A Study of Face-to-Face and Online Teaching Philosophies in Canada and Australia

Elizabeth Stacey and Faye Wiesenberg

Abstract

The perspectives of instructors who teach both online and face-to-face in a higher education context have been compared in this study. The diffe rences and similarities between their approaches, and the influences each modality has on the other have been explored, as well as possible differences in organizational cultures between the groups, who were based in Canada and Australia. The trend towards blended learning in higher education was an important outcome of the study.

Resumé

Les points de vue des formateurs qui enseignent en ligne et en face à face dans un contexte universitaire ont été comparés dans cette étude. Les différences et les similarités entre les approches, et les influences que chaque modalité a sur l'autre ont été examinées, en même temps que les différences de culture organisationnelle entre les groupes situés au Canada et en Australie. L'identification de la tendance vers l'apprentissage mixte (blended learning) aux études universitaires est un résultat significatif de l'étude.

Introduction

Online learning began as a way to improve the quality of distance education by providing more and better interaction with instructors and between students. In recent years, however, this mode of learning has been used increasingly as a supplement to traditional face-to-face teaching. Studies exploring and comparing the different teaching modes have to date, focused on learning outcomes; few studies have examined the success of these modes from the perspective of the teacher; this study seeks to fill this gap.

This study identifies and compares the perceptions of university instructors' approaches in online and face-to-face teaching environments at universities in Alberta (Canada) and in Victoria (Australia). We compared differences, similarities and inter-relationships in perspectives, particularly aiming to establish any (possible) differences between their o rganizational cultures. We also discuss the ways instructors are

beginning to integrate these modalities when they combine online teaching approaches with face-to-face teaching, a practice commonly called 'blended learning'. The ways in which information and communication technologies (ICTs) have influenced their pedagogies and practices are also discussed. The study is placed within the literature developed about this topic and describes the research methodology and the theoretical framework used. Profiles and contexts of the participants at each university are described, and the results of an online survey are discussed in detail. Some significant statistical differences between the two groups' scores on a web-based instrument that measures teaching approaches are also briefly described and discussed in conclusion.

Review of Literature

The importance of online learning as the last decade's new pedagogical mode in higher education is evident in the number of studies that examine its value to learners, particularly through the widespread use of computer conferencing (Stephenson, 2001, Fisher, Phelps & Ellis, 2000, Salmon, 2000, Anderson, 2004). Studies comparing online learning with face-to-face learning have strengthened the case for the newer mode of learning while evidence has been gathered to show its effectiveness. Van Schaik, Barker & Beckstrand (2003), in reporting a transition from traditional on-campus education to online learning, described a study that compared online learning (using the WebCT learning management system, with additional electronic lectures) and on-campus classes. Their findings, showing no significant difference between the two modes in either test results or attrition rates, have also been reported by other similar studies. Chen and Zimitat (2004), used measurement of student outcomes through test scores and these also proved there was no significant difference in learning outcome between the two modalities. Such results have strengthened support for online learning in higher education, when universities can claim that students are considered to be learning as effectively online as they are on campus.

Indeed, when Ladyshewsky (2004) compared student learning in nine courses in a graduate business degree, all being taught in both online and face-to-face modes, he found that overall the students learning online did better than those learning in a face-to-face mode. The online courses used Lotus Learning Space to provide lecture notes, resources, self-assessment activities and teacher-moderated discussions; over time, both the quality of the online design and the instructors' experience teaching online improved. At the individual course level, the differences in learning between both modes did not prove statistically significant, however the study "provides some assurance that student performance is at least as

good as, if not slightly better in EL [electronic learning] mode when compared to F2F [face-to-face] delivery". (p. 333).

The potential within the online environment for collaborative learning and mutual support among students was identified early when online learning first emerged in the late 1980s and gained momentum in the 1990s. Harasim, Hiltz, Teles and Turoff (1995) described the greatest strength of online education as its ability to facilitate interaction, and viewed the strength of computer-mediated communication in its potential for group activity. The social, affective and cognitive benefits of peer interaction and collaboration, which had previously only been possible in face-to-face situations, could be, with the mediation of computer communication, developed with distance education students. The fact that help and feedback could be easily available to students remote from the campus, through the use of both online group conferencing and e-mail, meant the instructor's role could be less dominant. The students' capacity to raise questions and receive replies and suggestions from other students, as well as from instructors, began to change the nature of traditional teaching.

Analysis of online teaching structures (Campos, Laferriere & Harasim, 2001) reported on the move to collaborative activities through online integration, especially with instructors more experienced in online teaching and learning. They also considered the new roles required of instructors and students in establishing such a collaborative environment. Other studies of online use also reported advantageous collaborative attributes. Stacey (1999), in an earlier ethnographic study of three collaborative groups of distance-education students, studying for their Master of Business Administration degree, reported that learning was enhanced through online collaborative behaviours. These behaviours ranged from sharing the diverse perspectives of the other group members, to being able to seek feedback and to clarify ideas through the group's communication, either electronically or through other forms of communication, stimulated by the electronic group communication. The students sought group solutions for problems through online discussion that combined with collaborative sharing of resources, gave them an environment for actively constructing new ideas and concepts, and enabled them to learn effectively. Baskin, (2001) reported that the online environment improved the process of collaborative small-group learning , since it was adapted from face-to-face classroom practice. In his study, undergraduate management students learned collaboratively through assessment tasks of problem-solving activities. Students responded positively to the experience of meeting online; they shared and interpreted data, and also shared resources and fieldwork results.

However, Baskin and other researchers (Paloff & Pratt, 2001, Herrington & Oliver, 2000) have warned of the importance of good pedagogical design for achieving this effectiveness. Instructors have yet to learn these design skills. The push to have instructors use an online collaborative mode has also meant that processes for professional development of academic instructors must be established as institutions of higher education seek to ensure instructors are equipped to meet this new market demand. Wilson and Stacey (2004) reviewed a range of studies reporting on ways instructors were being supported to teach online. Competencies required of online instructors such as those Goodyear, Salmon, Spector, Steeples & Tickner, (2001) described, included the roles of content facilitator, technologist, designer, manager/ administrator (concerned with issues of learner registration, security, record keeping, etc.), assessor, and particularly that of process facilitator, concerned with facilitating the range of online activities supportive of student learning. These competencies have been taught through accredited courses such as graduate courses of higher education, short face-to-face workshops, and online courses. Wilson and Stacey concluded that a staged approach matching the readiness levels of staff and focusing on local and discipline-based ideas and practices were most effective in providing authentic and relevant professional development.

Often, online learning is used in a blended mode where students, having met face-to-face or through synchronous communication (voice or visual media), interact online. Though there is some confusion in defining the term (Whitelock & Jelfs, 2003, Oliver & Trigwell, 2005), 'blended learning' most commonly refers to a combination of face-to-face learning with internet-based online learning. Osguthorpe & Graham (2003) introduced a special journal issue defining the term and its direction in practice. They state "the aim of those blended learning approaches is to find a harmonious balance between online access to knowledge and face-to-face human interaction" (p. 228). This blend may involve the mixing of online and face-to-face learning activities, students or instructors with a number of goals including pedagogical richness, access to knowledge, social interaction and ease of course revision (p. 231).

Such blending of learning modes makes strict comparisons of modality somewhat complex. Some studies alleging to compare distance and traditional modes of teaching and learning, in fact describe the distance education modality as a blended mode. Perez-Prado and Thirunarayanan (2002), for example, have conducted a qualitative study of students' perceptions of the same course in both online and face-to-face modes, with the 'distance education' mode group also meeting face-to-face at the beginning and end of the semester. This blending of face-to-face with online resources is becoming more common in educational

sectors (Bonk, Kim & Zeng, 2006) and is a trend in higher education that is understandable as instructors, comfortable in face-to-face teaching, begin teaching online. Owston, Garrison & Cook (2006) described such a blend in a study of eight universities from across Canada that have adopted forms of blended learning practices. Most teachers in the study used an online discussion to replace some of their face-to-face teaching; a small proportion of the sample used recorded e-lectures. The students overall were positive about their learning experience and appreciated the web resources. However, many in the sample, both instructors and students, recognized the extra time involved in technology use, as well as the lack of institutional recognition.

Instructors who have been comfortable and competent in traditional face-to-face teaching are often thrust into the new modes of online or blended teaching with only some technical preparation. They also assume their current pedagogical understanding will transfer to the new mode. Though there are some studies that compare experiences of instructors in the two modalities (Comeaux & McKenna-Byington, 2003, Curtis 2002), few studies have explored their perspectives by asking how they approached the different modes and if they taught differently. McShane (2005) explored instructors' beliefs and self-concepts as they changed from traditional to technologically-mediated teaching. Her findings were similar to the work of Pratt and Associates (2002). They conceptualized a teaching perspective or inter-related set of beliefs and intentions that informs an instructor's classroom practice. Their data was gathered from over 250 instructors in face-to-face teaching contexts and they developed an instrument called the 'Teaching Perspectives Inventory' (TPI), described below within the methodological section of this paper. Though the TPI was developed within a North American conceptual framework of the teaching/learning process, it was validated cross-culturally in China, Hong Kong, Singapore, Canada and the United States and is available online for research purposes only. Our study explored whether this model would also provide a framework for describing instructors' approaches as they teach online.

Methodology

We used an instrumental case study methodology (Stake, 1998) where each university was a separate case of inquiry which could provide some generalizations and from which resultant data between cases were compared. Data were gathered with an online survey of seven open-ended questions developed by the researchers to collect the unbiased perspectives of participants' about their teaching philosophies/ approaches within both face-to-face and online contexts (questions are

detailed as organizers in the results section of this paper). Participants were asked to answer these questions first and then to take the TPI so that their initial reflections were unbiased by their experiences with the language and concepts of the TPI. Demographic data were also gathered in this survey to establish participants' earlier teaching experience, both face-to-face and online, their current teaching workloads and the size of their classes, and all potential contextual factors influencing their approaches to teaching in both modalities.

The TPI, developed and validated by Dan Pratt and John Collins at the University of British Columbia (Pratt & Associates, 2002), was used to measure instructors' orientations to their roles as managers of the learning process (Pratt & Collins, 2006). The inventory yields five alternative points of view (perspectives) on teaching by asking structured questions about instructors' actions in the teaching setting, their intentions as to how they organize the learning situation, and their beliefs about fundamental principles of teaching and learning. These five perspectives are: Transmission (lecture and teacher-centered); Apprenticeship (experiential and coaching-oriented); Developmental (facilitation and learning-centered); Nurturing (focused on building learners' self-esteem); and Social Reform (change the status-quo oriented). This model of teaching adults, and subsequent TPI, was developed within face-to-face teaching contexts over two decades of research in Canada, China, Hong Kong, Singapore, and the United States. Over 250 teachers in different settings were interviewed about what 'teaching' means to them, had their teaching observed, and were evaluated in terms of the reaching of their teaching goals. Their answers revealed much about their approaches to teaching in many different learning contexts.

Collectively, their responses revealed the five qualitatively different perspectives on teaching which form the conceptual foundation of the TPI. These different views on teaching have been translated into a 45-item questionnaire (available at http://www.teachingperspectives.com) that yields numerical scores on each of the five perspectives. As well, three sub-scores within each of these five perspectives describes the respondents' beliefs about teaching, their intentions, what they are attempting to accomplish, and their actions or what they do in their classrooms. The current form of the TPI has been completed and results analyzed for more than 5,000 people (professional and in-training) teaching in face-to-face settings in various fields including: Community College, English-as-a-Second-Language, Nursing, Fitness, Law, and Adult Secondary Instructors; Higher Education Professors, Pharmacists, Dieticians, Employment Counsellors, Civil Service Trainers.

In this study, all participants in the study were asked to take the TPI twice; half of the sample were asked to begin from a face-to-face teaching

perspective, with the other half beginning from an online teaching perspective. Both groups then re-took the inventory from the alternative perspective in an effort to control any bias that may have occurred by the second completion of the TPI.

Results

The focus of this paper will be to describe the results of the qualitative survey, comparing the responses of the participants in the two cases. Some overall trends and differences in the TPI results will be introduced; the statistically significant differences between the two cases are then discussed as they relate to the qualitative data.

Participants' Profiles

Table 1 summarizes and contrasts the data groups represented in the samples selected from both universities. Details of both the university contexts and the data groups follow below.

Table 1: Profiles of Participants

	University of Calgary	SD	Deakin University	SD
Number of Participants	12		10	
Gender Distribution	9 female		5 female	
	3 male		5 male	
Teaching load per year half courses = 13 weeks or one semester in length)	4.73	1.01	7.8	0.63
Time spent teaching f2f	47.91%	22.7	52.1%	30.24
Time spent teaching online	52.09%	26.82	37.8%	27.60
Average f2f class size	20 students	7.72	26.7 students	7.13
Average online class size	18.5 students	4.38	21.8 students	7.42
Experience teaching f2f	19.33 years	9.12	24.8 years	8.31
Experience teaching online	6.25 years	3.93	4.9 years	3.54

f2f = face-to-face

University of Calgary

At 40 years old, The University of Calgary is a relatively new single-campus university located in the large western Canadian city of Calgary. It is a traditional post-secondary institution in that its primary delivery mode is face-to-face classes on campus. It is only within the past 10 years that a limited number of faculties have been offering degree programs in an online format, using the asynchronous and synchronous online conferencing within the BlackBoard learning management system, enhanced in some cases by the use of the synchronous audiovisual system, Elluminate.

The Faculty of Education has a much longer history. Having evolved from Calgary's Normal School for teacher training established 100 years ago, the Faculty of Education offers more online programs than most other faculties; primarily to a mature student group consisting of working professionals who access programs online on a non-residential (i.e., part-time) basis from their workplaces or homes during evenings and weekends. There are approximately 1,000 graduate students in the Faculty of Education being taught by an estimated 60 full-time academic faculty members.

Study participants were all tenured or tenure-track, full-time academics drawn from two of the three divisions within the Faculty of Education. These participants taught in six course-based masters level (MEd) online programs and in two course-based doctoral (EdD) programs. Twelve University of Calgary faculty members returned completed surveys and TPI scores for both face-to-face and online teaching contexts. Nine participants were female and three were male, teaching an average of 4.27 half-courses per academic year. The course load for faculty is 5 half-courses per academic year. Some faculty also held administrative roles, which generally resulted in some course release time. This participant group had taught an average of 19.33 years face-to-face, and 6.25 years online, making them relative newcomers to this newer mode of teaching. Approximately 47.82% of their teaching load was in face-to-face courses while 52.1% was in online courses.

The average face-to-face class size for this participant group was 20 students, while the average online class size was 18.36 (this relates to the mandated face-to-face maximum class size of 25 and online maximum class size of 20 in one faculty division, and of 25 in the other.) Nine of the 12 participants were teaching graduate level courses, which may account for this somewhat smaller online average class size. Overall, the 12 University of Calgary participants could be described as 'recent adopters' to online teaching within the Faculty of Education. Their positive attitude towards the use of advanced communication technologies to enhance

many aspects of their teaching role is strongly reflected in the qualitative data collected from the surveys.

Deakin University

Deakin University is a relatively new university with a history of both distance and on campus face-to-face education. The university was incorporated in 1975 in the regional city of Geelong to provide a campus-based university in rural Victoria, Australia, as well as to be an Australia-wide distance-education provider. In the early 1990s the Australian university system was changed to integrate Colleges of Advanced Education into multi-campus universities, Deakin University added two metropolitan and two country campuses to the Geelong campus; teaching staff with experience in either primarily distance or face-to-face mode of teaching were integrated into the five cross-campus faculties. The university has continued its policy of teaching the same courses on- and off-campus with the use of technological delivery and interaction mainstreamed as much as possible. Since 2002, there has been a policy requiring an online presence for all subjects with some courses using highly interactive online technologies. All undergraduate students now take one subject in their degree completely online to prepare them for graduate level professional development through online learning. Deakin University has remained innovative in adopting technologies for convergence of distance and on-campus teaching and learning. In 2005 there were 32,354 students (20,940 on-campus and 11,414 off campus) enrolled at Deakin University. The Faculty of Education taught 4,373 students over three campuses.

The main elements in teaching at Deakin University therefore involve:

- undergraduate courses taught in a dual mode with on-campus students sharing the same print, multimedia materials and assessment processes as off-campus students;
- many postgraduate courses taught largely off campus and online with only a few courses sharing a dual mode of on-campus teaching;
- many "off shore" courses, particularly in Asia which use electronic communication within their central course provision;
- university-wide projects aimed at implementing and mainstreaming the capabilities of both asynchronous and synchronous technologies in the delivery and support of all courses at the university.

The faculty who constituted the sample for this study were from the Faculty of Education and were selected to include instructors of both online and on-campus classes. This meant that the sample included primarily academics based at the metropolitan campus of Deakin, where

the largest proportion of on-campus classes (mainly undergraduate) in Education is held. Their students included some who were required by a new policy to complete a fully online unit; four of the instructors were implementing this new policy and reflected their online experience in their responses to the survey questions. Most postgraduate teaching in the faculty is done in distance education and online mode and six of the teachers in this sample reflected on their graduate level online teaching. The sample of 10 participants, five male and five female, were slightly more experienced than the University of Calgary staff in face-to-face teaching and similarly experienced in the online mode. Overall their teaching load was greater, almost twice that of the University of Calgary sample. On average they taught fewer courses online but taught larger class sizes in both modes with an average face-to-face group of 26.7 students and an average online group of 21.3 students. Deakin University uses WebCT as a basis for the online system called Deakin Studies Online which also provides other forms of electronic communication through e-mail and chat, with the possibility of synchronous audio and text communication through Elluminate Live and other media.

Results of the Open-Ended Survey Questions

Results are analyzed and discussed with the responses to the survey questions. The questions interrogated the beliefs, intentions and actions of the teaching academics much as the TPI seeks to question these different components.

> 1) Describe any significant differences between what you believe about teaching face-to-face and what you believe about teaching online.
>
> In describing differences in their beliefs between teaching face-to-face and teaching online, the University of Calgary participants (who were more experienced as online teachers) showed a stronger belief in the online mode of teaching. They described a paradigm shift happening between the two modalities that required the instructor to have a sound understanding of the pedagogy relevant to the modality used. They believed each mode required different learning styles on the part of students and that the online modality would eventually go far beyond face-to-face teaching. Their strong belief in the online modality was due to its democratic mode where multiple perspectives can be expressed by a diverse group of students who were more critical and reflective. They discussed a need for a sound 'e-pedagogy' and for instructional design consideration, requiring more planning and

organization. They described a change to collaboration and learner-to-learner communication as well as teacher facilitation in this mode, but with the instructor's (and students') communication requiring double the time and effort. They believed face-to-face teaching to be less structured, needing less advanced planning but was essential for conducting practicums and field trips.

The Deakin University participants had strong views about both teaching modalities. Forty percent believed online learning had great possibilities as a learning medium, but 60 % believed they could teach more effectively face to face, particularly given they were teaching education students and using the face-to-face modality to model teaching practices involving active learning. They thought face-to-face teaching gave them the means to project their personalities into their teaching, whereas establishing a social presence in online teaching and learning raised problems for both instructors and learners. They identified advantages in the online mode believing it made students more self directed and independent. 'Disengaged students can't just coast on by' as they may do in campus classes. Only 20% of the sample were enthusiasts about the online medium, which they believed to be the more efficient mode, retaining outcomes that are ephemeral in traditional teaching modes. This minority believed that the online modality enabled teachers to be more facilitative and potentially more dynamic and innovative.

2) Describe any significant differences between what you try to accomplish in your teaching face-to-face and what you try to accomplish in your teaching online.

When asked to describe any significant differences between what they were trying to accomplish in their face-to-face and online teaching, (i.e., their intentions), the University of Calgary sample (n = 12) saw no significant differences in their intentions. Of the Deakin University sample, 60% agreed their intentions were the same; the other 40% reflected further on what they perceived as differences in what was possible to accomplish in the different modalities.

3) Describe any significant differences between what you do when teaching face-to-face and what you do when teaching online.

In describing any significant differences between what they do when teaching face-to-face and what they do when teaching

online, (i.e., their actions), there was a diversity of opinion expressed by the two institutional groups. In the face-to-face mode, the University of Calgary teachers described being more spontaneous and experiential, but they responded to students less frequently and spent less time doing so than online. The power issue of teacher centeredness in the face-to-face modality meant it was easier for them to control discussion and some (17%) said they limit depth and go for breadth of content. The Deakin University sample showed their preference and greater experience in face-to-face teaching, describing how the active mode of teaching uses voice, music and body; the students are also learning actively with games, writing, and props. Modeling good teaching practice with the immediacy of being able to question and respond were also perceived as important differences. They also recognized that this mode was more teacher-centered and dominant; they intervened and controlled more. However, they thought it also provided more flexibility as they could change strategies as a seminar progressed. Shorter planning time also allowed for changing activities throughout the semester.

In the online mode the University of Calgary sample also found that posting critical information and discussion questions, before courses started, meant they were less spontaneous in their teaching. They used multi-media more, responded (using several media) to students more quickly and more individually; 33% perceived themselves as more efficient and intentional online; 17% reported that requiring students to be online made it easier to engage them, while 25% described the discussion as less easy to control though often more exciting and additive. A regular commitment of time was described by 33% of the group who checked online discussions every day, including weekends. They described their role online as more facilitative and they made more effort to put faces and personalities to names. They were more innovative in being challenged to look for alternative ways to frame learning experiences (like field trips); 17% described limiting the amount of content and seeking depth in their online discussion and focus.

The Deakin University sample also described their changing roles as online teachers as they became more facilitative and student-centered. They encouraged student responses more and praised students more; they also encouraged peer feedback. They described advantages in being able to post new materials and

reading online, and developed more polished materials for online use. There was opportunity for students to share documents more easily and for students to generate the topics for discussion through their questioning of the written materials. However their teaching responses were therefore more structured and text was still seen to limit the possibilities of activity. There was a concern that some students could be less visible in a class group if they did not post regularly.

4) Describe how your face-to-face teaching influences or relates to your online teaching. Describe how your online teaching influences or relates to your face-to-face teaching.

The influence of face-to-face teaching on online teaching and the influence of online teaching practices to face-to-face teaching were important results of this research. These demonstrated interesting trends towards new forms of teaching and learning, particularly through blended teaching and learning practices. As would be expected of teachers with more traditional teaching histories of face-to-face teaching experience, both groups talked about their face-to-face experience informing their online teaching, particularly as they approached both modalities from the same philosophical stance. They applied the best (and most appropriate) strategies from their face-to-face teaching to the online medium. They gave examples of their use of stories, concept maps/diagrams, and, in one case, an activity page online where students reflect on offline teaching activities. Such tasks provided an authentic purpose for online discussion and for building an online community, an aspect both groups identified as an important aspect in both face-to-face and online modalities.

The influence of online teaching on face-to-face teaching seems to be even more influential with face-to-face teaching often becoming a blended practice that integrates online resources and strategies with face-to-face classes. Both groups described how online teaching helps them to be more organized, thorough and thoughtful for face-to-face teaching. The University of Calgary group recognized that the affective aspect of online teaching now made them focus on a sense of community in their face-to-face groups. It increased their efforts to 'equalise' voices in the face-to-face discussion, rather than allowing some students to dominate. They integrated points of the online discussion into the face-to-face discussions (where blended learning practice was possible).

The Deakin University group were influenced particularly by the resource preparation that the online mode required, preparing more structured support materials for out-of-class study and with many now supporting face-to-face teaching with online communication and resources. They were more creative in constructing better online environments for learning rather than just as a 'lecture repository' with PowerPoint ™ slides from lectures. They also found that they learned to communicate better in written form with students rather than relying on verbal explanations and they even found that the students were better prepared for class when they had online resources to draw from. The Deakin teachers structured tasks more and transferred strategies developed for the online mode into face-to-face classes. The online teaching practice of facilitation meant they were also guiding learning more in a face-to-face mode rather than taking a teacher-controlling role.

5) Describe how your face-to-face teaching affects your online teaching (and vice versa) in any manner that you think significant to your overall philosophy and effectiveness regarding teaching in general.

The effects of both modes of teaching on participants' overall philosophies and effectiveness indicated the interactive influences and transformations that are taking place in higher education. Most face-to-face teaching now integrates a blend of online technologies while distance education can become a blend of modes and technologies as well. The influence of community formation online also influenced some of the participants to reconsider their approaches to their face-to-face classroom communities. The lead-time required to develop an online course also impacted on these instructors as they became more organized and creative in their planning for face-to-face classes.

Overall the University of Calgary sample group concluded that the mode of teaching does not affect their overall philosophy but that reciprocal learning from experiences in both modalities is additive, changing their approaches in all aspects of their teaching. Teaching online pushed them to better organize their face-to-face teaching (explicit assignments, deadlines, grading criteria), and online teaching "challenged me to reflect & rethink many aspects of face-to-face teaching". The experience of teaching online gave one participant more comfort with space and silence in the face-to-face classroom, enabling them to "refrain from filling those spaces." They did still consider face-to-

face teaching as more creative with more experimentation and hands-on learning possible in a face-to-face setting and less possible online due to limitations with technology. Their reflections on the issues of 'social presence' online made them strive to have the same 'presence' online as face-to-face where their experience brought an awareness of the importance of checking students' feelings online.

The Deakin University participants also found overall that teaching online resulted in instructors being disciplined to revisit and reflect on lesson material and become better practitioners. From online teaching they learned more about effective learning, e.g., structuring discussions so that students organize themselves. They perceived the possibilities for students being more self directed if they didn't offer immediate help. They creatively translated appropriate face-to-face activities into written form and posted these online or as published resources making the outcomes of classes more of a permanent resource. The overall effect to their approaches was in a change to their traditional face-to-face teaching that became more of a blended style of learning and teaching. They use online resources, and complement classroom teaching with online teaching, often posting resources online that are mentioned in class.

Descriptive Statistical Results of Teaching Perspectives Inventory

Table 2 indicates the perspectives chosen by the participant groups taking the TPI while reflecting on both modalities. As with the qualitative data, the two groups showed very similar profiles in their overall scores. Both groups showed the strongest preference for the developmental perspective in both face-to-face and online teaching. In face-to-face teaching they also chose a similar order of preference with nurturance as their second score, apprenticeship was third followed by transmission, and finally social reform. In the online teaching perspectives there was a slight difference in order of choice but no significant difference in overall scores except for the least preferred option of social reform when teaching online only. This perspective was of more importance to the University of Calgary participants than the Deakin University group.

Dominant scores on the TPI were consistent with the survey results. When expressing their own personal philosophies through the survey, both groups described these in terms of constructivist, i.e., is learner constructed and centered, active learning. Such concepts most closely align with the developmental perspective, their highest TPI choice in each teaching mode.

Table 2. Independent-Samples T-test Results for TPI Scores by Modality and University

TPI	University	N	Mean	Stand. Dev.	t	df	Sig. (2-tailed)
Online-Transmission	UC	12	31.75	4.77	.32	20	.75
	DU	10	31.10	4.68			
f2f-Transmission	UC	12	31.50	4.34	.71	20	.49
	DU	10	30.20	4.26			
Online-Apprenticeship	UC	12	36.00	3.54	.57	20	.58
	DU	10	34.90	5.17			
f2f-Apprenticeship	UC	12	35.75	4.07	-.63	20	.54
	DU	10	36.90	4.43			
Online-Developmental	UC	12	37.75	3.28	-.30	20	.77
	DU	10	38.20	3.65			
f2f-Developmental	UC	12	38.00	3.74	.12	20	.91
	DU	10	37.80	4.05			
Online-Nurturing	UC	12	36.67	4.23	1.10	20	.29
	DU	10	34.60	4.55			
f2f-Nurturing	UC	12	35.75	3.28	-.03	20	.98
	DU	10	35.80	5.55			
Online-Social Reform	UC	12	30.00	6.28	2.25	20	.04*
	DU	10	25.30	3.27			
f2f-Social Reform	UC	12	30.33	6.71	1.84	20	.08
	DU	10	25.70	5.12			

f2f = face-to-face UC = University of Calgary DU = Deakin University

The only statistically significant differences between cultural groups occurred within the action subscore of the TPI when combined across all five teaching perspectives. The University of Calgary sample group had a significantly higher-action sub score when teaching online (Table 3). When analyzed further, this difference was identified as related to two TPIs (online Nurturance; both online and face-to-face Social Reform). The University of Calgary sample had a stronger preference for acting in a way consistent with these two teaching perspectives. Possible reasons for these differences are discussed below.

Table 3. Independent-Samples T-test Results for TPI Sub-Scores by University

TPI	University	N	Mean	Stand. Dev.	t	df	Sig. (2-tailed)
Nurturing-Online-Action	UC	12	11.83	1.95	2.17	20	.043
	DU	10	9.90	2.18			
Social Reform-f2f-Action	UC	12	9.92	2.57	2.10	20	.048
	DU	10	7.80	2.15			
f2f-Social Reform	UC	12	9.42	2.31	2.02	20	.058
	DU	10	7.80	1.40			

f2f = face-to-face UC = University of Calgary DU = Deakin University

Discussion of Findings

In identifying whether our sample groups of university teachers perceived their teaching approaches and philosophies as different when they were teaching face-to-face and when they were teaching online, the quantitative results showed that the TPI spread of scores was very similar in both modalities with the order of preference the same in both. These findings were inconsistent with studies identified in the literature which show that teachers' approaches can differ considerably when changing modes of teaching (Comeaux & McKenna-Byington, 2003, McShane, 2005). The results may reflect the TPI's development as a tool for discerning teaching perspectives in face-to-face classrooms, a tool which may require adjustment for the online teaching environment since the results also differed from the qualitative data analyzed from the online survey. When questioned through the survey about their approaches, though they were trying to accomplish the same learning in both modes, the groups differed in their beliefs about what was possible in each mode. The Deakin University group appeared to have a stronger preference for teaching face-to-face, for seeing the practical and active potential in face-to-face teaching, for modeling good teaching, and for establishing better social and personal connections. The University of Calgary group appeared to have at least an equal, if not stronger preference for teaching online, seeing the move from face-to-face to online teaching as representing a 'paradigm shift' in teaching and learning.

However, as research studies have shown (Van Schaik, Barker & Beckstrand, 2003, Chen & Zimitat, 2004), online learning can be just as effective in terms of learning outcomes as face-to-face learning, and teachers in both groups recognized great potential in the online modality.

They expressed beliefs that the online mode was helping students to become more self-directed and teachers to be more facilitative and innovative. The survey responses also identified a difference in their actions online and face-to-face with a majority of participants in both groups admitting to being more teacher centered in the face-to-face mode and more learner centered in their online teaching. The potential for the online mode to facilitate student-to-student communication and to enable student collaboration, with teachers in a less central role as designers and facilitators (Paloff & Pratt, 2001), was further supported in the survey results. The learning objects required for online teaching also changed their actions through differing preparation timeframes. The university mode of planning online courses requires a longer lead-time and lacks flexibility for change during the teaching process. In comparison, face-to-face teaching is still more flexible for planning, as teachers can change activities on a more ad-hoc basis during the teaching process.

The initial paired t-tests of TPI sub-scores indicated a significant difference within the 'Action' sub-score indicating that what the two participant groups actually did within their classrooms differed. Further analysis revealed three distinct sub-score differences between the two participant groups (see Table 3). The University of Calgary participants appeared to be significantly more 'nurturing' in their actions online than were the Deakin University participants, as well as significantly more 'social reform' oriented in their actions in both face-to-face and online classrooms. The reasons for these differences might be explained as a Canadian cultural focus on experiential teaching, which this group had been able to more completely transfer into their online teaching actions. Though the Deakin University participants were committed to active learning in their face-to-face teaching, they had not yet translated their actions into the online mode. The differences in contextual variables would also provide a credible explanation. The larger class sizes and higher workloads of the Deakin University sample would mean their time for online teaching may be less, thus limiting the number and kind of activities possible. The University of Calgary sample spends more of their overall teaching time online than do their Deakin University counterparts, perhaps giving them more opportunity to actively engage learners with the content of the lessons. University of Calgary teachers also taught only graduate courses whereas their Deakin counterparts taught a higher proportion of undergraduate courses. This may explain the University of Calgary group's apparent preference for Social Reform teaching, since graduate level teaching tends to take a more critical and analytical approach to theory and practice.

We also sought to find how ICTs influence teachers' pedagogies and practices and to identify ways in which they are beginning to integrate

these modalities. The use of a blended mode of teaching and learning was evident with both groups. Most of the participants had the opportunity to meet their students face-to-face at some point while also using a range of technologies. Some instructors in the online mode were also using synchronous technologies to emulate face-to-face classes. These types of blended modes are being used more often and are developing into a common mode of teaching considered by many to be the most effective use of ICT (Bonk & Graham, 2006). Online resources and discussion frequently complement traditional classes, while online distance learning is complemented by synchronous discussion and interaction through various new forms of ICT (Stacey & Gerbic, 2006).

The move to online learning resulted in all participants becoming more reflective and innovative about their teaching practices in both modalities. In reflecting on their practice, some of the participants described a need for more professional development and identified the importance of the facilitation competencies identified by Goodyear et al (2001). The blended mode of teaching is being more widely used in both countries as the advantages of ICT are recognized and used in face-to-face teaching. As the technologies for synchronous, audiovisual interaction becomes more accessible, these too can introduce face-to-face aspects of community development into distance classes.

Conclusion

The research study has presented the teaching philosophies and perspectives of two small groups of university instructors in two different organizational contexts and two countries teaching in both online and face-to-face modes. The similarities and differences of opinion expressed through the online survey questions have been used to explain and interpret the seemingly consistent beliefs, intentions and actions about their teaching as revealed in the TPI. The fact that the TPI main scores were not significantly different by modality may be explained by the possibility that this tool, developed for face-to-face teaching measurement, has not accurately assessed teaching philosophies for an online teaching context.

Though the Deakin University teachers expressed a stronger preference for teaching face-to-face than the University of Calgary participants, who equally preferred the online mode, they all recognized and believed in the potential of the online environment. They recognized that students were becoming more self directed and independent, and their own roles as instructors more facilitative and innovative. The transition to online teaching has made them more reflective about their teaching and more systematic in preparing better quality online resources

for both modes of classes. The importance of using a form of blended learning that combines some face-to-face interaction or technologically mediated synchronous communication, with online interaction, is an important trend in teaching practice for both groups.

The differences in the opinions expressed by the two groups and the few significant differences in TPI scores can largely be explained by the contextual differences between organizational cultures. These include differing class sizes and workloads, the focus on predominantly different levels of graduate and undergraduate classes, and the different levels of experience within the groups in both online and face-to-face teaching.

However the findings of greater similarities rather than differences between the Canadian and Australian instructors, is encouraging in this time of increasing global education. Further investigation of possible differences in teaching perspectives between instructors in these two cultures and others is imperative today, as with the transition to online learning and teaching, more programs are being offered to an international community.

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Elizabeth Stacey is an Associate Professor in the Faculty of Education at Deakin University in Australia. She has researched and taught courses, particularly in the area of online and distance education, in all sectors of education and cross culturally. She can be reached at elizabeth.stacey@deakin.edu.au

Faye Wiesenberg is an Associate Professor in the Faculty of Education at the University of Calgary. She teaches in the Graduate Division of Educational Research (Workplace Learning) and Division of Applied Psychology (Counselling) researching the topics of adult career/continuing professional development; program development and evaluation; and teaching/learning via distance technology. She can be reached at fwiesenb@ucalgary.ca