Putting transformative learning theory into practice

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This paper elaborates on a number of key criticisms of Mezirow's transformative learning theory as well as providing arguments that validate it. Our paper exemplifies how Mezirow's theory can help adult educators and prospective school teachers understand that social structures and belief systems can influence student learning, that learners make meaning of their experiences in various ways which influence the sort of value systems they develop and that disorienting dilemmas often challenge the validity of one's values and the assumptions that underpin them. It exemplifies how Mezirow's theory can be put into practice in Adult and Higher Education via three case studies undertaken by the authors in different places, at different times and with different sets of learners. These include mature aged women returning to study, PhDs at a Swedish Engineering University, and domestic and international students studying at an Australian regional university. The case studies make use of a values survey, interviews and subsequent focus groups. Data from the survey and interviews are analysed and used to argue that transformative learning (Mezirow, 1991) can be practiced, to good effect, in university staff development

and teacher education courses.

Keywords: Transformative learning; Adult and Higher Education; Academic development.

Introduction

One of the research questions that informs this paper asks 'Can transformative learning theory be put into practice, and if yes, what are some of the differences it makes to the lives of learners?' A more specific question is 'Can disorienting dilemmas be triggered by carefully designed exercises, and, if yes, what are the effects on student transformative learning?' To do this we need first to define and critically review Mezirow's theory, which has, over time, become known as transformative learning theory. According to Mezirow, this theory explains how adult learners make sense or meaning of their experiences, how social and other structures influence the way they construe that experience, and how the dynamics involved in modifying meanings undergo changes when learners find them to be dysfunctional (Mezirow, 1991). Mezirow's theory owes much to the critical theorists and, in particular, to Jurgen Habermas, Habermas's theory of Communicative Action (1984 and 1986) postulates that there are different types of action that are motivated by different types of reason. He labels his first category Strategic or Instrumental Action. This type of action uses unilateral, non-inclusive means to achieve its aims when the end is considered important enough. Communicative Action uses understanding and agreement, via a process of rational and fair discourse, to achieve a mutually acceptable end (Gougoulakis & Christie, 2012). According to Habermas 'the system-world' that includes the market, government and non-government organizations, has been increasingly characterized by Strategic or Instrumental Action. Habermas does not exclude the use of communicative action in the system world but is concerned that instrumental reason and action, which is most often found there, is 'colonizing' both public and private spheres of 'the life-world' (Eriksen & Weigård, 2003, 101). Jack Mezirow's theory is much more focused on individual transformation but it too emphasizes rational and non-coercive dialogue as a means to make a change for the better. The aim of transformative learning is to

help individuals challenge the current assumptions on which they act and, if they find them wanting, to change them. This includes a mental shift as well as a behavioural one. The hope of transformative learning is that better individuals will build a better world.

Mezirow's Theory and Action Research

Mezirow's theory, expressed in lay terms, argues that every individual has a particular view of the world. The particular worldview may or may not be well articulated but it is usually based on a set of paradigmatic assumptions that derive from the individual's upbringing, life experience, culture or education. When asked to explain their worldview most individuals say, in effect, 'The world is this way because'. Their explanation is, in turn, based on a set of causal assumptions that are often ingrained and well rehearsed. If the individual is especially committed to his or her worldview it is highly likely that a proselytising element will creep in. In that case the individual may argue that 'The world should be this way', which is a position grounded in a set of prescriptive assumptions. Mezirow claimed that individuals have difficulty changing because their worldviews become unconscious frames of reference constructed of habits of the mind. He argues that particular points of view can become so ingrained that it takes a powerful human catalyst, a forceful argument or what he calls a disorienting dilemma to shake them.

In a collection of papers appropriately entitled, In Defense of the Lifeworld (Welton, 1995), Mezirow referred back to his extensive 1978 national study that he conducted on behalf of the US Department of Education. His study could be described as an action research project (Lewin, 1946 and Kemmis & McTaggart, 1998) since it was collaborative, participatory and sought to improve an aspect of society, in this case, second chance education for women. The Department wanted to know why so many women were returning to study and what effects their studies had on them. Mezirow was able to report that a return to study often lead to 'consciousness raising' on the part of many women and that the process tended to occur in a number of steps. He listed these as:

- 1. Disorienting dilemma
- 2. Self-examination
- 3. Sense of alienation

- 4. Relating discontent to others
- 5. Explaining options of new behaviour
- 6. Building confidence in new ways
- 7. Planning a course of action
- 8. Knowledge to implement plans
- 9. Experimenting with new roles
- 10. Reintegration.

On the basis of this early study, Mezirow, in dialogue and debate with other adult educational theorists, has postulated, refined, and, at times, revised his theory of transformative learning. An essential element of Mezirow's theory is the need to develop communicative skills so that internal and external conflicts, which result from changes in perspective, can be resolved via rational discourse rather than force. Mezirow has argued that rational discourse demands complete and accurate information, freedom from coercion or distorting self-deception, an ability to weigh evidence and assess arguments objectively, an openness to other points of view, an equal opportunity to participate, critical reflection of assumptions and a willingness to accept informed, objective and rational consensus as a legitimate test of validity. The insistence on rationality as a key to 'Communicative Action' and eventual transformation has been a contested aspect of transformation theory. In the following section we refer to this and other critiques of the theory. We also respond to a call for more integration between practice based research and transformative learning by introducing three case studies in the latter part of the paper that exemplify how the relationship between the two can be symbiotic. We argue, as does Taylor (2007), that the combination can 'ultimately result...in a more informed practice for fostering transformative learning and an effective method of classroom research...'.

Reconceptualising transformative learning

Mezirow's theory and its importance to academia can be gauged by the number of masters and doctoral students who used it as a basis for their dissertations in the two decades following his publication of 'Perspective Transformation' in the 1978 edition of *Adult Education Quarterly* (1978a, vol. 28:100-110). At least thirty-nine dissertations were written in North America alone. In 1997 Edward Taylor analysed

these dissertations in a critical review submitted to the *Adult Education* Quarterly (hereafter AEQ). His article was called 'Building upon the theoretical debate: A critical review of the empirical studies of Mezirow's transformative learning theory' (Taylor, 1997). He concluded that the studies showed that the influence of context in transformative learning has to be better understood and accounted for, that critical reflection is important but that other ways of knowing must also be included, and that diversity in terms of class, ethnicity, gender, and sexual orientation has to be addressed. His reference to a debate refers to a series of articles in the AEQ in which Mezirow was challenged and responded to criticisms of his theory. As early as 1989, in the Forum section of AEQ, Collard and Law argued that he failed to emphasize the importance of collective social action as a goal (Collard & Law, 1989). Mezirow responded, in the same year, by pointing out that 'There are significant mediating factors which impede taking collective social action because of a transformed viewpoint' (Mezirow, 1989). He explained the factors and defended the theory by arguing that both learning transformations and social action can take several forms and categorizing them is difficult. A few years later Clark and Wilson also submitted an article to AEO entitled 'Context and rationality in Mezirow's theory of transformational learning' (Clark & Wilson, 1991). They argued that a major flaw in Mezirow's theory was that it fails to account for context. They saw the need for 'a contextualized view of rationality which maintains the essential link between meaning and experience'.

The critique concerning context was raised once more in 1993 when an Australian Adult educator and researcher, Mark Tennant, insisted that Mezirow's theory did not recognize the socially constructed nature of development, including developmental stages in adult life (Tennant, 1993). Again the article appeared in the AEQ and in the following year the journal catered for the interest surrounding Mezirow's theory by publishing another article by Tennant and a fellow Australian, Michael Newman together with an article by Mezirow himself, entitled 'Response to Mark Tennant and Michael Newman (Tennant, 1994; Newman, 1994; Mezirow, 1994). At the 35th Annual Adult Education Research Conference at the University of Tennessee that year, the Group for Collaborative Inquiry sought 'to reconceptualise transformative learning and social action and recognise learning-in-relationships and whole person learning'. The Group claimed that Mezirow emphasized

rationality (cognition) at the expense of 'other ways of knowing, including...affective, somatic, intuitive and spiritual' ways (Taylor, 1997). The growing popularity of Howard Gardner's 'seven intelligences model' (Gardner, 1983) may have encouraged this criticism.

Stephen Brookfield, in his overview of adult education (Tuiniman, 1995) summed up a number of the above criticisms and implied others in his concluding paragraph. Our case studies provide examples of how some of these criticisms can be overcome in research based practice. Brookfield nominated ten areas for future research in adult education. Defining the notion of learning was the first. Researching relevant aspects of emotional intelligence in transformative learning a second. A third was that 'adult learning needs to be understood much more as a socially embedded and socially constructed phenomenon' (Jarvis, 1987). Brookfield also noted that more cross-cultural perspectives were needed 'to break the Eurocentric and North American dominance in research in adult learning'. There was a similar need, he said, to research the role played by gender in adult learning as well as a need to encompass work on spiritual and personal learning in order to understand the interconnections between these domains. His final four 'areas' of required research included the need for 'More phenomenographic studies of how adults feel their way through learning episodes', a greater emphasis on qualitative studies, by practitioners as well as academics, more integration of research on adult learning needs with research into adult development, adult cognition and the links between adult learning and learning at other stages in the lifespan (Brookfield, 1995).

In his 1997 *AEQ* review Taylor regretted the fact that so few of the theses he critiqued had been turned into journal articles. He summarized their content, taking note of the ways in which they modified or used Mezirow's theory. While he acknowledged the influence of Mezirow's theory, which in many respects had displaced Knowles's theory of Andragogy (Knowles, 1980), he concluded that it was important to guard against 'the reification of transformative learning theory' by encouraging scholars to reconceptualise it (Taylor, 1997). Ten years later, in the same journal, Taylor updated this critical review (Taylor, 2007). In the latter study he analysed 40 peer reviewed journal articles and concluded that 'transformative learning in adult, higher and continuing education has been around for over 25 years and continues to be the

most researched and discussed theory in the field of adult education' (Taylor, 2007). Seven years later the claim appears to have stood the test of time. In the March 2014 edition of AEO the journal listed its most cited articles. The top ten listing clearly indicated how important Mezirow's impact was. The ten most cited articles, in order, were Mezirow's 1994 'Understanding Transformation Theory' article, Taylor's 1997 critical review, a 1994 article entitled 'Intercultural Competency: A Transformative Learning Process', three articles by Jack Mezirow (1996, 1998, 1981), a critical review article by Sharan Merriam, Clarke's critique of Mezirow and finally two articles on self-directed learning by Brookfield (1984) and Low (1991). Mezirow's theory continues to have practical impact for adult learning, which is evidenced by the recent publication of The Handbook of Transformative Learning. Theory, Research and Practice (Taylor and Cranton, 2012) and by an annual international conference on Transformative Learning. On the other hand, Michael Newman's well-argued article 'Calling Transformative Learning Into Question: Some Mutinous Thoughts' published in AEQ in 2012 reveals just how controversial the theory continues to be, at least among academics.

Engaging action research and transformative learning to better understand both

One of Taylor's key findings in his 2007 meta-review was that 'More research is needed that simultaneously engages action research and transformative learning to better understand their relationship...' (Taylor, 2007). The following case studies are informed by the philosophy of John Dewey (1916) and adhere to the action research principles of Kurt Lewin (1946). They follow the methodological recommendations of Carr and Kemmis (1983) and make use of the principles of participatory action research developed by Kemmis and McTaggart (1988). The intention of all action research is to make changes for the better and in this sense, action research is both partisan and transformative (Mezirow, 1991). Since Kemmis and McTaggart's 1988 publication, action research has become increasingly relevant to educational improvement. Recent books and new editions on action research (Spaulding & Falco, 2013; McNiff, 3rd ed. 2013) encourage teachers at all levels to instigate their own research projects as a way of improving the learning outcomes of their students. Action research

involves a spiral process of planning, acting, observing, analysing, reflecting and then evaluating. The completion of one full cycle generally raises other issues that will be researched and acted upon in a new cycle. Because of this there is a natural affinity with transformative learning, which on the individual level also progresses through a spiral of steps. Action research is often sparked by a dilemma in one's professional practice just as individual transformation can begin with a disorienting dilemma. The methods and techniques we have used in our case studies also replicate some aspects of action research and transformative learning. Both the critical incident technique (Flanagan, 1954) and focus groups (Lewin, 1946) require analytical and critical reflection. The former often focuses on the individual while the latter, as the name suggests, is more of a collective process. All of the following cases seek to combine, understand and add value to both the action research and the transformative learning processes.

A case of consciousness raising

As an adult educator the first author taught a group of mature aged women who enrolled in a Graduate Diploma course for Adult and Vocational Educators at a regional university in Australia. Mezirow's break-through 1975 article was entitled 'Education for Perspective Transformation: Women's Re-entry Programs in Community Colleges' and many of the findings in that work were replicated in the course mentioned above. As a group of learners mature aged women face a rather special set of challenges because of the combination of their age, gender and previous education. Christie (1995) asked the women in his course to keep a critical incident file of their experiences and these. combined with informal interviews, revealed that their transformations were at times dramatic and involved painful conflicts. Attitudes, views and beliefs that had been internalised as 'habits of the mind' were shaken, questioned and rejected when exposed to transformative learning practices. For example, the belief that 'a woman's place is in the home' was undermined, the assumptions underpinning it challenged. and a new perspective enacted. The changed ways of seeing the world and the women's subsequent behaviour caused conflicts, especially with life partners. Some of the women said that enrolling had been the first step on what was a difficult journey. They believed that choosing to return to study had indicated that they were ripe for change. The course

itself raised other questions, arguments and disorienting dilemmas. The women met different sorts of role models among their fellow students and the teaching staff, and exposure to the theory of transformative learning, and transformative practices, like the values exercise described below, accelerated the process of questioning and rejecting some of the assumptions by which they had lived. Transformation rarely occurs unless the individual is convinced it is necessary. When the women acted on their changed view of the world the external conflicts that resulted were settled by a whole range of verbal, physical and legal possibilities: angry words, sometimes blows, divorce proceedings and, far too rarely the fourth alternative - rational argument. The process was often painful but the result for the women (and hopefully even for the men) was greater independence, personal integrity and eventually increased happiness.

Transforming views – changing practice

All four authors have been involved with Papuan and PNG teachers who undertake Master of Education courses at a regional university in Australia and their insights have contributed to the second case. The case is part of an ongoing action research project that involves practising teachers from the developing province of Papua, Indonesia. The participants were enrolled as part of a ten week program that addressed the Papuan teachers' need to enhance their English language proficiency and upgrade their teaching practices and pedagogical knowledge. The study, conducted in 2009-2010 by the second and third authors found, through post-course interviews, that the participants had transformed their teaching practices and epistemological perspectives after returning to their Papuan primary and secondary English teaching contexts. They had been confronted by many disorienting dilemmas in Australia. These included realizing that English could be taught in ways that they had not imagined possible at home, where a strict knowledge-transmission system applied and where there was an over emphasis on rote learning in preparation for National Tests. The teachers also encountered dilemmas that confronted their perspectives on teacher authority. The Australian lecturers were surprisingly friendly and informal and were not afraid of making or admitting mistakes. The transcripts from the interviews indicate that the Papuan teachers started questioning some assumptions underlying the view that a teacher needed to exert his

or her authority in order to teach. The more informal manner of the Australians and their willingness to admit that they too were learners, gave Papuan teachers greater confidence in using their English during the course as well as changing their teaching style back home. Seeing that one could admit a mistake but still maintain authority led (H) to comment: '[Now] I say to my students that I'm learning English like you. It's better we check the dictionary' [when previously she was ashamed to admit she couldn't define some words].

The flexibly delivered program involved 12 primary and secondary teachers and the main intervention in terms of action research was that the curriculum could be changed as the program progressed to cater for the needs and wants of the learner cohort (Carey & Robertson, 2014). Monitoring and evaluation was conducted via weekly meetings with an intermediary Indonesian-speaking researcher and through personal student diaries shared through a web log. This mode of delivery, monitoring and evaluation simultaneously engaged action research and transformative learning and allowed for small interventions that informed the *in situ* modification of the program. The program contained three main activities that challenged the participants' cultural and pedagogical schema: English proficiency development which involved immersion in the Australian culture and language through four weeks living in a home-stay setting; lectures and workshops on modern Western pedagogy, including visits to several Australian schools to view lessons and speak to teachers; and, peer-teaching to apply the new pedagogical perspectives and teaching methods with their peers in reflective teaching sessions.

Seven months after the program, the researchers visited the participants in Papua and some substantial transformative learning outcomes were revealed through semi-structured interviews. The twelve participants were asked 'How do you perceive the University program as having impacted on your conceptions of yourselves as English language teachers, your knowledge of your field and on your teaching practice? Their responses revealed that they had improved their relationships with their students due to the realisation that their Papuan tradition of maintaining power distance was interfering with building trust with students. One informant (B) said that 'The culture here makes it very hard for the teachers to come close with students... Sometimes the

teachers have to show they are humble to the student... If we have some behaviour like that, it seems our students will feel comfortable and come closer to us'. The teachers also demonstrated an increased sense of agency. This is evidenced by the following comment from (J): 'My students say ... "you are very different than before. When you came to our class before, you just came in with your book in front at the teacher's desk (and now) you walk around and use a lot of English in speaking"... and they are really interested in English'. The teachers also reported on an increased repertoire of classroom practices and how they had changed not just as English language instructors but also as people. One, (Y), said: 'I was surprised these methods (group work) make working with big classes easier'. Another, (D), admitted: 'Before I always followed what's in the book, but now realised no, I have to make the lesson myself....I don't need to blame the government for something; it forced me to make my own ideas come out to help the students'. Some of the Papuan teachers have been awarded scholarships to undertake the Master of TESOL Education at the regional university where the study was conducted.

Triggering Disorienting Dilemmas

In 2012 the Finnish scholar Kaisu Mälkki published a study (Mälkki, 2012) in which she explained how disorienting dilemmas could trigger changes in one's attitudes, beliefs and values. Since 2006 the first author has used an anonymous values survey in workshops aimed at increasing learners' awareness of the ways in which they see the world. The workshop began with students filling out a 'values survey' (Appendix A). The anonymous survey asked participants to give their views on ten controversial issues, namely euthanasia, immigration quotas, genetics research, the death penalty, privatization, internet censorship, abortion, working for unemployment benefits, adoption by gay couples, and nuclear disarmament. The participants responded to the survey by circling a number on a five-point scale to indicate where they stood on each issue. The survey had two statements about each issue; one was on the left of the five-point scale and one on the right. For example, the first issue was about euthanasia and the statement on the left said 'Euthanasia (mercy killing) should be legalised' while the one on the right said 'Euthanasia should not be legalised'. If one were convinced about the statement on the left, one would circle the number 1; if

moderately sure then number 2; if unsure then number 3. If, however, one strongly believed that 'Euthanasia should not be legalised', then number 5 would be circled, or number 4 if one believed that proposition less strenuously.

While the results from the survey were being turned into graphs for a PowerPoint presentation, students were given a clean survey sheet, divided into groups of eight and asked, in the first instance, to use the the sheets to predict the general result of the survey. If an individual felt that, out of all those who filled out the survey a majority would favour the legalization of euthanasia, he or she would circle the numbers 1 & 2. If it were thought the majority would 'fence sit', then number 3 would be circled. If the individual thought most people would not want to legalize euthanasia then 4 & 5 would be circled. If the individual predicted that the response would be evenly spread, he or she would circle all the numbers. When all the predictions were completed in a group, the results were revealed and a discussion followed on why individuals had predicted the way they did. This discussion included whether or not individuals were influenced in their predictions by their own 'frames of reference', or, where they predicted a result that was very different from their own position, why they thought the majority would hold such a different view from them. Once the group had created a new sheet that mirrored the total groups' collective predictions, the actual results of the survey were revealed and a new phase of discussion occurred.

For the plenary discussion the groups were asked to report back on where they most obviously agreed and disagreed. They also explained why they thought such differences had occurred and commented on the 'sources' of the values that were contained in the survey. The plenary session provided data on the sorts of disorienting dilemmas that faced some students. Appendix B provides the results from two contrasting groups. One group that was divided into three workshops was made up of 81 PhD students at a Swedish Technological University: 28 females and 53 males. The average age of the group was mid to late twenties. Approximately 60% were Swedish nationals and 40% non-Swedish. The latter group come from a wide range of countries including East European, European, Asian and South American countries as well as places like Russia and China. Because of the variety of languages, English was used as the means of instruction but small group work

could occur in one's own language if there were sufficient numbers. The PhD group answered the survey and undertook the workshop in 2007 in Sweden. The other group comprised 53 final year teacher education students in an Australian pre-service course and they did the workshop in 2014. In the Australian sample the majority of the cohort was female. There were 45 women and 8 men. Most of the group was in their early twenties although there was one male and five females in their middle age. In the plenary session no one was required to reveal their own position on any of the issues but a minority in each group did so. These people tended to be staunch advocates of a particular value and fitted into the category described earlier as those who felt that 'this is the way the world should be' at least on that particular issue. The overall result of the plenary sessions was that participants engaged in a stimulating debate on the way that class, society, religion, politics, economics or family upbringing can affect world-views. The debate raised awareness and in some cases set in motion disorienting dilemmas that lead to transformative learning. Analysis of data from subsequent focus groups (to be presented in another article focussing solely on this topic) will provide more insight into the degree and nature of such change.

Conclusions

The purpose of this article was to test if transformative learning theory can be put into practice and to exemplify, if it is successful, what sort of differences it can make to learning and learners. It also sought to test how one might trigger disorienting dilemmas. The values exercise, which has been used since 2006 in different settings and with different types of students, demonstrates one way this can be done. The exercise helped students to acknowledge that no matter how objective they endeavour to be in the classroom, differences in values exist, and those differences, if they come to the surface, can help or hinder learning. Combining action research and transformative learning in this case helps us understand both. The case illustrates how learners can become aware of the paradigmatic, causal and prescriptive assumptions they hold and perhaps question whether they are valid or not. This first step of recognizing that we hold ingrained views of the world can lead to subsequent steps that are not only required to change invalid assumptions but also the behaviour that is based on them.

If students are given the motivation, the means and the knowledge necessary to critically assess, challenge and change their assumptions they will have the chance to become lifelong learners capable of acting for the best in a rapidly changing world. Workshops, embedded in action research projects, where students are introduced to the theory of transformative learning and provided with tools to develop critical, analytical reflection could be used as a model for a critical awareness course. If students are more critically aware, then they will be able to transfer the knowledge they acquire in their discipline to new and unexpected situations once they graduate and enter their particular professions. Courses and workshops that are constructivist in nature can reveal the way in which all knowledge in all fields are social constructs. and offer participants an opportunity to reconsider their own world view and critique the assumptions that underlie that view. If they decide that some of those assumptions are invalid they have the possibility to change both their beliefs and their behaviour. If enough individuals within a field change, the field itself has a chance to change.

Mezirow would say that such change must always be provisional. He once quoted a bumper sticker he saw in New York. The sticker read 'subvert the dominant paradigm'. When paradigms dominate, at either the individual, group, institutional or state level it is probably time to begin to question, if not subvert them. The best way to do that is to train people to think for themselves. Transformative learning is another term for independent thought. It helps us critique our own thought processes, our points of view and the fields that shaped them, whether they are family, friends, fashion, the media, academic disciplines, educational institutions, church or state. Transformative learning adds value to other types of organised learning by helping us to regularly re-assess the validity of our learning and enables us to apply what we learn in unexpected situations. Because of this it has a place in all forms of university and adult education.

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Appendix A

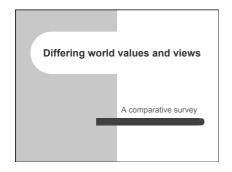
Differing world views

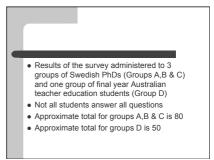
(an anonymous survey)

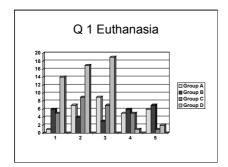
Read each pair of statements below and then estimate your position on each. For example, with statement 1, if you believe very strongly that euthanasia should be legalised, you would put a ring around '1'. If you think that it should not, put a ring around '5'.

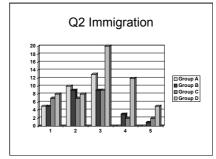
| 1.Euthanasia (mercy killing) should be legalised. | 1 2 3 4 5 | Euthanasia should not be legalised. |
|--|-----------|---|
| 2. 'Developed countries' should increase their immigration quota. | 1 2 3 4 5 | 'Developed countries' should decrease their immigration quota. |
| 3. Scientists should be free to carry out all types of genetic research. | 1 2 3 4 5 | Governments should control the nature and scope of genetic research. |
| 4. The death penalty is appropriate for some crimes | 1 2 3 4 5 | The death penalty is never appropriate no matter what the crime |
| 5. Privatisation of public facilities (eg power and water) is a good thing. | 1 2 3 4 5 | Privatisation of public facilities (eg power and water) is a bad thing. |
| 6. Governments should censor pornography on the internet. | 1 2 3 4 5 | Governments should not censor pornography on the internet. |
| 7. Abortion is every woman's right. | 1 2 3 4 5 | Abortion is morally wrong. |
| 8. Unemployed people should be made to work for their unemployment benefits. | 1 2 3 4 5 | Unemployed people should not be made to work for their unemployment benefits. |
| 9. Gay couples should be allowed to raise children. | 1 2 3 4 5 | Gay couples should not be allowed to raise children. |
| 10. Nuclear weapons should be banned and those in existence destroyed. | 1 2 3 4 5 | The existence of nuclear weapons is an effective deterrent to global war. |

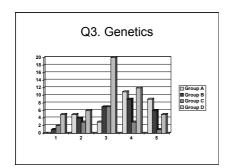
Appendix B

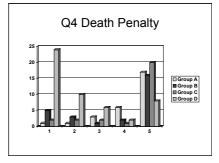




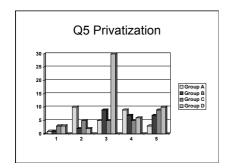


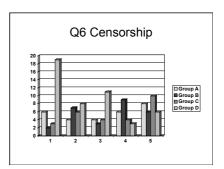


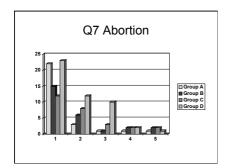


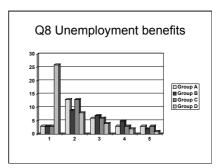


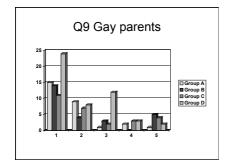


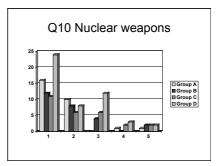












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Ann Robertson teaches languages, linguistics and communication courses and conducts research on intercultural communication and second language teaching and learning. She has developed inservice programs for teachers from Korea, China and Papua Province, Indonesia, and is a group recipient of an Australian Government Learning and Teaching Citation for Outstanding Contributions to Student Learning.

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