Parallel Universes: Student and Teacher Expectations and Interactions in Online vs Face-to-Face Teaching and Learning environments

ABSTRACT

This paper is based on the author's critical reflections as a University teacher of taking a long established and highly successful on campus (face-to-face) course for the first time into the online environment as a completely online course. The on campus course was run at the same time as the online course. It is argued, that the success and effectiveness of online courses, depend to a large degree on bringing together the 'two parallel universes' outlined in this paper: (i) of different expectations about course delivery, teaching, assessment, feedback and interactions that exist between teachers and students in the online environment; and (ii) the different pedagogical dimensions and requirements of a face-to-face university course in contrast to an online course. We need to better understand these parallel universes in order to design engaging, interactive and effective online courses. Comparisons between the online and on campus courses are drawn to provide valuable lessons and strategies for higher education teachers moving into the online learning and teaching environment

AUTHOR

Thomas Wanner
Geography, Environment and Population, The University of Adelaide

INTRODUCTION

Online education or e-learning "refers to the use of information and communications technology (ICT) to enhance and/or support learning in tertiary education" (OECD, 2005, p. 2). Online teaching can include either real time (synchronous) or anytime, anywhere (asynchronous) interactions or both (Poe & Stassen, n.d.,). There is a spectrum of how much technology is part of teaching and learning in higher education ranging from traditional face-to-face (F2F) interaction, to blended or sometimes called hybrid learning with a mixture of F2F and online delivery, to fully online teaching and learning (OLT) where all course content is delivered online (Allen & Seaman, 2013, p. 7). Online technologies have provided new opportunities to make higher education more flexible and student-centred and are seen by many University leaders as new ways to meet the challenges of the higher education sector in the context of economic constraints, increasing globalisation of education and changing pedagogical approaches (OECD, 2005; Allen & Seaman, 2013).

In Australia, reflecting global trends, e-learning or online learning is becoming increasingly prominent in tertiary education with Australian universities providing more online courses and degrees, and more students enrolling in online courses (Norton, 2013). The current three main trends of the Australian higher education sector, as stated in the Horizon 2013 report for Australia, are (i) that people expect "to work, learn, and study whenever and wherever they want", (ii) that "increasingly students want to use their own technology" and (iii) that "education paradigms are shifting to include online learning, hybrid learning and collaborative models" (Johnson et al., 2012, p. 3). These changes in higher education in Australia and elsewhere have resulted in changes to the role and experiences of the teacher and the nature of teaching and learning itself (Bennett & Lockyer, 2004, p. 232).

Taking a course from the face-to-face level of teaching to the online environment or designing a new course for just the online environment can be a very challenging task for higher education teachers (Herman and Banister, 2007; Redmond, 2011). The online teaching and learning environment requires not only a more complex and different set of skills, activities and interactions than the face-to-face learning environment (Bennett & Lockyer, 2004; Park et al., 2013; Redmond, 2011; Tuovinen, 2000) but a paradigm shift of the teaching pedagogy and approach for which most University educators are neither prepared nor adequately trained for (Allan & Seaman, 2013). The varied roles and skills required of the teacher in an online or e-learning environment such as 'e-moderator' (Salmon, 2003), content facilitator (Park et al., 2013), or designer, assessor or technologist (Bennett & Lockyer, 2004) makes teaching in the online environment more challenging but not necessarily less rewarding.

The author has had much experience as a teacher in higher education. His teaching is strongly situated in the blended teaching and learning mode through the extensive use of the University's learning management system (LMS) using tools such as wikis, discussion boards, electronic journals, quizzes, and electronic submission and return of assignments and provision of readings and the PowerPoint slideshow and recordings of lectures.The step to design and run a complete online course for the first time, however, was a new challenge.

This paper is situated in this relatively new space between face-to-face/blended/online learning in the higher education sector in Australia. It is based on the author's critical reflections as a University teacher of taking one of his long established and highly successful (based on formal student evaluations) on campus F2F courses for the first time into the online environment as a completely online course. The on campus course was run at the same time as the online course (Semester 1, 2013). It is argued, that the success and effectiveness of online courses, depend to a large degree on bringing together the two parallel universes (or alternative realities) outlined in this paper: (i) of different expectations about course delivery, teaching, assessment, feedback and interactions that exist between teachers and students in the online environment; and (ii) the different pedagogical dimensions and requirements of a face-to-face university course in contrast to an online course. The central thesis is that we need to understand better these parallel universes to be able to design engaging, interactive and effective online courses. The paper provides a few helpful lessons and strategies for novice instructors in the online learning and teaching space.

Face-to face (F2F) vs online learning and teaching (OLT) pedagogy

The trend towards online teaching and learning in the higher education sector has led to more research about similarities and differences between F2F and OLT pedagogy and practices (Deakin University, n.d.; Neuhauser, 2002 Herman & Banister, 2007; Kirtman, 2009; Jaggers, 2013: Lu & Lemonde, 2013).

Research about distance learning, which has been around for over 30 years, also contributes much to best practices and new pedagogic approaches in online education (Anderson & Dron, 2011; West, 2011). There has been a shift in last decade in that online courses compared to F2F courses are now seen by students as equally effective in terms of what they learn and their overall learning experience (Johnson et al., 2000; Bernard et al., 2004; Neuhauser, 2002; Legutko, 2007; Kirtmann, 2009). There are differences in that students prefer to take more difficult or more interesting subject in the F2F mode because of the perceived deeper level of student-teacher and student-student interaction in F2F courses (Jaggers, 2013). A study by Burns (2013) showed that students perceive online courses to be most convenient whereas F2F courses are seen as more conducive to their own learning style.

As Hannon (2009, p. 424) and also Kirtmann (2009, p. 112) have argued, there are shared understandings of teaching practice in the traditional F2F learning space between teacher and students, such as clear ideas when and where to meet and what goes on during the classroom. In contrast in OLT spaces there are less shared understandings of teaching and learning activities. The OLT space therefore requires deeper pedagogical considerations and considerations of the appropriate technology for achieving learning outcomes, than simply taking a F2F course and adapting it for online delivery (Fletcher et al., 2012). As Creasman (2012, p. 1, emphasis in original) states, "online courses do NOT function just like face-to-face classes, and designing the online course is not a simple matter of putting the material on the web."

Studies have shown that online courses overall fail in regard to student engagement and learning outcomes mainly because of the students' sense of isolation or low level of self-directedness (HRC, 2009, p. 15). However, students value the more independent, flexible and self-directed learning of online courses which depend on the instructional design of online courses for successfully achieving learning outcomes and student satisfaction (West, 2011). This means the online instructor plays an absolutely crucial role for the design and facilitation of effective online courses (Faculty Focus, n.d.; Tuovinen, 2000; Martens et al., 2007; Park et al., 2013). The key underlying idea for the design of effective online courses is that "instructors ensure that pedagogical principles drive the use of technology rather than the other way around" (HRC, 2009, p. 12). Online courses that are driven by "technological optimism" using the latest technology without consideration of online pedagogy and best practice design principles will not succeed (Martens et al., 2007, p. 85). There are three basic principles for successful online courses: (1) engage student in content, (2) promote student-teacher and student-student interaction, and (3) strive for social, cognitive and teaching presence[1] (HRC, 2009, pp. 3-5). These principles are equally important for effective F2F courses. However, the methods in achieving them are different in each of the two teaching and learning modes with technology aiding the course delivery and interactions in the online environment, and student-teacher and student-student interaction easier organised and managed in F2F courses

There are many 'best practices' guidelines about designing and implementing online courses which share similar pedagogical ideas (see HRC, 2009; Boettcher, 2011; Faculty Focus n.d.; Poe & Stassen, n.d.). Planning an online course is not just about content but very much about the process or about how the content is delivered and in what forms interactive, collaborative learning is encouraged. There is thus an "increased organisation responsibility of an instructor" (HRC, 2009, p. 8) to plan and run an online course (Legutko, 2007) compared to a F2F course. The 'best practice' principles suggested by experienced teachers and by much research in this area, provide helpful pointers for the planning and running of online courses. For example, Boettcher (2011) suggests the following best practice principles:

1. Be present at the course site
2. Create a supportive online course community
3. Share a set of very clear expectations for your students and for yourself as to (1) how you will communicate and (2) how much time students should be working on the course each week
4. Use a variety of large group, small group, and individual work experiences
5. Use both synchronous and asynchronous activities

[1] Social presence is when "participants in an online course help establish a community of learning by projecting their personal characteristics into the discussion." There are three forms of social presence: affective (expression of emotions, feelings and mood), interactive (evidence of reading and thinking as response to others). Cognitive presence refers to extent to which the teacher and the students "are able to construct and confirm meaning through sustained discourse (discussion) in a community of inquiry." Teaching presence is "the facilitation and direction of cognitive and social process for the realization of personally meaningful and educationally worthwhile learning outcomes (HRC, 2009, p. 5)."

6. Prepare discussion posts that invite questions, discussions, reflections and responses

7. Early in the term - about week 3, ask for informal feedback on "How is the course going?" and "Do you have any suggestions?"

8. Focus on content resources and applications and links to current events and examples that are easily accessed from learner's computers

9. Combine core concept learning with customized and personalized learning

10. Plan a good closing and wrap activity for the course

Other best practice guidelines for online course design stress similar dimensions or emphasise others, such as to 'develop learner's effectiveness as learners early in the course', 'clarify learning goals and one or more paths to them, and 'provide prompt constructive feedback' (Deakin University, n.d.); or to provide technology training for the students, out-of-class group activities and clear structures of communication with students to promote interactive teaching and learning (HRC, 2009, p. 15). I used these principles, in particular the ones by Boettcher (2011), for the design of my first online course as discussed below.

Going online: Designing and implementing a fully online course

Because of my interest in blended learning and e-learning I decided to take my very successful F2F on campus course[2] also into the OLT space. The current changes in higher education to move increasingly to blended and fully online learning, combined with my University's Strategic Plan with its emphasis on flexible delivery, were an added impetus.

Both courses the F2F on campus course (52 students enrolled) and the online course (19 students enrolled) were offered simultaneously in Semester 1, 2013. They share the same content and learning objectives about environment and development issues and the multiple dimensions of sustainability. The courses differed primarily through how the content was presented in the online environment and different assessment tasks with a strong emphasis on peer interaction and group work in the online course.

The online course was offered through the learning management system (LMS). The student had to go through learning modules each week which included short mini-lectures (7-10 minutes long video recordings in which students could see me talking to a PowerPoint presentation) about core concepts and issues, short readings (like 1-3 pages long policy briefs) and links to video recordings and relevant websites. Students were required to go through lecture modules and then use the discussion board to answer questions and discuss the content of the week. This was the asynchronous part of the learning activities. Every fortnight there were synchronous online classrooms to discuss the content and issues that arose for the students in the previous two weeks.

At the beginning of the course, with the intention to create a learning community and get to know each other, students had to post an introduction of themselves on the discussion board. They were invited to upload a photo or video. In addition, they were asked to do (i) a short survey about their 'Personal Learning Environment' where I asked questions about their experiences and skills with online learning, their expectations of the course, and what kind of technology they have at their disposal and feel comfortable of using as part of their learning in this course; and (ii) VARK Learning style questionnaire (Both were intended to provide me with a better idea of the type of the students in the course and their individual requirements and needs. As a response to both, I provided more information in forms of videos and web links what online learning means and that it is based on self-management and self-directed learning as most of the students did an online course for the first time; and asked for students to get a headset with a microphone for the online classroom.

The assessment in the F2F and the online course were slightly different. The assessment in the online course included four components with some degree of choice for the students:

- Critical review of online lecture of an international expert on environment and development: this task was set to gauge current knowledge about environment and development issues and the critical thinking skills of the students
- Research project and Inter-cultural group work: students worked together with a group of 'Information Design' students at the Media University, Stuttgart, Germany to produce an e-book about environment and development. The Australian students worked together in groups of three to produce the content for a chapter of a country of their choice providing a critical analysis of the country's environment and development issues. The German students were responsible for the technological side of creating the e-book.

[1] The F2F course has been offered for the last six years. The formal course evaluations of students over the last few years show 'overall agreement' of 90% for student satisfaction with this course and with the learning approach and assessment.

- Student Choice Assignment: student could choose to produce an e-portfolio of their work (including such items as their discussion board postings, journal of reflection on key concepts, critical review of lectures or provided videos) or do a take-home-exam at the end of the course
- Participation in online classrooms, Google Hangouts and the discussion board

Students in the F2F course also had to a critical review and participation and presentation in tutorials, in addition to an essay and a take home exam. Group work activities were built into the tutorials.

At the end of the course, formal student evaluations of learning and teaching experience (SELTs) were conducted and an additional anonymous survey was conducted to get wider feedback. The student evaluations of the F2F on campus course were again very high with an overall satisfaction with the quality of the course at 97% (39 students of 52 students responded, 70% response rate). In contrast, the evaluations of the few students that took the online evaluation of the course (4 of 19 students, 21% response rate) were not so positive: only 25% were satisfied with the quality of the course. In a survey after the completion of the course I asked for more feedback (7 students responded). Although this is a very small response rate, there are some lessons that one can draw from the students' feedback. The following two sections about 'parallel universes' provide my critical reflections of why the course did not succeed as well as the F2F course and what lessons can be drawn from this.

Parallel Universe I: teacher and student expectations

The communication of expectations is seen by many as one of the most crucial aspects for good teaching. Chickering and Gamson state as one of the principle for successful undergraduate teaching that teachers and institutions communicate "high expectations" because "expecting students to perform well becomes a self-fulfilling prophecy" (Chickering & Gamson, 1987). I did communicate my expectations about how participation is assessed (HDR, 2009, p. 10), how teacher and students will communicate and interact, and how much work is required in the course (Boettcher, 2011)[3] through the course guide. At the end of each week a summary of course activities of the week and tasks and deadlines for the following week were posted on the LMS. It became clear, however, that the expectations of the teacher and the students in the online course about interactions and activities were in two different realities or parallel universes, as can be seen from these students' comments

"*Expected less interaction with teacher/learner and did not expect to have real time activities.*"

"*I expected the course to be easier due to the flexibility of not actually having to attend classes and lectures and be able to learn more in 'my own time'.*"

"*My expectation in entering an online course was that there would be little to no teacher-learner interaction except if problems/issues arise… I did not expect there would be set times for online classrooms, rather that students would be presented with course materials and assignments to complete in their own time.*"

"*I did not expect to have synchronous classrooms, which at first posed some issues in finding suitable time to participate among my changing schedule. However after participating in a couple, the synchronous classrooms exceeded my expectations as a method of online learning and interacting.*"

Students clearly did not expect synchronous (in real time) interactions in form of online classrooms although it was stipulated in the course planner on the University website that the 'online classrooms'. However, the course planner did emphasise that these are "synchronous" (in real time) online classrooms. This was an unforeseen outcome that will be remedied for future online courses. I had followed the good practice advice of combining synchronous and asynchronous activities (Boettcher, 2011); which was backed up from my own experiences as an online student where I had synchronous online classrooms which I found critical for student-student and teacher-student interaction and creating a community of learners. The organisation and running of the online classrooms was, as stated by Bach et al. (2007, p. 102), "very difficult to arrange and manage" because all students had different study and work schedules and had not planned for a fixed time for synchronous activities. However, contrary to the argument by Bach et al. (2007) that students prefer asynchronous activities in online learning and teaching, students really seemed to enjoy the online classrooms. A few students suggested in the formal evaluations in the category on how the course could be improved that more regular online classrooms should be held; a sentiment which was also reflected in student comments:

[1] Boettcher (2011) lists as "Best Practice 3: Share a set of very clear expectations for your students and for yourself as to (1) how you will communicate and (2) how much time students should be working on the course each week."

"I also enjoyed the different interactions in online classrooms."

"The online classrooms were also good, and provided a good opportunity to learn from other students, enhance understanding of theories, and share ideas."

"However after participating in a couple, the synchronous classrooms exceeded my expectations as a method of online learning and interacting."

In short, is important to work with the expectations of students but it is not, contrary to what Chickering and Gamson suggested, a self-fulfilling prophecy of "expect more and you will get more" (Chickering & Gamson, 1987). It requires hard work before and during the course to establish student expectations (through an early survey and then in week 3 or 4 with another survey) whether the course sits well with student expectations, what student progress and satisfaction is, and how to address any problems. However, it is a fine line to get this right and to merge the parallel universes of teacher and student expectations as teachers should not just follow student expectations but need to get students to follow teacher expectations. In an online environment it is even more pertinent to establish and work with student expectations.

Parallel Universe II: face-to-face vs online learning and teaching

There is another parallel universe in that F2F and OLT are understood and approached by many students (and also by staff and faculties) as two separate entities or alternative realities. It is my observation that some students,staff and faculty either merge both worlds of F2F and OLT as if there is no difference at all or they keep both completely separate without any considerations that both learning and teaching environments have similarities and their respective strengths could improve the other. As Deakin University's online learning guide (n.d., p. 1) states, there are two main schools of thought about teaching online: 1. teaching online requires a different mindset and different pedagogies, and 2. teaching online is based on the same principles which underpin face-to-face teaching. However, I would argue that these two camps are too simplistic as there are similarities and differences in F2F and in OLT environments which require both a 'different mindset and different pedagogies' as well as sharing the same principles of good teaching whether F2F or OLT. The challenge is neither to simply transfer F2F pedagogies and teaching practices to the online environment nor "to establish new pedagogies for e-learning"; what is required is "a more conservative approach: finding out what teachers do and why, and then working out how technology can best be used to support that" (Oliver, 2006, pp. 133–134; quoted in Deakin University, n.d., p. 4). The real challenge is thus to merge the mindset and institutional culture that works on the basis that there are two parallel universes (F2F and OLT) rather than trying to bring them together in order to improve teaching and learning in both areas.

In the mindset of many students and teachers, however, there is still the dominance of the F2F environment which shapes their understanding of how teaching and learning should happen in higher education. In other words, there is the understanding that teaching and learning online is based on the same principles and practices as teaching and learning in F2F courses. For example, although the ability to do group work is now seen as an essential graduate attribute for students, the students in the online course Environment and Development did not expect to do any group work and overall regarded the online environment as not conducive to group work:

- I was not expecting to do a group assignment.
- Group tasks are always fraught with difficulty, despite teachers' inversely proportional enthusiasm for them. This was particularly ambitious given the online setting and still more ambitious again for involving collaboration with international students (Germans).
- Group assignments are a waste of time over the Internet. Members have no face to face interaction and it makes cooperation and effective submission impossible.

It can be argued that the online environment is even more conducive to group work because of the variety of technologies available to make it interactive and to track and record individual inputs. The example of group work shows that students take their understanding and expectations of group work from F2F courses to online courses. What kind of group work is valuable and beneficial for student learning and experience in OLT is an area in need of more research.

Another concern of the two parallel universes of F2F vs OLT is that online learning is seen by students (and faculty) as an easier and quicker option which requires less effort than F2F teaching and learning. The early personal learning environment survey and the end of the course survey showed that most students were new to the online teaching and learning environment and not familiar with the high

level of motivation, self-discipline and organisation that is required for studying an online course. Most students (5 from 7 respondents) did only 2-4 hours of work each week for the online course although at least 12 hours were stated as teacher expectation based on the University's guidelines for study at that level. One student stated did less than 2 hours and only one did significantly more than 12 hours.

There is also the issue of students' academic skills not just their motivation in online vs F2F teaching and learning. Students who are "generally higher performing" do well in online as well as F2F course but students who are lower performers and are struggling academically, are not well suited for the online learning environment as it requires very good self-management (Lu & Lemonde, 2013, p. 972). For students, the saying 'know thy self' in terms of one's own scholastic aptitude for a topic may serve best in determining if a particular student should take an online course in that topic (Lu & Lemonde, 2013, p. 972). Two students who undertook the new fully online course in 2013 had failed the F2F on campus course in previous years. It is important to stress here that OLT is not inferior to F2F teaching in regards to student experience and learning outcomes (Kirtman, 2009, p. 112) but that better performing students seem to do better in OLT environment than lower performing students. The contradiction here is that lower performing students might be attracted to online courses as they are perceived as an easier option. This is another important area for more research.

In short, F2F and OLT seem to be like two parallel universes which exist side by side without much learning by instructors, faculties and students about the different pedagogies and methods needed for both these teaching and learning spaces and how to bring them both together to improve teaching and learning in both environments. Merging both universes – the F2F and the OLT – is of course happening with blended learning but here the major component is F2F with some elements of OLT. Studies show that blended learning is the best option for learning outcomes and student experience at higher education (Partridge et al., 2012). Blended courses like fully online courses also require a high degree of self-motivation, self-discipline and independent learning which can be unfamiliar to students who have only experienced traditional face-to-face formats (Partridge et al. 2011, p. 5). Students as well as teachers therefore need more education and help to find their way into the online learning and teaching environment.

Lessons and Strategies to deal with Parallel Universes

I will offer here some lessons and strategies for other online instructors to help merge the identified parallel universes. Some of the points (e.g. about expectations) are not new and mentioned in 'good practices' guides for online teaching and learning, discussed above, but need reiteration and include my personal suggestions.

Lesson and Strategy 1: Question your motivation, teaching pedagogies and skills to teach fully online

There are some questions anyone who intends to move to the OLT environment should answer beforehand: Why would I want to teach online? What are the advantages for providing a course fully online compared to the F2F or blended mode of teaching and learning? What skills can I transfer and use from F2F to the OLT environment? What are the best pedagogies and technologies to achieve the learning outcomes?

Creasman (2012, p. 1) rightly observed, "designing your first online course will likely challenge your pedagogical mettle." It certainly did that for me. The experience of designing and running an online course questions one's teaching philosophy and practices. Higher education teachers need to be careful not to reconstruct and reinforce the 'parallel universes' identified in this paper. There is much that can be done before and during the course to better understand and try to overcome these parallel universes, as outlined here.

Lesson and Strategy 2: Establish expectations of students and their academic and technological skills very early

Establishing student expectations and communicating clear expectations about participation and assessment is vitally important for the success of both F2F and OLT courses. For online courses, it would be helpful, if possible, to contact students before the course starts and establish expectations, skills and technological set-up so that these can be taken into account right from the start and can be remedied before the course starts. Students could be enticed by the idea of being part of the course design and certainly would appreciate by being 'ready' in regard to technological equipment and skills when the course starts. If needed, additional support (e.g. online videos or workshops about needed technological skills, for example, how to do a wiki) can then be provided early on.

Lesson and Strategy 3: Do not do it alone

Although I did speak to educators with experience in online teaching and discussed the course design beforehand, the overall setting up and running of the course was left to me as course coordinator without help from an educational technologist. However, as Redmond (2011, p. 1058) argued, "universities can't expect that instructors can and will move from being a novice educator [in an online environment] to an expert online teacher without time, experience and support." There is a major problem in that as it is often expected of academic teachers to do just that, in times of financial constraints and where online teaching is seen as the easier and cheaper option. Online educators, in particular novices, need the support of the faculty in terms of clear e-learning strategies, finances, online technology expertise and in crediting the efforts of the educators in moving to the online environment through new workload models (Partridge et al., 2011).

Lesson and Strategy 4: Use synchronous and asynchronous activities

My experience has shown that synchronous activities in form of online classrooms or Google Hangouts are much valued by the students as they help with establishing a learning community, delivering content and for discussion and exchange of ideas and knowledge. For my course, there was certainly a demand to increase them in the future (as they were only held each fortnight).

Lesson and Strategy 5: Be prepared but also be prepared for failure (and learn from it)

As I have found out, the most well-intentioned use of good practices of design principles for online courses is "no guarantee for success" (Martens et al., 2007, p. 82). There are too many unknown and uncontrollable factors (e.g. whether students are high performers or not, the level of student motivation, technological skills and experience, cultural factors and so on) which can undermine the success of the online course in terms of student satisfaction and experience despite the best planned online course design. As Hannon states, "even experienced practitioners encounter unexpected outcomes when designing pedagogies to engage students online" (Hannon, 2009, p. 423, emphasis added). As reflective practitioners we need to have the courage to try new pedagogies and activities, including venturing into the online learning and teaching environment, but also need the courage to fail and to learn from our mistakes and make our course better next time.

CONCLUSION

This paper provided my critical reflections about designing and implementing for the first time a fully online course based on the same content and learning objectives of a long established and successful on-campus course which ran at the same time. This experience provided some valuable comparisons and insights between F2F and OLT. It was argued that the success and effectiveness of online courses depends on overcoming the two 'parallel universes' of (i) different expectations about course delivery, teaching, assessment, feedback and interactions between teachers and students in the online environment; and (ii) the different pedagogical dimensions and requirements of a face-to-face university course in contrast to an online course.With the increasing provision of online and blended learning courses in Australia's higher education, there an increasing need to better understand and then to merge the 'parallel universes' of different student and teacher expectations and different worlds of F2F and OLT which permeate higher educational culture and institutions.

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ISSN 1835-6850

Editorial Board

CRICOS 00123M

Published November 2014.

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