

Critical & Creative Thinking

The Australasian Journal of Philosophy in Education

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Philosophical Citizens – A Contradiction in Terms?

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New Age Beliefs Among Teacher Education Students

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Welcome to *Critical & Creative Thinking*

Welcome to Vol. 16 No. 2 of *Critical & Creative Thinking: The Australasian Journal of Philosophy in Education*.

Critical & Creative Thinking is published in May and November. Subscriptions are due in February (forms are available in this edition). We hope that you will continue your subscription, and if you have any suggestions, please send them to us.

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About the Journal

Critical & Creative Thinking is an international journal published under the auspices of the Federation of Australasian Philosophy in Schools Associations (FAPSA). The focus of the journal is philosophical inquiry with school-age students. What was once called Philosophy for Children has now grown into a sub-discipline of philosophy with its own history, traditions and pedagogy, and incorporates what could be called philosophical inquiry in the classroom, reflective education and, generally speaking, philosophy in schools, as well as related methodologies such as Socratic Dialogue. The journal performs two roles. The first is to publish scholarly research concerning the theory and practice of philosophical inquiry at school level. These articles will appear in the 'Research Articles' section. The second is to publish reports of practice, comments on resources, suggestions and ideas about philosophising with school students and so forth, with a view to encouraging professional interchange among those interested in philosophical inquiry with school-age students.

Aim and Scope

To provide a vehicle for the communication of ideas and a forum for discussion and debate of issues concerning the practice of philosophical inquiry with school-age students.

To promote better teaching and curricular design for the development of critical and creative thinking amongst school-age students through increased understanding and use of philosophical inquiry in the classroom.

To enrich the understanding of philosophy and philosophical inquiry as well as its role in the development of good thinking and good judgement.

To increase interaction and collaboration between the academic community of scholars in universities and teachers in schools on matters of logic, epistemology, creativity, metaphysics, aesthetics, ethics, inquiry, philosophy of science, mind, personhood, community, understanding, learning, thinking, dialogue, discussion, and related matters concerning philosophy, inquiry and classroom pedagogy.

To promote discussion of the place of philosophy in the nation and school curriculum and its infusion into the present curriculum, as well as the place of philosophy in the intellectual, creative, moral and social development of individuals.

Notes for Contributors

All contributions will be considered for publication. Articles will be subject to the normal processes of peer-review for scholarly refereed journals, including blind reviewing by at least two referees drawn from the Editorial Committee (or from other international scholars with special expertise as necessary).

Manuscripts should be prepared with a title page. Include all relevant information about the author; institutional affiliation (if applicable), email address and contact details. The title page will be removed prior to review.

Articles should be 1.5 or double spaced in 12 point. Please keep formatting to a minimum. Use footnote citation with a list of references at the end. Tables and text in side-by-side columns should be placed in a table with 1 point border.

Please send articles attached as a Word document to:
sue.knight@unisa.edu.au

Letters to the Editor

It may happen that you read an article and would like to respond, but not in the form of a lengthy article. Such responses, which might simply add to a point made by the author either in agreement or disagreement, or offer an alternative view, could appear as a 'Letter to the Editor.' The idea is to encourage dialogue between readers and authors, in effect using the journal to create a community of inquiry.

Send all contributions to: sue.knight@unisa.edu.au

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Editorial

The teaching of philosophy contributes to the development of free citizens. It encourages one to judge for oneself, to confront all sorts of arguments, to respect what others have to say, and to submit only to the authority of reason. ('Intersectoral Strategy on Philosophy', UNESCO, 2006)

It is surely this understanding, so powerfully expressed in the UNESCO's 2006 Intersectoral Strategy on Philosophy, which has long motivated individuals to teach philosophy to the young. If it is disappointing that UNESCO recommendations on the teaching of philosophy, reaching back half a century, have in general failed to place philosophy at the core of the curriculum, it is also a timely reminder of the ongoing crucial need to meet this challenge. We must continue to think not only about the theory and practice of effective philosophy teaching, but also of how we can work together to influence educational authorities and policy makers in order to bring about systemic change.

In the first paper of this issue, Claire Cassidy, like others before her, places philosophical inquiry at the centre of citizenship education, and then goes on to argue further that while rationality is generally considered necessary for the exercise of citizenship, the fact that we have at our disposal (from the field of philosophy for children) educational resources which can be harnessed to build children's proficiency in rational thought is comprehensively overlooked in official talk about citizenship education. The result is an apparent justification for precluding children from political involvement and participation. Cassidy also points to the fact that many adults may well fail to satisfy the 'rationality' requirement. This latter issue is taken up by Alan Barnes and colleagues who report on their ongoing struggle to understand why individuals, including very many of the pre-service teachers they have worked with for more than a decade, persist in holding onto beliefs which might be classed as superstitious, irrational, or otherwise

faulty. The individual examples they cite are concerning; one student appeared convinced that the course of history had been foreseen by Nostradamus while another was convinced that alien life forms were observing human beings at some discreet distance. The next two papers in this issue, from Yip Meng Fai and colleagues in Singapore and Verity Bruce and co-authors in South Australia, bring our attention squarely back to the classroom and more particularly to the role computer technology might play in scaffolding fruitful discussion of philosophical questions within face-to-face community of inquiry style discussions. These exploratory studies point to the crucial procedural support which new technologies might lend to teachers inexperienced in community of inquiry facilitation. The findings will be of interest not only to novice philosophy for children practitioners, but also to providers of professional development in the field. Indeed, in highlighting the possibilities that new technologies might bring to philosophical inquiry in schools, these papers will be of value to all those who are concerned with developing better reasoning skills in students, as will Collins' review of new and updated websites supporting the teaching of philosophy. Megan Laverty's review of a recent publication on values education (authored by Mark Freakley and colleagues), completes the second volume of the journal for 2009.

We extend our sincere thanks to all authors published in this issue of the journal as well as to those who have given generously of their time and expertise in reviewing articles this year. We would also like to welcome to the Editorial Board, Steven Trickey, who is well known for his work within a number of large scale empirical studies in philosophy for children, and thank all members of the editorial team for their continued support this year. Finally, we owe a great deal to Justine Gallasch without whom this edition of the journal could not have been brought to publication.

Our very best wishes for 2009.

Carol and Sue

Philosophical Citizens – A Contradiction in Terms?

Claire Cassidy (University of Strathclyde)

There is a current drive within education agendas in Britain towards the development of Citizenship Education, yet the concept of citizenship is rarely explored critically or philosophically in the educational world because it appears to be generally accepted that educating for 'citizenizing' – if there is such a word – is a good and desirable thing. However, this assumption should be challenged. In asserting, as many within education currently do, that educators should be promoting philosophical approaches and philosophical thinking with children, it seems appropriate to wonder whether the notion of a *philosophical* citizen is a contradiction in terms.

The term 'citizen' is interesting in itself. Cartledge (2002) writes of the root coming from the Latin 'civitas, civis' meaning that one was 'civilised' in Roman society, as opposed to the Greek 'politeia', which is derived from 'polis'; 'polis' being not a city-state as commonly thought, but more accurately a 'citizen-state' and one wherein it can be seen that the polis is a '...political community as a living corporate entity'.¹ The term 'citizen' nowadays takes its cue from ancient Athens and is linked closely with that of 'democracy'. Democracy is today another positively regarded concept, but one we do not have space here to explore. However, the notion of citizen need not imply democracy. Originally, citizens, in classical times, were not simply residents within a state. Cartledge (2002) asserts the difficulties in being a citizen in ancient Sparta; that citizenship was not a birthright, but instead something to be earned. In fact, as well as rights and responsibilities afforded Spartan citizens, there were conditions imposed also in terms of physical, economic and moral criteria.

¹ Delivered as part of the Roberts Lectures, Dickinson College, Carlisle, Pennsylvania.

Sparta, it should be remembered, was a militaristic society and citizenship of that society related closely to this fact. On the other hand, if we consider ancient Athens – the accepted seat of democracy – this was a city of only 300,000 people and not all residents here were citizens. The rights of citizenship were limited to adult males of non-slave Athenian descent; women, children, slaves and ‘foreigners’ were all precluded from any kind of membership of the citizenry. Even those who were citizens had limited participatory functions – voting every few years and from time to time engaging in debate about public issues. The dichotomy that exists for us now, in twenty-first century Britain, is that the Government is enthusiastically promoting a citizenship agenda without paying heed to the fact that the original notion of citizenship meant that an individual was there for the will and work of the State.

Citizenship is – or should be – about something larger than the individual, something more than one’s self and self promotion within society. Citizenship in education should be there to promote just that notion of working together for the good of the community, indeed, for the generation of community. Community, though, should not be understood in a narrow and naïve way; rather, it should be a state where individuals work together – certainly for a common good, *their* common good – but it should be a critical state, one where reason and reflection, argumentation and critical dialogues are fostered. This is what education should be inducting our children into, all the while allowing those recipients of formal education to be participants in the citizenizing of their State. In educating our young citizens – for they should not be viewed and treated as citizens of the future as they so often are – we should follow a Socratic model. Socrates undertook service to his city:

...by questioning the dominant conceptions of virtue and ‘good behavior’, and by maintaining rigorous moral and intellectual integrity as an individual. He did it by scrambling the traditional distinction between the ‘good man’ and the ‘good citizen’, while avoiding homiletics or edifying clichés. He did it by undermining authorities, purging opinions, and creating a general puzzlement where previously there had been a firm faith in the soundness of ‘traditional values’.

He did it, in other words, by enacting *thinking* in conversation (Villa, 2001, p. xii).

One cannot be blind to the irony that the push for Citizenship Education is one that has been instituted to bring the country back to 'traditional values', yet, it is this very instrument that should, through the promotion of '*thinking* in conversation', generate a more critical citizenry; one where individuals question, challenge and engage in philosophical dialogue as a means to bettering their society and develop community.

Unlike the Spartan system of 'Similar' where individuals were comparatively equal in that they were alike in some respects but not in all, in modern Western society there is a desire for equality – but this desire fails to include the notion of younger members of society and those beyond the age of majority as being equal in all things. Practically, very young individuals cannot participate in the same way as their older counterparts. This, though, does not preclude one from participating in one's society. In fact, we use the time when children are in school as a time to educate *for* citizenship (Scottish Executive, 2004). This is the mistake. Certainly we can teach *civic* education, where students learn about their responsibilities, duties and entitlements as *future* citizens, but this is not what is currently happening – particularly in Britain. Citizenship Education – or, as it is now being heralded, Education *for* Citizenship (further evidence that children are not yet citizens) – lies within the domain of curricular areas such as Personal and Social Development (in Scotland) and Personal and Social Education (in England and Wales). These curricular areas are where children learn what are the accepted social behaviours and practices of adult citizens. While there may be laudable topics for discussion, it appears that there are expected right and wrong answers and accompanying behaviours. The students are expected to conform to some norm set by the teacher, the school or the Government. There is limited space for children to explore their own moral codes and values, more especially if these were to be in some way discordant with the teacher's. Lessons on drugs and sex are incorporated within citizenship classes, which appear to be lessons on morality. Lawson (2001) suggests these classes should be places where pupils can raise issues

of concern in order to debate and discuss them. Further, these should be issues that are of concern to pupils *now*, not when they are older individuals with all the power that entails. Somehow the citizenship classes imply some kind of control, where the accepted moral code is held to be the way forward and the route into adult life and full citizenship. Archard (1993) indicates the reasoning behind the interest in children in terms of their schooling and Citizenship Education:

The State may claim a legitimate interest in the welfare of children both as *current* human beings to be cared for and as *future* citizens who must now be trained for their eventual roles in society (p. 112).

Russell (1932) highlights that a good individual is not the same as a good and useful citizen, which leads one to educate a future citizen in a particular way and one that may prove different to the methods that may be adopted if we view the child as an individual. Plato (1987) would perhaps share this notion:

The object of our legislation...is not the special welfare of any particular class in our society, but of the society as a whole; and it uses persuasion or compulsion to unite all citizens and make them share together the benefits which each individually can confer on the community; and its purpose in fostering this attitude is not to leave everyone to please himself, but to make each man a link in the unity of the whole (519e-520a; p. 263).

Rousseau (1973) correctly highlights the case that 'An individual may be a devout priest, a brave soldier, or a zealous senator, and yet a bad citizen' (p. 133). One is not a 'bad citizen' if one is not participating. In this instance, one is not a citizen at all since in being a citizen, we are required to act. No, a bad citizen is an individual whose aims or motivations are less than those which might be of good or benefit to the community. Further, it may also be argued that the notion of a 'responsible citizen' – one that the new Scottish Curriculum (Scottish Executive, 2004) is currently promoting – is a false one since a citizen, in working for the

good of the State or community in which one resides, cannot be anything other than responsible. Similarly, one need not talk of 'active' citizens, since a citizen is expected to act and participate. It is precisely in being an active member of a society or community which leads to effective citizenry. Cassidy (2007) asserts that the term 'active' assumes that one is making contributions in a social context beyond simply conducting one's daily business of eating and sleeping. Contributions may take the form of working to bolster the economy. Similarly, spending money will aid the economic growth of the society, helping others by giving time or money develops the society and perhaps, and most importantly, in order to be an *active citizen* one must participate in a different kind of manner. Cassidy goes on to suggest that one should make one's voice heard in order to be counted as a citizen that acts, an active citizen. One, she claims:

...should be interacting with others to question, challenge and give voice to alternative moral codes, justifications or reasoning. One cannot be a passive citizen, even in deliberately abstaining from voting one is acting in a mental and even physical sense by staying away from the polling station, but there is more to participation than voting' (2007, p. 135).

Indeed, Giroux asserts that 'Critical thinking cannot be viewed simply as a form of progressive reasoning; it must be seen as a fundamental, political act' (1981, p. 57). This would appear to support the notion that even in thinking, discussing and debating contemporary issues, one is undertaking citizenly duties. It could be argued that it is imperative that in taking part, one should deliberate, consider, reflect and inquire into one's society or community. As Cartledge (2002) suggests, citizenship, in its original form, was realised through action, and this should hold true today, for to be inactive one is not contributing to the State in any way.

What is concerning within the Citizenship Education agenda and how it purports to engender action is that curricular documents appear to be little more than comfortable pieces of rhetoric where children will be trained for their future participation as citizens. What is worrying is

the manner in which this may be taught. While teachers may be keen to promote 'responsible citizens', such as in the new Scottish curricular guidelines *A Curriculum for Excellence* (Scottish Executive, 2004), there is a danger that there will be criteria for such 'responsible' individuals coloured by the values of the teachers concerned – a population not wholly representative of wider society. This could easily be viewed as indoctrination.

Indoctrination is a powerful word and one which conjures up negative associations – rightly so. While there will be overt forms of propaganda and indoctrination, such as in religious schools and their curricula, other forms may occur in less obvious ways. The rise of Enterprise Education and Education for Enterprise where children are, on occasion, encouraged to participate in entrepreneurial activities is an example. While some may view this as a worthwhile activity, there are others who perceive it as promoting certain values which do not sit in accord with their own. The education agenda in Scotland is such that just this type of activity is to be open to all children throughout all years of their primary schooling. Indeed, there is an expectation that children will all, at some time in their primary school career, have the opportunity to partake in an activity that promotes these values. Children learn the values of the market place and are likely to respond to these in a manner closely in relation to that of their class teacher. This is exactly the danger of Education for Citizenship. By considering it as part of personal and social development, it is inseparable from moral education where children are inducted and trained in the accepted manners, mores and values of wider society. This said, these are only the manners, mores and values of a small sector within that wider society – those of the teaching profession, or in fact, those who set the education agenda. After all, it must be granted that teachers cannot absent themselves wholly from their value systems or moral codes and that these values are transmitted via formal, informal and hidden curricula all the time. Teachers are, one may argue, undertaking the will and work of the State and, in so doing, are imparting skills, morals and values the State deems important and desirable. Indeed, where better to situate citizenship classes than where it is possible to exercise control over morals and behaviour.

It may be held that this prepares *future* citizens, such as those in the cities of ancient Sparta or Athens, but it does not allow for children as citizens *now*, and leaves little room for disagreement with the accepted moral codes and behaviours of the day. Indeed, this potentially leads to unthinking, non-reasoning individuals who do not question or consider their situation and environment. One could go further and posit that there can be no such thing as a thinking, reasoning citizen, since the role of that individual is to undertake what the State requires of him/her. After all, perhaps the greatest example of a thinking, reasoning, questioning citizen was Socrates – and there is no need to consider further how the State viewed his attempts to encourage the young to question. Philosophical citizens may be impossible to reconcile.

Not all is lost, however. Were one to accept that the State is important and that we should, as individuals, work for the betterment of the State, we may be able to move towards a more positive notion of citizenship for our children – one that accepts that children are capable of being active, participative, political and philosophical agents and that they can contribute to their community as much as any adult. This could mean that children should not be excluded from the opportunity of being citizens.

In order to maintain an effective democracy, McCall (1991) suggests the need for an effective citizenry whereby:

...as a citizen, a person must be able to think critically, to weigh different alternatives, to evaluate reasons given for particular decisions or policies which affect the community. To be an active and effective citizen requires both the disposition to reason and the skills required for effective reasoning (p. 2).

It is precisely this point one should focus upon in considering how to include children into the citizenry and in what manner they can and should participate. McCall is here advocating a philosophical approach to participation and it is this element that is lacking in our adult citizen population and is often not even countenanced in our children. McCall devised a practice called Community of Philosophical Inquiry (COPI) which grew out of Lipman's Philosophy for Children (P4C) programme (2003). Prior to

these practices, children and young people have been engaged in Nelson's Socratic Method since the 1920s. Even earlier, the philosophy clubs of Edinburgh and Glasgow during the Enlightenment were breeding grounds for the young to consider social and political issues of the day from philosophical perspectives. It could be argued that our communities be governed by the decisions of citizens after reasoning dialogue has taken place with its constituent members. Reasoning, though, is not something we are actively encouraged to practise, and like any other skill, in order to reason proficiently one does require practice. McCall (1991) states clearly the prerequisite for being a reasoning, reflective and effective citizen:

...a person needs to be able to make reasoned judgements concerning the views of others, and needs to be able to modify his or her view if necessary. This requires comprehension skills, which in turn requires skill in analogical reasoning as well as in recognising and evaluating analogies; identifying assumptions; recognising fallacies; being careful about jumping to conclusions; recognising part/whole relationships; always being aware of alternatives; seeking out consistencies and inconsistencies in every sphere of life (p. 2).

She continues to suggest that democracy or empowerment for individuals will not necessarily follow from enfranchisement alone. Rather, it will be allowing and enabling them – children and adults – to develop their inquiry and reasoning skills that empowers individuals and encourages them to '...seek for and deal with the truth – what is there' (ibid., p. 38). And it is here that McCall raises a crucial issue – the empowerment of children. If we are to give children a voice socially and politically, we must be prepared that we will be challenging the ways in which children are currently viewed by society and we would thus be challenging, in some way, the accepted social order.

Children are not treated as equals and, as such, different things are expected from them than from the adult members of society (Cassidy, 2007). However, note that the expectations are set by *adults* within society. Adults determine not only what is acceptable behaviour for an

individual, but this is further extended by determining how children will – in future – participate in society; they, adults, are shaping *future* citizens. Citizenship is perceived to be a valuable and desirable thing to possess, yet it is becoming ever more evident that for children, while they are being trained in the ways of being citizens, they are not – as children – permitted to practise their citizenizing skills.

The notion of citizenship and how active one is, or is allowed to be, is an issue of power and in the context of children and adults, children certainly have the less powerful status and are thus limited in the contributions they can make because of this powerful 'dominance', as Qvortrup (1997) calls it, adults have over them. So, while adult society is issuing decrees about children's rights and entitlements, adults are still very much in control, driving the issues and agendas of what children's entitlements should be and in what ways they can participate. And it is this 'adult' power that acts most effectively by not promoting the younger members of our society within the decision-making process; they are given a voice when adults see fit. Aristotle (1955) would hold that there is no place for politics in the life of children and no place for children in the life of politics. He need not be concerned. While Citizenship Education is increasingly present in British schools, little of its content has to do with involvement in the politics of wider society. In fact, even where it does stray into this realm, children are firmly kept in their place until it is considered that they are old enough to participate on the political stage. There is much to contend with here, yet, in allowing a space or opportunity for their views to be taken into account, the status of children may be improved upon. In being receptive to the views of this group – not even a minority group in the sense of the numbers belonging to it – true representation can be provided. Within the United Nations Convention on the Rights of the Child (UNCRC), Article 12 states that children have the right to develop their own views, ideas and opinions freely without external interference with this freedom. Yet, there are still restrictions in the sense that maturity of reasoning, age, and ability to articulate are all heavily cited, yet (other than age) these are not factors that are confined to children. Lundy (2007) stresses four key factors in meeting this convention. She asserts that children should have space, voice, audience and influence. Archard

(1993) perhaps offers an explanation for what Lundy recognises as a failing in fulfilling the Convention's aims, when he highlights exactly why children are excluded from the adult world of reason and understanding. He suggests that children are perceived of lacking certain adult dispositions, such as being rational or having certain cognitive capacities – this is patently not true.

Certainly, as Locke (1976) suggests, children are expected, indeed, obliged, to conform or subscribe to an agenda or contract that is prescribed and established by adults for the governing of society, even though they are not considered as citizens. This being the case, children's voices, in the present climate, are often somewhat tokenistic. King (1998), in taking account of Hobbes, offers the suggestion that '...it is precisely because children cannot see the consequences of their actions that they cannot enter into a covenant' (p. 77). However, one might make the same assertion in relation to other members of society, members considered as being too old to be children. Further, Cassidy (2007) suggests that while children may not formally accept a covenant – since their voices and actions are somewhat determined by external forces – children do comply with the covenant or contract. They must, by necessity, comply in order that they gain membership to society, maintain their personhood, strive towards citizenship and 'grow' into adulthood. Because children are perceived as being unable to reason effectively, they are therefore not afforded citizenship in their own right. Faulks (2000) suggests that 'Political reform must look to improve the opportunities for citizens to exercise their rights and responsibilities by promoting an ethic of participation' (p. 108). There is no reason to suppose that these opportunities to participate be reserved for older members of society. We must promote an ethos whereby individuals, young and old, see and understand the need for co-operation and interdependence for the creation of a community.

Issues affecting our personhood and/or citizenship permeate all areas of our lives, and within school (and outside) there should be opportunities to discuss and explore these matters. Indeed, Lawson (2000) makes the pertinent point that:

Telling pupils what to think as opposed to how to think has certain implications. The outcome may be positive for society in the short term but this approach leaves no room for real debate and does not allow for individuals to explore issues for themselves and reach their own conclusions (p. 171).

We cannot consider moral issues by simply doing as we are told by the power or authority in charge. An effective citizenry is one where members generate 'community spirit', by undertaking activities and work within the community to maintain and promote some form of reciprocal relationship within wider society, the reciprocity being that these individuals are afforded particular rights for their citizenizing behaviour. We should take care not to confuse the idea of 'community spirit' with the controlling of behaviour and moral codes. Instead, the notion of community should be concerned with the sharing of ideas and opinions in order to better society as a whole. 'Better' needing to be defined through dialogue, discussion and debate as the members of a society may not – indeed, probably will not – all agree on how they may define the 'betterment' of society. This dialogue, one might assert, is essential in actually working towards a notion of community.

Policy-makers and educationists, in considering Education for Citizenship, might have something to learn from Socrates who encouraged the young to philosophise. While neither the UNCRC nor Lundy (2007) do not overtly advocate children philosophising, this approach may be seen as a natural way to accommodate hearing children's views and enabling them to have a voice. Cassidy (2004) would claim that philosophy with children would give children the necessary tools to listen, discuss, debate and change their views and the views of others. Socrates' perspective on children is considered by Matthews (1998); he suggests that:

Socratic questioning, we could almost say, began as philosophy for children... Certainly it included philosophy for children from the first. Socrates himself seems to have found it entirely appropriate to engage children in philosophical discussion; moreover, he clearly respected children as philosophical discussion partners (p. 12).

Children, Lipman (1988) would argue, are as capable and competent of commenting and reflecting upon the 'serious business of life' – as Callicles suggests in the 'Gorgias' – which ultimately affects their existence and functioning. McCall developed Community of Philosophical Inquiry (COPI) – a structured, practical, non-technical philosophy – and philosophising within the structure of a COPI might be the best method or approach available to us for allowing or enabling children to participate as citizens within society, for dealing with the 'serious business of life'. McCall (1991) asserts that:

...the nature of reality, or truth, or justice or beauty...are basic issues and anyone, no matter how little knowledge they may have can think about them, can reason about them, and can engage in philosophical inquiry on these issues (p. 19).

Very often, Communities of Philosophical Inquiry involving eight or nine year old participants will raise the same questions, issues and arguments as a Community of participants in their forties, fifties or sixties. Having lengthy life experience or a broad-ranging vocabulary does not preclude one from finding it difficult to say what one wants to say or say what one means.

McCall's point that traditional philosophical and psychological definitions of rationality may exclude many adults from the category of rational beings is one that is often overlooked, or rather ignored, in the argument that children are not adept reasoners. Psychologists such as Piaget who advocate stage maturation theory have done little to support the idea that pre-adolescents are able to reason competently. However, the likes of Matthews (1980), McCall (1991), Lipman (2003), Kennedy (2006), Cassidy (2007) and others working in the field of Philosophy with Children would rebuke this notion and would share in asserting that even while very young we, as humans, are able and competent reasoners. They would similarly attest that it is through one's usage of these skills that one becomes more adept at the use of one's reasoning, reflection and analysing skills. In advance of these practitioners, Mill (1985) acknowledges that 'The mental and the moral, like

the muscular, powers are improved only by being used' (p. 122). And this is vital in considering how children are perceived and in what ways they are permitted to be part of society.

The structure devised by McCall of the Community of Philosophical Inquiry (COPI) facilitates reasoning in participants – whatever their age. Indeed, McCall (1991) points out that:

...seeing the children agreeing and disagreeing with each other, adding to the ideas of others, even explaining to other children what they might have been thinking of – all of these behaviours stand as counter-evidence to the assertions of some cognitive psychologists that children are egocentric. Both in the sense of only being willing to consider their own point of view (a characteristic which they would share with adults), and in the sense of being unable to perceive another point of view (p. 26).

Children are, like their older counterparts, empowered by participating in a COPI. Although, as children, opportunities to directly bear influence on policy-making are extremely limited, given the opportunity to exercise the skills of inquiry, thinking and reason they could participate and engage effectively as citizens in the wider community. COPI would support the development of these skills. Within the structure of COPI children would:

...learn how to listen to alternative viewpoints, how to posit alternative viewpoints – even alternatives to what they currently hold – how to build upon previous arguments and develop them whereby they can demonstrate their application in the wider world (Cassidy, 2007, p. 217).

There is evidence of Community of Philosophical Inquiry with primary and early secondary school-aged participants discussing topics such as death, love, marriage, the existence (or not) of God, terrorism, bigotry, prejudice, truth and justice. Similarly, in adult groups, these subjects have emerged and often the self same issues come out in the inquiries, but the children are less inclined to try to stick rigidly to a particular perspective in order to persuade than

some adults are. They (the children) seem to be more willing to engage fully with the dialogue without the distraction of what they 'know' about how the world external to the COPI functions.

COPI is by design an egalitarian process. Each individual participant is as free as any other to make a contribution to the dialogue and the merit of one's participation is not gauged by the quantity of contributions; there is a shared search for meaning that relies on the collaboration of the rest of the constituent members of the COPI. It is likely that even the quietest members of a COPI follow the line of argument, reflect on the contributions and ultimately take something from the dialogue that will have some bearing on their lives outside the Community and potentially the way they live those lives in relation to others. Consequently, the individual not only has the potential to change as a result of the inquiry, s/he has the potential to change the environment, institutions and other individuals around her/him. Morrison and McCulloch (2000) suggest that:

In developing new means by which children can be heard, politicians should themselves find more effective, appropriate ways of communicating with children/young people, providing opportunities for them to participate directly in debate and decision making (p. 7).

One approach that may meet this recommendation is through the use of COPI. As Lundy (2007) suggests, children's voices cannot be viewed tokenistically; action must follow as a result if we are truly engaging in what Article 12 of the UNCRC advocates.

In order that children are able to develop their own beliefs and understanding, that they come to some awareness of their own values, that they are able to challenge received wisdom and even to be protected against Citizenship Education that is indoctrinal or propagandist, it is crucial that they are encouraged to inquire and inquire in depth. It is for these reasons that COPI may be of use to all members of society, not just those younger members; it should be acknowledged that everything is open to question and scrutiny. Training and practice of reasoning, for citizens of any age, might be promoted and facilitated through COPI.

This would allow and support their full participation in society's policy and decision-making processes. It would certainly be a shift in the running of society were young voices, as well as those more practised and established voices, and their associated views aired and accorded weight. It would be desirable in the promotion of an effective and inclusive citizenry that all voices were accorded equal space, to use one of Lundy's (2007) factors in considering children's rights.

Participants in COPI, whatever their age or experience, are encouraged to reason, reflect and inquire and it is from this that society and its constituent members could draw. The notion of our society requiring and desiring critical thinkers, individuals who are adept reasoners and who are receptive to the reasoning and ideas of others, is promoted by Siegel (1988). It is in facilitating and engendering these skills that society will shift towards community. It is this drive to create critical, reasoning and reflective citizens that Community of Philosophical Inquiry – and other forms of practical philosophy – aims to promote. Siegel (1988) sees critical thinking as an ability to reason and use such reasoning skills to justify:

...beliefs, claims, and actions. A critical thinker, then, is one who is *appropriately moved by reasons*: she has a propensity or disposition to believe and act in accordance with reasons; and she has the ability properly to assess the force of reasons in the many contexts in which reasons play a role (p. 23).

Siegel's definition of a critical thinker does not preclude children. Cassidy (2007) suggests that 'A much more inclusive society – a community perhaps – is needed where all individuals have a platform to speak from and be heard in order that their views may influence policy and practice'. Children, it would appear, are constrained by their social status.

Perhaps adults do not want children to question and reason because in taking account of their views, ideas and opinions, they (adults) may have to alter their own. Childhood could be seen as a period of indoctrination, the time when young humans are socialised into how one is expected to be in society. Yet now that the Government

(certainly in Britain) and society's educators are talking in terms of Citizenship Education, a more participative model of society is required. We are breeding citizens, but this begins when young; individuals have their reasoning skills facilitated and honed in order that they may contribute to the emergent community. As in the COPI, individuals are important, but individuals *as* individuals, not because they possess a certain age or status. Community of Philosophical Inquiry is a positive model for our society and how the younger members of that society are treated. It may be through a practice such as this that true citizenship – philosophical citizenship – may be enacted and one that may be further removed from that perpetuated in classical Sparta or Athens, one that may see philosophical citizens as a contradiction in terms.

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New Age Beliefs Among Teacher Education Students

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Abstract

Belief in the paranormal is apparently widespread, but education, particularly at a tertiary level, might be thought to counter such beliefs, and embed in their place scientific and rational modes of thought. In this project, levels of New Age belief were measured in a survey of 362 teacher education students at an Australian university. It was found that 36 (10%) of them consistently rejected all six New Age statements on the survey, and four (1%) consistently accepted all six statements. In all, 226 (62%) indicated agreement with at least one New Age belief. When we defined New Age believers as those who accepted the majority of New Age beliefs, the figure was 25% of the sample. In contrast, 42% felt able to reject the majority of New Age belief statements. New Age beliefs did not relate to either (a) university year level, (b) Grade Point Average, (c) anti-scientific attitudes, or (d) self-reported dispositions to approach or avoid personal argumentation. We observe that, at 25%, levels of New Age belief are unacceptably high in this population, but note that, to date, empirical researchers have been unable to provide convincing accounts for why people would hold such beliefs.

Introduction

The present paper stems from discussions, a decade ago, between philosophers and psychologists working in a tertiary Education faculty. A number of staff reported an apparently high level of beliefs which might be classed as superstitious, irrational, or otherwise faulty, aired among students in tutorial classes. For example, one student had actively disputed the notion of genetic inheritance of behavioural traits, on the grounds that her family was of

peasant stock, but she was now a successful university student. Another student appeared convinced that the course of history had been foreseen by Nostradamus. A third was convinced that alien life forms were observing human beings at some discreet distance. As tertiary academics, we were struck by the apparent confidence and assuredness with which such propositions were advanced, even within a public arena, and the apparent unwillingness of other students to attempt to dispute such ideas.

Yates and Chandler study

Two of us then conducted a paper and pencil survey, securing anonymous responses from 232 of our primary teacher education students (Yates & Chandler, 2000). Earlier, we had asked a faculty panel of five members to identify eight propositions as 'totally unbelievable'. That is, all panel members had to agree that these ideas were unbelievable even though they felt they might be held true by at least some within the student body. These eight statements, identified by the panel members as totally unbelievable, could all be classed as New Age beliefs. We embedded these eight items in a survey instrument, asking respondents to express a level of acceptance or disbelief. The mean number of statements rejected by the students was 3.5 out of 8. Of the 232 students who participated, only four rejected all eight statements.

What was surprising was the level of apparent agreement with these unbelievable statements. For instance, the idea that Nostradamus predicted history accurately was apparently believed by 39%, that star signs depict personality was believed by 46%, and 47% agreed that séances could be used to contact the spirit world.

Using recognised statistical procedures, we were able to compute an overall score representing the level of New Age beliefs and relate this to other known features of the student cohort. To our surprise, this overall score was *not* correlated significantly with any of the following: (a) attitudes towards science, (b) amount of TV watched, (c) number of book authors the students could recognise on a checklist (an index of intellectual engagement), or (d) their expressed need for cognition. Need for cognition was assessed through a questionnaire that taps the extent to which people prefer easy or complex ways of thinking and

reacting. Hence, we were faced with the apparent evidence that our students, as successful products of a modern education, exhibited remarkably high levels of New Age belief, but we had little notion of any other variable that might relate to such a belief pattern.

Other published findings

Our findings were by no means unique. Our interpretation of the available research literature is that correlations between paranormal or New Age beliefs and other factors which have been measured are disappointingly small or non-significant. For example, Walker, Hoekstra and Vogl (2002) found no relation between level of science knowledge and skepticism regarding paranormal beliefs in American undergraduates. Ede (2000) argued that scientific rationality is no more common in science graduates than in other students and pointed to a lack of skills with which to evaluate scientific claims as the major reason for this outcome. By contrast, Otis and Alcock (1982) found university faculty members more skeptical than students, and students more skeptical than members of the general public. Orenstein (2002) reported no difference between groups defined by level of education until they were at postgraduate level, at which point there was a modest decline in paranormal belief. Some studies revealed differences in paranormal belief related to length of education and to discipline. Aarnio and Lindeman (2005) found that university students had fewer paranormal beliefs than students of vocational schools, and that students of medicine and psychology held the least paranormal beliefs, while students of theology and education held the most. The differences between disciplines were, however, quite small.

One possible way of accounting for belief in the paranormal is to appeal to a generally anti-scientific attitude, especially among students who have had limited exposure to science during their school years. However, Cobern and Loving (2002) found that the attitude of their sample of elementary teachers was not particularly anti-scientific. While noting that elementary teachers were more like the general population than like science graduates or secondary science teachers, they found that they were not so much *anti*-scientific as judicious about their attitudes to science. They noted, 'Preservice elementary teachers value

science...but do not place it at the top of some epistemological pyramid' (Cobern & Loving, 2002, p. 1026). Like Gustafson and Rowell (1995), Cobern and Loving argued that such students come to university with their own views about science relatively well formed, and tend to retain these views. Coll and Taylor (2004) argued that even practising scientists held an open mind on belief in certain paranormal phenomena, and despite being committed to quite rigorous evaluation of their beliefs, were aware that they held some beliefs for socio-cultural reasons rather than basing them on clear scientific criteria.

Slight gender differences in paranormal belief have been reported in some studies. For example, Aarnio and Lindeman (2005), Rice (2003), and Yates and Chandler (2000) all found females higher on such belief. However, Lange, Irwin and Houran (2000) found gender effects were not consistently displayed, but varied across specific items.

The relationship of critical thinking and reasoning ability to level of paranormal or New Age belief has been explored in several studies. Hergovich and Arendasy (2005) found a significant relationship between the two, showing higher scores on paranormal belief and New Age philosophy among students who achieved low scores on reasoning tests than among those who achieved higher scores. Bressan (2002) reported errors in probabilistic reasoning were greater in believers than non-believers in a sample drawn from the general population, but not for a separate sample of university students. In a well-controlled laboratory study, Dagnall, Parker and Munley (2007) found that only one of a series of measures of probabilistic reasoning measures (i.e. perception of randomness) predicted paranormal belief. Hence, on the basis of the available empirical studies, it is difficult to ascribe New Age or paranormal belief to an overall failure in reasoning, or to attributes such as a general lack of statistical awareness.

One plausible explanation for the finding of widespread paranormal belief in the population at large, and also in university students, comes from Lindeman and Aarnio (2007). They postulate that such beliefs are related generally to the intuitive physics, psychology and biology which developmental psychologists have found are acquired without instruction by all children in the course of their normal development (Wellman & Gelman, 1992). Magical or

paranormal beliefs are argued to be distortions of such knowledge where explanations typical of one category are erroneously fused with objects from another. This occurs, for instance, where intentional explanations typical only of human subjects are transferred to inanimate objects. For example, treating dice as if they can be encouraged to fall a certain way is inappropriate because dice are not the sort of objects which can be affected by persuasive statements, and children as young as four years old can make this distinction. While such explanations are thus understandable, there is a confusion of ontological category in their application. These confusions result in superstitious or paranormal beliefs not where they are used playfully or as metaphors (e.g. as in talking to a recalcitrant computer which one knows will not respond, or encouraging the set of dice in a playful manner), but where they are believed to be literally true. Subbotsky (2001) argues that alternative modes of explanation (scientific and non-scientific) coexist in both children and adults, and his research demonstrates that in certain cases this is even more obvious in studies of people's behaviour as opposed to measures using verbal responses.

The overall picture from the behavioural science literature is that there are few consistent findings which offer any convincing explanation for differences in level of paranormal belief. Empirical findings appear to have made little advance beyond those reported by Irwin (1993, p. 2). In a major review of the literature on paranormal belief, he begins by stating that:

The nature and functions of these beliefs have been the subject of considerable speculation and empirical investigation by parapsychologists and sceptics alike, but as yet an explicit consensus view has failed to emerge.

The current project

In essence, the present project constitutes an extension and replication of our earlier study (Yates & Chandler, 2000). In this second survey, we reduced the number of statements from eight to six, eliminating the two ideas that found the least support. We surveyed students in first and third year classes. In the case of the third year students, we had the benefit of being able to track their Grade Point Average

(GPA). Given that prior studies had found some (albeit slight) relationship between belief and educational attainment, we predicted a relationship between university year level and New Age beliefs, and we predicted that belief in the New Age would correlate negatively with GPA.

In addition, these students had completed a brief questionnaire on dispositions to approach or avoid argumentative situations. We predicted that beliefs in the New Age might relate to argumentative dispositions in the following way. We felt that students would welcome argumentation if they were either 'New Age believers' or 'Skeptics'. That is, people who enjoy argumentation might show up as the extremes on our index of New Age beliefs, at either end of the continuum. This hypothesis is based on the simple notion that since both Skeptics and New Age believers are demonstrating a preparedness to adopt a position on contentious issues, they would also be predisposed toward natural argumentation. We refer to this as the argumentation hypothesis.

Method

Participants and procedure

The participants were 205 students (162 female, 43 male) in their first year of study towards the Bachelor of Education degree, and 157 students (130 female, 27 male) in their third year of study. All the participants can be described as pre-service primary (elementary) education students. They participated in the survey in the context of practicum classes in computing skills. Individuals were asked to log onto the departmental server and answer questions online. Although this was done within a group context, every student sat at an individual terminal, and interaction was discouraged. Questionnaire responses were submitted to the server electronically. Participation was approved under university ethics procedures, and hence was voluntary. Students who did not wish to participate could leave the class early, which occurred in five instances.

Instruments

New Age beliefs

Six statements were used to tap New Age beliefs (see Table 1). These were taken from Yates and Chandler (2000). For each item, students were asked to indicate level of belief on a scale which ranged from 'totally unbelievable' (1) at one end, through to 'totally believable' (7) at the other.

Anti-scientific attitudes

The same six items as used by Yates and Chandler to tap anti-scientific attitudes were repeated in this study. Responses were tallied to form a single score reflecting the absence of belief in scientific values. One sample question was 'Overall, the impact of science on civilisation has been more for the negative than the good'.

Argumentation approach and avoidance

This scale, first published by Infante and Rancer (1982), was used to measure personal disposition towards argumentation. It consists of 20 items, of which 10 are intended to tap personal enjoyment and fulfilment in engaging in intellectual argumentation. Two sample items are 'I enjoy a good argument over a controversial issue', and 'I consider a discussion in which conflicting views are stated an exciting intellectual challenge'. The other 10 items tap the disposition to avoid argumentation. Two sample items are 'I try my best to avoid discussing controversial issues', and 'I prefer being with people who rarely disagree with me'. The two scores are reported separately, and naturally will correlate negatively (Pearson $r = -.28$ in the present dataset).

Achievement

In the case of the third year class, Grade Point Averages were extracted from records of earlier completed academic courses at the university to generate a Grade Point Average for each participant. This GPA score was expressed as a percentage, which ranged from 55 to 84 across the cohort, with the mean at 66.

Results

Descriptive findings

We began by looking at the frequencies of response, across the six New Age items. We defined acceptance as indicating a score greater than 4 on the scale, and rejection as a score of 3 or less. This allowed students to remain unclassified (i.e. responding with *'no opinion'*). It was found that 36 students (10%) consistently rejected all six New Age statements, and four (1%) consistently accepted all such statements. In all, 226 (62%) indicated agreement with at least one New Age belief.

The six New Age items clearly grouped together to form a coherent cluster. This was established statistically with the use of a factor analysis procedure, with all six items inter-correlating significantly, and loading onto a single factor. When the six items were tallied to form a scale (New Age tally), the alpha coefficient (indicating internal reliability) was 0.80, which is regarded as high. The means for the items are shown in Table 1, along with frequencies of participants defined as 'Skeptics' or 'Believers' on each item.

On aggregate, the 362 students made 2137 responses to the New Age items, and the frequencies per response category, summed across the six items, are shown in Figure 1. The bimodal distribution is noteworthy since it suggests that sizeable numbers of the group felt able to reject the statements as *'totally unbelievable'*, which was, of course, the universal response given by the faculty panel at the outset. Also noteworthy is the low endorsement (41 or 2%) of the category *'totally believable'*.

Table 1: New Age items, means, and percentages of Skeptics and Believers

Item	Statement	Mean (SD)	% Skeptics	% Believers
14	Extra-terrestrial craft, known as UFOs, sometimes visit the earth	2.74 (1.7)	62	18
6	Past lives (i.e. earlier incarnations) can be uncovered through hypnosis	2.9 (1.7)	58	21
4	Certain crystals possess magical healing properties	2.98 (1.6)	56	21
1	The star signs (astrology) can be used to analyse our personality makeup	3.15 (1.8)	54	33
7	The spirit world can be contacted through séances or through psychic people known as mediums	3.5 (1.8)	48	34
3	Although he wrote over 400 years ago, the philosopher and seer Nostradamus accurately predicted the course of modern history	3.84 (1.2)	24	23
	Overall New Age tally	19.1 (7.0)	42	25

Notes: (a) data from 362 participants, (b) means expressed along a 7-point scale, 1 = 'totally unbelievable', 7 = 'totally believable', (c) Skeptics are people who responded 1, 2, or 3, (d) New Age Believers are people who responded 5, 6, or 7, (e) on Overall New Age tally, people were classified on the basis of 4 or more acceptances (Believers), or 4 or more rejections (Skeptics), (f) SD means standard deviation.

Association of New Age tally to other measured factors

Statistical correlations were computed to investigate the relationship between New Age beliefs and the other measured variables. These product-moment correlations were not significant. New Age tally was *not* significantly correlated with (a) GPA, (b) anti-scientific attitudes, or (c) with either argumentation approach or argumentation avoidance. Within this set of correlations, the only significant relationship found was between the argumentation approach and avoidance scores, $r = -.28$, $p = .001$.

Similarly, means testing procedures indicated that the differences between the two university year levels (Year

One versus Year Three students) were not significant on any of the variables measured within the present data.

We examined the data for the possibility that both New Age believers and Skeptics (as defined by people holding extreme views in either direction) would score highly on argumentation scores. This was explored through means testing procedures, comparing the extreme groups to the middle range (i.e. people centred around 'no opinion'). Significant differences between these three groups on the argumentation scores were not found. Thus the 'argumentation hypothesis' was not supported.

However, a significant gender effect was evident, with females scoring more highly on the New Age tally than males. The means were 19.5 and 17.5 respectively, $F=4.2$, $p=.04$. This gender effect was also apparent on each of the six New Age statements. Chi-square testing frequency tests did reveal that males were more likely to be classified as Skeptics than females (53% vs. 40%). However, it was also evident it was *not the case* that more females than males were classified as New Age believers (found to be 25% overall, see Table 1). Further, of the four individuals who achieved the maximum score on New Age beliefs, three were female and one was male, this ratio being consistent with a sample composed of 292 females and 70 males.

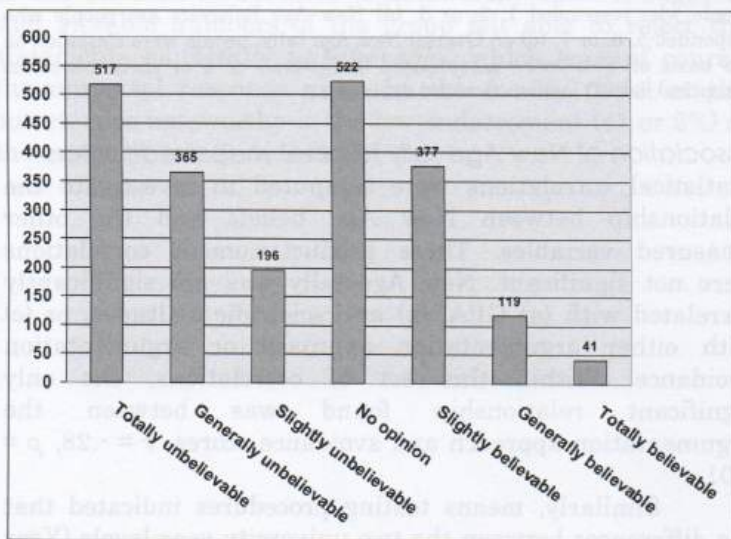


Figure 1: Frequency of responses to New Age statements aggregated across items

Discussion

In question, how many teacher education students present as New Age believers? From our current dataset, the answer is that 25% of such students report a level of belief in the majority of the New Age notions presented in the survey. There are variations across specific items. For example, only 18% of the sample felt that UFOs visit the earth, whereas 34% believed in séances. A notable 62% reported that at least one New Age statement might be believable.

The levels of New Age belief obtained in this current survey are slightly lower than those we reported in 2000, based on a similar population. Nevertheless, the overall level of New Age belief among our potential teachers is unacceptably high. This constitutes an evaluation arrived at on the basis of what we expect of teachers in a modern society, where science and technology form the backdrop to our lives. The fact that Skeptics, at 42% of the sample, were more numerous than New Age believers can be interpreted in a positive light. Stated bluntly, we expect teachers to be visible as individuals prepared to challenge statements which lack credibility and to act as role models in interpreting the world, and reasoning about complex issues in a balanced way. The statements in Table 1 were selected because they lack credibility, as judged by university staff, but 25% of the undergraduates in the current sample rated four or more of these same statements as being believable.

Does the use of a graded scale invite people to rate such beliefs as *'slightly believable'* when they may have responded *'negative'* had we offered a simple dichotomous choice as to whether a specific phenomenon is believable or not? Possibly this interpretation is supported by the pattern of responding as shown in Figure 1. Whilst it may be unacceptable to state you *'really do believe'* in UFOs, it may still be possible to indicate a level of ambivalence when offered a sliding scale on which to respond. But, can we allow teachers, who are to be the role models for the coming generation, the luxury of doubt in such matters? What would it mean to report to others that one *'slightly believes'* in UFO visitations? Perhaps what these respondents intend to convey is that these propositions are not obviously inconsistent, that there is at least a logical possibility that they are true, even though most of the respondents would not construct their lives around such a belief.

It was anticipated that the university experience might account for some increment in personal skepticism, but levels of New Age thinking did not differ between the first year and third year students. Whilst a cross-sectional design does not rule out the possibility of significant change across time, the observed trend does not support this notion. A further 'negative' result was evident in the case of Grade Point Average. At times, a statistical correlation (such as we used) does not always tell the full story, so we visually inspected graphical scatterplots attempting to relate GPA to the various New Age beliefs. Disappointingly, we were unable to discern any clear patterns, and are obliged to note that the null hypothesis was unable to be rejected.

The gender effect was significant overall, with proportionally more males presenting as Skeptics. However, when it came to examining frequencies of actual New Age believers, there was no statistical basis for suggesting that the females out-represented the males. The participants did not neatly divide into Skeptics and New Age believers; some were unclassifiable as either Believers or Skeptics. Hence, although it may be the case that on overall tallies, males are more skeptical than females, when it comes to looking to the actual number of people who believe New Age ideas, there may be no significant gender difference.

The survey did not find any significant effects with regard to natural argumentation tendencies. That is, knowing how the student felt about New Age issues did not appear to relate to his or her self-reported tendencies to either approach or avoid argumentation. Further, we tested for the possibility that the argumentation hypothesis might work differently for high and low capability students, using GPA as a statistical moderating factor. Again, we could not identify any significant trends.

In the project which pre-dated this one, we had found no relationship between New Age beliefs and personal need for cognition, as described by tendencies to reflect, to question, or to search for complexity (Yates & Chandler, 2000). The finding that New Age beliefs present as entities quite independent of anti-scientific attitudes was found in both the present survey and our earlier one. It is important to recognise that none of the students in our two surveys had studied traditional science topics at the university level. However, we also note that in the Walker, Hoekstra and

Vogl study (2002), level of study and knowledge in science had no apparent bearing upon paranormal belief. They concluded that 'having a strong scientific knowledge background is not enough to insulate a person against irrational beliefs' (p. 26). In addition, Genovese (2005) found no linkage between New Age thinking and the number of science courses taken by teachers in their university degrees.

In sum, our findings, which appear to be consistent with those of other researchers, indicate that remarkably high levels of New Age beliefs are evident in populations who can be viewed as successful products of a modern educational system. However, when it comes to attempting to account for why some students present as Believers, and others as Skeptics, behavioural researchers are unable to point convincingly to any clearly defined correlates. One promising lead, we feel, lies in the findings of Dagnall, Parker and Munley (2007). As we noted earlier, they found that although New Age believers were not deficient in more general thinking skills, they did appear to be deficient in solving problems involving appreciating randomness. Further, the work of Subbotsky (2001) and Lindeman and Aarnio (2007) suggests another line of inquiry, indicating that we should look not so much at the reasoning power of the individual as at the kinds of objects to which particular explanations are applied. Entertaining some of these beliefs may not be invariably negative. Some of what were once thought magical beliefs have been proved scientifically plausible. Ancient belief in contagion was surely part of the inspiration for the germ theory of disease. What other apparently implausible beliefs might result in a promising line of scientific inquiry?

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eP4C: Using Technology to Support Community of Inquiry

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Introduction

Philosophy for Children

The Philosophy for Children (P4C) programme provides purposeful instruction and practice in critical thinking skills. It aims to make students more reasonable – the ‘fourth R’. The central practice of the programme is called ‘community of inquiry’. This practice requires students to ‘share their own perspectives, listen to one another, read faces, challenge and build on one another’s thinking, look for missing perspectives and reconstruct their own ideas’ (Institute for the Advancement of Philosophy for Children [IAPC], 2003). It is hoped that the introduction of the community of inquiry methodology will better equip students with important cognitive skills, such as ‘creating hypotheses, clarifying their terms, asking for and giving good reasons, offering examples and counter examples, questioning each other’s assumptions, drawing inferences...’ (IAPC, 2003).

Students face an unpredictable world and will need to gain critical thinking skills to give them control over their lives and learning. In school, they face the omnipresent danger of putting aside what they think in order to reproduce what their teachers and peers think. Philosophy offers children the opportunity to move beyond routine thinking and to think critically. It aims to counter uncritical thinking and helps to strengthen judgement through the use of reasoning.

Computer-Supported Collaborative Argumentation

Computer-Supported Collaborative Argumentation (CSCA) is a collaborative inquiry-based teaching strategy to develop critical thinking skills with the aid of computers. Central to

CSCA is the idea of a CSCA tool, which is basically a software tool. One way to develop critical thinking skills is to use CSCA tools to facilitate argumentation and related moves via scaffolding, so that students are able to practise these moves.¹

P4C and CSCA

P4C is traditionally conducted in a face-to-face setting, with students seated in a circle to discuss philosophical questions as a community of inquiry. However, such discussions can also be done in an online mode. To be more specific, we can adopt an approach involving the use of a computer network to mediate asynchronous text-based discussion using CSCA scaffolding in the context of smaller discussion groups. In short, the components of this approach are: (1) computer mediation, (2) smaller number of participants, (3) asynchronous manner of discussion, (4) CSCA scaffolding, and (5) text-based communication.

Computer mediation

The first component of the proposed approach is computer mediation. Studies in non-P4C contexts show that members of computer-mediated groups participated more equally in discussions than did members of face-to-face groups (Dubrovsky, Kiesler & Sethna, 1991; Eveland & Bikson, 1988; Hiltz, Johnson & Turoff, 1986; Kiesler, Zubrow, Moses & Geller, 1985; Siegel, Dubrovsky, Kiesler & McGuire, 1986; Weisband, 1992). Without the use of a computer network to mediate discussion, members of face-to-face groups were able to perceive individual differences associated with social status, such as age, gender and race (Cohen & Roper, 1972; Dubrovsky et al., 1991; Kanter, 1977). This created a status hierarchy and inhibited communication from members (e.g., Dubrovsky et al., 1991; Kiesler, Siegel & McGuire, 1984). According to Marttunen and Laurinen (1998), computer mediation:

¹ A move, or its technical equivalent, illocutionary act, is the action intended to be performed by a speaker in the course of producing an utterance. It entails understanding the speaker's utterance and identifying the illocutionary act behind the utterance. For example, a speaker is said to have *asked a question* when he utters the sentence 'What is heat?'.

...allows various kinds of people regardless, for example, of their race, looks, occupational status and level of education, to participate in interaction on an equal basis. When...the participants do not see each other it is not so difficult to put over one's own point of view as it may be in face-to-face situations (p. 3).

Veerman (2000, 2003) provided an alternative perspective and argued that members might simply harbour *fear* of losing face in front of their peers. Computer mediation rendered members unable to see each other's faces. This would foster communication from participants who would otherwise feel inhibited.

Number of participants and asynchronous discussion

The second and third components of the proposed approach are smaller number of participants and asynchronous manner of discussion. Low, Malek and Au (2006) suggested dividing the face-to-face P4C class into smaller discussion groups to promote equitable participation. This would increase the chances of the students being able to express themselves, especially in large classes of around 30 students.

The same practice may be applied to classes in an online setting. What should be the size of the discussion group in an online setting? In a preliminary study conducted by Veerman (2000), students' participation in asynchronous online discussions using Allaire Forums was observed. The students were undergraduates enrolled in a two-month educational technology course, and discussed theoretical aspects relevant to literature and educational practice. Twelve discussions were organised across the whole course, and no requirements were set. In other words, the students could participate in any discussion as and when they liked.

The observational study provided the researchers with the important insight that, assuming an asynchronous context, discussions that attracted about 12 students worked best. Smaller groups did not contribute sufficient messages to maintain the discussion, and larger groups contributed too many messages to keep track of.

CSCA scaffolding

The fourth component of the proposed approach is CSCA scaffolding. We will look at the historical beginnings of CSCA and how CSCA scaffolding emerged from these beginnings. We will then look at how CSCA scaffolding facilitates students' moves and the role of teachers in P4C discussions.

Historical beginnings of CSCA

In the early 1970s, Rittel (1972) and Rittel and Webber (1973) described a type of problem which they labelled 'wicked', as opposed to 'tame' or 'benign', problems. In a tame problem, it is clear when a solution has been reached. A tame problem has already been understood sufficiently for it to be analysed with models or methodologies. It may even be analysed with automatic tools, such as medical diagnoses by expert systems. On the other hand, a wicked problem:

1. Is made up of an interlocking set of issues. These issues are not understood until a solution has been developed. For example, in the design of a new car, adding structural support in the doors 'makes the car safer from side impact, but the added weight increases the cost, changes the fuel economy and ride, and requires adjustment to suspension and braking systems. Making the car safer also impacts marketing, raising issues such as pricing and demand...' (Conklin & Weil, 1997, p. 4).
2. Involves various stakeholders who have expertise in different aspects of the problem. For example, in car design, we have 'the people who know what is needed (Marketing or Sales) and the people who know what can be done (Engineering or Marketing)' (Conklin & Weil, 1997, p. 4).
3. Involves solutions whose constraints change over time. For example, in car design, 'some decisions, such as the addition of side-impact reinforcements, might be forced by unpredictable constraints, such as the need to impress a politician or a Wall Street analyst with the company's commitment to safety' (Conklin & Weil, 1997, p. 4).

While models or methodologies used to analyse tame problems are top-down in nature, Rittel (1972) and Rittel and Webber (1973) suggested an *argumentative* method oriented towards solving wicked problems.

The work of Rittel (1972) and Rittel and Webber (1973) laid the foundation for the development of the Issue-Based Information System (IBIS) (Kunz & Rittel, 1970). IBIS was a language (not technological tool) for encouraging and structuring argumentation. The basic IBIS entities were *Issue*, *Position* and *Argument*, and the basic IBIS relationships were *supports* and *objects to*. Every IBIS discussion would begin with an *Issue*. An *Issue* was the question to be discussed. A *Position* in response to the *Issue* was a suggested answer or potential solution. An *Argument* that *supports* or *objects to* a *Position* was a statement of the pro or con of a suggested answer. Figure 1 is a basic IBIS structural unit showing the inter-relationships between *Issue*, *Position* and *Argument*.

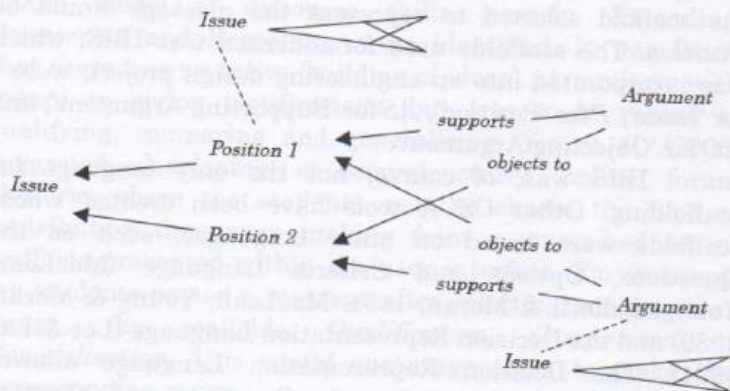


Figure 1: Inter-relationships between *Issue*, *Position* and *Argument*

As shown in Figure 1, a new *Issue* might arise from the basic structural unit, and it might be explored with *Position*, *Argument*, another new *Issue*, and so on. This resulted in a network of basic structural units. The units could be linked by various relationships. One unit could be connected to other units by relationships such as *more general than*, *similar to*, *replaces*, *logical successor of* and *temporal successor of*.

Facilitation of moves via CSCA scaffolding

Scaffolding provides assistance to students, with support fading as their competence increases (Hogan & Pressley, 1997; Larkin, 2002). An important aspect of scaffolding is that it is temporary (Vygotsky, 1930/1978). As the students' abilities increase, the scaffolding is progressively withdrawn. This process is similar to the scaffolding which supports the construction of a new structure and is removed when the structure is completed (Pressley & McCormick, 1995).

The traditional idea of scaffolding involves adults or more able peers providing support and guidance to the learner. A new perspective that has arisen in recent years recognises software tools as scaffolding agents. Since the development of IBIS, CSCA tools which contain scaffolds that were based on the IBIS language (e.g., indented text IBIS) have been created. Such scaffolds represent what the participants' messages are about and restrict the types of messages the participants can post in a discussion. For example, if a participant would like to put forth a position, the scaffold selected to represent the message would be *Position*. The scaffolds used for indented text IBIS, which was incorporated into an engineering design project, were *I* for 'Issue', *P* for 'Position', *AS* for 'Supporting Argument', and *AO* for 'Objecting Argument'.

IBIS was, of course, not the only language for scaffolding. Other CSCA tools have been created whose scaffolds were based on other languages, such as the Questions, Options and Criteria Language (MacLean, Young, Bellotti & Moran, 1991; MacLean, Young & Moran, 1989) and the Decision Representation Language (Lee & Lai, 1991). The Decision Representation Language allowed participants to contest through *Questions* and *Counter-claims*.

The scaffolds can be notations (symbols, icons) or words. A potential disadvantage of using notations as scaffolds was highlighted by Tan (2000) and Tan, Turgeon and Jonassen (2001). In the study, 30 male students enrolled in a turf-grass management course were explicitly instructed to use the + notation for 'Warrant', a component of Toulmin's model of argument (Toulmin, 1958; Toulmin, Rieke & Janik, 1984). In spite of this, some of the students used the notation to represent advantages of a solution. According to the researchers, one reason for this could be that the students

interpreted the notations of the CSCA tool in terms of their everyday experience. If scaffolds involve words, we do not have to paraphrase the scaffolds into normal English. This avoids problems due to students' interpretation of the notations. Table 1 shows an overview of the different types of CSCA scaffolds. The examples of CSCA tools are those used in educational settings.

Table 1: Overview of different types of CSCA scaffolds

Type of scaffolding	Examples of scaffolds	Examples of CSCA tools
<ul style="list-style-type: none"> • Notations • Words 	<ul style="list-style-type: none"> • ?, □, +, -, +/- • <i>Verify, Discuss, Explain, To be seen...</i> 	<ul style="list-style-type: none"> • Belvédère, • QuestMap • Connect, • Knowledge Forum², • Rationale

Scaffolds can be used to facilitate moves which are lacking in face-to-face discussions. In Singapore, Yip, Au and Quek (2006) used content analysis to explore 35 Secondary 2 students' P4C discussions. Three dimensions of Fisher's (2003) model of discourse skills, namely, Extending, Countering and Reasoning, were identified. It was found that there was an active 'building of ideas', particularly with regard to giving justifications, but less so in regard to qualifying, comparing and generalising. Yip et al. (2006) suggested developing a semi-structured online forum platform where the students were to choose the type of contribution they were making from a prescribed set of scaffolds presented within the user interface. For instance, the students posted a message after selecting, among other things, the scaffolds *Qualification*, *Comparison* or *Generalisation*. This would encourage them to make the corresponding moves.

In the research study mentioned earlier (Tan, 2000; Tan et al., 2001), the 30 male students in the turf-grass management course, mostly employees at golf courses, were divided into groups of three or four each. Each group was assigned three case-based problems to analyse and solve, and completed the assignment synchronously using QuestMap. Content analysis of one of the group's discussion showed the students' tendency to make Claims (45%) and Grounds (35%) instead of Warrants (15%) and Rebuttals

² Although Knowledge Forum is used for knowledge building (Scardamalia & Bereiter, 1994, 2006), it can also be used as a CSCA tool.

(0.4%). At the same time, the group was found to employ QuestMap as a peripheral tool during the discussion. In other words, the students in the group held a face-to-face discussion before transforming what they discussed using QuestMap. To enhance the number of Warrants and Rebuttals, the researchers proposed to mediate the discussion using the CSCA tool through a computer network. In this way, the scaffold notations for 'Claim', 'Grounds', 'Warrant' and 'Rebuttal' presented within the CSCA tool user interface would encourage the students to provide Warrants and Rebuttals in addition to Claims and Grounds.

Facilitation of moves in P4C

Previous studies have shown that most of the talk that *naturally* occurred in classrooms when students worked together was either 'disputational' or 'cumulative' (Mercer, 2000). Disputational talk is characterised by a consistent reassertion of one's opinion. It consists of short exchanges of assertions and counter-assertions (e.g., 'yes it is – no it isn't' exchanges). In cumulative talk, students add information of their own. In other words, they build positively but uncritically on one another's contributions.

Similar results were reported by Mercer (1995) on students involved in the Spoken Language and New Technology project. Fisher (2003) shared much the same sentiments about cumulative talk when he said that 'children's contributions can be...endlessly anecdotal...' (p. 178).

The role of teachers shifts from 'content expert' to 'facilitator' in P4C. As facilitators, teachers have to encourage students in discussions to shift from assertion and cumulative moves to clarification and argumentation moves. They can do this by modelling the moves the students are expected to make, and by Socratic questioning (IAPC, 2003). In Socratic questioning, teachers ask open-ended questions, including those that seek clarification, probe reasons, explore counter examples, and test implications. '[T]he facilitator...guides the children...by asking open-ended questions...' (IAPC, 2003, What is a Typical P4C Session like? paragraph 4). Over time, when the community of inquiry reaches the mature stage of growth, the students take on roles to ask the questions, instead of being guided by the facilitator (Fisher, 2003).

As above, the role of a P4C teacher is to facilitate students' clarification and argumentation moves in discussions. As shown in the previous section, CSCA tools can be used to facilitate various types of student moves via scaffolding. Thus, there is potential for CSCA tools to be incorporated into P4C discussions to facilitate clarification and argumentation moves *in addition* to the teacher. This may be useful for beginning teachers in P4C.

The study carried out by Tan (2000) and Tan et al. (2001) shows that using notations as scaffolds may lead to problems due to students' interpretation of the notations. To avoid such problems, it is better to use words for scaffolds. The study by Tan (2000) and Tan et al. (2001) also suggests the importance of using a computer network to mediate discussions. Computer mediation is crucial to the CSCA tool's effectiveness in facilitating student moves.

With the incorporation of information and communication technology into project-based learning, a teacher's role would be potentially increased and become more demanding (Mergendoller & Thomas, 2000). The same could be said for the incorporation of CSCA into P4C discussions. The teacher has to assume the role of a coach by showing students how they could use the CSCA tool to conduct discussions.

Text-based communication

The fifth component of the proposed CSCA approach is text-based communication. There are three types of CSCA tools that can be developed, depending on the mode of communication they offer (Collis, 1996). The three types of CSCA tools are: (1) those that offer audio-video-based modes of communication only, (2) those that offer text-based modes of communication only, and (3) those that offer both. In other words, CSCA tools can involve audio-video messages only, text-based messages only, or both audio-video and text-based messages. At the present moment, most CSCA tools offer users text-based modes of communication only (Veerman, 2000, 2003).

Of course, in the case of audio-video messages, text may appear as titling in the audio-video, or may be part of what is being captured in the audio-video (Collis, 1996). However, the text should be 'minimal in quantity in order to be legible' (Collis, 1996, p. 35).

In text-based CSCA tools, posting messages invariably involves typing. Users 'capture their ideas via typing, letter by letter, through their keyboards' (Collis, 1996, p. 35). When we type, we have to formulate our thoughts into written text, which makes our messages more considered than in the case of verbal language, which can be quite impulsive. Since we would have thought through our ideas before we type, the content is less likely to be of poor quality.

Chen and Looi (2007) examined the advantages and disadvantages of online discussion in an in-class setting *vis-à-vis* online discussion in an off-class setting. The participants were 16 male and female Heads of Department of Information Technology who were enrolled in a professional development course to help them explore and think about their roles and responsibilities. They posted messages in both in-class and off-class online discussions by logging onto a course portal.

In this study, an in-depth interview was conducted to obtain the participants' perceptions, opinions and suggestions on the strategy of online in-class discussion. In her comparison of text-based and oral discussion, one of the interviewees (Gloria) shared: '...we would have thought about it before we typed. After some thinking...you type it out...But when we talk, it is sometimes quite impulsive' (Chen & Looi, 2007, p. 320).

Speaking within the context of e-mail communication, Marttunen and Laurinen (1998) argued that 'when e-mail is used one has to formulate his/her thoughts into written text, which makes the message more considered than in the case of spoken language' (p. 3).

An example

The following presents a case example of a P4C discussion being conducted in a Secondary 3 classroom supported by technology. The class consisted of 30 high ability Chinese students (aged 15) from an all-boy high school in the central part of Singapore. Following Veerman (2000), we divided the class into asynchronous discussion groups. However, there were 10 students instead of 12 students in each group. This was due to practical implementation issues – there were only 30 students in the class.

The students in each group communicated their messages via a computer network using a CSCA tool. The online discussions were conducted beyond curriculum hours and spanned a period of 19 days. As mentioned above, the students were all male Chinese students aged 15 years old. They also wore school uniform. Thus, if computer mediation makes student participation more equitable, it is probably due to the obliteration of the fear of losing face in front of others rather than to the obliteration of the status hierarchy.

A teacher took on the role of facilitator in all three groups. As mentioned in an earlier section, the students ask the Socratic questions themselves when their community of inquiry reaches the mature stage of growth. In the present example, the Socratic questioning was still done by the teacher-facilitator.

Each group discussed the same question. The question for discussion was 'Is the statement "All steel bars expand when heated" true?' It was an issue taken from the Philosophy of Science. The discussion question was selected to readily evoke different kinds of approaches and opinions. Being multi-dimensional in nature, it readily aroused conflicting views among the students, and hence effectively brought about discussion. A stimulus was presented to provoke the discussion. It was a passage taken from an 'O' level science textbook.

In a lesson leading up to the online discussions, the teacher-facilitator familiarised the students with the CSCA tool and taught them how to use the tool. The CSCA tool utilised scaffolds and the more complex scaffolds were explained to the students with the use of examples. The rationale and ground rules for online discussion were also stated. Each group then took part in an eight-day 'warm up' discussion of the question 'Is astrology scientific?'. This was followed by a session where the teacher-facilitator highlighted the pitfalls found in the warm up discussion. Some of the pitfalls highlighted included posting messages at the inappropriate place in the discussion forum and the use of inappropriate scaffolds. The teaching and learning cycle for the class is shown in Table 2.

Table 2: Teaching and learning cycle for the observed class

Stage	Activities	Mode	Time period
1	Teacher-facilitator introduced the idea of online discussion. Teacher-facilitator showed a PowerPoint presentation, which familiarised the students with the CSCA tool and the more complex scaffolds, and stated the rationale and ground rules for online discussion.	Face-to-face	1 period (1 hour)
2	Students posted messages on the question raised by the teacher-facilitator in the warm up discussion.	Online	8 days
3	Group presentation by students on how to improve their warm up discussion. Teacher-facilitator highlighted the pitfalls found in the warm up discussion.	Face-to-face	1 period (1 hour)
4	Teacher-facilitator introduced the new question for the next session and asked the students to post messages on the new question. At the end of the discussion, the teacher-facilitator provided online comments and feedback.	Online	19 days

The web-based version of Knowledge Forum was used as the CSCA tool. Although Knowledge Forum is used for the process of knowledge building (Scardamalia & Bereiter, 1994, 2006), it can be adapted for CSCA settings. Knowledge Forum supports discussions as textual threads through hierarchical indentation. In other words, it employs indentation to represent the hierarchical relationships among the message titles (Figure 2).³ Each message title can be expanded by a mouse click to show the content of the messages. Scaffolds restricting the types of messages a participant can post are presented within the Knowledge Forum user interface, and the scaffolds are words.

³ In certain forms of hierarchical indentation, the relationships represented are not between messages titles, but between messages.

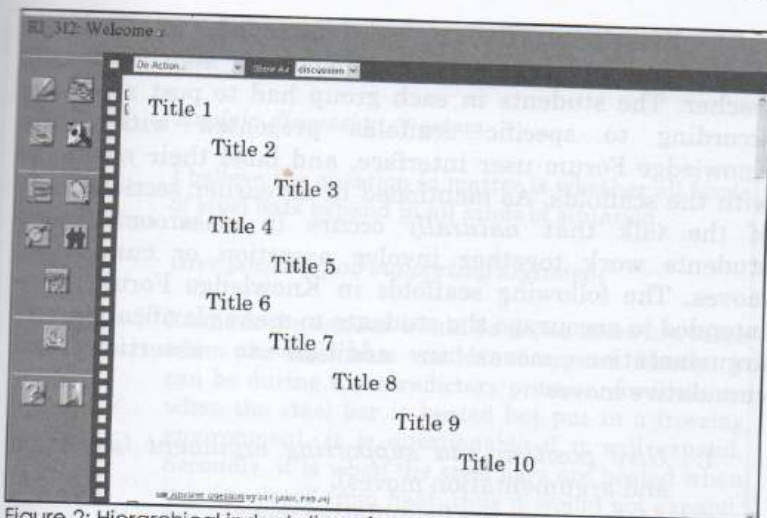


Figure 2: Hierarchical indentation of message titles

The screen capture in Figure 3 shows the discussion forum of one of the discussion groups.

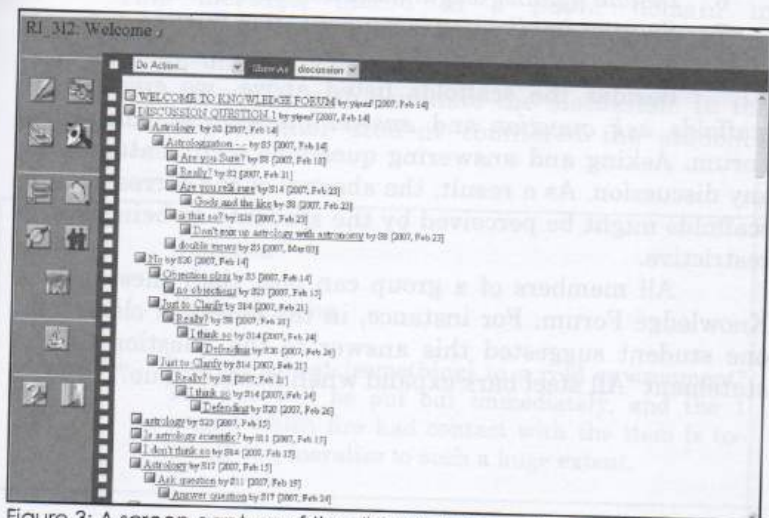


Figure 3: A screen capture of the discussion forum of one of the discussion groups

Knowledge Forum was intended to facilitate clarification and argumentation moves *in addition* to the teacher. The students in each group had to post messages according to specific scaffolds presented within the Knowledge Forum user interface, and label their messages with the scaffolds. As mentioned in an earlier section, most of the talk that *naturally* occurs in classrooms when students work together involve assertion or cumulative moves. The following scaffolds in Knowledge Forum were intended to encourage the students to make clarification and argumentation moves in addition to assertion and cumulative moves:

1. *Give position and supporting argument* (assertion and argumentation moves);
2. *Make connection* (cumulative move);
3. *Qualify*⁴ (cumulative move);
4. *Explain discussion question* (clarification move);
5. *Raise objection* (argumentation move);
6. *Defend against* (argumentation move); and
7. *Suggest implication* (argumentation move).

Besides the scaffolds listed above, we created the scaffolds *ask question* and *answer question* in Knowledge Forum. Asking and answering questions occur naturally in any discussion. As a result, the absence of the corresponding scaffolds might be perceived by the students as being overly restrictive.

All members of a group can post their messages in Knowledge Forum. For instance, in the observed classroom, one student suggested this answer to the question 'Is the statement "All steel bars expand when heated" true?':

⁴ To qualify is to add something which makes another's claim less strong or less general.

Title: No.

Scaffold: *Explain discussion question*

Content: I believe the question in matter is whether all kinds of steel bars expand in all kinds of situation.

Scaffold *Give position and supporting argument*

Content: I believe the answer would be no, as there are cases when the steel bars would not expand. Firstly, it can be during a contradictory premise, for instance when the steel bar is heated but put in a freezing environment, it is questionable if it will expand. Secondly, it is when the steel bars are heated when it is insulated from heat, thus it would not expand. There are many imaginary situations that can be talked about as long as we are willing to make it up.

This message, placed in a public domain in Knowledge Forum, was given equal opportunities to be responded to, unlike in the case of face-to-face interaction, where some members may dominate the discussion. In the instance above, another student countered the student's answer:

Title: Objection

Scaffold: *Raise objection*

Content: how do u heat [something] in a cold environment? The fire will be put out immediately, and the 1 second which fire had contact with the item is too 'small' to generalise to such a huge extent.

Mar 01, 2005, from:

<http://www.education.com/knowledgeforum>

Kanter, R. M. (1977). Some effects of proportionate vs group

life: threat and relief and responses to them.

women. *American Journal of Sociology*, 81(5), 903

910.

Conclusion and further work

Technology can play a role in supporting P4C. It makes student participation more equitable, increases students' clarification and argumentation moves, and improves the quality of students' messages.

We hold that, to implement a CSCA approach in P4C, we should use words as scaffolds and employ a computer network to mediate the asynchronous discussions. We should also ensure that there are about 12 students in any discussion group. In addition, the teacher has to assume the role of a coach by showing students how they could use the CSCA tool to conduct discussions.

We reported on the process of integrating CSCA into a Secondary 3 P4C classroom in Singapore. We highlighted in the illustrative example the need to conduct warm up discussions for students if they have not been exposed to online discussion before.

While the proposed CSCA approach is, at this stage, inevitably somewhat speculative, we believe that there is a strong case for investigating it further. An important aspect of such an investigation concerns comparing the face-to-face approach in P4C with the CSCA approach in terms of the equitability of student participation, the types of moves made by students, and the quality of students' messages. In addition, it should be noted that the proposed scaffolding approach could also be used in face-to-face discussion, where each participant must say what type of move they are making, for example, 'I am raising an objection...'. There is thus a need for research that investigates the effectiveness of the scaffolding approach in both face-to-face and online discussion.

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Community of Ethical Inquiry, Concept Mapping and an Interactive Whiteboard

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Abstract

Both educators and philosophers have argued that a central goal of education is the development of students' justificatory reasoning skills; skills that allow individuals to live successfully in, and contribute to, a democratic society (Lim, 1998; Lipman, 1985; Knight & Collins, 2001). Existing research has shown that the development of justificatory reasoning skills is most effectively achieved through engaging students in collaborative, genuine inquiry or, more fully, in collaborative dialogue about problems which not only *matter*, but which are also 'ill-structured' (Kuhn, 1992); in other words, problems which are not amenable to straightforward empirical investigation, but whose solutions depend heavily on processes of justificatory reasoning (Lipman, 1985; Collins, 2004; Knight & Collins, 2001). This is just the approach Lipman has identified as 'Community of Inquiry' methodology.

Claims have also been made about the positive impact of Information and Communication Technologies (ICTs) on the reasoning skills of students (Bayne, 2007; Cogill, 2002). While until recently computers have not been seen as supporting collaborative teaching methodologies, the introduction of interactive whiteboards (IWBs) in schools has seen such computer-supported group collaboration become a realistic possibility (Barnes & Geer, 2007).

Interactive whiteboards, though, come at a high monetary cost, so it is imperative that they function as more than pedagogical novelties or classroom decorations. Interestingly, there is some evidence to suggest that visual representation via the technique of concept mapping is likely to be beneficial to the development of reasoning skills

(Mayer, 2005; Jonassen, 1996; Royer & Royer, 2004; McMahon, 2007). It seems plausible to suggest, then, that the visual representation of ideas through the use of an interactive whiteboard might contribute to the effectiveness of Community of Inquiry methodology.

This research seeks to investigate the extent to which this is the case, especially in relation to the development of ethical justificatory reasoning skills.

Introduction

Justificatory reasoning as a goal of education

It has long been argued that the primary purpose of education involves both individual and social ends. This argument goes back at least as far as Plato (see his Republic, translated by H.D.P. Lee, 1955), but more recently the importance of this goal of education has been emphasised by Dede (2007), Collins (2004), Kuhn (1992) and Lipman (1985). In Western society, just democracy is seen as a means of meeting these individual and social ends. The fundamental goal of education can be seen, then, as one of promoting a just democracy and it can be argued further that a just democracy depends on individuals being disposed to engage in sound justificatory reasoning about matters of social importance (Knight & Collins, 2001). We take sound justificatory reasoning to involve making decisions on the basis of arguments that have true premises, and are either inductively strong or deductively valid. Kuhn stresses the importance of such reasoning when she links reason giving to the type of thinking which is most important '...to the quality and fulfilment of people's lives, both individually and collectively' (Kuhn 1992, p. 156).

It is clear that reasoning about matters of social importance encompasses both the ethical and empirical domains. Consider, for example, an issue involved in the most recent Australian Federal election. One of the major questions influencing people's votes revolved around the issue of electrical power. The Liberal party supported the plan to build nuclear reactors while the Labor party did not. To vote well on this matter required individuals to understand and assess the arguments for and against a commitment to nuclear power. Many of these arguments lie within the empirical (or broadly scientific) domain, and

relate to the cost of nuclear reactors, to their potential effectiveness in reducing greenhouse gas emissions, and to questions about the extent to which nuclear waste might be stored safely. Yet ethical considerations are equally important in the decision making process. Voters also needed to consider the interests of others, a feature we take as central to **ethical** decision making. To vote well on this issue it was necessary to consider effects on future generations in relation to the dangers of both global warming and the dangers posed by a nuclear power industry. These concerns clearly relate to the welfare of others, indeed, others whom voters will never know. Again, after Collins (2004), we take sound justificatory reasoning in the ethical domain to include premises which refer to the wellbeing of others. On this basis, then, it can be argued that the primary purpose of education is to develop children's ability and readiness to engage in justificatory reasoning in both empirical and ethical domains.

Epistemological levels research

The discipline of cognitive psychology includes a research program which is concerned with the development of justificatory reasoning. This is so-called 'Epistemological Levels' theory (Kuhn, 1977), a developmental theory in the tradition established by Piaget. As is well known, Piaget tied reasoning development to age-related stages, through which individuals progress as a result of natural engagement in social interaction and dialogue (Eggen & Kauchak, 2004). While Piaget proposed that only more mature children or young adults would be able to reason effectively, it is now generally agreed that while reasoning development may well proceed through a series of invariant stages, these stages cannot be said to be age-related. A number of researchers, including Kuhn (1977), have found that even young children are able to reason effectively when problems are presented in a simple, concrete, and conversational manner (Mayer, Neveu, Poissant & Schleifer, 1999). Kuhn's research (1992) has also shown that individuals do not progress naturally through the stages of reasoning development, but need explicit cues or instruction. Moreover, although each stage must be encountered before moving to the next, an individual may well be operating within two concurrent stages at any time, especially when reasoning across a

variety of domains, such as scientific, social scientific, ethical and aesthetic. Within the field of epistemological theory, researchers differ over the distinct sequential developmental stages of justificatory reasoning but agree on the same basic structure (Kuhn, 1977; King & Kitchener, 1994). In this paper, we work with the three stages identified by Kuhn: *absolutism*, *relativism* and *evaluativism*.

The first and most basic form of justificatory reasoning constitutes the *absolutist* stage, and amounts to a simple appeal to authority (Kuhn, 1977 & 1991). At this primitive level, individuals will justify any belief or decision by merely referring to an opinion, or to observation, each of which is taken to be irrefutable. Examples include the claim that the Sun revolves around the Earth because it is seen to do so, the belief that homosexuality is morally wrong because the church condemns it, or the view that cloning human beings is unethical because the law forbids it. It is clear that appeal to authority alone can never constitute logically adequate justification. Regan makes the point clearly:

Even if there is a moral authority, those who are not...authorities can have no good reasons for thinking that there is one unless judgements of the supposed authority can be checked for their truth or reasonableness, and it is not possible to do this unless what is true or reasonable...[is] known independently of what this supposed authority said. (Regan, 2000, p. 259)

The second level of reasoning, *relativism*, is a disposition to excuse any practice as a mere difference of opinion or culture, where it is held that no one view is closer to the truth than any other view. Relativists point to an obvious and widespread disagreement in science and, to a larger extent, in morals, both within and across cultures, concluding that such differences mean that it is impossible to say that any one view is closer to the truth than another. Relativism, too, is logically inadequate. The inadequacy is manifest in relation to science: the fact that some cultural groups have believed the earth to be flat does not mean that we are unjustified in asserting that the earth is round. Even in the realm of ethics it is clear that the cultural differences to which the relativist points do not entail the impossibility

of rational moral justification. Logically, mere difference does not imply either that such justification is, or that it is not, possible.

The final stage, or developmental endpoint, is the *evaluativist* stage, whereby individuals arrive at beliefs and decisions based on sound *reasons and evidence*. They listen to the views of others and make decisions after they have weighed all the evidence. Evaluativist reasoning is equated with sound justificatory reasoning.

It is clear that absolutism and relativism are not only logically inadequate as approaches to justification, but also dangerous. The dangers of reasoning in the first stage are particularly apparent. The disposition to settle for the word of an authority or to base judgement on observation alone is problematic: a sacred text is seen to call for jihad; the media represents Indigenous Australians as lazy; observation shows that women are better suited to child rearing than are men. Similarly, the relativist approach is equally disturbing (Knight & Collins, 2001). If a relativist approach is adopted, no practice of another cultural or social group can be condemned. The actions of the Ku Klux Klan, or the selling of children into slavery, would be excused as mere instances of cultural difference. The dangers of these justificatory reasoning dispositions, then, are clear, particularly in the ethical domain. Hence, it can be argued that educators should work to bring their students to the evaluativist stage of reasoning, particularly perhaps, in the ethical domain.

The development of ethical justificatory reasoning

It is **ethical** reasoning that forms the focus of this paper. Now clearly, what it means to engage in ethical justificatory reasoning is a matter of some controversy within the field of philosophy. However, despite the ongoing debates, there are some aspects of ethical reasoning which are generally agreed to be crucial for the making of good moral judgements. The most fundamental of these surfaces when we ask why it is that we feel confident that ethical judgement is necessary in relation to practices such as bullying or Nazism. Surely the answer must lie in the significant harm that such practices bring. Generalising from these examples, it seems plausible to argue that ethics is grounded in good and harm (suffering), and that human beings, and indeed all sentient

beings, share common capacities for suffering and wellbeing. It follows that ethical justificatory reasoning involves a consideration of the interests of all those affected by one's actions. Further, it seems clear that the activity of empathising with others is central to the process of ethical justificatory reasoning. Of course recognising harm and welfare as the basis of ethical reasoning does not in itself deliver a moral decision making procedure. We would argue that it is also necessary to weigh up harm and wellbeing where the consequences for each affected individual are counted. However, this research focuses on the two uncontroversial aspects of ethical reasoning identified above, namely the need to take into account the interests of all those affected by one's actions, and the implied need to empathise with others.

While extensive research has been undertaken into various developmental aspects of reasoning, including ethical reasoning, only recently has the question of *how* to develop the disposition to engage in justificatory reasoning been addressed within the epistemological levels research program (Collins, 2004; Reznitskaya, Anderson, Archodidou, Kim, McNurlen & Nguyen-Jahiel, 2001; Kuhn, 1992). There have been studies that *evaluate* educational programs aimed at improving justificatory reasoning skills, but on the whole these studies do not give an understanding of the cognitive components of the intervention (Reznitskaya et al, 2001).

As Collins (2004), Reznitskaya et al (2001) and Kuhn (1991) have shown, skills in justificatory reasoning improve with participation in Community of Inquiry discussion, and this research has demonstrated that it is one of the most effective ways to encourage the disposition to reason as an evaluator. The Community of Inquiry approach is based on the view that it is important that children come to understand the rules of justificatory reasoning, and that the best way to support the development of such understanding is to encourage children to discover the rules for themselves in the process of engaging in collaborative discussion around questions which not only **matter**, but which are also 'ill-structured' (Kuhn, 1992); in other words, problems which are not amenable to straightforward empirical investigation, but whose solutions depend heavily on processes of justificatory reasoning (Collins, 2004; Knight & Collins, 2001;

Lipman, 1985). Ethical questions are clearly ill-structured in this sense.

This approach is based in part on early work by Vygotsky (cited in Eggen & Kauchak, 2004), who viewed social interaction as the primary factor in cognitive development. According to Vygotsky, the two elements of social interaction that are most important here are *dialogue* and *scaffolding*. Vygotsky argued that dialogue between peers supports the development of justificatory reasoning. Reasons are advanced, counter examples are raised, and reasons are modified in light of counter examples. This is in line with Piaget's view (cited in Mayer, Neveu, Poissant & Schleifer, 1999) that the development of reasoning is largely dependent on a person's exposure to counter examples, that is, from the points of view of others. Although this can be achieved individually, through reading or web searching, the process has been shown to be far more effective when it takes the form of dialogue between two or more individuals, and especially between peers (Eggen & Kauchak, 2004).

Scaffolding is the other element which is vital to the development of justificatory reasoning. Scaffolding involves the guiding of individuals' thinking by more able interlocutors. In the Community of Ethical Inquiry, then, scaffolding is provided by both the teacher and fellow students who guide members of the group to consider more fruitful reasoning moves. Some of the logical and ethical behaviours that it is important to develop in the process are set out by Splitter (1985, p. 47):

- Learning to ask relevant questions;
- Distinguishing relevant from irrelevant information;
- Identifying underlying assumptions;
- Taking circumstances into account;
- Considering the interests of all ;
- Showing empathy;
- Detecting fallacies in reasoning;
- Distinguishing fact from opinion;
- Giving reasons for beliefs held; and
- Seeing connections among different strands of thought.

The behaviours listed by Splitter are key elements of justificatory reasoning. They are some of the important skills needed for living in a just democracy. It can be seen from the above discussion that the Community of Ethical Inquiry, through which the justificatory skills of students (even very young students) can be developed, has a place in the classroom where justificatory reasoning is a crucial goal (Lim, 1992; Lipman, 1985).

While the effectiveness of the Community of Inquiry approach in developing justificatory reasoning skills is not in doubt, this study aims to discover whether the use of particular techniques and tools within a Community of Ethical Inquiry could enhance this development. More specifically the study investigates whether concept mapping (on an interactive whiteboard) during Community of Ethical Inquiry lessons could impact on the development of justificatory reasoning, especially with students in the early primary years.

Concept mapping and the interactive whiteboard

Concept mapping is a cognitive tool (or psycho-technical tool, according to Churchill, 2005) that externalises thoughts into hierarchical, spatial representations of knowledge. The major cognitive advantage to concept mapping, then, is that it externalises the organisation of ideas. It shows graphically the relationships and connections between ideas and the gaps in knowledge.

Kavanagh, Schiller and Tillet (2002) claim that concept mapping gave the children in their study a chance to extend, clarify and share their thinking with others, while providing scaffolding to help them be more specific in their communications. A similar study by Kimber, Pillay and Richards (2001) with a Year 11 class, found that student learning was enhanced by concept mapping via the well-known software package, *Inspiration*[®]. Further, a study by Scappaticci (2000) found that the visual representation of ideas tends to encourage children to take ownership of their own positions, to defend their views and to take counter arguments seriously. This might well be because such public representation is seen to reinforce the value of the ideas put forward. Clearly the courage to stand up for one's considered opinions is a characteristic which is vitally important in a

democratic society, and one which the Community of Inquiry approach has long sought to foster.

The cognitive value of such graphic representation appears to derive from what Richard Mayer (2005) has called the *multimedia effect*. A series of studies by Mayer has shown that individuals can process additional information if it is presented simultaneously in two forms (auditory and pictorially). According to Mayer (2005), information can be represented in the brain in either the verbal or visual code. Churchill (2005, p. 341-342) agrees with Mayer and claims that '...different representations are more efficient when dealing with different parts of a...reasoning task'. This suggests that concept mapping with children would allow them to process the information from discussion in both an auditory mode and a visual mode.

Building on Mayer's work, Australian researcher Sweller (2003) theorised that there is a limited space for children's working memory (cited in Eggen & Kauchak, 2004, and Baddeley, 1998). This is known as the *Cognitive Load Theory*. During a Community of Ethical Inquiry session, children may lose a lot of the information that is being discussed in light of the cognitive load imposed. More research is needed to determine whether a mind tool (like a cognitive mind mapping tool) may be able to reduce some of this load, so that children can work on their reasoning rather than trying to remember what was just said.

Mind mapping tools (including Venn diagrams, flowcharts and concept maps) have been traditionally used in the classroom for some time (Burse & Newhouse, 2004). However, the drawback of mind mapping in the past has been that the maps had to be drawn by hand. Today we have software that allows for the 'efficient' generation of concept maps. In the study reported here, the software *Inspiration*[®] was utilised. The other benefit to using computer-generated maps is the ease of 'editing ideas', whereas hand drawn maps have to be started again or pieces of them erased (Scappaticci, 2000).

An interesting study by Royer and Royer (2004) found a significant difference in complexity between computer-generated concept maps and hand-drawn maps. The study also compared group-generated and individually generated maps and found that computer-generated, group-generated maps were the most complex. In addition, Kimber

et al (2001) found that group-generated maps showed greater depth of knowledge than individually created maps, whether manual or computer-generated. This suggests that concept mapping is better undertaken in group situations, such as Community of Ethical Inquiry discussions.

Aside from the benefits of computer-generated concept maps mentioned above, other claims have been made about the potential for ICTs (particularly via the IWB) to develop thinking and reasoning skills of students. Bayne (2007) declares that the IWB increases the ability of students to cope with more complex concepts, such as reasoning applied to problem solving, and Cogill (2002) has noted the usefulness of the IWB for helping children alter their perceptions based on other children's points of view. However, this research is somewhat speculative in nature and little empirical-based research has been done in this area despite large costs associated with this technology (Halford, 2007).

While it is important to consider the costs of education as an investment, it is vital for this technology to be used effectively, or it becomes a very expensive decoration. Many studies show that IWBs are merely being used to replace an older, more conventional way of teaching (such as a normal whiteboard or flashcards). Commonly, it would seem that the use of IWBs has not resulted in innovative pedagogy.

This study seeks to explore one way in which the IWB may be used to improve learning outcomes in the area of reasoning development via concept mapping. More particularly, the study investigates whether concept mapping via an interactive whiteboard, embedded within a Community of Ethical Inquiry, could serve to enhance students' ability to reflect and critique their own and others' opinions.

The study

The subjects of the intervention were twelve children attending a metropolitan school in the Western suburbs of Adelaide, South Australia. The students were sampled from one Year 3 classroom, therefore aged between seven and nine years. Participants were randomly assigned to two groups. Each group underwent a series of three Community of Ethical Inquiry lessons, of approximately 45 minutes

each, revolving around the key topic, 'The Treatment of Animals'. The lessons took place in isolation from the rest of the class. The discussion plans used were identical for each group, with the difference being the use of an IWB and the concept mapping software *Inspiration*[®] for the treatment group.

The topic 'The Treatment of Animals' was chosen because of its relevance to all participants and because of its noted success in another key study (Collins, 2004). The lessons incorporated adapted discussion plans and exercises from Lipman and Sharp's (1985) Community of Ethical Inquiry manual. The stimulus for the discussions revolved around the book, *Zoo*, by Anthony Browne, which is appropriate for the year level and the topic. The concept maps generated within the IWB group during Lesson 2 and Lesson 3 are shown on subsequent pages (Figures 1, 2 and 3).

A Behaviour Checklist was used to investigate the impact of concept mapping during the Community of Ethical Inquiry lessons, more particularly, after the second and third lessons. The checklist focused on **general elements of justificatory reasoning** (such as the giving of examples and counter examples), elements of **ethical justification**, (for example, considering the interests of others), as well as **attitudinal factors** (such as taking others' ideas seriously). Tallies of the positive behaviours and attitudes were made and a total for each lesson can be viewed in Table 1. This data was used together with audio recordings of the lessons to explore the ways in which traditional techniques of Community of Ethical Inquiry might be effectively supplemented by concept mapping approaches.

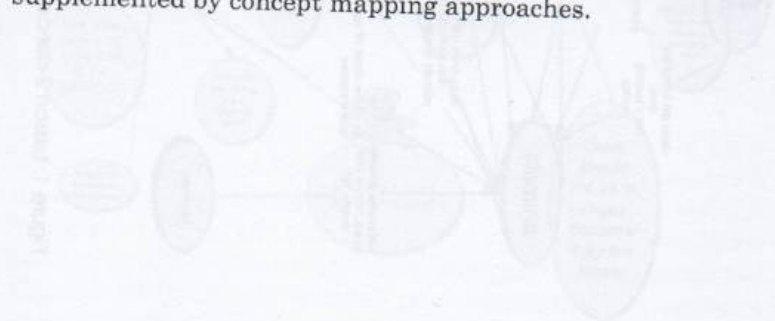


Figure 3. Concept map generated during lesson 3 by the IWB group

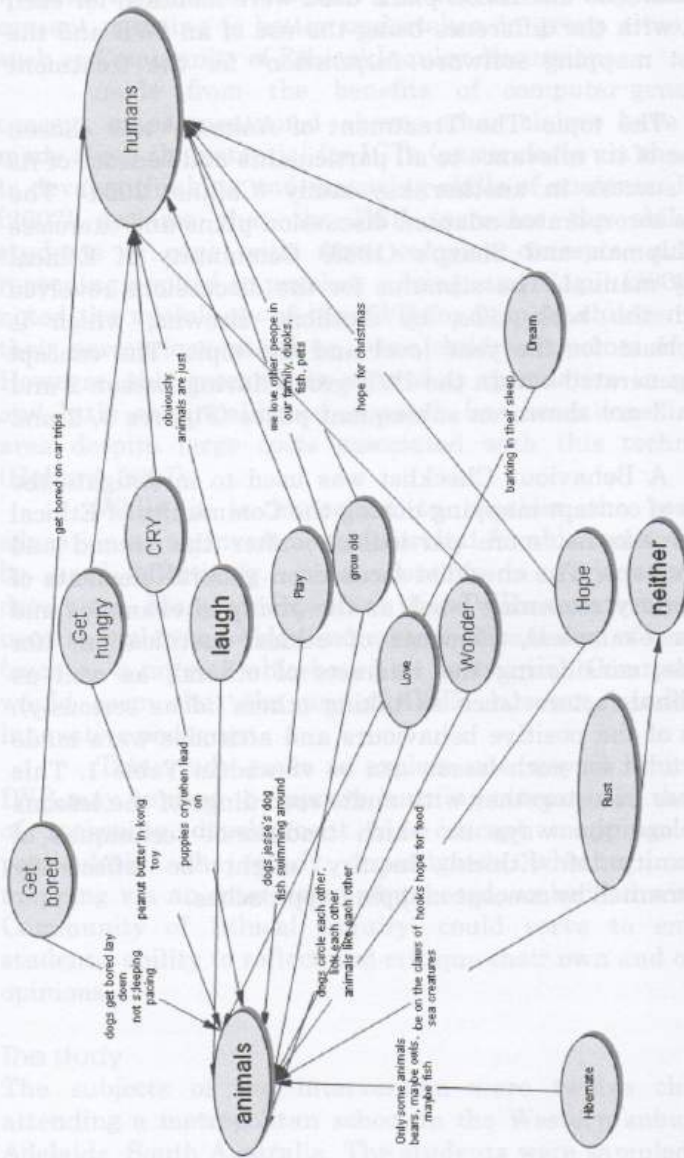


Figure 1: Lesson 2 concept map generated by IWB group

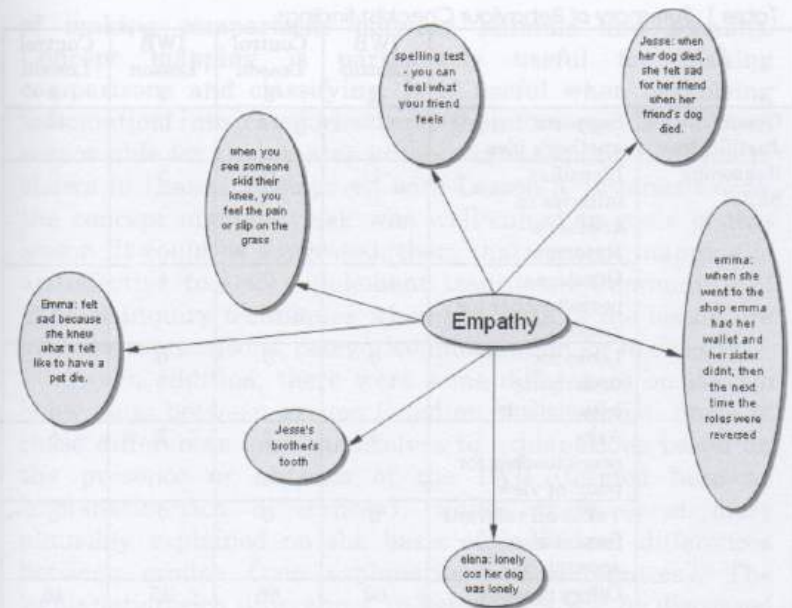


Figure 2: Concept map generated during Lesson 3 by the IWB group

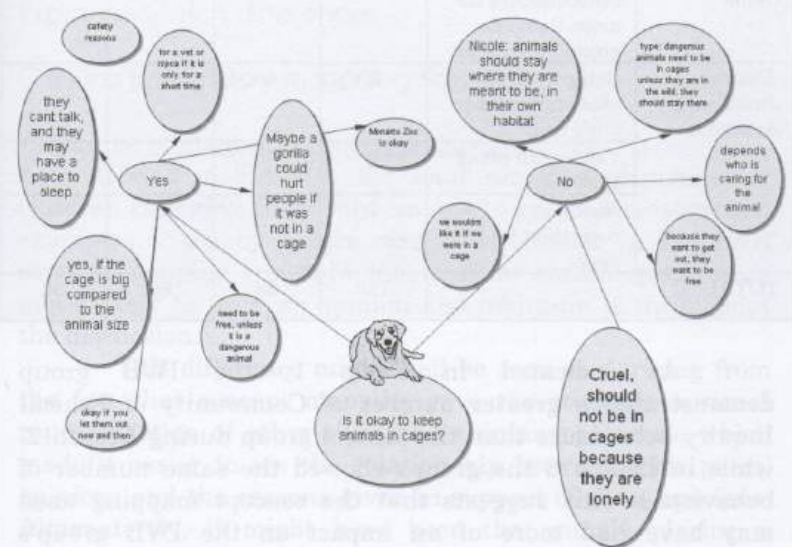


Figure 3: Concept map generated during Lesson 3 by the IWB group

Table 1: Summary of Behaviour Checklist findings

		IWB Lesson 2	Control Lesson 2	IWB Lesson 3	Control Lesson 3
General Justificatory Reasoning Skills	Supports another's idea	25	14	13	15
	Identifies fallacies in another's statement	1	0	3	5
	Questions peers/teacher for reasons	1	0	1	0
	Looks for underlying assumptions	0	0	0	0
	Asks peers/teacher for point of view	5	4	2	6
	Takes all relevant factors into account	0	0	7	6
	Offers reasons, examples/counter examples	82	66	35	48
Ethical Justificatory Reasoning Skills	Shows empathy for animals	3	3	14	3
	Considers consequences for more than one group/individual	0	0	5	2
Desired Justificatory Attitudes	Being open to ideas different to one's own	2	0	1	0
	Takes own ideas seriously	0	0	0	0
	Accepts correction by peers	2	1	1	0
TOTAL		123	88	86	86

As indicated in Table 1, the IWB group demonstrated a greater number of Community of Ethical Inquiry behaviours than the control group during Lesson 2, while in Lesson 3 the groups showed the same number of behaviours. This suggests that the concept mapping used may have had more of an impact on the IWB group's Community of Ethical Inquiry Lesson 2 and is probably due to the fact that the *type* of thinking needed in Lessons 2 and 3 differed. The type of thinking utilised in Lesson 2 was that

of making comparisons between animals and humans. Concept mapping is particularly useful for making comparisons and classifying. It is useful when organising information into categories, and therefore may have been responsible for the greater number of reasoning behaviours shown in Lesson 2 compared with Lesson 3. In other words, the concept mapping task was well-suited to goals of this lesson. It could be suggested, then, that concept mapping is an effective tool to supplement traditional Community of Ethical Inquiry techniques when the aims of the lesson are to make comparisons, categorise information, or to classify.

In addition, there were some differences on *certain* behaviours between groups listed on the checklist. Some of these differences lend themselves to explanations based on the presence or absence of the IWB (termed here as 'explanation-rich differences'), while others seem more plausibly explained on the basis of individual differences between groups ('non explanation-rich differences'). The 'explanation-rich differences' in behaviours will be discussed below and further categorised under the headings of 'general justificatory reasoning skills', 'ethical justificatory reasoning skills', and 'desirable justificatory attitudes'.

Explanation-rich differences

General justificatory reasoning skills

Changing opinion when good reasons are given

As indicated in Table 1, the total recorded occurrence of children changing their opinions based on good reasons and examples posed by others was much higher in the IWB concept mapping group. Members of the control group were more likely to form an opinion and maintain it throughout the discussion.

This difference might well be seen as deriving from the fact that concept mapping gave the students a visual representation of other children's thinking patterns, which made it easier to see the relationship between their peers' opinions and the reasons given in support of those opinions. Alternatively, it might have been that simply placing a child's opinion on the public map gave status to it, so that other students were then more likely to consider the opinion seriously.

For example, the concept map generated by the IWB group can be viewed in Figure 3. It shows one path of thought for Nicole. She stated that she thought that animals should stay in their natural habitat. Earlier in the discussion, Mack had stated that he thought it was okay to put animals in cages, but after Nicole's input, he changed his mind:

Nicole: *I think that things should be able to live where they are supposed to live, like sharks should be in the ocean.*

Verity: *Okay, so Nicole is saying that they should be able to stay where they should be, like sharks in the sea. VERITY ADDS THIS POINT TO THE MAP. What about polar bears?*

Emily: *They should stay in Antarctica.*

Nicole: *I don't know if it is the North Pole or South Pole?*

Mack: *I agree, I think they should live in their own habitats.*

(IWB group, Lesson 3, middle of lesson)

In the second lesson, Mack also changed his mind about the content of the book:

Verity: *So do you think that the tiger in the book is bored?*

Mack: *Yes, definitely.*

Later, after some discussion about hunger and the signs that animals show of being hungry, Mack changes his opinion:

Mack: *Actually, I don't think that the tiger in the book is bored, it's just waiting for its food.*

(IWB group, Lesson 2, beginning of lesson)

Ethical Justificatory Reasoning Skills

Showing empathy for animals

As indicated earlier, we take empathising, that is putting one's self in the shoes of another, to be a central aspect of moral reasoning. Children clearly demonstrated empathy during the lessons.

The results of the behaviour checklists for the lessons (see Table 1) showed more instances of empathising in the IWB concept mapping than in the control group. Although this might be put down to pre-existing individual differences, it seems plausible to suggest that the reason might lie in the concept mapping. The children in the IWB concept mapping group may have shown more empathy because concept mapping enabled them to examine the effects of placing an animal in a cage in greater depth. The children in this group were invited to put themselves in the 'shoes' of an animal time after time, in the light of a succession of different reasons which were placed on to the map. For example, when the children were discussing whether the size of the cage/enclosure made a difference, they put themselves in the shoes of the animal; when they were discussing whether the animals would get lonely, they put themselves in the shoes of the animal, and so on. Take, for example, the following dialogue:

Mack: *Yes, if the cage is big, like, quite big not just like a small cage.*

Nicole: *Yeah, 'cos if I was in a cage I would want it to be big enough, like not just a room, but a whole house.*

Verity: *So if the cage is relative to the animal...like if you had a mouse, the cage would not have to be as big?*

Mack: *Yeah, like my chooks, the cage goes all around the back of the cubby house I think, and we um...have opened it right up.*

(IWB group, Lesson 3, middle of lesson)

Considering the consequences for more than one group or individual

As argued earlier, ethical reasoning requires a consideration of the interests of others, as well as of one's self. As indicated in Table 1, the children within both groups were able to consider the consequences for more than one group or individual. However, the results showed more than double the number of occurrences of this behaviour in the IWB group than in the control group.

This difference is consistent with the findings in relation to the demonstration of empathy, and may be attributed to the fact that once the researcher placed one

child's point of view on the map, the children all then focussed on the one point together. For example, children in the IWB concept mapping group were discussing dangerous animals and whether it was okay to keep them in cages. Once the researcher added this point to the concept map, the children started to talk about a range of scenarios to do with dangerous animals that took different circumstances into account. For example:

Mack: *Dangerous animals might just come up and take things from you.*

(IWB group, Lesson 3, middle of lesson)

Derik: *Dangerous animals don't need to be kept in cages in the wild, 'cos there are no cages!*

(IWB group, Lesson 3, middle of lesson)

Emma: *And like a fighting fish needs to be separate from the other fighting fish for its own good, even though it wants to be in there, they just fight, so they have to be separated!*

(IWB group, Lesson 3, middle of lesson)

A deeper explanation for the IWB children being more able or more inclined to consider the consequences for all individuals can be derived from information processing theory, more particularly from features of the so-called Cognitive Load Theory and the multimedia effect. As indicated earlier, the Cognitive Load Theory (Sweller, 1999, cited in Bruning et al, 2003) is based on the belief that the working memory can only process a few units of information at any given time. Too many elements at any one time produces cognitive load and results in decreased processing efficiency. One way to reduce the load on working memory is to present information in the two channels of the mind (for example, the pictorial representation channel and auditory channel). This is known as the multimedia effect (Reed, 2006; Mayer, 2005). In the case of this study, the children in the IWB group were processing information in both the auditory channel (through discussion) and the visual or pictorial channel (that takes input from the eyes and forms a pictorial representation of the discussion). So while the concept map contained words, this was still being processed

through the pictorial channel as it showed a *visual representation* of the ideas discussed.

It could be hypothesised, then, that having the visual as well as auditory representation of a range of differing points of view aided the young children in the cognitively complex task of drawing consequences for more than a single individual or group.

Desirable justificatory attitudes

Being open to ideas different to one's own

This behaviour was extremely difficult to identify, as when a child is silent it cannot be inferred that he/she is not open to another's opposing idea. However, there were a few instances during the IWB group where this acceptance of others' views was made clear with spoken comments, while the control group demonstrated quite the opposite with some children recorded as *not* being accepting of another's idea. In the IWB group Lesson 2, the following example of openness to others' ideas can be seen in the transcript when the children are discussing whether animals 'rust':

Verity: *Can humans rust?*

ALL: *No!*

Verity: *What about animals?*

ALL but Mack: *NO!*

Mack: *Maybe it is possible on the claws...*

Verity: *Okay, maybe, so I will move rust over to here. VERITY MOVES THE RUST NODE SO THAT IT IS LINKED WITH ANIMALS AND WRITES MACK'S REASON ON THE BOARD.*

Nicole: *On the collar maybe?*

Verity: *So Mack, are you talking about sea creatures, because I don't know...*

Mack: *'Cos I caught a crab once and it was all reddy on the shell, and there was this little bit of orange on the side...*

Verity: *Interesting, was this rust or something else?*

Lena: *Maybe it was just getting its shell?*

Mack: *And I saw a brown crab with a bit of white on the side.*

(IWB group, Lesson 2, end of lesson)

This example shows that although the children do not initially agree with Mack, once the researcher adds Mack's idea to the concept map, the children seem more open to explore it. This suggests perhaps that the students felt that once an idea is represented on the concept map, it becomes worthy of discussion.

In the control group, there were no clear examples of this, and in fact the children were more likely to be recorded disagreeing with their peers' ideas. For example, in the control group the children were discussing whether they should just build bigger enclosures for the animals:

Cerise: *But then it costs more money!*

Hannah: *But it is not much money.*

Cerise: *But if we use too much stuff, the earth will just float off. It will just fill up the world with stuff. It's true. It's going to happen if we don't do something about it.*

Verity: *Why would that happen? If there are too many people, or too much stuff?*

Cerise: *Too much things, like fuel and gasses.*

Hannah: *Whatever! How would you know?*

Cerise: *I saw it on a documentary.*

Hannah: *Doesn't mean it is going to happen.*

(Control group, Lesson 3, middle of lesson)

Here Hannah is showing that she does not have an open attitude to Cerise's comment, perhaps because she sees it as irrelevant, although she does not articulate this point. Perhaps, however, Hannah is simply dismissive of Cerise's ideas as the comment 'whatever' would seem to indicate. It is important to stress that the challenging of another's view in an attempt to find an answer to a shared problem might well help the discussion advance because it forces children to defend their point of view, and support it with evidence. However, in the examples the interactions were hostile and unresponsive, rather than open and constructive. In another example, Cerise is unable to accept Kelly's input into the discussion:

Kelly: *Well there's these two people, and they had a baby cub and they...*

Cerise: *They had a baby cub?!*

Kelly: *Yes, a baby cub.*

Cerise: *People? Had a baby cub?*

Kelly: Yes! It was their pet.

(Control group, Lesson 3, middle of lesson)

If Kelly's suggestion had been recorded as (say) part of a concept map in the IWB group, perhaps the children would have taken more of an open attitude and given Kelly a chance to express her idea more fully.

Post hoc explorations of concept mapping on an IWB

This section highlights other factors that emerged from the transcripts that were not expected or set up as foci of the thesis. Nonetheless, these findings are interesting and contribute to the literature around Community of Ethical Inquiry and IWB use. Themes which surfaced related to student engagement, ownership of ideas, editing of ideas, collaboration and satisfaction with the 'answer', and considering the problem broadly and deeply. These are discussed in light of the data and the literature in the sections below.

Engagement

Much of the literature on the impact of IWBs centres around the topic of engagement. Although it was not in the scope or aim of this study to focus on the differences between the two groups in terms of engagement, some noticeable differences did occur which are noted here.

During this research project, the rate of student talk within the two treatment groups (assessed in accordance with the concept of response rate developed by Clark, Anderson, Kuo, Kim, Archodidou & Nguyen-Jahiel, 2003) did not differ significantly, however, the *type* of talking was noted to differ between groups.

In the control group, the field notes that were gathered showed a lack of engagement:

- Children seem bored, shrugging shoulders and distracted easily by external factors.
- Children seem to be rushing their responses. They say what they think, and then wait for others to say something.
- When discussing the topic of rust, Hannah jumps out of her chair and shows rust on the chairs and tables.

All the other children are distracted and use the opportunity to get out of their chairs.

- When discussing whether fish play, the conversation moves onto the movie, *Finding Nemo*, and for about a minute the children talk about movies that they have seen, unrelated to the topic of discussion.

While these points were noted within the control group, the IWB group displayed no such behaviours.

A second point to note relating to engagement was that when the researcher started the third lesson, she placed the concept map from the previous lesson on the board for a quick summary of the lesson. This helped to focus the children on the content of the lesson, and aided in quick recall. This benefit of using IWBs has been suggested by numerous other studies (see Bayne, 2007, and Barnes & Geer, 2007). However, no empirical-based comparisons have been made between the recall of children using an IWB and those not using an IWB.

The lack of engagement within the control group could be attributed to the fact that the single mode of information processing was producing cognitive load for these children, while in the IWB the multi-modal communication method was reducing the cognitive load.

Ownership of ideas

Another factor that emerged as a result of the IWB concept mapping lessons was what the key researcher has termed 'ownership of ideas'. It was noted that throughout lessons where the IWB was used, children showed a tendency to relate back to their own ideas, to refer to them as their own, and to be more inclined to defend and carefully explicate their views. This is in line with research carried out by Scappaticci (2000). For example, in the IWB group, Nicole had stated that she thought keeping an animal in a cage depended on whether it was for its own good or not. Then she subsequently came up with a range of reasons and points of evidence to support her view, such as keeping an animal in a cage at the vet or at the RSPCA or for safety reasons. At the end of the third lesson, the children used the concept map as evidence of the progress of their thinking. They appeared to take the attitude that they had 'produced' the map and that therefore they 'owned' the ideas.

As argued earlier, taking ownership of ideas is an important disposition especially in relation to real life decisions, leading individuals to stand up for their beliefs, to defend them with evidence and reasons.

Editing ideas

An interesting phenomenon that arose from the concept mapping group was that students often used the concept map as a 'benchmark' and added to it and changed it as they thought of a new point, even if the discussion at the time was on a new topic. For example, in Lesson 2 the group was discussing whether animals play or not. The discussion had already touched on whether animals laugh and whether they cry. Then, Nikki pointed to the node that was labelled 'cry' (see Figure 3) and said:

For...well I think [my idea] is for playing and crying. Well my dog, when I leave she starts crying, she jumps on the cubby house and jumps on the shed roof and starts playing around. That's true!

Nikki was concerned that her idea had not been included in the earlier discussion about crying and wanted to return to that topic and add a new piece of evidence. This notion of being able to go back and edit ideas was not evident in the control group.

Later in the discussion, Nikki also wanted to return to an earlier topic to add to the discussion:

*Nikki: I have something to add to 'hunger'.
Verity: Okay, so you would like to go back and add something to 'hunger'?*

NIKKI POINTS TO THE HUNGER NODE. When my dogs get their kong things, you know how you put food in them?

Verity: Yes.

Nikki: My mum puts food in them and every time they fight over them 'cos they really have to try to get their tongues in there. It takes about two hours to get the peanut butter out.

(IWB group, Lesson 2, middle of lesson)

This ease of 'editing of ideas' seems beneficial to the Community of Ethical Inquiry because changing opinions and re-working earlier arguments is paramount to reaching a considered point of view. The concept mapping tool on the IWB may have assisted these children cognitively to deal with reviewing their ideas and refining them.

Collaboration

The Community of Inquiry discussions that occurred as part of this study exemplified the process described within cognitive psychology as *distributed cognition* (Pressley & McCormack, 1995). The thinking that occurred was not the product of one head, but the collaboration of many heads. This is beneficial in many ways. Firstly, the participants start with differing prior knowledge, and therefore they attend to differing points of the discussion (Pressley, 1995). Then as the group continues through the discussion, new connections are made and knowledge is combined. This results in a solution that could not be reached by one person alone.

While it can be said that distributed cognition occurred in both groups, it could be argued that this was more clearly demonstrated by behaviours of the IWB group. There were two behaviours that suggested that the IWB group was more engaged in this distributed cognition, or collaboration. Firstly, the IWB group were more likely to 'respond to the idea, and not the person.' This was one important factor for successful participation in Community of Ethical Inquiry discussions stressed in a study by Clark, Anderson, Kuo, Kim, Archodidou & Nguyen-Jahiel (2003). It was evident that in the IWB group, the group-developed concept map gave the group a sense of 'team'. In the IWB group, it could be hypothesised that the IWB gave the children a representation of the ideas on which they could argue against, but in the control group ideas were not recorded and therefore the children were responding to the person who stated the idea. Interestingly, in the control group, the comments made between group members were often unsupportive and nasty. For example:

Hannah: *Well it is about my dog as well*

ALL: *GROAN*

(Control group, Lesson 3, middle of lesson)

Cerise: *Ummm...I forgot. That's what happens when I try to talk and someone talks in front of me!*

Hannah: *No, she talked first!*

Cerise: *No, I talked and then you talked!*

Hannah: *No, you talked after!*

(Control group, Lesson 3, middle of lesson)

Hannah: *Don't get so dramatic, Cerise!*

(Control group, Lesson 3, middle of lesson)

The second manifestation of collaboration noted by the researcher was the tendency of members of the IWB group to talk to the group rather than the teacher (as was the case in the control group). This was clear because the group members were engaged in more of a team member-to-team member discussion where responses were directed at supporting the ideas of another. In contrast, members of the control group, in the absence of an IWB, were more likely to engage in discussion with the researcher. In this group, the researcher often had to remind the speaker to address the group, not just answer the question to the teacher, like traditional teacher-student-teacher cycles of questioning.

In Community of Inquiry, distributed cognition is paramount to the success of the program, so on this count too, it seems plausible to suggest that concept mapping on an IWB has merits for the Community of Inquiry approach.

Satisfaction with 'answer'

Another difference between the groups worth highlighting is the fact that the IWB concept mapping group expressed satisfaction with their progress at the end of the session, while the control group did not. When asked by the researcher, 'Do we have an answer to the question is it ever okay to keep animals in cages?', the two groups indicated that they felt very differently. The IWB group responded in the following way:

Mack: *Well, no, well sort of.*

Derik: *I think we have a yes and a no 'cos some might think yes and some might think no and it depends.*

Verity: *Good one Derik, we have to actually decide when the situation comes up, because if I was to ask you, 'is it okay to keep your chickens in a cage?' you would have to think about all the circumstances and decide what your opinion was.*

Mack: *Like my chook cage started off small and now it is bigger so it is okay now.*

Verity: *So if I asked you this type of question do you think you'd be in a better position to answer it?*

ALL: *Yes.*

(IWB group, Lesson 3, end of lesson)

Now contrast this to the control group's response:

Verity: *Okay, so has anyone got the answer to this?*

ALL: *No!*

Verity: *Well, this type of question doesn't really have an answer, it has lots of different parts to the problem...when we think about these sorts of problems we have to think about the consequences for everyone involved, not just for the animals or not just for the humans.*

Cerise: *I don't get it.*

Maddie: *What is the answer then?*

Verity: *Well, think about it, if I said that animals should be free 'cos I like animals, that is not a good reason.*

Hannah: *Yeah, that's not good enough.*

(Control group, Lesson 3, end of lesson)

As the transcripts show, the control group did not seem to show their understanding of the process involved in answering this type of question and did not seem to recognise the progress they had made. They still seemed to expect a simple 'yes' or 'no' answer, rather than focussing on the reasoning steps they had taken in their discussion. However, the IWB concept mapping group had the reasoning processes laid out in front of them in the form of the map and they seemed to see the map as the whole as their 'answer'.

The members of the IWB group showed that they were aware of and valued the reasoning process which they had collectively gone through. In this way, they demonstrated an evaluativist approach to the problem.

Teacher questioning

While the results have focussed on the development and comparison of *student* groups, there were also differences between the groups in the way that the researcher interacted with the students. During the IWB group lessons the researcher referred to the concept map in such a way that it may have impacted on the collaboration of the students. For example, the researcher often said 'we' when referring to actions of the group:

Verity: *Okay, so we are linking up humans to laughing. Do we all agree that humans laugh?*
(Lesson 2, beginning of lesson)

Verity: *Do we want to add anything else to this?*
(Lesson 2, middle of lesson)

In comparison, in the control group, the researcher was more likely to refer to individual students and their opinions rather than talking about the opinions of the group. For example:

Verity: *Do you think that the Kookaburra is laughing?*
(Lesson 2, beginning of lesson)

Verity: *What do you think Kelly?*
(Lesson 2, middle of lesson)

So while the IWB group was seen to be more collaborative (as discussed under 'Collaboration' above), it may have been the subtle changes in the way that the teacher directed the questions that influenced the children to act collaboratively.

Another factor that differed between the groups in terms of teacher talk was the way that in the IWB group the researcher drove the children to consider another point of view. For example:

Verity: *Okay, so when is it NOT okay to keep animals in cages?*

(Lesson 3, middle of lesson)

In this example, and at other times, the researcher used the IWB as a reference point for discussion.

In the control group, this type of questioning still occurred, but it was more likely for the researcher to ask the general question *then* ask each child for input. For example:

Verity: *Is it okay to keep animals in cages?*

(Lesson 3, middle of lesson)

Verity: *What do you think Henry?*

Verity: *What do you think Kim?*

Summary statements were also very frequent in the IWB group but were not as common in the control group. For example, the researcher used statements to clarify and summarise the progress the group had made in their discussion to date. Often this was used when the researcher was writing something on the IWB. For example:

Verity: *Alright, so you were saying that you went to the shop with your friend and she forgot her wallet, then next time the roles were reversed?*

(Lesson 3, middle of lesson)

Verity: *So Mack, you said that it is okay if the cage is big relative to the animal? Like if you had a mouse, the cage would not have to be as big?*

These types of comments were useful to restate a point of one child in another way as well as writing it on the board.

A final factor that emerged when examining the researcher comments from the transcripts was that the IWB was used to keep the group focussed. The researcher felt more comfortable managing the behaviour of the IWB group because there was an element of control. Whenever the researcher felt that the discussion was deviating too much, she was able to bring the IWB group students back to the focus by referring to the concept map. For example:

Verity: *Okay, but what does that have to do with animals in cages?*

(Lesson 3, middle of lesson)

When deviations occurred in the control group, the researcher felt less able to bring the children back to the focus because there was no reference point to refer to. Instead, the researcher often moved on with a new question or restated question.

Therefore, in summary, when working with young children, there may be benefits of using IWB concept mapping for the students, but even more importantly for the teacher, especially a teacher relatively new to the Community of Ethical Inquiry process. The teacher may find that the IWB concept map can help to improve practice by guiding questioning and clarifying student comments. It may also reduce student misbehaviour by increasing student engagement and focus.

Conclusions

This study was motivated by the need for further research in two distinct areas. The first is the development of ethical justificatory reasoning skills in young children, which it has been argued is necessary for effective citizenship. The second is the increasing use of IWBs in South Australian schools, which, it has been argued, has not been matched by research which justifies their use, given their high monetary cost.

The aim of the study was to investigate the effectiveness of supplementing the traditional Community of Ethical Inquiry approach with the technique of concept mapping via an IWB. The findings suggest that concept mapping on an IWB may indeed be one way to supplement the traditional Community of Ethical Inquiry technique, and improve practice in this area. As well as impacting on expected *reasoning* behaviours during the lessons by providing a multi-modal communication method that may have increased students' ability to process larger amounts of information or synthesise opposing points of view, concept mapping during Community of Ethical Inquiry lessons also impacted on other student and teacher behaviours. The technique of IWB concept mapping seemed to develop a more collaborative environment (possibly due to focused teacher questioning), as well as increased engagement and a sense of ownership over opinions on the part of students.

It seems plausible to conclude, then, that concept mapping via an IWB has potential to improve the practice of teachers implementing a Community of Ethical Inquiry approach to ethical justificatory reasoning development.

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Cora Coors (University of South Australia)

I am always delighted, even excited, to discover a website that looks like it will genuinely support student teachers and teachers to develop their knowledge and understanding of engaging children and adolescents in the processes of philosophical inquiry. Long gone are the days when I refer requests for resources solely to the well-thumbed works of Lipman and Sharp that reside in our high demand library collection - though for me these remain the most valuable resources available for any teacher of classroom philosophy, and as such still sit at number one on my list of recommendations. Today, though, I am able also to provide links to a growing number of websites that, to varying degrees, have aided my own work in classroom and tutorial discussions of philosophical issues and which others working in the field might also find helpful.

The idea for this review of readily accessible, English language philosophy in the classroom websites arose after a morning spent exploring the recently updated Northwest Center for Philosophy for Children site and a number of visits to a newly developed and ever-unfolding website, *Philosophers and Critical Thinkers in Senior Schools* (FACTISS). More about these two high quality and generously shared resources shortly, but for now let's turn to a general overview of just what support materials are available on the web aided with a consideration of how useful they might be for educators working to bring philosophical inquiry into young people's lives. Perhaps not

¹Web addresses for all internet sites referred to in this review have been included in the accompanying references list in the order they have appeared in the article.

A Review of Philosophy for Children on the Web: An Exciting but Cautionary Tale

Carol Collins (University of South Australia)

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surprisingly, the review brings with it some cause for concern and a few words of caution.

The research for this review began, not unexpectedly, by submitting the term 'Philosophy for Children' into a couple of commonly used search engines. The result, however, was unexpected. In the not-too-distant past, such a search resulted in the central organisations, the International Council of Philosophical Inquiry with Children (ICPIC) and the Institute for the Advancement of Philosophy in the Classroom (IAPC), being listed first and second. Today on 'Google', ICPIC does not feature until the fourth page, while IAPC comes in at item eleven. Similarly, a search in 'Alta Vista' reveals IAPC as listed in eighth place (with 'Philosophy for Children on E-Bay' coming in first!) while ICPIC is nowhere to be seen. Other websites listed on the first two pages of both search engines include some Australian national and state-based philosophy for children organisations, the relevant Stanford Encyclopedia of Philosophy entry, one or two private related enterprises, advertisements for books and journals and the odd expired page. Entering alternative phrases, including 'P4C', 'Philosophy in Schools' and 'Pre-college Philosophy' was even less fruitful in locating key organisations, with IAPC, for example, being pushed further down the list. Although I know a little about the mechanics and competitiveness involved in securing a prime position on web search pages, I was disappointed and rather alarmed to realise that the high quality websites known to me (largely through email communication with colleagues) are unlikely to be readily discovered through internet searching.

While I'm more than happy to acknowledge that my web searching skills are fairly restricted and that different ways of searching the net would surely yield better results in the area, I also wonder whether my limited level of competence is all that unusual. If it is not, perhaps the issue deserves the attention of all concerned with disseminating quality resources and information about philosophy in schools, and particularly those colleagues who also hold the technical skills required to more effectively manage the task of dissemination via the internet.

This first discovery in my review of websites gave rise to a further important issue, namely a consideration of what kinds of information are (and should be) included in

philosophy for children websites. And here the power and potential of the internet as an educational resource is clearly evident. The burgeoning number of websites dedicated to philosophical inquiry in schools reflects a vast array of educative possibilities for students of all ages and their teachers, as well as for parents and other care providers. The central sites of ICPIC and IAPC mentioned earlier, along with other national association sites such as P4C (New Zealand), SAPERE (UK) and FAPSA (Australia), provide (to varying degrees) background information on the emergence and spread of Philosophy for Children, descriptions of the kinds of philosophical questions that direct a P4C curriculum and of community of inquiry methodology and the way in which it supports the development of the skills and dispositions required for effective philosophical inquiry. They also provide details of organisational structures, forthcoming conferences, professional development and tertiary course materials, links to other relevant associations, websites, theoretical and practical books and curriculum materials, journals, and in some cases links to exemplars of discussion plans and classroom activities.

Among these, IAPC provides the most thorough overview and justification for Philosophy for Children, and uniquely, a comprehensive and current review of qualitative and quantitative studies in the field, dating back to the 1970s. It is the website I recommend as an ideal starting point for students and colleagues seeking to understand broadly the history, nature and future of philosophy for children around the world. From here, they can also explore a myriad of links to other international sites. Importantly, the website is well maintained and regularly updated, a fact which brings to the fore a second cause for concern, namely, the matter of funding and resourcing websites.

The frustration of finding out-of-date information on websites and of clicking on web-links only to find missing and removed web pages is surely common to all internet users, and indeed, many philosophy in schools websites suffer from such problems. While ICPIC, SAPERE and FAPSA, for example, have much to offer in terms of dissemination of information to newcomers and those already active in the field, links to other associations, resources or forthcoming events on the websites are often out-of-date or incorrect. Collaborating with more technically

minded colleagues in the establishment of a *Critical & Creative Thinking* web page within the FAPSA website this year has given me a great deal of insight into the challenges of building and managing a website with very limited human and financial resources. The frustration is indeed shared by the web authors and managers who care about the quality and currency of their projects, as well as by those who visit websites with particular needs in mind. The matter of attracting adequate funding in this field extends beyond the upkeep of websites of course, and as unpalatable as it might seem, is one to be faced by us all if philosophy for children is to grow and flourish. Perhaps this might be a future topic for consideration in *Critical & Creative Thinking*.

One solution that seems to have been effective for at least some new and established non-profit websites is the securing of ongoing funding or sponsorship from larger related organisations. The new 'Philosophy Toolbox' site, for example, is a free web resource for teachers and students created by volunteers interested in promoting philosophy in schools. The website is co-sponsored by the American Philosophical Society's Committee on Pre-College Philosophy and the North American High School Association. While there are no actual lesson plans or associated background philosophy reading available as yet on the site, it does provide carefully selected information about philosophy, philosophy for children, community of inquiry and other relevant pedagogical matters, as well as details of forthcoming conferences and workshops, and appropriate links to other websites.

One link in particular will take the internet searcher to what must be among the best of philosophy for children websites aiming to share high quality teaching resources, namely, the site of 'The Northwest Center for Philosophy for Children'. The centre is an independent, not-for-profit organisation, funded primarily by grants, tax-deductible donations, and workshop fees, and although their website was established some years ago, it has recently been upgraded with very pleasing results. While the website does less in the way of providing an overview of the history and nature of philosophy for children than its counterparts, its strength lies in the fact that it makes available a wide range of well-supported lesson plans and classroom activities.

Notable among these are discussion plans associated with children's literature (including the well known *Frog and Toad* stories and extracts from *Alice in Wonderland*), brief but thoughtful ethical dilemmas to stimulate discussion, a unit of work based around the Holocaust and lesson plans designed to help students think through issues raised in Plato's *Allegory of the Cave* and *Ring of Gyges*. Moreover, the website has links to two early issues of the journal 'Questions: Philosophy for Young People' (which contain dialogues from classroom discussions and ideas for philosophy lessons), a philosophy blog for children and the 'Kid's Philosophy Slam' – an annual essay contest. The Northwest Centre also details its own professional development courses available for teachers and recommends equivalent courses provided by IAPC. One minor shortcoming, however, and one common to most philosophy for children websites, is a lack of any detailed information about what is actually required to successfully facilitate classroom discussions of philosophical issues and hence to effectively teach the skills of philosophical inquiry.

In some ways, this is understandable, even desirable given the opportunity that websites provide for the promotion of philosophy for children and community of inquiry methodology; it is clearly important to attract and encourage teachers to consider using this approach so that in turn, they might ignite their own students' curiosity and work to develop their reasoning skills. The 'Philosophy for Children: Philosophical Questions from Children's Stories' website for example (which incidentally is the first site on the Google search list), encourages teachers and parents alike to conduct community of inquiry style discussions based on existing children's story books using the 'question sets' supplied. Brief background notes on the philosophical issue at hand are helpfully provided, although the notes and question sets do not necessarily fully reflect the philosophical nature of the themes raised through the literature. The 'Guidelines for leading a philosophical discussion with young children' section on this site is currently under construction and it would be inappropriate to speculate on the form this might take, but it seems to me that there are some risks in promoting philosophy for children as an approach anyone can implement easily with a picture book and set of questions in hand: some risk in *not*

presenting the fact that it is extremely challenging to effectively facilitate community of inquiry discussions and that such facilitation requires dedicated training and support. Indeed, while it is important avoiding alarming teachers who are thinking of including philosophy as part of their daily curriculum, it is surely crucial to encourage these teachers (as part of their visit to a website) to think about the demands of learning and preparation required for the teaching of philosophy, even with very young children. Failing to understand the challenges of implementing philosophy in the classroom, or thinking that no special professional development is required in order to do so effectively, may well lead to teachers struggling, failing and even abandoning the approach without ever experiencing the rewards it can bring for students and teachers.

One further cause for concern stems from the fact that some so-called philosophical questions and discussion plans included on websites are not necessarily philosophical questions at all. The 'Philosophy for Children: Teacher Tools' website, for example, contains story books and associated lesson plans dealing with a wide range of philosophical issues, but the lesson plans often fail to include even a single clear philosophical question. A Year 4 lesson plan based on a story about a sad gorilla, for example, provides the following (mainly comprehension) set of questions: 'Why does her dad not have time for her?', 'Where is her mum?', 'Does her dad love her?', 'Does she think her dad loves her?', 'Was the gorilla who took her out her dad?', 'Did the toy gorilla really turn into a real one?'; while, a Year 12-13 lesson plan on parent-child relationships includes only the following (again comprehension) questions to be used in conjunction with a poem: 'Does this poem mean that every generation is messed up by its parents?', 'Why does Larkin hate parents/children?', 'Did Larkin have a bad childhood himself?', 'Is it all a downward spiral of hatred?'. Similarly, the relatively new and enticing 'Interactive Philosophy' website for young children, which is on the whole genuinely philosophical in nature, invites young visitors to the site to email their response to a key question: 'Look at the photograph on the right very carefully. Do you have any ideas about where the path may lead to?' The children's responses, while imaginative and sometimes amusing, are clearly not philosophical in nature.

This problem is not confined to websites of course. Frequently, teaching materials are published which purport to raise philosophical questions with the aim of fostering philosophical inquiry, but which on closer inspection are found to contain few, if any, philosophical questions and little in the way of guidelines for eliciting philosophical themes. I suspect that the easy accessibility and dynamic features of some websites just seem to highlight the issue more saliently. My concern here lies in the fact that students and teachers might genuinely believe they are engaging in philosophical inquiry and promote their thinking and work as such, when they are mistaken. How much this matters has long been a point of discussion between Lipman and others in the field and is referred to most often in the context of what should actually be counted as genuine philosophical inquiry in school settings and the associated question of what content should be included and assessed within any professional development or teacher training course in the area of philosophy in schools.

A website that appears to have gone some way to overcoming the problem of failing to demonstrate fully what genuine philosophical inquiry entails is the new Australian site 'Philosophers and Critical Thinkers in Senior Schools' (PACTISS). This non-profit, free database of philosophy and critical thinking teaching resources is described as 'the online presence of the Australian Philosophy Teachers Network'. While aimed directly at teachers of senior secondary students, the website has much to offer educators working across year levels in terms of the relevant and current philosophy-based links and resources included in the site. Features include links to pod casts and transcripts of recent radio programmes and media reports, video footage of teaching tips, interviews with scientists and philosophers including Richard Dawkins and Peter Singer and even brief excerpts from Monty Python. The site also houses a myriad of cartoons, quotes and scholarly articles. These features, combined with carefully developed and detailed lesson plans, Power Point slides and assessment items, leave little doubt of the complexity and demands of engaging students in genuine and effective philosophical inquiry. Peter Ellerton's opening comments (below) on the PACTISS site reveal the generous spirit in which it has been established and will, I hope, continue to grow:

PACTISS.org is about sharing resources between teachers wherever they may be. While it is associated with the Australian Philosophy Teachers' Network, it also stands alone as a free and accessible resource for anyone interested in teaching philosophy and critical thinking. The website has been seeded with enough materials so that most people should find something useful even at this stage, but I hope that in time others will contribute to the project and the collection builds to include something from people from all sorts of teaching backgrounds. One important thing to note is that no one is making any money here. The whole site is free and sponsorship will eventually pay for web hosting and associated expenses. Thanks must go to all those who contribute their time and energy to the PACTISS.org project, and to the ideal that we are all better off if we are all critical thinkers.

PACTISS is not alone of course in making a generous contribution online with the aim of bringing philosophy to the young. And here seems an appropriate place to acknowledge that this review is by no means exhaustive. Websites like the Gareth Matthews' inspired 'Philosophy for Kids' and 'Dialogue Works' from the UK along with others from Europe, South America and South East Asia, have long contributed ideas and resources to this online forum, and exciting developments continue to appear on both new and existing websites: puzzles, cartoons, blogs, discussion groups, audio and video footage of interviews and classroom discussions, interactive tools for structuring arguments, and quizzes to test logical proficiency and understanding of philosophical concepts.

Finally, while the internet searches noted here have not unearthed any 'super-sites' containing all of the components noted above, the development of such a site is probably not really possible or even necessary. We could, however, try to take collective action on at least a couple of fronts in our quest to make the most of this amazing technological forum. First, it might be very beneficial for educators seeking information about philosophy in schools online, if those organisations and individuals with an existing relevant internet site made a concerted effort to include links to other quality websites on their own web

pages so that we might create an extensive interconnected web presence. (Undertaking this research review has, for example, revealed a number of key websites that would probably be willing to add a link to *Critical & Creative Thinking*.) Secondly, the question of what would actually count as a quality philosophy for schools/philosophy for children website deserves discussion within and across the fields of philosophy, education and cognitive psychology, beginning perhaps with a far more detailed and systematic review of international websites than I have attempted here. The information gleaned from such an exercise could then be used, for example, to develop a set of criteria to be included on key organisational websites that would assist internet searchers to locate other quality philosophy for children websites.

In the meantime though and in spite of concerns raised in this review, I will continue to recommend my favourite internet sites alongside my favourite, well-worn philosophy for children teaching resources and look forward to what the future might bring us via the net. It is impossible to imagine all the possibilities that lie ahead for philosophy for children on the web, but the prospect is exciting – even for an online novice like me!

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Book Review

Values Education in Schools: A Resource Book for Student Inquiry, by Mark Freakley, Gilbert Burgh and Lyne Tilt MacSporran

Megan Laverty (Columbia University)

Values Education in Schools: A Resource for Student Inquiry is the second collaboration of Professors Gilbert Burgh and Mark Freakley. Burgh teaches ethics at the University of Queensland and Freakley teaches ethics education at Griffith University. In 2005 they, together with Terri Field, published *Ethics and Community of Inquiry: Education for Deliberative Democracy* (Thomson/Social Science Press, South Melbourne, Vic, 2006), which outlines the principles underlying their approach to values education. Lyne Tilt MacSporran, a high school teacher in Queensland, joins Freakley and Burgh as the third author of *Values Education in Schools*. Together they have produced an indispensable curricular resource for teachers of values education. *Values Education in Schools* engages students in honest and thoughtful investigation of values, asking them to identify lived values – as they inform newspaper editorials, government and school policy decision-making, and individual behaviours – as well as what they take to be aspirational values – those values we *ought* to have. Students are invited to test both lived and aspirational values in discussion with one another, and in their everyday behaviour and interactions.

Values Education in Schools is a recent addition to curricula supporting philosophical inquiry with school-aged students. Written for high school students, *Values Education in Schools* is of manageable length, well organised, and could be used to support the teaching of values across a variety of

subject areas. The chapters correspond to the values identified in the *National Framework for Values Education in Australian Schools* published in 2005, namely: care and compassion; doing your best; fair go; freedom; honesty and trustworthiness; integrity; respect; responsibility; and understanding, tolerance and inclusion. The chapters are self-standing, but if they were to be taught collectively over time, then *Values Education in Schools* would allow teachers and students to build a comprehensive and integrated approach to values inquiry.

Each chapter begins with a series of narrative vignettes that present a range of potential responses to a set of inter-related issues. For example, the chapter 'Care and compassion' presents cases of insensitivity in the form of gossiping, joking, stereotyping and dismissive disregard. But, it also includes situations where hurt is either unavoidable, as in the break-up of a relationship for example, or is produced by an individual's hyper-sensitivity. The responses to these cases represent a range of perspectives of teachers, parents, and students. The vignettes are designed to stimulate students' thinking about the value under consideration. They are followed by brief explanations of the key ideas, cues for inquiry (including discussion starters) and extension activities. Student dialogue is the principal focus and the authors recommend that it be conducted according to the principles of a community of philosophical inquiry. Teachers and students should be prepared for uncertainty as their diverse ideas make it harder, and not easier, to establish a conclusive resolution. They should accept that although they may fail to reach a unanimous agreement on the issue at hand, their understanding of the values under exploration will grow and deepen as a result of their engagement in such inquiry and dialogue.

There is much that is artful about *Values Education in Schools*. For example, some cues for inquiry include quotations from diverse historical thinkers (Mahatma Gandhi, Friedrich Nietzsche, and Bertrand Russell, to name a few). The text does not privilege these insights; instead, it presents them as a collection of hypotheses that need to be explored alongside the students' perspectives. The arguments that surround and frame particular values are presented in a conversational manner reflecting how they

are spoken about in ordinary, everyday contexts. Most students will have no difficulty relating to the vignettes or their concerns. Each chapter culminates with an extension exercise using popular media, film and/or notable historical events (*Australian Idol*, the Azaria Chamberlain case, the Redfern and Cronulla riots, and the Mabo decision, to name just a few examples).

The chapters all have the same progressive movement. The vignettes begin with what is most intimately compelling for the students in the context of their own lives: changes in school policy; the fair and unfair exercise of parental and teacher authority; academic and sporting contests; and virtual and real fights. The cues for inquiry and discussion starters build on the students' investment in these issues by encouraging them to investigate and discuss aspects of the value that is being contested. Having come to some tentative conclusions of their own, the students are asked to test their efficacy in a broader social and historical context. The extension exercise cultivates students' appreciation for the social ramifications of the value under consideration and heightens their sense of what is at stake in classroom inquiry and dialogue. Students realise that they are implicated in controversies of larger practical concern, which is an important lesson for emerging members of a democracy.

The approach employed by Freakley, Burgh and Tilt MacSporran assumes that value inquiry encourages individuals to discover what is common to them in their humanity. Although students may disagree about significant issues, collaborative investigation of those issues brings students together around values that are shared. The text offers tools for exploring and accommodating such disagreements with these shared values. One such value is living well, and the need to make better judgements in the interests of living well. Another such value is finding meaning in one's life by means of individual engagement with experience and concepts. *Values Education in Schools* connects values inquiry with living more meaningfully and ethically. It assists teachers' efforts to equip young people to take responsibility for their own values in the spirit of ongoing inquiry. This book is for any teacher who believes that values inquiry is an important aspect of democracy and of being human.

It is in this spirit that the authors introduce some useful philosophical distinctions. In the chapter on responsibility, they distinguish three kinds of responsibility (causal, legal and moral); in the chapter on compassion, the authors distinguish between an ethics of care and an ethics of justice; and in the chapter on doing your best, they distinguish between intrinsic and extrinsic goods. Familiarity with these distinctions, and an ability to incorporate them into one's thinking, are important aids to self-aware valuing. Freakley, Burgh and Tilt MacSporran also explain some of the traditional philosophies that have shaped Western thinking about values. For example, in the chapter on doing your best, the authors elaborate on Aristotle's views of human excellence. The text moves from the exploration of concrete normative concerns towards more meta-ethical questions about the nature of values and the status of values inquiry. For this reason, the book concludes with a discussion of the fact-value distinction and the debate between absolutism and relativism. The design of the book implies that the meaningfulness of these philosophical issues only emerges through sustained inquiry into values.

Clearly this is an Australian publication written for the Australian context. Many of the chapters refer to Australian events and, while I congratulate the authors on their commitment to their local milieu, it is in this context that I wish to raise my reservation about the book's scope. Many of the issues raised have a broader significance in the global context. A useful extension would have been to show how these values operate in global concerns; or to consider the impact of alternative world views (atheist, Buddhist, Moslem, Christian, for example) on values; or how, within a global context, these values – and not just tolerance – can be seen to foster a cosmopolitan sensibility. The oversight of global awareness is a disappointing omission and I assume it was determined by the scope of the *National Framework for Values Education in Australian Schools* and not the authors themselves. I would like to see the authors develop a supplementary text that advises teachers on how to 'teach' values inquiry, addressing such pedagogical questions as: How should sensitive topics like death and dying be treated?; What role should be given to feelings and faith in values inquiry?; and, How do I assess the values inquiry of my students?

The merit of *Values Education in Schools* is that it will encourage students to think more reflectively and critically about value-based issues. As we move towards greater global interconnectedness, the acts of torture, terrorism, genocide, war, religious sectarian violence, abuse and exploitation are cited as being on the rise. Against this (apparent) evidence of society's decline, adults, including teachers, nonetheless presume a position of moral authority with respect to children, taking responsibility for their moral and citizenship education. Ironically, expectations for moral and citizenship education become progressively more ambitious the more ill-equipped society seems able to provide it. I find it refreshing to encounter a more modest and achievable proposal for moral and citizenship education of the kind presented in *Values Education in Schools*.

Values Education in Schools: A Resource Book for Student Inquiry, by Mark Freakley, Gilbert Burgh and Lyne Tilt MacSporran, ACER Press, Melbourne, 2008, 119 pp.

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