

**Opportunities for learning provided by a "flexible delivery" environment  
(Paper Code no.: 079)**

**Geoff Isaacs, Trish Andrews, Sarah Stein**

**University of Queensland**

**Teaching and Educational Development Institute (TEDI)**

**University of Queensland**

**St Lucia QLD 4072 Australia**

**Email: [g.isaacs@mailbox.uq.edu.au](mailto:g.isaacs@mailbox.uq.edu.au)**

**Paper presented at the annual conference of the Australian Association for Research  
in Education**

**4 - 7 December 2000**

**The University of Sydney**

**Sydney, Australia**

## **Abstract**

The study described here was part of a larger study evaluating activities at the University of Queensland's "state of the art" purpose-built campus for "flexible delivery" at Ipswich, Queensland. We describe the various learning opportunities identified by three university teachers, each from a different faculty, as they planned for, and implemented, subjects based at the Ipswich campus. Data were gathered through interviews and discussions with the teachers and their students, classroom observations, and collection of artefacts, such as teacher diaries of activities and planning materials. Teachers noted that the widely held and publicized expectation that the new campus would provide different and better opportunities for learning and teaching was borne out for the most part in their experiences during the semester. Students' and teachers' perspectives on the quality of learning taking place were enhanced; opportunities were created for teachers to experiment with ideas to enhance learning using a variety of strategies and technologies. Some awareness was shown by teaching staff of issues related to the interactions amongst beliefs about teaching and learning, teaching practices and students' developing perceptions of learning. However, there are clear implications for the continuing professional development of teachers in higher education "flexible delivery" situations.

## **Introduction**

This paper reports on a project which forms part of a larger study into the evaluation of the University of Queensland's educational initiative in establishing a "state of the art" purpose-built campus for "flexible delivery" at Ipswich, near Brisbane. The new campus is approximately 40 kilometres away from the main campus at St Lucia. In addition to supporting newer modes of teaching and learning at Ipswich, the campus is supposed to provide for all University of Queensland teaching staff a sample of alternative ways of structuring courses. In the words of the University's Pro-Vice-Chancellor (Academic), the Ipswich campus has been established as an educational "lead site," an "engine for change" in the University generally (University of Queensland, 2000). Therefore, courses at Ipswich were expected to embrace "important emerging discipline" and "new knowledge areas."

The campus affords ready access to a variety of resources, such as self-directed learning spaces, which provide, among other facilities, easy computer access for students and physical space in the form of specifically designed learning areas to support variations in group or class sizes and teaching approaches. The one teaching method not completely supported is the traditional "chalk and talk," large group lecture: there are no large lecture theatres on the campus. All courses at Ipswich involve at least some face-to-face contact and some self-directed learning activities. Most have a substantial online component, which students are, in some cases, obliged to complete on campus, for example, because access to servers is restricted to addresses on campus.

## **Background Issues**

The term "flexible" in relation to delivery of learning material and in relation to approaches to learning can be contentious in that there is a variety of uses of the word and often little clear explanation about its meaning. In this paper, the term flexible learning refers to "altering learning [opportunities] so that users find it easier, more accessible, quicker, better related to their needs, or more effective" (Sloman, 1994, p. 126). Related to this is the idea of flexibility in terms of delivery, receipt or engagement with learning materials. Flexibility in learning and teaching enables "learners to learn when they want (frequency, timing, duration), how they

want (modes of learning), and what they want (that learners can define what constitutes learning for them)" (Van Den Brande, 1993, p. 2). In other words, flexibility in education refers to adaptation of programs, access, activities and so on, to meet the needs of learners and their preferred learning modes (Nikolova & Collis, 1998). From this perspective, increasing the flexibility means enhancing the student-centredness of teaching and learning processes.

As teachers make moves to embrace student-centred approaches, they often face challenges to their knowledge about teaching. Shulman (1987) has described seven professional knowledge bases held by teachers: (a) *knowledge relating to content*; (b) *general pedagogy knowledge* of broad strategies used to manage and organise classrooms; (c) *curriculum knowledge* which is knowledge of the materials and programs used to make up a curriculum; (d) *pedagogical content knowledge* or the knowledge of how to teach particular aspects of content; (e) *knowledge of learners*; (f) *knowledge of educational contexts* or how educational institutions and mechanisms operate; and (g) *knowledge of educational ends*, that is, knowledge of underpinning purposes and values of education. Changes to educational situations, approaches, settings, content, curriculum, and so on, have implications for teachers' understanding and expression of their professional teaching knowledges. Thus, for example, the introduction of a new curriculum which promotes a shift from teacher-centred to student-centred learning can have an impact upon a teacher's formerly "secure" pedagogical content knowledge, that is, the teacher's knowledge of the "subject matter *for teaching*" (Shulman, 1986, p. 9) (emphasis in original). The teacher may realise that the way he or she represented ideas to students previous to the change are appropriate no longer, because the new curriculum has triggered reflection upon knowledge of learners and general pedagogy and has had, in turn, an influence upon the teacher's conceptions of "good teaching" (Entwistle, Skinner, Entwistle, & Orr, 2000). If the curriculum change involves variation to routines, such as having to travel between (newly introduced) campuses to teach (Kavanagh & Taysom, 1999) - and especially if that campus is also promoted as being specially designed for a particular purpose, such as "flexible delivery" - there can be an impact on professional teaching knowledge about educational ends.

From its inception in 1999, teachers at the new Ipswich campus of the University of Queensland, have created new courses emphasizing the flexible or student-centred approaches that were, according to publicity, to underpin all teaching at the campus (University of Queensland, 2000). The research team was interested in the impact that teaching at this specially built campus had upon teachers' professional knowledges.

Therefore, the aim of the study was to investigate the links between the lecturers' perceptions of their role as teachers and their incorporation of the teaching technologies available at the Ipswich campus into their courses.

More specifically, the objectives of this study were:

1. To identify and describe the teaching approaches adopted by a small group of teachers in the implementation of their new "flexible delivery" courses during one semester at the Ipswich campus.
2. To identify the factors that each teacher reported as being an influence on their selection and use of various teaching strategies and technologies; and
3. To draw conclusions about staff development needs of university teachers to support the development of student-centred practices.

## **Design and Methods**

The participants were three experienced university teachers, each from a different faculty: Martin from the Faculty of Engineering, Physical Sciences and Architecture, Donald from the Faculty of Business, Economics and Law and Nicole from the Faculty of Social and Behavioural Sciences (all names are pseudonyms). The researchers monitored the actions of each of the three teachers as they each implemented one subject across one semester. Martin, Nicole and Donald were selected because they were known to the researchers as innovators who were trying to participate in the spirit of flexible delivery espoused by the University for the Ipswich campus.

Semi-structured interviews were held with each teacher twice, once during the first half of the semester and once after the semester had ended. During each interview, the teachers were asked about their beliefs about teaching and learning and their motivations for taking the actions that they did during their teaching sessions. They were also asked to express their viewpoints about flexible delivery and flexible learning and how they were attempting to put those beliefs into practice. The researchers observed teaching sessions and made field notes of observations. Stimulated recall of classroom events was used during both interviews to focus the teachers' thoughts and stimulate reflection on classroom practices. Each interview was transcribed and the transcriptions were returned to the teachers for comments and checking. The teachers kept a diary/journal in which they listed activities that they considered were associated with their teaching duties. For example, they kept records of times spent planning or preparing activities, marking assessment tasks or discussing teaching with tutors. They also kept records of their ongoing reflections on their teaching experiences and the implementation of the subject as the semester progressed. In addition, one of the researchers took part in an end of year program review held by the whole curriculum development team of which Martin was a member. Reflections from Martin in the light of the development of the whole program in which he was involved were collected by means of field notes taken during the review session.

Students in each of the teachers' classes were invited to provide feedback on their experiences of the subjects during the semester. Data were gathered through either focus group interviews or through written responses to questions. The questions probed the students' reflections on their learning, for example, What aspects of this subject best helped you to learn?; How might this subject be changed to make your learning better?; How did the way you learned in this subject compare with the way you learned at high school or immediately prior to coming to this university? Student responses were minimal, however, and therefore could not be viewed as representative of the whole of each of the cohorts. However, in this study student comments have been used only insofar as they are able to reinforce ideas already supported by other data evidence.

Case studies of each teacher's beliefs and practices were assembled. Each case study focussed upon the variety of teaching technologies (i.e., teaching strategies, use of computer technologies, classroom organisation techniques) incorporated by the teachers into their semester's work and their motivations for using them.

## **Results and Discussion**

First, a brief description of each of the teachers involved in the study will be given. These descriptions include an overview of the teacher's background, his or her beliefs about teaching, as well as a short overview of the subject that he or she implemented during the study. Second, results of the study will be discussed in terms of the connections amongst the teachers' beliefs about university teaching and learning, the way they implemented their subjects, and the influence that being part of a new campus intended to promote and

support flexibility had on those beliefs and practices. Reference will be made, from the researchers' point of view, to the influence, change or challenge the experience of teaching at Ipswich seemed to have on the professional teaching knowledges (Shulman, 1987) of the participating teachers.

### *The Three Teachers*

The three teachers, Martin, Donald and Nicole, who participated in the study, were experienced teachers and researchers, and they approached their course and subject development with clear and well-developed notions of teaching and learning. Each teacher promoted ideas about student-centred learning and about the role that theory and practice play in the development of any real understanding.

### *Martin*

At the time of the study, Martin had been teaching at a university level for approximately 20 years. He had begun teaching in architecture courses at university as a tutor. Before working at a university full time, Martin had worked as an architect in the public and private sectors, had had experience writing financial software and working as a consultant.

The subject Martin taught was a first year undergraduate subject during which students explored the design and development of information environments. The subject incorporated a significant design perspective during which the student learning was supported by Martin and a team of four tutors in the (ultimate) development of web pages/sites through lectures, tutorials, workshops and studio sessions. This subject was part of a new course, unique to this university. Therefore, many of the aspects of this subject and the whole program had been developed completely from the beginning, that is, many subjects were not merely of developments of previously offered subjects offered in other universities. Martin and the other developers struggled with *knowledge relating to content* (Shulman, 1987) as they made decisions about what would constitute the knowledge parameters and perspectives of their course (Martin, reflection made at the end of the semester; Field Notes).

Martin prided himself on being "focussed on using, useability, of things" (Interview 2). Learning, he believed, is about doing and it is through doing or experiencing for oneself that understanding happens.

I sometimes say to students, like in tennis, if you want to learn ... if you want to be a great tennis champion, what do you do? You don't read a book about it. You can read books about it, but principally, you've got to do it. If you've got a bad backhand, what do you do? Do you avoid doing backhand shots? No, you work on improving it. (Interview 2)

Martin saw the relationship between his understanding about architectural design, and his approaches to and beliefs about, teaching and learning. Indeed, he believed that design thinking helped him to understand and develop his beliefs about learning: "Design training, can make you more focussed on the learning experience" (Interview 1). For example, he identified a parallel between what he saw as the designerly mind and learning by doing: "The designerly mind is that you learn by doing" (Interview 1). This meant that the subject he taught was centred on the solving of problems. Martin and his tutors provided ongoing guidance and support for students as they worked their way through defining, deciding upon and exploring problems, investigating background ideas and resources, developing ideas, devising possible solutions, creating outcomes and evaluating their worth. Martin had based his teaching approach around his experience of the architecture studio. Martin saw architecture and the way architecture is taught as a model for understanding learning and as

a basis for the way he taught. He believed that learning should be "project based, problem based ... It's been in architecture for a hundred years" (Interview 1). Through architecture education and the way architects operate in their day-to-day activities, he was able to represent or exemplify his understandings about how learning happens and how teachers should support learning. Inherent in this approach was flexibility, for the students and for the teachers. There was choice, one to one contact with teachers, and open endedness. While there was an overall program set for the semester, including two lectures, workshops, field trips and studio sessions, there was minimal structure to the way each event occurred (Field Notes).

There's no specified anything. There's just studio time to suit the timetable ... and different staff they do things entirely differently. No one questions this because that's what you do because what [we're] interested in, is you get good design and the way you get good design is through good process. But each individual will do that differently, 'cause they'll have different projects.  
(Interview 2)

Thus, Martin believed that it was not possible to plan what was going to happen each week during the studio sessions because the students were solving the problems, and their needs and the paths they were going to take their problem solving was not predictable in other than general terms. As a reflection of his belief about "good process" Martin asked his students to develop a portfolio/journal in which they recorded their developing ideas about design and information environments across the semester. This journal, which contributed to the students' assessment, encouraged, in Martin's view, reflective practice and helped to focus the students' attention on the processes of thinking, learning, studying and designing (Field Notes).

Martin was very open to changing elements of his subject, too, particularly because of his awareness of the "newness" of the content. For example, at the end of the semester, Martin noted that one project had promoted ideas that were too complex for the first year students to grasp, in his view. Therefore, upon reflection, he planned to make changes to either the whole project or to the way he supported the project next time he taught the subject (Martin, end of semester reflection; Field Notes). He reflected also upon how to enhance the students' use of the portfolio/journal, as he considered it was not used to its full advantage during the semester (Martin, end of semester reflection; Field Notes).

For Martin, then, his understandings about teaching and his teaching practice were very student-centred; he was confident in his *general pedagogical knowledge* (Shulman, 1987). While he believed the studio approach to be a natural way to teach and a means of encapsulating an approach that matched his understandings of flexible learning, his *knowledge related to content* (new subject matter) and his *pedagogical content knowledge* (ways of teaching that subject matter) (Shulman, 1987) were challenged in this new context. Indeed, the whole development team, including Martin, faced challenges to aspects of their *knowledge relating to curriculum* (Shulman, 1987) as they experienced the outcomes of their efforts to develop their unique program (Martin, end of semester reflection; Field Notes).

### Nicole

Nicole, who taught in the postgraduate teacher education course at Ipswich, had been a middle and upper school teacher for 10 years prior to working at the university. Nicole's qualifications were in music, music education, drama education and the education of special needs students. She had also been an army instructor. In addition, she possessed postgraduate qualifications, including a Doctor of Philosophy, in educational psychology, her

research focussing on knowledge structures across the domains. During her five years teaching at a university level, Nicole continued to reflect upon her beliefs about learners, learning, and the links between the theory and practice of teaching and learning. Her varied background in teaching led her to consider herself a "jack of all trades" (Interview 2) where teaching was concerned.

Nicole was interested in helping her students to draw ideas together about the theory and practice of teaching and she believed that when teachers are able to see the value of both aspects of their teaching and reflect upon them, they are more likely to become lifelong learners. This was exemplified in the final activity of the semester: a mini conference. For the conference, each student, having submitted an abstract previously, presented a paper summarising and analysing their semester's experiences, from the perspectives and research they had undertaken in one of the subject topics. Because this was the first time that this subject had been implemented, much of the structure, content and approach taken were experimental. Nicole's comments about her expectations for the conference reflect part of the vision that she hoped to realize: "So we're hoping to, through that conference, make a bridge between themselves as teachers and themselves as self-actualising professionals" (Nicole, Interview 2).

Nicole's students were engaged in teaching practice for much of the semester during the research study, so they were not able to meet face to face until half way through the semester. However, there was course content to be covered, even while the students were on practicum. Nicole believed that the best way to have the students interact with the content of the course and reflect upon its place within the real life teaching in which they were engaging, was to provide multiple pathways for learning through which guidance and scaffolding could occur. Multiple pathways meant that students could choose how they worked their way through materials, an approach Nicole would have liked when she was a student herself.

As a student myself [I] have found too much direction to be particularly constraining. Sometimes it was fine, because it was just exactly what I wanted to do. Other times I felt it really meant that I basically had to give up what I wanted to do. (Interview 2)

Thus, the nature of the course materials and resources and students' access to them were important for Nicole, and her views about providing multiple pathways for students formed the heart of her description of "flexibility":

Flexible learning is ... looking at the way students, the path students can take towards teaching and learning. And that will be set to some extent by delivery, but more importantly by the engagement, the type of engagement made possible. (Interview 2)

To facilitate this synthesis of theory and practice, and to acknowledge the idea of multiple pathways, Nicole formulated the subject around thirteen topics, three or four of which the students were asked to work through intensively during their practicum. To encourage student interactions even while they were away from the campus, Nicole made use of online bulletin boards and email to provide opportunities for the students to share experiences, answer key discussion questions, swap ideas and reflect on their developing understandings about teaching and learning in a high school situation. A face-to-face component of the subject took place after the ten week practicum block. During this time, Nicole and other education specialists exposed the students to all of the thirteen topics. A variety of materials from real life, such as case studies, artefacts from real teachers and teaching situations were used to focus attention on everyday happenings in schools. These, together with tasks

related to recording and analysing their own teaching situations, and readings, references and key questions for discussion, Nicole aimed to assist the students to view university-based, theoretical notions in the light of the experiences they had gained through their teaching practice. The materials were presented in such a way as to allow the students "to pace themselves through some learning activities which provide a degree of choice each week" (Interview 1). Finally, at the end of semester mini-conference, to synthesize learnings, the students presented an in-depth assignment/paper on one of the topics, including how they had made sense of the topic in terms of their own reflections and their practicum experience.

Like Martin, Nicole's *general pedagogical knowledge* (Shulman, 1987) was secure. Her extensive experience as an educator in a number of different contexts had meant that she had developed clearly expressible ideas about teaching and learning and she applied those principles within the structure and conduct of this subject (Field Notes). However, it could be seen that, particularly as this subject was new (this was the first time that it had been implemented), Nicole faced challenges in aspects of the design, development and implementation of this subject, as she explored the appropriateness of teaching strategies to enhance students' learning of the content through promoting interactivity, engagement and response (*pedagogical content knowledge*).

### *Donald*

After completing a Bachelor of Arts majoring in history, Donald began a teacher education course, as he had always wanted to be a teacher. However, he did not complete his teaching qualification, after becoming disillusioned by his early experiences of teaching in a school system, and decided to take a job in business instead. He eventually ran his own business and, later, after some time away from work undertook study towards a Doctor of Philosophy in history. During that time, he gained a position as a lecturer in management and has continued teaching in that area because he believed that he could make a difference to the way management is thought about and enacted in Australia. His current research interests, allied to management, lie in the area of the nature of knowledge, its creation and diffusion, and related issues. Donald taught a second year, undergraduate business communications subject during the time of the study.

Donald's idea that education is the key to ensuring change in the way things are done in the business world lay at the heart of his perceptions about teaching and learning. He believed that knowledge is developed when theoretical ideas are melded with ideas gleaned from practice, and vice versa. "You can't do any practice without some sort of conceptual framework to do it with" (Interview 2). Good management decisions, in Donald's view, are not made in response to what is "trendy" or the latest innovation. On the other hand, he believed that quality decisions are made when individuals and groups work from well-developed personal and theoretical frameworks, consider all parts of a system, draw upon a thorough knowledge of the context, and thereby, develop clear notions of why and how a change will be managed. In other words, Donald believed that it was important for managers to have clear, well-founded theoretical and practical reasons for making decisions and introducing and managing change. These ideas were expressed in terms of his hopes for the students he taught.

I want to contribute towards producing graduates who can be intellectual leaders in their workplaces ... to be ... confident about the world of ideas, confident that they can work better and understand it and that they can switch between, you know, very applied day to day business issues and then going back and looking at research which has been going on. (Interview 1)

Donald believed that to be confident in management situations it was important to develop one's own set of values, because values and beliefs influence and underpin actions: "So I would like to allow students to develop through their own experience at university, a set of values ... and that they can believe in their own intuition or believe that their own intuition has some value" (Interview 1).

Structures within the subject Donald ran during the research study indicated that he tried to represent these ideas in his teaching. First, there were no formal traditional lectures in his business communications subject. Being on the Ipswich campus meant that his class was small (15 students). The majority of weekly timetabled class interactions with the students were in an informal meeting format, discussion centring on key readings (Field Notes). The readings had been provided to the students in the form of a workbook, which also contained accompanying questions for thought, discussion and review. The students were given projects along the way and these were assessable. In one project, the students, in groups, interviewed managers from industry about a change that the managers had been involved recently and how that change had been managed. The students were asked to review and analyse their findings in the light of the theoretical ideas and frameworks that they had developed from their other work throughout the semester. Each group then prepared a presentation and a written report of its findings and analysis. As an example of the interest Donald had in the development of his students' across the semester, Donald provided scaffolded support during this project. For example, Donald recorded in his diary that he had spent time "working through interview plans with each group so they would be ready to do their industry projects" (diary entry, week 7) and researcher observations of classroom interactions indicated that Donald was willing to initiate and respond to needs expressed by students regarding uncertainties about their projects and their assignments (Field Notes). Furthermore, on two occasions Donald reflected in his diary upon plans to review and redevelop a pre-requisite first year foundation subject, so as to ensure that students would be provided with the best possible opportunity to experience a coherent and developmental set of ideas and support for their learning (diary entries, weeks 6, 7).

Finally, to help students to gain a sense of their own development as learners, another feature of Donald's subject was a journal he asked each student to develop across the semester. The journal was a place where the students wrote reflective notes to show how they were drawing together all their learning experiences, practical and theoretical, combined with personal views, into a whole perspective on management and business communication. Each student then presented this "drawing together" or synthesis of ideas in overview or summary form in a final assessable essay. Donald knew that the task would be difficult for his students - "[We] talked about the individual assignment. It is a confronting one because [the students] have to reflect on what they have been learning and how it will help them to do management. They seem a little afraid of it" (diary entry, week 9) - but he believed that the challenge would help the students to recognise how they were developing their own perspectives and understandings in the light of their (short) industry experience and of the theoretical ideas they had grappled with during the semester.

Like Nicole and Martin, Donald felt secure in his *general pedagogical knowledge* (Shulman, 1987). His ongoing wrestle with *pedagogical content knowledge* was evident as he reviewed and reflected upon the strategies he used to promote a deep level of interaction among his students, to stimulate engagement with ideas and support the bringing together of theoretical, practical and personal experiences.

### *Expectations*

Perceptions about the potential of the specifically designed campus (at Ipswich) have resulted, in the cases of the three teachers in the study, in a variety of expectations for

teaching and learning. The case study teachers and their students expressed expectations of different, and, supposedly better, opportunities for learning and teaching.

The University publicises the flexible learning opportunities available at the Ipswich campus in terms of student-centredness rather than flexibility of access only - for example, "we seek to ensure technology and content engage, that delivery is stimulating, that classes, seminars and workshops inform and enhance, and that work tasks generate negotiation, analysis and knowledge" (University of Queensland, 2000). According to Donald, many students and university personnel have translated these messages into meaning the intensive use of high-tech equipment such as computers and advanced communication technologies, with, in his opinion, an overemphasis on access and delivery of material. "Some of the attraction for some students is the anonymity of being able sit behind a computer screen and never actually have to confront people like me face to face 'cause some students find that uncomfortable" (Donald, Interview 1). He also believed that the term "flexible delivery" was understood by many students to mean, "that I [the student] am a customer and I should be able to decide about what level of participation I choose at all levels, whether it is in the classroom or group work or dialling in from home" (Donald, Interview 1).

Donald believed that these false impressions of the campus reflected "really down market stuff" and he was sure that the university would not want to be known to "flog degrees to anyone who just knows how to use a modem" (Interview 1). So in that sense, Donald was "concerned about the hype to the extent that it shapes people's expectations of what happens here" (Interview 1), indicating that he was reflecting upon his professional *knowledge about educational ends* (Shulman, 1987). Simultaneously, however, he believed "that potentially we've got something that is fantastic here" (Interview 1), so it was important for him to make clear what flexibility in learning and teaching really meant. He did this through developing what he considered to be well thought out learning experiences for his students.

I've got no problems with the idea of us projecting ourselves as being at the cutting edge of something, but when we ... define flexible delivery in terms of technology and ... interactivity in terms of technology, then you're in real trouble because, well for one, technology is incredibly inflexible, and secondly, there can be nothing more interactive than people sitting together in the same room talking. I've no problems with flexibility, I've no problems with interactivity, it's just whether you are using it as marketing rhetoric or it somehow underpins a sound pedagogical strategy. (Donald, Interview 1)

It was evident that while the three lecturers held beliefs about offering students flexibility for learning, or multiple pathways, as Nicole put it (Interview 2), flexibility meant something more to them than the use of modern communication technologies only. These teachers already held well-developed notions and understandings about teaching and learning, or general pedagogical knowledge (Shulman, 1987), before they began teaching at Ipswich and they were not swayed from those beliefs. What they found, particularly as expressed by Donald, was that they did reflect upon their *knowledge of educational ends* and *general pedagogy* (Shulman, 1987), by reassessing their beliefs in relation to what they considered the more popular expectations about the campus. Thus, when they talked about flexibility they emphasised their beliefs about offering the best opportunities for students' learning, and enacted those beliefs through their practice, for example, Martin's studio sessions, Donald's class meetings and Nicole's multiple pathways.

For at least some students, expectations about a better environment for learning at the Ipswich campus were also related to its so-called flexible nature. However, while the evidence is not conclusive for all students, there was an understanding expressed by some

that, like their lecturers, flexibility was more than studying or accessing university courses remotely. For example, one student explained that from her perspective, "Flexible delivery is how you get it, flexible learning is how you learn it... because of, possibly, this method of flexible learning, we're a lot more proactive and always approaching the lecturers and the tutors" (student, Martin's class). For this student at least, flexibility meant the inclusion of face-to-face contact and taking responsibility for one's own learning.

The opportunity to be part of the new university environment stimulated the three teachers to take active roles (e.g., as planner, curriculum designer and developer, program director/coordinator) in the ongoing critique and development of the degree programs in which they were involved. This involvement had come about partly because these teachers had to initiate new courses and thus become involved in establishing new ideas and putting into practice their beliefs about teaching.

I mean I've been acting program director here for six months now as a Level A [academic]. At St Lucia no way, no how would I be sitting in the same room as the Vice Chancellor discussing issues of teaching and learning. That wouldn't happen. And even as a Level B here now highly unlikely that I would have those opportunities on the St Lucia campus, except on an occasional invitation. But I've had a fair amount of input. (Nicole Interview 2)

However, as Nicole acknowledged, the mere fact that courses had to be developed from the beginning, may have been the stimulation for the activity. Whether the interest and enthusiasm would continue after the courses had been established for a while was to be seen, according to Nicole.

I think teachers have been encouraged to participate just like any sort of foundation thing. I wonder how long that will go on for. But at this stage because, because it's all been new and fresh I think everybody's ideas have been taken into consideration. (Nicole interview 2)

Even so, because the three teachers involved in the study were "in at the ground level" they had been given the "space" to explore and reflect upon their beliefs about teaching and learning and then to put into practice their ideas in an attempt to realise their expectations.

### *Experimentation*

The Ipswich campus provided opportunities for the case study teachers to experiment with ideas to enhance learning through the use of a variety of teaching technologies, many of which they were not able to utilise in the same way previously.

The teachers experimented with ideas for flexible interaction as a means to acknowledging student learning needs in practical ways. Of the three teachers in the study, Nicole made the most use of communication technologies. She found that because of the nature of the semester she was running, with her students on teaching practicum for great part of that time, it was an ideal opportunity to utilise bulletin boards and email to encourage discussion. These discussions could be held as the students were gaining their practical experiences of teaching. For Nicole, the use of computer aided communication technologies served the purposes and intents of her subject and to facilitate her students' reflection on their practical experiences, even though she spent extensive time and effort in establishing and co-ordinating their availability and use (diary entries, Nicole).

Donald expressed his feelings that the unreliability of available computerised communication technology could make it an ineffective and unreliable support for learning interactions.

We don't really use much in the way of IT for quite a few reasons. One reason is that the students just loathe WebCT and they complain about it all the time...they don't like it cause it ... is clunky to work and I don't like using it myself ... IT is so brittle and fragile and if it doesn't work a hundred percent of the time when the students need it then don't use it. And I find as well for me most of the time there is very little value it adds to the learning process and all it does is add more hours of my time doing or taking time away from my research and it's frustrating students. (Donald, Interview 1)

However, Donald experimented with face-to-face interactions and the overall subject structure. Flexibility was evident in terms of the variety of ways students were offered to interact and respond to material both theoretical and practical (Field Notes, Course print materials).

Martin's use of a mix of skills development workshops, lectures, studio sessions and seminars, and the close interactions he had with his students as they worked through projects, provided plenty of opportunities for students to engage with ideas and develop understandings and skills (Field Notes). For Martin, the use of computer technology was an inherent feature of his course anyway, but because of the high face-to-face contact time he had structured into his subject, computer technology was used only minimally, beyond the essential use made of it in project work. For example, an email list was used mainly for posting notices about due dates, changes to the timetable and so on (Field Notes). In fact, Martin held the belief that to engage students in the skills and abilities needed to design and understand information environments, it was necessary to reduce regular computer use, to stimulate deep reflection upon its essential use (Field Notes).

Some other examples of experimentation used by the teachers in the study included the use of WebCT; printed workbooks and study guides; the use of multiple pathways for students to work through materials and ideas; making materials and experiences relevant by incorporating real life artefacts and field experience; and, including open-ended activities to allow and encourage students to create their own meanings and solutions to problems (Field Notes). All the teachers in the study acknowledged that there were opportunities for experimentation in creating new courses at Ipswich ("we don't have to do things the old way" (Martin, Interview 2)), and did not feel compelled to ensure that experimentation only meant the incorporation of computer based communication technologies.

The students who responded to requests for their reflections on their learning experiences during the semester recognised, in some instances, that there was a difference to the courses offered at Ipswich compared with those offered at St Lucia. The variety of teaching strategies used in their courses was identified as being supportive of their learning. They also pointed out that the new courses themselves presented them with innovative ways of learning about their field. From the researchers' point of view, there seemed to be some links between the way the students talked about their learning and the lecturers' experimentation with teaching strategies and approaches to the conduct and structure of their subjects. For example, one student in Martin's class pointed out that the subject drew together ideas from many areas and helped her to make connections with her prior knowledge. From her point of view, the subject approached information technology from a perspective not usually found in other courses.

The thing I like about the projects is the ability to pull together a lot of different technical skills. If you're just working on Java ... when you have a subject like studio, which actually draws on all subjects, you can use the Java aspect with some of your design skills... and you get to team together a whole lot of things ... I find that really excellent. (student, Martin's class)

Some students believed that the variety of teaching strategies used and the learning strategies encouraged enabled them to engage more readily with ideas and to focus on what was important. For example, one student in Donald's class commented upon the value of both the classroom discussions and the learning journal for helping him to identify key ideas and link them together.

The initial learning takes place at home when you're reading and processing [set readings and other materials in the study guide] there. I found the questions that contributed to the journal were very helpful because [they] helped me to see what was important, what to focus on....[And] in class, expanding on what we've learnt [at home] helps you. (Student, Donald's class)

While the provision of resources at Ipswich meant that experimentation was encouraged, the teachers expressed concerns about sustaining the costs of experimentation when the funding runs out. Nicole, for example, felt that there was some possibility to experiment, but increasingly she was being asked to justify experimentation in terms of financial resources.

I guess you have some opportunity to experiment but increasingly we're beginning to...justify those experimentations because of costs. We had, we did have to some extent an open cheque book I think in the beginning and now people are saying that's all very well but how can we fund, sustain this particular mode that you've designed? Is this going to be an ongoing cost? When will it need to be renovated and how much will the renovations cost? ... I think that there hasn't necessarily been a lid put on experimentation, but I think people are asking for more judicious consideration of what you might be doing. (Nicole, Interview 2)

### *Enhanced Learning*

Subjects and courses at Ipswich have enhanced and raised the awareness of the case study teachers' and many of their students' perspectives on the quality of learning taking place. Both the students involved in the data gathering processes and the three teachers participating in the study believed that learning was enhanced due to the opportunities provided by the flexible learning environment at Ipswich. The teachers believed that they were more able to acknowledge student needs, especially because their classes were small. According to the teachers involved, the environment provided opportunities for authentic activities to be enhanced and undertaken in more efficient and meaningful ways. The beliefs that each teacher held about learners and learning and the ways each attempted to meet the learning needs of their students have been described earlier in this paper.

There was recognition by the students that courses at Ipswich were different in structure from those at St Lucia. At Ipswich there were

"smaller groups, the class has been rather informal, no sort of structured lecture and tutes as such...whereas [similar classes at St Lucia are] pretty much just the lecture and rocking up to the tutorial...and it's certainly helped me a lot being here as opposed to when I was at St Lucia" (student, Donald's class).

Some were able to describe just how the Ipswich situation had helped them to learn. When asked about their learning during the focus group interviews, the students involved were able to express their views about their own learning and were conscious of how their learning was being supported. For example, one student in Donald's class described

subjects offered at the main campus as being very different in structure from similar ones offered in Ipswich in the same Faculty. In the smaller classes at Ipswich, the informal atmosphere was appreciated, and consequently, a culture formed...where [we] were all comfortable with each other...people felt free to say anything...and also the lecturers know us" (student, Donald's class). Awareness was thus raised about how such an atmosphere encouraged the students to take risks, speak up, ask questions and offer opinions. Students also recognised that the journals they were asked to develop helped them to become more reflective, helping them to "take what you're learning and apply it to yourself" (student, Donald's class). The students pointed out how engaging in projects or doing something with new ideas enabled them to learn better. They felt they were "actually doing stuff, instead of just lectures then cramming at the end and say[ing] yes I've passed and then in three weeks time forget[ing] what you've just learnt anyway. The progressive type project thing helps you revisit stuff that you've learnt from other semesters" (Student, Martin's class). Donald's students saw a similar advantage. Upon reflection of their assignment to explore change management in a business environment, one student noted that they were given the chance to "take the theory that you're learning and apply to it what you've actually seen in practice...[it] really reinforces it." (Student, Donald's class).

Nicole had noticed that an increasing number of students were becoming conscious of their own learning and more able to describe their expectations for studying at university.

[The] students have to expect more out of their learning? I think they do. The students and the cohort that we've just had finished here were very quick to come and say, 'Hey wait a minute, I'm not ready.' And, 'You're not giving me what I need to know. This doesn't match with what I'm going to need in the real world.' Those sorts of things, and they're expecting that the courses will provide those sorts of things. (Nicole Interview 2)

She also considered whether the students' raised awareness was related to their having studied at Ipswich or whether it was a general trend amongst students. However, she thought that Ipswich had something to do with the increased self-awareness she was experiencing among students, stating, "I certainly didn't have those sorts of conversations with people at St Lucia" (Nicole, Interview 2).

While evidence from the students' perspectives cannot be said to be representative of all students involved in the three subjects, we believe that the responses we did gather offer at least some, though perhaps, tenuous, support for the successful embodiment of the three teachers' visions for teaching and learning as described by them during interviews, in their diaries and through the classroom observations made by researchers.

### *Summary*

The experiences of the three teachers in this study showed that the specially designed Ipswich campus provided an opportunity for them to exemplify an orientation to teaching that was student-centred. While these teachers held the belief that student-centred teaching was educationally sound before they went to Ipswich, they were enabled to demonstrate their beliefs through the design and development of their new subjects. In other words, the Ipswich campus had afforded the manifestation, by these teachers, of a learning facilitation orientation to teaching (Kember & Gow, 1994), rather than a knowledge transmission orientation (Kember & Gow, 1994), which can be the result of having to face large numbers of students with limited resources in the way of space, materials and teaching staff.

Placing the student at the centre of the teaching and learning process is not all about resource provision, of course. In this study, the teachers already had well-founded notions

about education. The establishment of the Ipswich campus as being specifically designed to support resource intensive teaching through the provision of the infrastructure to enable remote and local classroom interactions in smaller student groups provided the opportunity for the teachers in the study to put into practice those well-founded and already held beliefs about student-centred learning. The new courses developed by the three teachers, therefore, served to confirm expectations for better learning and for the establishment of better learning environments for students, but those learning opportunities were designed in terms of what the teachers themselves believed to be sound educational bases. For example, while these teachers had to grapple with what they believed to be common understandings of flexibility (viz., that flexibility equals access), they did not move away from their beliefs about good education. Consequently, they began to describe flexibility as having a deeper meaning related to learning rather than to access only. In doing so, there was some evidence to suggest that their students' notions about flexibility began to develop similarly. Even though the three teachers were very firm in their ideas about good teaching and learning, however, the changes in their teaching context led them to be faced, variously, with challenges to their *knowledge of content*, their *general pedagogical knowledge*, their *pedagogical content knowledge*, *knowledge of curriculum* and *knowledge about educational ends* (Shulman, 1987).

### Implications

First, this study has implications for the development of teachers at campuses specifically designed for "flexible learning and delivery," and for the development of university teachers, in general. If teaching such as that demonstrated by the teachers involved in this study is predominant across the new campus, then it is the researchers' belief that Ipswich has the potential to become a showcase for good teaching and learning practices.

For the three teachers involved in the study, the establishment of the new campus has not eventuated in dramatic changes to the ways they think about teaching and what constitutes good education. For the most part, their *general pedagogical knowledge* (Shulman, 1987) remained unchanged. These teachers were experienced, successful teachers and were used to talking about education and their educational practices and beliefs. These deeply held beliefs were unlikely to change because their physical environment had changed (Mezirow, 1991). However, the support provided in terms of resources and opportunity, gave the teachers the chance to draw upon their already established beliefs and practical experiences and endeavour to make real their vision for learning through curriculum design, development and implementation.

A showcase of good teaching and learning beliefs and practices is important to assist teachers for whom student-centred approaches are new, and whose *general pedagogical knowledge* and *pedagogical content knowledge* (Shulman, 1987) are challenged by the ever constant pressure to concentrate on learners and learning, rather than knowledge transmission. This shift in concentration means, for many teachers, a shift in their conception of the teaching enterprise as a whole. Conceptual change about teaching can be very difficult to realize, especially when the conceptions are held by university teachers who have developed their existing understandings after being involved in teaching during lengthy academic careers (Kember & Gow, 1994). However, demonstration, guidance, having opportunities to view good teaching practices, such as those demonstrated by the three teachers in this study, and their effects, will provide models of possibilities and be a key to promoting and supporting teacher change (Guskey, 1986). Assistance for the development of teachers' conceptions about teaching towards a learner facilitation orientation (Kember & Gow, 1994) can be provided through the showcase that the new Ipswich campus could become.

Second, the study has implications for the way institutions promote new campuses, specifically those specially designed to support flexibility in teaching and learning. At Ipswich, the campus is promoted as providing opportunities for better learning. Our study of the three teachers during one semester seems to support those higher expectations and enhanced opportunities for, as well as raised awareness of, learning were outcomes. However, the institution as a whole will need to rethink what those aspirations and outcomes will mean for the perspectives on learning opportunities available across all campuses. If newer, better resourced campuses, such as Ipswich, offer better opportunities for student learning, does that mean that opportunities provided at other campuses are somehow not as good? If the "catch cry" of campuses such as Ipswich, is flexibility, which, in the university's own promotion and in the teaching outcomes as demonstrated by teachers such as those involved in this study is really a synonym for good education, then the institutions may need to reconsider the advantages of promoting flexibility as a particular quality of a new campus. Rather, the uniqueness of the subjects and courses offered and the ready availability of communications technologies may be particular unique elements. It would be, perhaps, in the institution's best interests to describe what is offered at all campuses as an acknowledgement of the learner's place at the centre of teaching and learning processes, and that this is being achieved, even though classes are large and resources may not be as plentiful or extensive as at the new campus.

### **Conclusion**

Support for teaching and the development of teachers through campuses such as the Ipswich campus of the University of Queensland can have far reaching effects. Opportunities provided through a flexible delivery and learning environment go beyond the technologies themselves. The availability of extensive resources and the provision of infrastructure to support communications technology meant that the teachers involved in this study were "freed up" to pursue their ideas and implement what they believed were good teaching practices. They were stimulated to enact their vision for teaching and learning and were better able to acknowledge student learning needs than when they had taught at the main campus.

Changes such as those that have occurred as a result of the establishment of the new specially designed campus at Ipswich have indicated that teachers who are experienced and successful teachers will continue to work towards implementing ideas that are sound, from an educational point of view. They will adhere to their beliefs about learning and teaching and incorporate them within the new environment. However, the experiences of the three teachers in the study suggest that, for teachers unused to approaching teaching from a student-centred perspective, there will be need for staff development support to assist them as they grapple with the challenges that they will face as they experience changes in their teaching situation. Furthermore, this study also suggests that it may be important for the institution as a whole to recognise that the promotion of the better quality of learning opportunities at the new campus will have implications for the way learning across the University is advanced.

## References

Entwistle, N., Skinner, D., Entwistle, D., & Orr, S. (2000). Conceptions and beliefs about "good teaching": An integration of contrasting research areas. *Higher Education Research and Development, 19*(1), 5-26.

Guskey, T. R. (1986). Staff development and the process of change. *Educational Researcher, 15*(5), 5-12.

Kavanagh, M. H., & Taysom, S. V. (1999). Multicampus university in operation: Perceptions of staff and students. *Journal of Institutional Research in Australasia, 8*(2), 98-108.

Kember, D., & Gow, L. (1994). Orientations to teaching and their effect on the quality of student learning. *Journal of Higher Education, 65*(1), 58-75.

Mezirow, J. (1991). *Transformative dimensions of adult learning*. San Francisco: Jossey-Bass.

Nikolova, I. & Collis, Betty. (1998). Flexible learning and design of instruction. *British Journal of Educational Technology, 29*(1), 59-72.

Slovan, M. (1994). *A handbook for training strategy*. Aldershot, England: Gower Publishing.

Shulman, L. S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher, 15*(2), 4-14.

Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review, 57*(1), 1-22.

University of Queensland. (2000, 4 September). *Ipswich campus: Study - Flexible learning*, [Website]. University of Queensland. Available:<http://www.uq.edu.au/ipswich/Study-learning.html> [2000, 24 November].

Van den Brande, L. (1993). *Flexible and distance learning*. Chichester: John Wiley