Q1: access print-based teaching resources housed in the institution's physical space	155	2.73	1.335

**Table 3** Rotated component matrix for preferred delivery methods

Delivery methods <i>Question leader: I would...</i>	Factor 1: Technology Mediated Delivery	Factor 2: Face-to-Face Mediated Delivery
Q4: attend online asynchronous teaching workshops facilitated by the institution's academic staff using threaded discussions	.882	
Q7: attend online asynchronous teaching workshops facilitated by invited experts in distance-delivered teaching using threaded discussions	.879	
Q5: attend synchronous teaching workshops facilitated by the institution's academic staff using web-based conferencing tools	.876	
Q8: attend synchronous teaching workshops facilitated by invited experts in distance-delivered teaching using Web-based conferencing tools	.870	
Q2: access digitally-based teaching resources located on the institution's web space	.470	
Q3: attend face-to-face teaching workshops facilitated by the institution's academic staff		.880
Q6: attend face-to-face teaching workshops facilitated by invited experts in distance-delivered teaching		.871
Q1: access print-based teaching resources housed in the institution's physical space		.714

Extraction method: Principal Component Analysis

Rotation method: Varimax with Kaiser Normalization

$p = .008$ ,  $n = 160$ ), but they are statistically significant correlated due to the reasonably large sample size.

### Teaching resources

Table 4 displays the results of preferred teaching resources. The first column describes the method and the third column provides a weighted summary of importance as expressed by the proportion of respondents who endorsed the resource. Higher proportions indicate higher importance.

The first six items (Q12, Q7, Q9, Q15, Q3, and Q16) were endorsed by approximately half of all respondents and represent a spectrum of issues and resources related to effective online learning. In particular, the items seem focused on pedagogical goals and related outcomes such as motivating students and effective use of technology. The next four items (Q6, Q4, Q8, and Q13) were endorsed by over a third of the participants and are more focused on online discussion forums, and web logs. The final six items (Q2, Q14, Q11, Q5, Q1, and Q10) were endorsed by less than a third of all respondents and are a mixture of issues and resources.

**Table 4** Teaching resources

Teaching resources	<i>N</i>	<i>M</i>	<i>SD</i>
<i>Question leader:</i> I would like to see more teaching resources on how to (check all that apply):			
Q12: engage self-paced learners through motivations strategies	161	.55	.499
Q7: deal with difficult students	161	.54	.500
Q9: conduct different instructional methods in an online classroom (e.g., debates, Webquests, case studies, problem-based learning, invited guest, nominal group technique)	161	.52	.501
Q15: use Learning Management Systems (LMS) (e.g., Moodle) to improve learning	161	.51	.501
Q3: assess student contributions in online discussions	161	.48	.501
Q16: effectively use online student assessment tools (e.g., quizzes or exams)	161	.47	.500
Q6: maintain meaningful online discussions	161	.45	.499
Q4: start effective online discussions	161	.43	.496
Q8: deal with difficult students on the phone	161	.42	.494
Q13: effectively use web logs (Blogs) with my students	161	.41	.493
Q2: moderate text-based asynchronous discussions	161	.32	.467
Q14: effectively use wikis with my students	161	.29	.453
Q11: ensure I am using proper email etiquette with my students	161	.28	.450
Q1: effectively moderate text-based synchronous discussions	161	.26	.440
Q5: bring closure to online discussions	161	.25	.437
Q10: ensure I am using proper phone etiquette with my students	161	.22	.414

The 16 questions were analyzed in a oneway repeated measure ANOVA and there was a significant effect of Teaching Resource,  $F(15,2400) = 11.629$ ,  $p < .001$ . A PCA with Varimax rotation was completed on the data in order to reduce the items into underlying constructs. The resulting structure, shown in Table 5, revealed three factors. The first factor accounted for 23% of the variance and consisted of items that dealt with the effective use of different online resources. The second factor accounted for 16% of the variance and consisted of interpersonal skills required for dealing with individuals. The third factor accounted for 15% of the variance and dealt almost exclusively with the engagement/motivation online discussion forums.

Based on the PCA, the questionnaire items associated with each factor were averaged to create an estimate of the three underlying constructs: *Effective Use of Technology*, *Interpersonal Skills*, *Engagement/Management of Online Discussion Forums* with means of

**Table 5** Rotated component matrix for teaching resources

Teaching resources <i>Question leader: how to...</i>	Factor 1: Effective Use of Technology	Factor 2: Inter-Personal Skills	Factor 3: Engagement/ Motivation of Online Discussion Forums
Q13: effectively use Web logs (Blogs) with my students	.737		
Q14: effectively use wikis with my students	.711		
Q3: to assess student contributions in online discussions	.656		.318
Q9: conduct different instructional methods in an online classroom (e.g., debates, Webquests, case studies, problem-based learning, invited guest, nominal group technique)	.649		
Q1: effectively moderate text-based synchronous discussions	.614		
Q2: moderate text-based asynchronous discussions	.605		.402
Q15: use Learning Management Systems (LMS) (e.g., Moodle) to improve learning	.596		
Q16: effectively use online student assessment tools (e.g., quizzes or exams)	.549	.307	
Q10: ensure I am using proper phone etiquette with my students		.849	
Q11: ensure I am using proper email etiquette with my students		.845	
Q8: deal with difficult students on the phone		.773	
Q7: deal with difficult students		.551	
Q4: start effective online discussions			.776
Q6: maintain meaningful online discussions	.316		.764
Q5: to bring closure to online discussions			.718
Q12: engage self-paced learners through motivations strategies		.305	.504

Extraction method: Principal Component Analysis

Rotation method: Varimax with Kaiser Normalization



.405, .363, .421 respectively. Oneway repeated measure ANOVA of three levels was performed which was not significant,  $F(3,320) = 1.692, p = 0.186$ .

### *Instructional/Course services*

Table 6 displays the results of preferred delivery methods. The first column describes the service and the second column provides a weighted summary of importance as expressed on a five-point Likert scale where higher numbers indicate higher importance. As can be seen, the need for teaching retreats was rated most important overall, although the absolute magnitude of the rating is generally moderate.

The four questions were analyzed in a oneway repeated measure ANOVA and there was a significant effect of Instructional/Course Service,  $F(3,453) = 5.984, p = .001$ . Satisfaction with course development is rated significantly lower than teaching retreats (Q2) (Bonferroni adjusted  $p = .004$ ), and teaching portfolios (Q3) rated (Bonferroni adjusted  $p = .016$ ).

A PCA with Varimax rotation was completed on the data in order to reduce the items into underlying constructs. The resulting structure, shown in Table 7, revealed two factors. The first factor accounted for 43% of the variance and consisted of the first three items services focused on *Teaching/Instructional Support*. The second factor accounted for an additional 26% of the variance and consisted of a single item focused on *Course Development Satisfaction*.

Based on the PCA, the three questionnaire items associated with the first factor were averaged to create an estimate of the underlying construct, *Teaching/Instructional Support*. The fourth item was used as a direct estimate of the second factor, *Course Development Satisfaction*. A Paired Samples t test indicated that support for *Teaching/Instructional Support* ( $M = 3.368$ ) was greater than *Satisfaction with Course Development* ( $M = 3.000$ ),  $t(156) = 3.557, p < .001$ . There is no correlation between *Teaching/Instructional Support* and *Satisfaction with Course Development* (Pearson's  $r = -.017, p = .836, n = 157$ ).

### *Strategic planning*

Table 8 displays the items that deal with Strategic Planning. The first column describes the service and the second column provides a weighted summary of importance as expressed on a five-point Likert scale where higher numbers indicate higher importance. As can be seen, the need for sustained early training (Q1) and support for innovative teaching explorations (Q11) were the most highly rated items of importance. The least important

**Table 6** Instructional/course services

Instructional/course services	N	M	SD
Q2: I would attend teaching retreats	152	3.45	1.127
Q3: I would use a teaching portfolio development service	152	3.36	1.064
Q1: I would use peer-to-peer support teaching services	152	3.22	1.031
Q4: I am satisfied with the existing course development services	152	3.02	.993
Valid N (listwise)	152		

**Table 7** Rotated component matrix for instructional/course services

Instructional/course services	Factor 1: Teaching Support	Factor 2: Satisfaction with Course Development
Q2: I would attend teaching retreats	.760	
Q3: I would use a teaching portfolio development service	.760	
Q1: I would use peer-to-peer support teaching services	.751	
Q4: I am satisfied with the existing course development services		.971

Extraction method: Principal Component Analysis

Rotation method: Varimax with Kaiser Normalization

strategic items dealt with mandatory courses on threaded discussions (Q4) and mid-course evaluations of instructors (Q7).

The 11 questions were analyzed in a oneway repeated measure ANOVA and there was a significant effect of Strategic Planning,  $F(10,1490) = 57.533$ ,  $p < .001$ . A PCA with Varimax rotation was completed on the data in order to reduce the items into underlying constructs. The resulting structure, shown in Table 9, revealed three factors. The first factor accounted for 23% of the variance and consisted of six items focused on *Support for the Scholarship of Teaching and Sustained Training*. The second factor accounted for an additional 22% of the variance and consisted of the four items dealing with *Evaluation of Courses and Instructors*. The final factor accounted for an additional 17% of the variance and consisted of two items (Q2 and Q4) concerned with *Mandatory Courses*. Table 9 reveals, however, that these factors were not clean each had an item that cross-loaded with the another factor.

Based on the PCA, the questionnaire items associated with each factor were averaged to create an estimate of the underlying constructs: *Scholarship of Teaching*, *Course/Instructor Evaluation*, and *Mandatory Courses*. The three constructs were analyzed in a oneway repeated measure ANOVA and there was a significant effect of Strategic Planning Construct,  $F(2,318) = 59.636$ ,  $p < .001$ . Pairwise comparisons with Bonferroni corrections indicate that there is a statistically significant difference between *Scholarship of Teaching* ( $M = 3.944$ ) and *of Courses/Instruction Evaluation* ( $M = 3.278$ ), and *Mandatory Courses* ( $M = 3.156$ ) with both Bonferroni adjusted  $p < .001$ . However there is no statistically significant difference between *Courses/Instruction Evaluation* and *Mandatory Courses* with Bonferroni adjusted  $p = .427$ .

### Teaching beliefs

Table 10 displays the items that deal with teaching beliefs. The first column describes the service and the second column provides a weighted summary of importance as expressed on a five-point Likert scale where higher numbers indicate higher importance. As can be seen, the belief in one's own teaching practice as important (Q3) was the most highly rated item of the three items in this section and the highest item rated from all sections considered. The three questions were analyzed in a oneway repeated measure ANOVA and there was a significant effect of Teaching Belief,  $F(2,316) = 50.126$ ,  $p < .001$ . Pairwise

**Table 8** Strategic planning

Strategic planning <i>Question leader: I believe...</i>	<i>N</i>	<i>M</i>	<i>SD</i>
Q1: new teaching staff should be provided with an option for sustained early straining in distance-delivered teaching	150	4.23	.636
Q11: there should be funds available for innovative teaching explorations	150	4.15	.669
Q10: there should be support services for the scholarship of teaching and learning	150	3.95	.663
Q9: there should be support services for teaching staff who are applying for university-wide, national, or international teaching awards	150	3.76	.730
Q6: there should be a university-wide end-of-course evaluation of course design	150	3.75	1.003
Q3: new teaching staff should be provided with an option for sustained early training in effective teaching strategies with asynchronous threaded discussions	150	3.67	.807
Q2: there should be mandatory course on distance-delivery for teaching effectiveness for new teaching staff	150	3.41	.812
Q8: there should be a graduate supervision evaluation form	150	3.37	1.190
Q5: there should be a university-wide end-of-course evaluation of instructors	150	3.36	1.095
Q4: there should be mandatory courses in effective teaching strategies with asynchronous threaded discussions for new teaching staff	150	3.91	1.074
Q7: there should be a university-wide mid-course evaluation of instructors	150	2.66	.989

comparisons indicated that belief in one's own teaching practice as important (Q3) was rated significantly higher (Bonferroni adjusted  $p = .001$ ) than beliefs about institutional values (Q2) and web based technologies (Q1). The latter two did not differ from each other.

A PCA with Varimax rotation was completed on the data in order to reduce the items into underlying constructs. The resulting structure revealed a single factor of all items accounting for 45% of the variance.

### *Workplace satisfaction*

Table 11 displays the items that deal with workplace satisfaction. The first column describes the workplace issue and the second column provides a weighted summary of importance as expressed on a five-point Likert scale where higher numbers indicate higher importance. As can be seen, good working relationships with academic colleagues (Q2) was the most highly rated item of importance. Alternatively, many respondents do not agree that they have opportunities to collaborate on projects with colleagues (Q6).

The six questions were analyzed in a oneway repeated measure ANOVA and there was a significant effect of Workplace Satisfaction,  $F(5,795) = 87.602$ ,  $p < .000$ . Pairwise

**Table 9** Rotated component matrix for strategic planning

Strategic planning	Factor 1: Scholarship of Teaching	Factor 2: Course/ Instructor Evaluation	Factor 3: Mandatory Courses
Q10: there should be support services for the scholarship of teaching and learning	.842		
Q9: there should be support services for teaching staff who are applying for university-wide, national, or international teaching awards	.774		
Q11: there should be funds available for innovative teaching explorations	.763		
Q1: new teaching staff should be provided with an option for sustained early straining in distance-delivered teaching	.516		.419
Q3: new teaching staff should be provided with an option for sustained early training in effective teaching strategies with asynchronous threaded discussions	.429		
Q5: there should be a university-wide end-of-course evaluation of instructors		.856	
Q6: there should be a university-wide end-of-course evaluation of course design		.775	
Q7: there should be a university-wide mid-course evaluation of instructors		.696	
Q8: there should be a graduate supervision evaluation form	.340	.601	
Q2: there should be mandatory course on distance-delivery for teaching effectiveness for new teaching staff			.883
Q4: there should be mandatory courses in effective teaching strategies with asynchronous threaded discussions for new teaching staff		.328	.833

Extraction method: Principal Component Analysis

Rotation method: Varimax with Kaiser Normalization

**Table 10** Teaching beliefs

Teaching beliefs	N	M	SD
Q3: I consider my own teaching practices to be important	159	4.53	.560
Q2: I believe that teaching is valued at my institution	159	3.69	1.181
Q1: I believe web-based technologies are essential to successful distance education	159	3.67	1.016
Valid N (listwise)	159		

comparisons revealed that an effective working environment (Q1) and good working relationships with academic (Q2) and non-academic colleagues (Q3) clustered into one group and were rated significantly higher (all Bonferroni adjusted  $p < .01$ ) than the items forming a separate group consisting of opportunities for collegial collaboration (Q4) and

**Table 11** Workplace

Workplace	<i>N</i>	<i>M</i>	<i>SD</i>
Q2: I have good working relationships with academic colleagues	160	4.09	.767
Q1: My primary workplace is an effective working environment	160	4.08	.809
Q3: I have good working relationships with non-academic colleagues	160	4.04	.764
Q5: I am provided with the necessary advice for professional growth	160	3.15	1.123
Q6: I am provided with the necessary resources for professional growth	160	3.06	1.112
Q4: I have good opportunities to collaborate on projects with my colleagues	160	3.01	1.168

professional growth advice (Q5) and professional growth resources (Q6) clustered into another group Table 12.

A PCA with Varimax rotation was completed on the data in order to reduce the items into underlying constructs. The resulting structure revealed two factors. The first factor accounted for 37% of the variance and consisted of three items and could be described as *Professional Growth*. The second factor accounted for 33% of the variance and consisted of three satisfaction items and could be described as Collegial and Effective Workplace.

Based on the PCA, the questionnaire items associated with each factor were averaged to create an estimate of the two underlying constructs. A paired *t*-test indicated a statistically significant difference between these two subscales,  $t(161) = 15.071, p < .001$ . *Workplace Satisfaction* ( $M = 4.08$ ) was rated much higher than *Professional Growth* ( $M = 3.28$ ). There is a moderate correlation between these two subscales (Pearson's  $r = .509, p = .000, n = 161$ ).

### Survey comments

At the end of each of the six sections, we invited the survey participants to provide additional feedback. Sixty of the survey respondents provided additional comments. A number of respondents expressed their concerns in terms of “not enough time” and “not being paid” to participate in continuing learning opportunities, or having to give up paid time to do so. Participants offered a variety of suggestions to help address time constraints in relation to teaching effectiveness services, such as: an online community, the university covering travel, accommodation, and paying all teaching staff to participate in sessions.

**Table 12** Workplace

Workplace	Professional Growth	Workplace Satisfaction
Q5: good advice for professional growth	.888	
Q6: necessary resources for professional growth	.861	
Q4: good opportunities for collaboration	.708	.359
Q16: good relations with non-academic colleagues		.826
Q2: good relationships with academic colleagues	.349	.766
Q1: effective working environment		.724

Extraction method: Principal Component Analysis

Rotation method: Varimax with Kaiser Normalization

Rotation converged in three iterations

The most frequently cited and recurring theme was related to isolation. The manner in which the comments were written indicates this is a troublesome issue for many of the survey respondents, with a sense of false promises made in regard to the benefits of teleworking. The following are examples of comments that reflect the respondents concern on this issue:

- Tele-commuting has failed as an experiment because it has virtually killed collegiality, intellectual cross-fertilization, and the social dimension of the workplace
- I now work in almost complete isolation from the university and its staff/academics
- It is hard to have collegial discussions without a mail room, coffee room
- Distance teaching is a very isolating experience
- We need many more opportunities for collegial interaction
- Social exchanges are invaluable and cost of doing so every 2 months worth it
- I want and need collegial interactions

### **Discussion: from false promises to responsive solutions**

The purpose of this exploratory study was to gain a better understanding of how to encourage the improvement of distance delivered teaching practices and to do so in ways that can overcome many of the unique participation barriers for academics who are teleworkers. Through descriptive and factor analyses we were able to provide suggestions for structures and practices which can be managed skillfully to create an environment that provides continuous learning opportunities to improve teaching. The results of this study also provide suggestions for continuous learning activities that are likely to inspire members of the instructional design team (curriculum designers and instructors) to integrate pedagogically effective use of e-learning.

These findings are encouraging on a number of fronts. The most striking and positive finding is that a very large majority of respondents strongly believe in the importance of their own teaching practices. The desire to develop teaching skills is an essential foundation to improving teaching practices. To overcome access barriers that teleworkers experience, the data in this study indicate continuous learning activities should be delivered via digitally-based web-spaces whereby teleworkers can access the information from their home office. The survey comments also indicate the desire to participate in face-to-face workshops is based on the assumption that time and travel to attend would be paid for by the institution. This may well be a judicious investment on the part of the institution in that this would provide an opportunity for the provision of teaching development and collegial interactions, likely resulting in a greater identification with the institution, job satisfaction and a reduction in turnover intentions. Given that a university's most valuable and expensive resource is its academics, and a university's future is dependent upon the success of its academics, providing funding for time and travel would almost certainly be a wise investment.

In regard to areas of practice needed for the improvement of teaching, the data indicate that the following are high priorities: motivate their learners; use different instructional methods in an online classroom; deal with difficult online students, and; use course management systems to improve learning. In regard to structures needed, the data indicate new teaching staff should be provided with: an option for sustained early training in distance-delivered online teaching; funds available for innovative teaching explorations;

support services for the scholarship of teaching and learning, and; support services for university-wide, national, or international awards.

The results of this study also indicate that if new technologies are to be adopted in ways that support learning centered approaches, they need to be introduced with consideration of the implications for improving teaching and learning. The data collected in our survey support assertions made by Kirkwood and Price (2006) (see also Laurillard 2002) that one of the main problems resulting in resistance to the use of technologies in higher education is a focus on technologies rather than a focus on understanding the nature of learning and teaching and how such issues impact on the effective use of technologies. The responses on *Teaching Resources* (Table 4), for example, reveal that the technologically related questions (i.e., moderating text-based synchronous/asynchronous, use of wikis and blogs) ranked significantly lower than *Teaching Resources* dealing with pedagogical approaches (i.e., instructional methods, motivational strategies, dealing with difficult students). Hence, while technologies can facilitate a movement toward exploring new ways of teaching and learning in online distance delivery it must be lead by effective pedagogical underpinnings.

The comments in this study also raised additional concerns about time, tutors, technology support, mentoring, and course evaluations. Most of the comments, however, revolved around feelings of isolation arising from teleworking policies and the importance of collegial social interactions. Literature cited at the beginning of this paper indicates that continuing learning opportunities is an option that can reduce feelings of isolation and provide social interaction while at the same time help improve teaching practices. According to Kinuthia (2005), the success of a faculty development program is influenced by a shared vision, responsiveness to faculty needs, involvement of faculty in planning and program development, and clearly defining and communicating policies, goals, and objectives. This area in particular warrants further investigation.

Finally, this was an exploratory study that developed and piloted a survey. The data analysis revealed that the survey items were valid and reliable. As such, this study also makes a methodological contribution in respect to the survey administered.

## Conclusions

We can conclude from the results of this study that most academics who are involved in the development and delivery of distance learning activities care deeply about their work, would like to participate in continuous learning opportunities, and want to be connected with like-minded colleagues in the development of innovative interactions that support excellence in instruction and the scholarship of teaching. Prior research has shown that if left unattended, new hires—especially new hires who are teleworkers—experience a sense of isolation that eventually progresses toward exasperation, disillusionment, and eventual alienation (Eib and Miller 2006; Smith and Smith 1993). Also consistent with our survey findings is Palmer's (1999) opinion that collegial socialization as an essential aspect of teaching excellence. According to Palmer, without collegial socialization a privatization of work evolves which “creates more than individual pain; it creates institutional incompetence as well. By privatizing teaching, we make it next to impossible for the academy to become more adept at its reaching mission” (p. 1). The outcome of privatized teaching is that the performance becomes more conservative and few stray from their comfort zones in regard to what is ‘tried and true’—even when it does not work. In ODL institutions, evidence of resistance to move from what Palmer refers to as the “silent consensus” (p. 1) has been the resistance to move from the content dissemination model to an interactive

learning centered model which could be enabled through effective use of new communication tools.

Moreover, institutional offerings for continuous learning activities in ways that connect colleagues are likely to result in an increase in job satisfaction and work performance. Beyth-Marom, et al., (2006) notes further that offering continuous learning activities (which are relatively low in costs), also results in improving relationships between teleworkers and the institution. Hence, thoughtfully designed continuous learning activities create a culture that supports excellence in teaching, while fostering connectedness between and among colleagues and the institution. This is vital to continuous innovation and improvement in ODL institutions.

### Limitations of the study and further research

Essential to being able to operate within an innovative and changing environment is knowing what structures and practices encourage the improvement of teaching performances and to do so in ways that will overcome many of the unique barriers faced by ODL institutions. We used a survey to explore this issue. Surveys are known to be effective at providing descriptions of a target population and determining associations between data items. The results of a well constructed survey can gather large scale data from a representative sample population to predict with some measure of statistical confidence that certain perceived behavior occurs with a degree of regularity and certain factors cluster together. Alternatively, a well known drawback to surveys is that the results are superficial unless combined with in-depth and more sensitive techniques. Specifically, closed item survey data tells us ‘what’ is happening, but not ‘why’. ODL institutions and their educational development and delivery staff are unique and plagued by many non-generalizable complexities between and among graduate, undergraduate, paced and non-paced courses and programs. In this instance, individual differences have been sacrificed for aggregated survey responses. Additional research is needed to provide greater explanatory power from the insiders’ perspectives, and to gain greater understandings between the curriculum developers, instructors, courses and programs.

Further research is also needed to determine whether the outcomes of this study can create a culture that supports excellence in teaching, while fostering connectedness between and among teleworkers and the institution. This is vital to continuous innovation and improvement in teaching while at the same time realising many of the benefits of teleworking cited at the beginning of this paper.

### References

- Barker, P. (2002). On being an online tutor. *Innovations in Education and Teaching International*, 39(1), 3–13.
- Bauder, H. (2006). The segmentation of academic labour: A Canadian example. *ACME Journal*, 4, 228–239.
- Bennett, S., & Marsh, D. (2002). Are we expecting online tutors to run before they can walk? *Innovations in Education and Teaching International*, 39(1), 14–20.
- Beyth-Marom, R., Harpaz-Gorodeisky, G., Bar-Haim, A. & Godder, E. (2006). Identification, job satisfaction and work motivation among tutors at the open university of Israel. *International review of Research in Open and Distance Learning*, 7(2). Retrieved March 1, 2007 at <http://www.irrodl.org/index.php/irrodl>
- Cooper, C. D., & Kurland, N. B. (2002). Telecommuting, professional isolation, and employee development in public and private organizations. *Journal of Organizational Behavior*, 23(4), 511–532.



- Eib, B. J., & Miller, P. (2006). Faculty development as community building. *International Review of Research in Open and Distance Learning*. Retrieved March 1, 2007 from <http://www.irrodl.org/index.php/irrodl>
- Entwhistle, N. J., & Ramsden, P. (1983). *Understanding student learning*. London: Croom Helm.
- Fouche, I. (2006). A multi-island situation without the ocean: Tutor's perceptions about working in isolation from colleagues. *International review of Research in Open and Distance Learning*, 7(2). Retrieved March 1, 2007 at <http://www.irrodl.org/index.php/irrodl>
- Gibbs, G. (1992). Improving the quality of student learning through course design. In R. Barnett (Ed.), *Learning to effect* (pp. 149–165). Buckingham: SRHE and Open University Press.
- Harris, D., & Holmes, J. (1976). Open-ness and control in higher education: towards a critique of the Open University. In R. Dale, G. Esland, M. MacDonald (Eds.), *Schooling and capitalism: A sociological reader*. London: Routledge and Kogan Page.
- Harrison, J. E. (2002). The quality of university teaching: Faculty performance and accountability. A literature review. *The professional file. Canadian Society for the Study of Higher Education*, 21, 1–18.
- Hill, E. J., Ferris, M., & Martinson, V. (2003). Does it matter where you work? A comparison of how three work venues (traditional office, virtual office and home office) influence aspect of work and personal / family life. *Journal of Vocational Behavior*, 63(2), 220–241.
- Jones, T. (2004). Support for the virtual professor: Future challenges. In *Proceedings of world conference on educational multimedia, hypermedia and telecommunications*, (pp. 3340–3344). Chesapeake, VA: AACE.
- Kinuthia, W. (2005). Planning faculty development for successful implementation of web-based instruction. *Campus-Wide Information Systems*, 22(4), 189–200.
- Kirkwood, A. & Price, L. (2006). Adaptation for a changing environment: Developing learning and teaching with information and communication technologies. *International Review of Research in Open and Distance Learning*, 7(2). Retrieved March 1, 2007 at <http://www.irrodl.org/index.php/irrodl>
- Laurillard, D. (2002). *Rethinking University Teaching*, Routledge Falmer.
- Lockwood, F., & Latchem, C. (2004). Staff development needs and provision in commonwealth countries: Findings from a commonwealth of learning training impact study. *Distance Education*, 25(2), 9–12.
- Mael, F. A., & Ashforth, B. E. (1992). Alumni and their alma mater: A partial test of the reformulated model of organizational identification. *Journal of Organizational Behavior*, 13(1), 103–123.
- Meyer, J. P., & Allen, N. J. (1997). *Commitment in the workplace: Theory, research and application*. Thousand Oaks, CA: Sage.
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, 61(1), 20–52.
- Ng, C. F. (2006). Academics telecommuting in open and distance education universities: Issues, challenges, and opportunities. *International Review of Research in Open and Distance Learning*, 7(2). Retrieved March 1, 2007 at <http://www.irrodl.org/index.php/irrodl>
- Palmer, P. (1999). *The courage to teach*. San Francisco: Jossey-Bass.
- Pinsonneault, A. & Boisvert, M. (1996). The impacts of telecommuting on organizations and individuals: A review of the literature. In N. J. Johnson (Ed.), *Telecommuting and virtual offices: Issues and opportunities* (pp. 163–185). Hershey, PA.: Idea Group Publishing.
- Prosser, M., & Trigwell, K. (1991). Student evaluations of teaching and courses: Student learning approaches and outcomes as criteria of validity. *Contemporary Educational Psychology*, 16, 269–301.
- Schrum, L., & Ohler, J. (2005). Distance education at UAS. A case study. *Journal of Distance Education*, 20(1), 60–83.
- Smith, B., & Smith, M. (1993). Revitalizing senior faculty through statewide efforts. In M. Finkelstein, M. LaCelle-Peterson (Eds.), *Developing senior faculty as teachers*. San Francisco: Jossey-Bass.
- Thorpe, M. (2002). Rethinking learner support: The challenge of collaborative online learning. *Open Learning*, 17(2), 105–119.
- Wheeler, S. (2004). Five smooth stones: Fighting for the survival of higher education. *Distance Learning*, 1(3), 11–17.