Critical & Creative Thinking

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Research Articles

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Review

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Welcome to *Critical & Creative Thinking*

Welcome to Vol. 16 No. 1 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.

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

Critical & Creative Thinking

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Editorial

Welcome to the first issue of *Critical & Creative Thinking* for 2008, a volume comprising wide-ranging contributions from educators, cognitive psychologists and philosophers working towards increasing the presence of philosophical inquiry and thoughtful dialogue in various educational settings. The articles reflect the many benefits of supporting individuals to become skilled in thinking philosophically. Steve Trickey, for example, reports on findings from a large-scale empirical study demonstrating significant and sustained improvements on measures of cognitive and social development in young students following a philosophy-based classroom intervention in Scotland. Importantly, however, he also encourages us to consider the positive impact community of inquiry methodology might have in relation to students' emotional health and well-being. Paul Jewell and Sonya Paterson present their recent work with secondary mathematics students, in which they draw together ethics and statistics in order both to stimulate students' curiosity and motivation to understand new mathematical concepts, and also to foster the skills required for managing the statistical information necessary for making sound ethical decisions about complex social issues. In contrast, Martyn Mills-Bayne outlines findings from his Honours research project with junior primary students and stresses the value of providing ongoing opportunities for even very young children to discuss genuine, relevant ethical dilemmas with their peers.

Other authors writing for this issue urge us to consider persistent obstacles to the wider uptake of philosophically-based curricula in schools, and challenge us to find ways to break through such barriers. Maughn Gregory's review of recent efforts by staff from the Institute for the Advancement of Philosophy for Children to ensure the provision of quality teacher education, should serve as a timely reminder that the task of equipping individuals to teach philosophy effectively must involve in-depth and sustained study of both philosophy and pedagogy, even in the face of severely limited resources. Leif Larsen expresses

concern about the lack of philosophical inquiry within the Australian education system despite the widely touted aim of developing critical thinking across the year levels, and calls for research into the reasons for this anomaly. More pragmatically, Ben Cleveland points to the obstacles, which traditional learning spaces pose for the implementation of progressive pedagogies. Reform on all fronts is surely crucial if we are to make further inroads in bringing philosophy to young people.

This issue also includes reports of exciting and successful philosophical inquiry programmes taking place in Western Australian schools (Matthew Wills) and more broadly within the schooling system in Singapore (Ho Wah Kam). Finally, Peter Lavskis' review of Francis Wheen's *How Mumbo-Jumbo Conquered the World* will, we suspect, inspire those of us frustrated by the prevalence of patently unsubstantiated yet firmly held views, to read this recent important commentary.

Thank you to all contributors for sharing their ideas and work in the field. Sincere thanks, too, to the many reviewers who responded so thoughtfully to authors' manuscripts, and to Justine Gallasch for her generous contribution as sub-editor once more. As editors we are encouraged by the increasing diversity and quality of submissions to the journal and take it as an indication that *Critical & Creative Thinking* is becoming more widely recognised as a vehicle for the dissemination of relevant educational research. Such recognition is crucial in the current climate of impact factors and citations, but more importantly in the contribution it makes to the field of philosophy in schools. As a next step, however, we seek to foster a culture of dialogue amongst the readership and thus invite responses to the ideas presented in this and recent issues. Such an exchange of ideas is surely the hallmark of a genuinely scholarly publication and one we should strive towards. More practically, the future of the journal depends equally on significant growth in its subscriber base and to that end, we urge you to be active in promoting *Critical & Creative Thinking*.

Carol Collins and Sue Knight

This issue of *Critical & Creative Thinking: The Australasian Journal of Philosophy in Education* is dedicated to the memory of Ross Phillips, in recognition of his unerring support of the journal and of philosophy in schools more generally.

Philosophy in Schools: Ideals, Challenges and Opportunities[1]

Maughn Gregory (Montclair State University)

Abstract

For the past four years, the Institute for the Advancement of Philosophy for Children (IAPC) at Montclair State University has been reconstructing the way it works with schools and school teachers to bring philosophy to school children. The new model, called 'Philosophy in Schools', involves teachers in a program that alternates theory and practice. After an introductory workshop in philosophical dialogue, teachers who commit to the program are coached in their role as philosophical facilitators by university faculty and graduate students. In this paper I describe the challenges we have faced in that work, some of the innovative things we have done, accomplishments we're proud of, setbacks that make us disheartened, disagreements we've cultivated, questions we've developed that we can't answer yet, and how all of this has altered our conception of what it means to do philosophy with children.

I. Introduction: children doing philosophy

For the past four years, faculty and graduate students affiliated with the Institute for the Advancement of Philosophy for Children (IAPC)[2] at Montclair State University have been reconstructing the way we work with schools to bring philosophy and school children together. In this paper I describe the ideal we have evolved for this work, challenges we have faced in that work, some of the innovative things we have done, accomplishments we're proud of, setbacks that make us disheartened, disagreements we've cultivated, questions we've developed

[1] An earlier version of this paper was delivered at the conference 'Philosophy as Educational and Cultural Practice: A New Citizenship', UNESCO Headquarters, Paris, France, November 16, 2006.

[2] See http://www.montclair.edu/iapc.

that we can't answer yet, and how all of this has altered our conception of what it means to do philosophy with children.

More than three decades after our Institute's founder, Matthew Lipman, began introducing children and philosophy to each other, that endeavour still strikes many educators and philosophers as odd and in need of special justification, so I preface my description of our institutional experiments in *how* to best go about doing philosophy with children with a few words about *why* we want to do that – the answer to which derives from our conceptions of philosophy and of children. Philosophy for Children[3] construes philosophy very broadly as a yearning or wondering toward meaningfulness or truth, which our program operationalises as collaborative inquiry into questions about ethical, aesthetic, epistemological, political, and other philosophical aspects of experience.[4] We rely on the Deweyan notion that these are aspects of most people's ordinary experience rather than remotely intellectual or esoteric subjects,[5] and on the growing awareness advanced by Lipman that children's experience is just as replete with these philosophical dimensions as is the experience of adults.[6] Although the IAPC has promoted Philosophy for Children as an effective means of reaching educational objectives such as improved reasoning, creativity and social

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[3] The phrase 'Philosophy for Children' was coined by Matthew Lipman and Ann Margaret Sharp in the early 1970s. Practitioners around the world today use phrases like 'Philosophy with Children', 'Philosophy with Children and Adolescents', 'Philosophy in Schools', and 'Philosophy for Young People', to refer to their own work; however, in the literature these phrases are also often used to refer to any program that engages children in philosophical dialogue (as opposed, especially, to programs for teaching older children the history of philosophy). In this paper, unless otherwise indicated, I use the phrase 'Philosophy for Children', in the latter sense, to refer not only to the materials and methods developed by Lipman and Sharp, but to similar programs, whether or not originally derived from Lipman and Sharp.

[4] See Gregory 2007, pp. 2-6.

[5] Dewey writes, for instance, that 'the work of art develops and accentuates what is characteristically valuable in things of everyday enjoyment. The art product ... issue[s] from the latter, when the full meaning of ordinary experience is expressed.... A conception of fine art that sets out from its connection with discovered qualities of ordinary experience will be able to indicate the factors and forces that favour the normal development of common human activities into matters of artistic value.' Dewey 1989, p. 17.

[6] See Gregory 2002.

skills,[7] for most of us involved in this work these benefits are auxiliary to the benefit of children having the chance to do their own philosophical inquiry: to become aware of the aesthetic or the ethical in their own experience, to share their puzzlement and excitement, to inquire into the problematic, and to learn how to make their own sense of it all – to formulate their own judgements about what is what, and how things relate, and how their corner of the world could be more just, more beautiful, more meaningful. Rather than see this kind of experience as something instrumental to other kinds of learning, I would say the reverse: that much of the rest of one's education should be considered instrumental to this kind of experience.

The method developed in the early 1970s by Lipman and Sharp for engaging children in philosophical inquiry, though often embellished and varied in practice, has endured mostly intact since then. Lipman rearticulated the method in his latest book[8] in terms of five stages:

1. The offering of the text [Students read or enact a philosophical story together.]
2. The construction of the agenda [Students raise questions for discussion and organise them into an agenda.]
3. Solidifying the community [Students dialogue about the questions as a community of inquiry facilitated by an adult with philosophical training. Discussion continues over subsequent philosophy sessions until the agenda for the reading is finished, or until the students agree to move on to the next reading.]
4. Using exercises and discussion plans [The philosophical facilitator introduces relevant activities to deepen and expand the students' inquiry.]
5. Encouraging further responses [These include, e.g. self-assessment of philosophy practice, art projects and action projects.]

[7] See Lipman, et al. 1980, Chapter 5, and the list of studies under the link 'Research on Philosophy for Children' at the IAPC website http://www.montclair.edu/iapc, last accessed 5 March 2007.
[8] Lipman 2003, pp. 101-03.

The central practice of Philosophy for Children is the *community of inquiry*, a practice of collaborative dialogue that engages young people in cognitive practices such as creating hypotheses, clarifying their terms, giving and evaluating reasons, offering examples and counter examples, questioning assumptions, and drawing inferences, as well as social practices like sharing perspectives, listening attentively, helping others make their point, and challenging and building on other people's ideas. The facilitator of these dialogues neither leads the children to a predetermined answer nor attempts to validate every opinion as equally sound. Instead, she models and prompts the kinds of behaviours just mentioned, helps the children to see the structure that emerges in each dialogue, and encourages them to follow the inquiry where it leads, i.e. in the direction of the strongest arguments and evidence (including the evidence of feelings). The goal of these inquiries is for the participants to arrive at one or more *reasonable philosophical judgements*[9] regarding their own questions, with the expectation that doing so will require each person to reconstruct or 'self-correct' the ideas and feelings she began with, at least partially. In order for this to happen, it is important that the children see the philosophical facilitator as someone who respects them as persons, takes what they have to say seriously, is an expert in the procedures of inquiry, models self-correction, doesn't think she knows everything and really loves ideas.

II. Who will facilitate?

This ideal, of having adults facilitate rigorous but open-ended philosophical dialogue among groups of children, has generated a tremendous amount of scholarship in the last thirty-something years, including epistemological, political, ethical and even aesthetic theory justifying and critiquing the ideal, psychological and cognitive science explaining why it should work, and empirical studies documenting what works and doesn't work, under what conditions. However, in this essay I speak not as a theoretician but as an administrator – a program builder – and the question I address is: Given what we understand today about our ideal, what does it take, practically, to make it happen in real schools, with real children? What it takes, I have learned, is

[9] See Gregory 2006, pp. 160-71.

a number of necessary factors sufficient only in their combination.

Perhaps the most important factor is the skilled philosophical facilitator: a person who listens to children with a sensitive philosophical ear; who thinks and feels carefully, and is transparent in doing so; who is procedurally rigorous but is comfortable with ambiguity. Most of the people who have prepared for and practised this kind of facilitation under the auspices of the IAPC fall into three categories, each with typical strengths and weaknesses: university faculty of philosophy, graduate students in philosophy or education, and school teachers.

Some of the university faculty who have taken an interest in Philosophy for Children have become our most important resources, not only for promoting this work and providing teacher preparation in it, but also for developing the program's theory, methods and materials – all of which, of course, depend on their becoming excellent practitioners themselves, i.e. excellent facilitators of children's philosophical discourse. Professors of philosophy who facilitate children's dialogue are uniquely prepared to appreciate the philosophical implications of what the children say and do, to model and prompt good reasoning moves, and to help the children keep track of the structures and the intricacies of the extended arguments that emerge in their dialogues. They also have experience in teaching and classroom management, much of which transfers to the context of secondary and even primary schools. However, university faculty who are prepared, willing and supported by their institutions to work with children on a regular basis are extremely scarce. Moreover, for every university professor who has made Philosophy for Children part of her professional life, there are a handful of others who have been attracted to this work, or the idea of it, but after trying it out have decided either that the work did not suit them (most typically because they were uncomfortable *not* being the centre of attention or the arbiter of knowledge in a dialogue), or that working with children and school teachers would not be deemed sufficiently scholarly by their universities and professional organisations, and so would hamper their professional advancement. This last point – the reluctance of academic philosophers to see children and philosophy as relevant to one another – is a damaging bias that I hope the

growing vitality of the field of practical philosophy is beginning to undermine.

I began practising Philosophy for Children as a graduate student at the University of Hawaii, which had at the time the most extensive Philosophy in Schools project in the United States. A grant from the Hawaiian state government funded a number of graduate students to lead weekly philosophy sessions in public schools and to work with classroom teachers who were studying the program. In Hawaii and now in New Jersey, I have seen graduate students in philosophy and education develop into highly-skilled facilitators with children, and devote some or all of their graduate studies to this work. Some of the advantages of having graduate students work with schools are that children often think of them as more hip than teachers or university faculty and so respond to them more enthusiastically; teachers are often less intimidated by them than by university faculty, and to be frank, their labour is cheaper. Some of the disadvantages are that their star quality can be a detriment if the children associate the graduate student too closely with doing philosophy; many graduate students have little or no experience in teaching or working with children and so struggle with issues of classroom discipline; some graduate students are prone to the same problems of ego and professional planning that beset some university faculty; it can be very difficult to secure regular funding for graduate student assistantships to do work that is not directly related to university teaching or research assistance; and of course the biggest problem, institutionally-speaking, is that graduate students are only with us a few years at a time.

There are university faculty in some places who practise philosophy with children alone or with a small number of their students on a semester-by-semester basis, depending on their availability. In most of these cases, the intent is for the faculty member and graduate students to learn something new about philosophy, to improve their dialogue facilitation skills, to pilot a new curriculum, or to study children or childhood, as much as it is to give children the opportunity to encounter philosophy. The former are certainly legitimate objectives, but if the latter objective is to be realised in any substantive and enduring way, philosophy must be more than a short-term unit brought in and then

taken away by a dynamic classroom visitor. It must be given a regular place in the physical, temporal, fiscal, theoretical and attitudinal life of the school – and that means first and foremost involving the teacher.

Teachers bring a number of advantages to the role of facilitator of children's philosophical dialogue. They are skilled in classroom management and have established habits of discipline with their students. They know their students well and interpret their words and actions better than visitors can. Their expertise in one or many areas of curricula makes it easy for them to help the children make connections between philosophy and the other disciplines. And many of them are experienced in conducting group conversations. Helping teachers learn to facilitate philosophical dialogue has become the focus of our Philosophy in Schools project at the IAPC because in spite of the challenges, we believe this is the surest way to realise the ideal described above, of giving children the opportunity to practise philosophy with integrity and regularity. We are mindful, of course, that making philosophical inquiry a regular part of the classroom experience both necessitates and induces broader educational reforms, e.g. toward student empowerment, reasoning across the disciplines, inquiry-based pedagogy and community decision-making. And while it is part of the Institute's mission to contribute to educational reform initiatives consistent with its work in Philosophy for Children,[10] our ability to do so requires that we pay particular attention to the quality of the philosophy sessions we enable. In the final section of this paper I will describe our Philosophy in Schools model in some detail, and will describe the ideals and challenges that each facet of the project was designed to meet.

III. Philosophy in Schools: negotiation and preparation

Philosophy in Schools is the model for partnerships between the IAPC and primary and secondary schools within the vicinity of the university as well as in other states, with which we maintain a long-distance relationship. The model consists of five phases of increased commitment on the part of the Institute and the schools.

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[10] The IAPC's Mission Statement is available online at http://cehs.montclair.edu/academic/iapc/about.shtml#mission, last accessed 5 March 2007.

Phase One is negotiating a new IAPC/school relationship, which may come about because a parent, teacher or school principal has approached the Institute, or because the Institute has approached a school, having secured grant funding to conduct a study or to offer professional development.

One of the most important points of negotiation is to determine how many teachers in the school will be involved in the program. We have determined that in most cases Philosophy for Children is most successful when it begins with a small but committed cohort of at least five teachers within a school. Typically, someone from the Institute conducts an 'awareness session' at the school in order to help teachers, parents and administrators gauge their interest in P4C. In negotiating with school administrators, IAPC administrators make it clear that we do not expect all to participate, that we wish to avoid pressuring teachers to participate, and that we hope school administrators will also avoid such pressure. However, we expect participant teachers to commit to study and practise the program for at least one school year before deciding whether or not to continue with the program. In some instances, teachers from non-participating schools may join a nearby P4C cohort. Working with cohorts of teachers within a school obviates the resentment and resistance from teachers who would otherwise be forced or pressured to work with us, but it has also caused resentment from teachers who have felt that their decision not to do philosophy put them at professional disadvantage or risk in their school. We have found it necessary to ask school principals to stipulate, at least formally, that neither working with us nor not working with us will put teachers at professional risk.

The school's initial commitment is significant. The school must schedule and pay for an introductory workshop for the P4C teacher cohort, which usually entails either paying for substitute teachers or paying the P4C teachers for overtime work. The school must allow the teachers to schedule philosophy sessions once or twice per week, for 30-45 minutes for lower grades and an hour for higher grades. It must purchase sets of the IAPC curriculum for each participating classroom, and must schedule and pay for follow-up workshops and/or 'Philosophy for Teachers' (P4T) sessions. The commitment of the IAPC includes arranging

faculty to conduct the teacher preparation workshops, arranging faculty and graduate students to coach individual teachers' classroom philosophy practice, supervising this staff, and keeping the records necessary to certify the teachers' professional development credit.[11]

Another important obligation the school incurs in deciding to work with us is explaining and sometimes defending that decision to parents and other community members. Parents have raised concerns about their children doing philosophy in many places we have begun to negotiate with schools, and in many cases the parental concern is foreseen by school teachers and administrators. Most parental concern and resistance to Philosophy for Children is based on conservative religious views that fall into two categories: that schools should not teach children what to believe about certain religious, moral or metaphysical issues (one parent told me that she did not want anyone but herself teaching her children about death), or children should not be encouraged to question their family's religious, moral or political beliefs.[12] The first category is easy to deal with: we encourage parents to review our materials, observe philosophy sessions and even join our introductory teacher workshops, in order to convince themselves that far from indoctrinating their children with certain philosophical positions, Philosophy for Children attempts to protect children from indoctrination by enabling and disposing them to reach their own reasonable judgements on issues that matter to them. Of course, this answer feeds into the concerns of parents in the second category, who believe in their own exclusive right to shape their children's moral beliefs. While we support a school's decision to allow parents to pull their children out of philosophy sessions, we expect the schools we work with to stand by their own policies and not allow parents with private moral objections to interfere with our program.

Following these negotiations, Phase Two of our model involves preparing the teachers to begin their philosophical practice, mostly through an introductory

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[11] The IAPC is an approved Professional Development Provider for the New Jersey Department of Education. See http://www.state.nj.us/njded/profdev/providers/search.htm, last accessed 5 March 2007.

[12] See 'On Philosophy, Children and Taboo Topics', in Gregory 2007, pp. 35-36.

workshop. These workshops last at least three days, which are either run together or distanced at a month apart. The workshops introduce participating teachers to the theory and the practice of Philosophy for Children. The objectives and methodology of the program are explained in presentations and in articles and book chapters the teachers read and discuss. We encourage teachers to see themselves as embarking on a long-term personal inquiry into the nature of philosophy and the theory and practice of P4C.

The workshops also include sessions in which we practise using the IAPC curriculum together. In these sessions, we do not pretend to be children or give responses we believe children would give. The philosophical issues embedded in the texts are perennial, and are equally challenging for us adults. The purposes of these philosophy sessions are to give participants the chance to experience their own philosophical community of inquiry and to reflect on that experience, with special attention to the role of the facilitator. The curriculum sessions help teachers to get the 'feel' of doing philosophy: to develop an ear for philosophical questions and ideas, to see the big picture of an unfolding philosophical argument, and to notice how the moves of the facilitator reinforce the quality of the discourse and help it advance in the direction to which it tends.

Two of the greatest challenges in preparing teachers to facilitate philosophical dialogue are that most of them lack any background in logic or informal reasoning (other than some coursework in critical thinking that is difficult to apply in a dialogical context), and that many of them struggle to recognise the philosophical content in our Philosophy for Children curriculum (much less in other school materials), to see how philosophical questions differ from other kinds of questions that deserve attention in a classroom, and to hear the philosophical meaning in children's discourse. IAPC faculty have disagreed about the best ways to meet these challenges. Some have worked to develop charts, checklists, and other aids to help teachers make sense of the process of philosophical inquiry, while others have argued for the 'immersion' approach of simply doing more philosophy with teachers so they can learn by doing. Our workshops currently employ both strategies.

Another challenge for many teachers is that the kind of classroom discussion they are used to is of a very different,

typically didactic kind, which is neither open-ended (because the teacher's role is to guide the students to discover for themselves a predetermined answer), nor truly collaborative (because the discourse pattern is strongly teacher-centred, no matter how many students are permitted to speak). The only alternative to didactic discussion many teachers can imagine, initially, is a 'circle time' or 'town meeting' discussion, in which participants are encouraged to express their opinions on an equal footing, without being criticised or judged for what they say. It takes time for some teachers to appreciate philosophical dialogue as collaborative inquiry aimed at judgement and the reconstruction of beliefs and values, as another kind altogether. Therefore, in our introductory sessions we draw attention to distinguishing features, such as maintaining a slow pace, tracking the arguments that unfold and waiting to speak when we can help move the inquiry forward, paying attention to others in the group, keeping our remarks brief, and directing our comments to the entire group.

IV. Philosophy in Schools: implementation

Phase Three of our model involves conducting philosophy sessions in the teachers' classrooms throughout the school year. Each teacher in the cohort is assigned a Philosophy Coach from the IAPC: a faculty member or graduate student who attends the weekly philosophy sessions. The coach typically facilitates the first few sessions while the teacher observes, then takes turns with the teacher facilitating and observing and helping the teacher reflect on the sessions, and eventually provides support while the teacher facilitates most sessions. Teachers in schools in other states are also assigned Philosophy Coaches, with whom they communicate by email and an online dialogue forum. They are given a standard Reflection on Philosophy Session form[13] to help them evaluate their own sessions and ask for specific kinds of advice from their coaches. They are also encouraged to submit video tapes of their sessions to their coaches.

While philosophy sessions are happening in the schools, the IAPC coordinates a number of kinds of supervision and support. Philosophy Coaches participate in a bi-weekly 'P4C Coaching Group' at the IAPC, in which faculty and graduate students exchange ideas and concerns,

[13] Ibid., p. 58.

take turns showing videos of philosophy sessions (led by us and by the teachers we work with) for group critique and discuss shared standards of practice. The Institute conducts monthly Philosophy for Teachers (P4T) sessions in which the teachers and we exchange ideas and concerns, observe and discuss video tapes, or read and discuss relevant research articles. Teachers are also regularly invited to events sponsored by the Institute, including colloquia, follow-up workshops, study groups and Summer Seminars. The IAPC keeps careful records and certifies the teachers' professional development credit for these events.

All of this represents a tremendous investment of personnel hours, which is by far the most precious of the Institute's resources. During the first year of practice, the IAPC usually does not charge for these services unless there is grant money involved, because the school has invested so much money in the curriculum and workshops. There is simply no other way we have found to help teachers become competent in Philosophy for Children than this kind of individual and ongoing support, coaching and evaluation. For this reason, we are limited to working with no more than a few schools at a time.

A number of challenges typically surface during this phase of our model. To begin with, there is always some difficulty with scheduling. We have had to stipulate that philosophy sessions not be scheduled during the first or the last hour of the school day, in which it is more difficult for younger children to concentrate, and that philosophy not be automatically cancelled when there are special school assemblies or outings. A more serious challenge is that some teachers find the practice of philosophy more difficult and/or otherwise less enjoyable than they anticipated, or they develop interests in other areas that take up their time and energy, and so they find ways to limit their participation. One innovation that has helped with this problem is to ask the school to appoint a P4C coordinator who keeps in regular communication with the P4C cohort and acts as a liaison with the Institute.

Another challenge peculiar to the way we work with teachers in schools close to the Institute is that they sometimes become too dependent on the philosophy coaches: relying on them to do most of the facilitating, not trusting themselves to take over, and in some cases being too

intimidated by their coach to risk making mistakes in front of them. This is something we have learned to watch out for, and our response is to have the coach only visit less often, to give the teacher a chance to practise without being observed.

Another challenge we face is the mixed competence of our available graduate students. It is the policy of the Institute to not allow students to be Philosophy Coaches in the schools until they have demonstrated their proficiency to us. Before that, they spend time observing school philosophy sessions and practising facilitation with the supervision of experienced teachers or coaches. But it can take much of an academic year for even a student with a background in philosophy to become competent, which means that most of our Masters students have little or no time left during their degree program to work as coaches. Most of our coaches are doctoral students in their second or third year – meaning, of course, that they have only a year or two to help. For a number of years we evaluated graduate students informally, by faculty consensus, but that led to some justifiable resentment on the part of students, and so just last year we experimented with a standardised evaluation process to qualify graduate students as Philosophy Coaches.

But our most serious challenge is that all of our individual coaching and group workshops may be ineffective in helping some teachers become proficient philosophy facilitators. After working closely with teachers for two or three years, some still struggle with reasoning or identifying philosophical content, or reconstructing their habits of didactic classroom discourse. Some teachers in this situation become discouraged and lose interest. Some develop a misplaced confidence in their abilities and want to continue their philosophy practice without being coached or participating in further study – in spite of our continual reiteration that inquiry into philosophy and philosophical practice is an ongoing obligation and pleasure for the most experienced of our faculty members. However, most teachers who struggle with their philosophical practice have realistic expectations and are committed to a long-term apprenticeship – which of course requires further expenditures of resources by the school and the Institute.

V. Philosophy in Schools: evaluation and advanced practice

In response to these challenges, the IAPC is experimenting with a number of forms of assessment. Two kinds of assessment are important to the practice of Philosophy for Children: self-assessment conducted by communities of children and adolescents doing philosophy, and external assessment *of* those communities, conducted by teachers and by the Institute. In addition to the Reflection on Philosophy Session forms described above, the IAPC has designed a number of Observation Guides[14] for teachers to use to assess video recordings of their philosophy sessions, though we have not yet succeeded in making this a regular practice for most teachers. We have been much more successful in helping teachers facilitate regular self-assessments with their students. Self-assessment is part of the practice of the community of inquiry, as the ideal of self-correction requires that participants become aware of and improve their own inquiry skills and outcomes. The IAPC has designed a number of instruments for students to conduct collective self-assessments.[15] The Institute also conducts annual evaluation surveys of students and teachers to learn about how they are experiencing the program: what they like and dislike and what they find valuable and not so valuable.[16]

Phase Four of our Philosophy in Schools model is another form of assessment that we are currently experimenting with: Institutional endorsement of competent teachers and graduate students as 'Philosophy for Children Practitioners'. Several Philosophy for Children centres and federations around the world have designed similar credentialing programs, though none that I am aware of involve the individual coaching we have been able to provide. Our program has four requirements: 25 hours of workshops, seminars, or other coursework in Philosophy for Children, 25 hours of supervised practice of philosophy facilitation, a formal self-assessment of a video-recorded philosophy session, and a formal assessment of the same recording by IAPC faculty. Because our university offers graduate degree

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[14] Ibid., pp. 56-60.
[15] Ibid., pp. 51-55.
[16] Ibid., pp. 61-66.

programs in Philosophy for Children,[17] teachers may take our Practitioner Endorsement program for university credit, which may be applied toward one of our Masters-level programs. However, for teachers not interested in university credit, the only incentive to work for this Institutional Endorsement is the prospect of personal growth.

Phase Five of our model is a vision of involving teachers in 'Advanced Practice' in Philosophy for Children that we are only beginning to realise. The most significant aspect of this phase is that teachers with Institutional endorsement assume primary responsibility for conducting their philosophy sessions, with only periodic visits from IAPC coaches. We take it as an important part of the success of our model for Philosophy in Schools that schools eventually become relatively self-sufficient in their philosophy practice. As long as philosophy is practised in a school, the Institute is interested to be involved in ongoing P4T sessions, professional development and program evaluation, while phasing out of intense individual coaching frees the Institute to begin new relationships with other schools. An important challenge associated with this phase is that some schools with several years of experience in P4C are not inclined to continue to pay for these services. My colleagues and I have had the sad experience of visiting schools around the world where the practice of philosophy has devolved considerably for lack of continued professional development and assessment.

Schools conducting advanced practice in Philosophy for Children serve as demonstration sites for investigators that visit the Institute regularly from all over the world.[18] In Phase Five of our model, teachers with Institutional endorsement become involved with the Institute in a number of mutually beneficial ways. They become mentors to new graduate students and to other teachers doing their initial P4C practice. They are invited to collaborate with IAPC faculty in writing papers, conducting research, developing and testing new curriculum, and they may be employed by the Institute to help conduct workshops, teach mini-courses, lead study groups, etc.

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[17] See http://cehs.montclair.edu/academic/edufoundation/programs, last accessed 5 March 2007.

[18] See, e.g. 'British Educators Visit Local Schools', *West Essex Tribune*, Livingston, New Jersey, April 28, 2005.

VI. Challenges, reassessments and questions

There are three challenges that threaten to undermine our work, which may arise during any phase of our model. The first is a change in school administration, i.e. the replacement of the school principal or district superintendent who approved the funding and provided the leadership for introducing philosophy into the school system. It is our experience that school administrators, like politicians, often attempt to prove their strength in a new position by initiating new programs and distancing themselves from programs closely associated by their predecessors. And because philosophy is not mandated in the curriculum, it is vulnerable to this kind of disruption. This nearly happened to us recently, in fact, and I was very gratified that the cohort of P4C teachers in the school rallied together and made a formal appeal to the new principal, who agreed to support the program.

The second perennial challenge to our work is the promulgation of new federal, state or district educational standards or testing systems or programs that consume so much time and energy that schools and teachers find it very difficult to make time for anything not mandated. In these cases, our strategy is to point to research that shows that philosophy is likely to help children meet the new program objectives or standards.

The third perennial challenge is cutbacks in university support to the Institute. One important reason we have been able to work so closely with schools in the last several years is that the cost of doing so is not born entirely by the schools but is subsidised by the university. University budgets are quintessentially unstable, particularly when they are derived from state government budgets. Maintaining our university support by demonstrating the good work that we do is one of my most important responsibilities, which, again, can be complicated by changes in university administration.

Our experience implementing and reconstructing this model of Philosophy in Schools over the last four years has left us with a number of questions that can only be answered in the coming years. The most pressing question for us is: given the standard we have evolved for basic practitioner endorsement, how much time and resources

should we realistically expect to invest in order to bring a cohort of teachers to meet that standard? Are there more cost-efficient ways to help teachers reach the standard, perhaps over longer periods of time? Beyond the basic standard, what kinds of philosophical expertise can teachers develop by working with us, apart from taking formal degree programs in philosophy? In what ways and to what extent can philosophical inquiry become part of other school subjects like mathematics, history and character education? And what kinds of opportunities can we offer to experienced P4C teachers to encourage them to continue their study and practice of philosophy?

Our experiences have also helped us to re-think what it means to do philosophy with children in some details. It has reconfirmed our conviction that reasoning is an indispensable part of, but not the whole of, vibrant philosophical dialogue. It has given us the opportunity to continue to find philosophical meaning in the experiences and the thinking of children and teachers in school settings. It has caused us to be clearer and more insistent about the nature of inquiry that should structure philosophical dialogue so that it does not dissipate into an endless and incoherent exploration of associated ideas, by offering more concrete indications of the kinds of judgement toward which philosophical inquiry aims. It has caused us to reconstruct our recommendations for using the Instruction Manuals that accompany the philosophical novels in the IAPC curriculum.[19]

Most importantly, our experience has reconfirmed the fundamental premise of Philosophy for Children: that children and adults without philosophical training are capable of discerning ethical, aesthetic, political and other philosophical dimensions of their own experience, of recognising problematic aspects of that experience, and through a process of rigorous and conscientious dialogue, of inquiring toward judgement and action capable of resolving what was problematic. That is our ideal: the experience we aim for when we sit on the rug with a group of children to do philosophy for an hour or so. As with all educational experiences, the real is sometimes far from the ideal; but the real can also surpass the ideal and give us new ideas about what is possible.

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[19] The new recommendations are explained in Gregory 2007, pp. 11-12.

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'More than Cognitive': Reflections on Components of the Clackmannanshire Thinking Project

Steve Trickey

Introduction

The links between emotion and thought have intrigued philosophers from the time of Aristotle. This paper draws on the evaluation of the 'Thinking through Philosophy' project in Clackmannanshire in Scotland to set the scene for exploring the links between emotion and thought from philosophical, psychological, educational and medical perspectives. The paper thus consists of two distinct but related parts, i.e. a summary of the Clackmannanshire study and a discussion of the link between cognition and emotion. The latter discussion considers the consistency of this link from a range of perspectives. Finally, consideration is given to wider implications for education and health that arise from the connection between the content of our thoughts and the nature of our feelings.

Matthew Lipman devised the Philosophy for Children programme with the aim of encouraging children to think more reasonably and make wiser decisions. A number of studies have suggested positive cognitive and social outcomes can accrue from the use of Philosophy for Children. For example, the Institute for the Advancement of Philosophy for Children (IAPC) website currently lists 74 studies citing evidence of positive cognitive and social outcomes arising from 'communities of inquiry'. However, Philosophy for Children evaluations have frequently failed to meet the rigour required for adequate data analysis. For example, Sternberg and Bhana (1996) previously voiced concerns over the lack of adequate control groups when they considered 20 evaluation studies of Philosophy for Children. They noted that the research reports were very sketchy: issues of subject dropout, class selection, durability, transfer, subject population and experimenter bias are generally not

addressed. For these reasons, meta-analyses of evaluations of Philosophy for Children (e.g. Trickey & Topping, 2004; Garcia-Moriyon, Rebollo & Colom, 2005) have had to be selective in studies used in critical reviews of Philosophy for Children.

The present paper includes a summary of a wide-ranging evaluation of Paul Cleghorn's (2002) 'Thinking through Philosophy' programme in Scotland. The findings include evidence of gains in both cognitive reasoning ability (Topping & Trickey, 2007a) and social/emotional functioning (Trickey & Topping, 2006; 2007). However, it might be argued that this should not be surprising in view of the link between emotional and cognitive processes suggested in the opening sentence. This paper will outline the research in the Clackmannanshire evaluation before discussing links between thoughts and emotions. The paper will explore how developing thinking may contribute to promoting emotional health – a particular interest of the writer as a practising psychologist.

The Clackmannanshire study

The Clackmannanshire study was a four-year project that investigated the effect of weekly collaborative philosophical inquiry on classroom discussion and the cognitive and socio-emotional development of those participating. Prior to the Clackmannanshire project, the author was involved in a critical review of selected research literature of outcomes of Philosophy for Children (Trickey & Topping, 2004). A body of previous evidence was thus already available, supporting positive outcomes from the use of Philosophy for Children prior to the Clackmannanshire evaluation.

The Clackmannanshire initiative aimed to investigate the nature of any effects from developing communities of inquiry in mainstream classes of 30+ pupils in schools across an entire educational authority (district). The teachers involved received training for the project but had limited previous experience of collaborative inquiry methods. Participating teachers were provided with an initial full 'starter' day of training before the project commenced. This day considered the rationale and content of the philosophical inquiry process followed by an opportunity to observe an experienced practitioner leading an inquiry and opportunities for reflective discussion of what they had

observed. The children from each class also received a preparatory talk before the project started. Participating teachers were then invited to regular two-hour after-school group recall sessions to share thoughts, observations and concerns as to how the programme was progressing. Further support was available from experienced teachers seconded to the project on a 'call-out' basis to address specific issues as the project proceeded. The project was fully supported by the county's educational directorate and received favourable media interest from its inception.

Cleghorn's (2002) Thinking through Philosophy programme was designed to provide a series of lessons with sufficient structure to support teachers with limited previous experience of philosophical inquiry. Teachers were encouraged to follow a regular sequence of activities during each inquiry lesson, as outlined below:

- Focusing exercise – scripted and aimed to create an alert but relaxed state in which the children's attention is more 'in the present'.
- Linking with the previous week – designed to reinforce memory of what has taken place the previous week and to provide an opportunity to bring forward any new related thinking that had taken place during the previous week.
- Pair/group work – this encourages initial sharing of thoughts in a non-threatening situation and provides the teacher an opportunity to check the children's initial understanding of a specially selected story.
- Stimulus – the story or poem is read aloud by the teacher.
- A whole-class inquiry – designed to gradually develop critical classroom dialogue (over a period of many months) that helps the students build on each other's ideas and construct a deeper understanding (or better solution) than would be possible individually.
- Closures – this stage involves encouraging children to reflect on the discussion and ways in which their thinking might have progressed during that discussion.
- Thought for the week – designed to highlight a practical idea drawn from the story to provide

'homework' for the rest of the week in order to 'bridge' that idea to real situations outside of the story.

The research design involved both quantitative and qualitative approaches and consisted of three distinct methodologies. The three evaluation methods used standardised tests, analysis of video recordings of classroom discussion and analysis of questionnaires. Together, these methods provided measures of cognitive ability and self-esteem and indicators of critical thinking, dialogue and socio-emotional development.

The first two evaluation methods involved the collection of a range of data from two comparable populations of children aged ten years before the initiative started. Initially eight experimental schools were involved during the first year of the project. These eight schools were joined by another eight schools during the second year. The project was gradually expanded across schools and year groups. During the first year, classes from the project schools participated in one lesson each week using Cleghorn's Thinking through Philosophy programme, while matched control classes followed their usual curriculum. Both populations were then re-tested at a later stage under the same conditions. The third evaluation method used questionnaires to elicit the perceptions of pupils, teachers and head-teachers of outcomes arising from the intervention. The responses were then subject to systematic analysis.

1. Standardised test evaluation

The standardised tests used were the 'Cognitive Ability Tests' (CAT) and the 'Myself as a Learner Scale' (MALS). 'Pre-initiative' standardised Cognitive Ability Test scores were obtained for a sample of 105 experimental pupils from four schools and 72 control pupils from two matched schools. Follow-up testing took place 16 months later. A comparison was made of individual children's performance before and after their regular participation in classroom inquiry. Pre- and post-CAT scores for individual pupils were statistically analysed using the Wilcoxon Test. There was an overall average gain per pupil of six standardised points in their

Cognitive Abilities Test score. There were no gains in the cognitive ability scores of the control group.[1]

Burden's (2000) 'Myself as a Learner Scale' (MALS) was constructed to have a focus upon 'academic self-concept' and comprises of 20 statements, e.g. 'I need lots of help with my work'. The students rate themselves on each statement on a five-point scale. 'Pre-initiative' scores were obtained for 186 pupils comprising of 134 experimental pupils and 52 control pupils. This procedure was repeated six months later and the pre- and post-test results matched for every one of the 186 pupils. Those pupils who had been involved in the Philosophy programme improved their self-esteem scores (statistically significant at the 0.05 level). There was no significant difference between the pre- and post-test results of the control pupils.

2. *Analysis of video recordings of classroom discussions*

In the analysis of video recordings of classroom discussions, pre- and post-video recordings were obtained of experimental classes involved with the Thinking through Philosophy programme and control classes, which had no involvement with the programme. 'Pre-initiative' video recordings were made of classroom discussion of a Greek fable in six classes. The teacher first read out the story and then explored its meaning through discussion with the class. Six months later, the teachers (whose classroom discussions were video-recorded) were asked to repeat the exact same task with the same instructions and the discussions were again video-recorded.

Specific behaviours were selected for scoring on the grounds that they were readily observable and measurable and provided an indication of the extent to which the broader aims of the programme had been achieved. An initial measure of inter-observer agreement was gained to ensure the observation schedule was sufficiently reliable. All the items that were finally included in the observation schedule had a high level of inter-observer agreement. Items were deleted from the schedule if they failed to meet satisfactory inter-observer agreement. experimental and control video recordings from six schools were then scored without the raters knowing which group the recordings came

[1] A more detailed discussion of the methodology of this study can be found in Topping and Trickey (2007a).

from. Pre- and post-scores for both groups were statistically analysed using the Wilcoxon Test. This process aimed to determine:

- the incidence of pupils supporting their views/opinions with reasons;
- the incidence of pupils agreeing or disagreeing with a view expressed by other pupils and providing a reason for this;
- the incidence of teachers asking an open-ended follow up question;
- the ratios of the amount of time pupils were talking to the amount of time their teacher was talking; and
- the length of discrete pupil utterances.

The classes involved in the Thinking through Philosophy programme increased their scores in all of the above five behaviours (all significant at $p<0.05$ level). The rate of pupils supporting their views with reasons doubled in the experimental group over a six-month period. Teachers doubled their use of an open-ended follow-up question in response to pupil comments. It was particularly interesting that the percentage of time that pupils were speaking (compared to the percentage of time that the teacher was speaking) increased from 41% to 66% in the experimental classes. The length of pupil utterances in the experimental classes increased on average by 58%. There were no significant changes in the discussions taking place in the control classes. Overall, the analysis of the video recordings of the classroom discussions suggested that participation in the Thinking through Philosophy programme led to improvements in the quality of dialogue and critical thinking.

3. *Analysis of questionnaires*

The perceptions of pupils, teachers and head-teachers of the outcomes arising from involvement with the Thinking through Philosophy programme were obtained through:

- systematic analysis of questionnaires completed by a sample of 77 pupils after six months;
- questionnaires completed by head-teachers after six months; and

- verbal and written comments from participating teachers throughout the initiative (elicited during support meetings and through diaries maintained by the teachers).

The pupils were asked to write responses to ten questions in order to elicit their views and experiences of participating in the Thinking through Philosophy project. Nine of these questions were open questions and one was closed. During the analysis of the pupil questionnaires, pupil responses for each open-ended question were assigned to categories (e.g. a category of 'increased participation in discussion' in response to an open-ended question inquiring about any changes that pupils had noted as the project developed). Those responses that did not readily fall into a specific category were placed in a category termed 'Other'.

The reliability of this approach was gauged by obtaining inter-rater comparisons. Two raters allocated a sample of the overall pupil responses to existing categories. This procedure was carried out blind, i.e. the raters had no knowledge of the decisions of the other. The ratings of the two raters were then compared. The number of agreed ratings was divided into the total number of pupil responses and multiplied by 100 to calculate the percentage of occasions on which the two raters were in agreement. This calculation provided an inter-rater comparability of 85%.

Analysis of the responses indicated that the pupils saw communities of inquiry as leading to an increase in their participation in classroom discussion and to gains in their social/emotional development and thinking. The study provided evidence of improvements in pupil perceptions of their communication skills, confidence and concentration. The study also suggested that the process of community of inquiry helped pupils learn to self-manage their feelings/impulsivity more appropriately. Pupil responses to each question were subjected to Chi-Square analysis to determine the probability of these scores occurring by chance. Seven out of the ten questions were significant at the 0.01 level and two questions at 0.04.[2]

It is important to emphasise that evidence of gains in the social/emotional development of the pupils was

[2] More detail of the questionnaire study can be found in the reference to Trickey and Topping (2007).

considerably strengthened by the level of consistency of results at three different levels, that is:

- there was consistency of pupil responses to the different questions in the questionnaire;
- consistency between pupil perceptions, class-teacher perceptions and head-teacher perceptions; and
- consistency of findings from different evaluation methodologies, e.g. both the questionnaires and the video analysis of classroom discussion provided clear evidence of increased participation of pupils in classroom discussion; and the pupil perceptions of increased confidence matched gains measured on standardised tests of self-esteem.

Sustainability of cognitive gains

The above results came from the primary (elementary school) project involving 10- to 12-year-olds during a period of 16 months spanning 2001 to 2003. These children then transferred to secondary schools where none had any further experience of Philosophy for Children. Both experimental and control groups of pupils were followed up in 2005 by re-testing with the Cognitive Abilities Test (CAT) as they approached the end of their second year of secondary education.

The group that had participated in inquiry and had achieved significant cognitive gains at primary school demonstrated that these gains were fully sustained following two years of secondary education despite no further experience of philosophical inquiry, i.e. their standardised age-related mean CAT score of 105 showed no change. (See Figure 1 below.) Similarly, the control group that had showed no cognitive gains in primary school also showed no gains in secondary school (and in fact showed a slight deterioration).

The main conclusion arising from this additional study (reported in Topping & Trickey, 2007b) was that cognitive gains achieved through regular participation in collaborative classroom communities of inquiry *proved sustainable* despite the absence of further experience of classroom inquiry in secondary school.

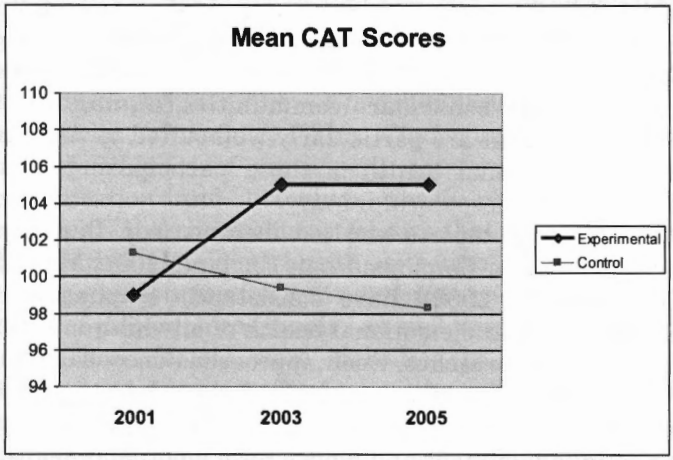

Figure 1: Changes in mean Cognitive Ability Test scores in the experimental group (that had participated in regular inquiry) and the control group (that continued with their previous activities)

Cognitions and emotions

Participative communities and emotional health

The Clackmannanshire study provided evidence that one hour of classroom philosophical inquiry each week in primary schools over a sixteen month period can be cost-effective in promoting sustainable gains in cognitive ability. The subsequent suggestion from pupils and teachers that the nature of classroom interaction not only changed during the weekly inquiry hour, but also to other parts of the curriculum, could be a factor in helping to explain this outcome.

The questionnaire feedback from pupils and teachers (reported in Trickey & Topping, 2007) together with an analysis of a pupil self-esteem measure (reported in Trickey & Topping, 2006) suggested socio-emotional gains also arose from this intervention in addition to the reported cognitive gains.

The rest of this paper will explore links between thoughts and feelings and between thinking and emotional health in general. While people may not set out to improve their emotional well-being through participating in

communities of inquiry, there may be significant social and emotional gains accruing from regular participation in communities of inquiry. While many other classroom processes and programmes may lead to developments in social/emotional behaviour, communities of inquiry may have features that are particularly well-suited to supporting the social/emotional health of those participating in such collaborative philosophical inquiry.

Previous reports and publications (e.g. Department for Education and Employment in England, 2001; Mentality, 2002; Edwards, 2003)) have consistently emphasised the need to promote the emotional health of all children through whole-school approaches. Such approaches encourage pupils to develop skills to regulate both their thinking and how they express their feelings, contributing to improvements in their social adjustment and longer-term emotional health.

Communities of inquiry share the same characteristics with whole-school approaches previously associated with positive emotional health outcomes. For example, the Mentality report cited Hannam (2001) who suggested that a strong school culture of participation and collaboration supports the learning of communication and collaboration skills and leads to enhanced self-esteem and a greater sense of self-efficacy. The Mentality report also recognised participation as a key factor in promoting the emotional health of school-age children. The Clackmannanshire community of inquiry study provided both video and questionnaire evidence of increased participation following experience of philosophical inquiry.

Strong links between participative communities and emotional health have been noted in the work of Weare (2000) and Cahill (2001). Weare emphasised the importance of *participation, communication and listening* in supporting social/affective development in schools. She suggested that well-planned co-operative work in small groups had an essential part to play in developing emotional and social competencies, such as listening, sensitivity, negotiation, conflict resolution and co-operation. Weare also claims that language has a key role to play in 'educating the emotions' (Weare, 2000, p. 127), arguing that communication skills, and in particular listening skills, are a vital part of feeling good about oneself and relating effectively to others. She goes on to suggest that positive feelings about self are

promoted through the undivided, unconditional attention of another person. This seems highly relevant to philosophical inquiry. Such attention makes us feel interesting, worthwhile and understood. Weare's comments resonate with findings in the Clackmannanshire study of communities of inquiry. The Clackmannanshire project provided evidence of participant perceptions of improved communication and listening. These perceptions accord closely with the above characteristics that Weare associated with positive emotional health outcomes. The elements of listening, communication and participation are central to the process of philosophical inquiry as well as emotional health.

Three factors were identified by Cahill (2001) as critical to the development of a healthy self-concept, i.e. that people need:

- a sense of control (autonomy);
- a sense of bonding, i.e. 'a sense of belonging or connection' (including the need to be valued); and
- 'a sense of meaning' and purpose.

Cahill claimed that a sense of *connectedness* is a key factor in the well-being of both the individual and the group and that *'the need for community'* is universal. Cahill argued that supportive classroom communities enhance the resilience of young people and that such communities can be built through developing caring and respectful relationships, high expectation messages, and opportunities for meaningful participation and contribution (including 'being heard').

Cahill raises the relevant question: 'How do teachers structure student participation in the classroom?' (Cahill, 2001, p. 48). The writer would suggest that Philosophy for Children goes some way to answering the question in that the structure and process of classroom philosophical inquiry promotes participation in a way that may also contribute to emotional and social health as well as cognitive competence.

Thinking and the appropriate expression of feelings

A linkage between thinking and feeling will have implications for supporting children's social development and emotional well-being. Gazzard (2000) proposed that Philosophy for Children is an effective means of promoting self-regulatory aspects of emotional intelligence through

replacing destructive, impulsive reactions by more thoughtful responses and more appropriate expression of feelings. In this sense, the practice of philosophical inquiry not only contributes to cognitive processing but also to emotional and social functioning. This reference to a more thoughtful cognitive-rich response appears consistent with Moseley and colleagues' definition of self-regulation (2004, p. 8). Moseley defines self-regulation as involving 'cognitive, motivational, affective and behavioural components that enable individuals to adjust their actions and/or their goals in order to achieve desired results in changing environmental circumstances.' The questionnaire analysis of perceptions of children in the Clackmannanshire study suggested that communities of inquiry might contribute to more effective self-regulation of the children's emotions through a reduction of impulsivity. The Clackmannanshire questionnaire analysis thus offers some support to Gazzard's proposal above.

This concept of self-regulation also appears similar to the master aptitude in Goleman's (1995) popular text, which he cites as an important element in emotional intelligence. In this text, Goleman referred to five school programmes that had demonstrated an improvement in emotional/social skills in children (i.e. improved their 'emotional intelligence'). One of these programmes, i.e. Promoting Alternative Thinking Strategies (PATHS) (Kusche & Greenberg, 1994), was particularly interesting in that its evaluation (Greenberg et al, 1995) was claimed to be the first clear demonstration that teachers in the classroom could teach emotional fluency and understanding. In the context of the current paper, the reference to 'thinking strategies' in the title of the PATHS programme again appears to emphasise the close links between thoughts and emotions.

Park (2001) also considered the relationship between thoughtful dialogue and 'emotional literacy'. Park appeared to be referring to methods such as Philosophy for Children when he argued the case for the promotion of emotional literacy skills through the development of dialogue skills in the classroom. He suggested that children bring a set of assumptions about themselves into the classroom that are rooted in the emotional experiences they have gathered from early infancy onwards. Park suggested that the power of

dialogue rests in its capacity to engage young people's thinking and feeling in ways that encourage them to more effectively consider the evidence that supports their beliefs and assumptions. This line of thought leads on to a consideration of connections between the process used in Philosophy for Children and the process used in one of the most widely utilised and established 'therapies'.

Philosophy for Children and 'Cognitive Behavioural Therapy'

Encouraging children to examine evidence for and against their thoughts and beliefs is a key element in one of the most widely used therapies. The inextricable link between what people think and how they feel is reflected in 'Cognitive Behavioural Therapy' (CBT) (Beck, 1967). Recent guidance from the National Institute of Clinical Excellence (2007) recognised the evidence supporting the effectiveness of CBT as a preferred therapy for many emotional issues. The writer suggests that cognitive behavioural therapy and the process of inquiry in Philosophy for Children have a number of parallels. This paper will consider some of these shared characteristics in order to add weight to the notion of philosophical inquiry as a significant potential positive contributor to children's emotional health.

CBT focuses on how people tend to respond to their *cognitive interpretations* of experiences rather than the experience itself. In CBT, the client is encouraged to monitor and note thoughts that are associated with uncomfortable feelings and to consider the evidence both supporting and contradicting those thoughts. The client is then encouraged to explore and note alternative ways of thinking about that particular situation. Changes in thoughts (and the *willingness to change one's mind in the light of evidence*) lead to changes in the client's feelings. Core beliefs (and 'maladaptive rules' underpinning 'negative automatic thoughts') can be similarly subjected to critical evaluation. In CBT, children are encouraged to think like a judge in court in relation to the evidence supporting their own thought processes (Cresswell & Willets, 2007). The CBT therapist uses carefully-worded Socratic questions to encourage changes in thinking. Socratic questions are preferred by CBT therapists (to giving advice, reassurance or ready-made problem solutions) because Socratic questions

are more likely to be effective in enabling the client to discover truths not previously accessible to them. Changes in habits of thinking are likely to be associated with improvements in the child's longer-term emotional well-being.

The collaborative process of Cognitive Behavioural Therapy has close parallels with that of philosophical inquiry. Consideration of both processes serves to further underline the close links between thought and emotion. From a philosophical perspective, Sharp (2007, p. 252) proposed that 'emotions are judgements' and that 'each emotion entails a cognitive appraisal'. This led to her statement that 'emotions are therefore a type of cognitive activity'. Sharp (2007, p. 255) suggested that, '...in addition to practice in critical and creative thinking, a classroom community of inquiry should provide an opportunity for children to...':

- identify their emotions;
- 'ferret out' the underlying belief of the emotion;
- identify a procedure for justifying their emotions – 'Children should be encouraged to explore the beliefs that underlie their emotions. If the beliefs are submitted to inquiry, and through dialogue are not deemed valid, then children should be encouraged to reflect on the unreasonableness of the emotion'; and
- let go of emotions that they cannot justify to themselves.

In view of the close parallels between the collaborative processes of Cognitive Behavioural Therapy and Philosophy for Children, it is not surprising that Doherr (2000) concluded that philosophical inquiry helps children recognise their emotions and increases the likelihood of benefit from cognitive behavioural therapy. The parallels between these processes are such that it was also not surprising that positive emotional and social gains were found in the Clackmannanshire evaluation of the Thinking through Philosophy programme.

This is not to suggest that the use of Philosophy for Children can provide an answer to individual children's severe and complex emotional issues: 'Good therapy is more than good Socratic dialogue' (Davis, 2007, p. 133). However,

the parallels do suggest that regular participation in communities of inquiry may have the potential to contribute to emotional resilience and well-being in whole populations of children. In this sense, the practice of Philosophy for Children can be regarded as more akin to the CBT-based 'Friends for Life' programme (Barrett, 2005) that can be used with whole classes of children (as against traditional CBT practice that focuses on an individual client). The Friends for Life programme aims to build emotional resilience and reduce emotional difficulties in children and young people. The programme has been extensively evaluated (e.g. Stallard et al, 2005) as an effective emotional health programme. Again, this is not surprising in view of the discussion in this paper of the links between thought and feeling and how any change in one has an inevitable influence on the other.

Autonomy and emotional health

Philosophy for Children aims to encourage children to think 'more reasonably' and to make better judgements. The writer would suggest that the notion of children thinking more critically (and independently) resonates with the concept of 'personal autonomy' – a concept frequently linked with emotional health. There has already been reference in this paper to Cahill's (2001) assertion that a sense of autonomy is critical to the development of a healthy self-concept. Emotional health appears in part to be about developing the capacity for independent and autonomous thought. Gordon (2003, p. 5) has considered the close link between philosophical inquiry and health from a medical perspective. Gordon argued that 'health is fundamentally linked with autonomy', i.e. the personal competencies that enable one to shape one's own life are fundamental to mental well-being.

Elliston (2001) expressed a similar medical viewpoint that a key determinant of our well-being is the degree to which we feel that we have a sense of control over ourselves as well as our lives. Elliston advocated the practice of what he referred to as 'mindfulness'. The concept of 'mindfulness' related to a process of becoming intentionally aware of our bodies and minds and the world around us without making any judgements as to what is happening in the moment – it is about paying attention in the present moment. This practice is the same as the first step in each

session of Cleghorn's (2002) Thinking through Philosophy programme that underpinned the Clackmannanshire project.

The importance of Gordon's concept of personal autonomy to emotional health is similarly discussed from a philosophical perspective by Grayling (2003). Grayling differentiated between the concept of 'autonomy' (involving self-motivation and self-regulation) and what he referred to as 'heteronomy' that yields to external solutions such as Prozac. Grayling argued that the process of philosophical inquiry not only helps people to think more independently but also contributes to health and happiness.

Philosophical inquiry appears to share a number of characteristics associated with social development and emotional well-being, i.e. being listened to, belonging to a participative community, developing personal autonomy and connection with others. The Department for Education and Skills (DfES) (2005) in England included Philosophy for Children in its Primary National Strategy guidance to schools for developing social and emotional learning. In particular, communities of inquiry were described as 'conducive to affective as well as cognitive development' and attributed this 'to the dialogical nature of the community of inquiry – the oral sharing of feelings, experiences, perspectives and ideas' (Department for Education and Skills, 2005, p. 56). The DfES report further suggested that the pupils' sense of self as autonomous agents is steadily improved as they find they are encouraged to 'think for themselves through thinking with others' (Department for Education and Skills, 2005, p. 58). The concept of autonomy thus appears a continuing thread that links Philosophy for Children with concepts of emotional and social well-being.

Links between thought and emotion – some brain-based observations

This paper has explored some of the components of collaborative inquiry and how these may relate to social/emotional outcomes as well as cognitive outcomes. Clinical evidence of a physical link between thought and feeling may also add to our understanding of the relationship between cognition and emotion.

One of the brain pathways that has been of particular interest to educators is evidence of neurological links between the 'higher thinking executive centres' of the brain and the brain's emotional 'fight and flight' limbic system. From a medical perspective, Damasio (1994) used evidence from brain-damaged patients to argue that there are inseparable links between emotion and cognition. Damasio proposed that we cannot make wise decisions in everyday life without accessing our emotions. He cited clinical evidence concerning the neural pathways of the brain that suggested individuals need to link both their emotional and rational responses in order to assess situations, form relationships and make considered decisions.

More recently, Immordino-Yang and Damasio (2007, p. 3) claimed that 'recent advances in neuroscience are highlighting connections between emotion, social functioning, and decision making that have the potential to revolutionise our understanding of the role of affect in education' and 'our understanding of learning'.

The pathways of the brain have also been considered in the context of communities of inquiry. Linking the brain to philosophical inquiry, Gazzard (2000, p. 43) hypothesised that 'philosophising with children about their experiences in ways that are both informative and playful is needed in order to build bridges from the neocortex (the 'thinking brain') to the amygdala' (the 'emotional brain'). Gazzard suggested that strengthening these connections might help to de-activate messages from the amygdala (the emotional sentinel of the brain) and enable a 'more cognitive-rich response' on behalf of the child. She proposed that such cognitive-rich responses help the child manage primitive fight/flight reactions that otherwise damage the child's relationships with others. Gazzard thus offers a brain-based model that relates to Damasio's earlier clinical studies linking emotion and thinking, but places these connections in the context of philosophical inquiry.

Conclusions

This paper started by summarising the findings of the Clackmannanshire evaluation of the 'Thinking through Philosophy' project in Scotland. These findings served as the basis for an exploratory discussion of the inextricable links

between thought and emotion. These links were demonstrated to be manifest across a range of medical, psychological, philosophical and educational perspectives. As suggested earlier in the paper, the indivisibility of thoughts and emotions has been the subject of consideration since the philosophers in ancient Greece and now appears to be supported by evidence from a range of perspectives.

The paper also suggests that the link between cognition and emotions has important implications for both education and health. Philosophical inquiry engages both thought and emotion in a social context. The Clackmannanshire study suggests that the process of inquiry is likely to promote social and emotional development as well as cognitive development in children. In this process, social development is encouraged through normal and natural interaction within the context of a set of given humanistic rules.

A number of parallels between inquiry and cognitive behavioural therapy were highlighted, reinforcing the possibility of classroom inquiry contributing to the social and emotional health of children in school. Gazzard (2000, p. 40), who has been referred to earlier in this paper, argued for increased emphasis on prevention rather than cure, suggesting that 'education seems a more enlightened path than therapy'. This view also appears endorsed from an educational psychology perspective (the same discipline as the writer) by McLean (2003) who argued that if pupils are involved in classroom activities that meet their basic needs to be competent, autonomous and have a sense of belonging, they are less likely to develop emotional and behavioural problems. This is not to deny that there will always be children whose experiences have been such that they will benefit from individual therapeutic work. However, classroom approaches, such as communities of inquiry that encourage both autonomy of thinking and connection with others, would also appear likely to contribute to the wider emotional and social health of children. In this sense, the effects of inquiry are likely to be far 'more than cognitive'.

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Hats On and Keys Ready: Teaching Thinking Skills in Australian Schools

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Introduction

Teaching children to think critically has always been a central aim of education. Indeed, some influential educators have argued that this is the *only* thing that matters: 'all that the school can or need do for pupils, so far as their minds are concerned ... is to develop their ability to think' (Dewey, 1966, p. 152). True as this may be, practising teachers know that they have a significantly bigger and more complex task than this.[1] Attempts to improve children's thinking skills need to be somehow juggled across many subjects or learning areas and alongside many other educational objectives. There is evidence to suggest, however, that most teachers at least share the view that teaching children to think critically is an important function of formal education (Paul, Elder & Bartell, 1997).

Unfortunately, the same research casts serious doubt on teachers' ability to effectively impart critical thinking skills to their students. Paul, Elder and Bartell studied more than 60 American tertiary teaching institutions to 'assess the extent to which [their] programs prepare candidates for teaching credentials to teach critical thinking and problem-solving skills' (p. 1). What they found, among other things, was that an overwhelming majority of those responsible for teaching future primary and secondary school teachers valued critical thinking highly as a primary objective of instruction but that they could not articulate a coherent concept of critical thinking, let alone demonstrate how to go about fostering such skills in their classrooms. Given the findings of research conducted by American philosopher and educator Matthew Lipman, that students'

[1] This is not to suggest that Dewey was talking only about critical thinking skills in any narrow sense but simply to highlight his commitment to the central place in the curriculum for thinking.

reasoning skills do not develop unless they undertake explicit instruction in a course of study such as philosophy (Lipman, 1985), this is some cause for concern.

If we, as teachers, are serious about successfully developing our students' ability to think critically, we obviously need to have a clear understanding about how this can best be done. If the research conducted by Paul, Elder and Bartell mentioned above is representative of teacher education courses generally, it seems reasonable to assume that most teachers have not been explicitly taught critical thinking skills themselves; for this reason, they are unlikely to have a clear understanding of what they mean when they talk about critical thinking skills or to be properly equipped to develop these skills in their students. This is hardly a controversial statement – we would say the same about the teaching of, say, maths or science – so why should critical thinking be any different? And if this is indeed the case, it is perhaps unreasonable to expect that the thinking skills programs chosen by teachers for use in their classrooms are necessarily the best tools for imparting critical thinking skills, assuming that is what they are intended to do.

The Australian context

While the Paul, Elder and Bartell study relates specifically to American teachers, there seems no good reason to assume that the situation is any different in Australia. In fact, it is arguable that in some respects it may be worse. There exists a range of thinking skills programs (Covington's Productive Thinking Program, Feuerstein's Instrumental Enrichment Program, Marzano's Dimensions of Thinking, de Bono's CoRT program and Lipman's Philosophy for Children program) that are used internationally (Pressley & McCormick, 1995, pp. 269-272) and that tend, on the whole, to be formal, structured and well-researched[2] programs consisting of a sequence of steps or skills to be mastered in order to solve problems and develop cognitive ability (Collins, 2005, p. 29). For some reason, such formal, structured programs seem not to have flourished in Australia (although further research on this question is

[2] See the section on 'What the research says' below for further discussion of what constitutes a well-researched program.

clearly needed). Purely anecdotal evidence[3] suggests that such programs are used rarely, if at all, in this country. Instead, schools or individual teachers appear to use an ad hoc and disparate 'grab-bag' of thinking tools or strategies drawn from a range of sources. The two approaches[4] that seem to be used most widely are Edward de Bono's Six Thinking Hats and Tony Ryan's Thinker's Keys.

Bloom's Taxonomy, Gardner's Multiple Intelligences, Extended Brainstorming, Creative Problem-Solving, Consequence Wheels and Questions Matrices are many other approaches that are often cited by schools as being thinking skills programs, or at least aids to the teaching of thinking skills. Unfortunately, with the exception of Bloom's Taxonomy and Gardner's Multiple Intelligences theory (neither of which are thinking skills programs *per se*), few if any of these approaches appear to be underpinned by any reliable research or have any sound theoretical basis, nor is there any research to indicate why they are so popular. This is clearly an important question: if we don't know why they are being used, and the skills they are supposed to be developing, how can we assess their effectiveness? Rather than simply blaming teachers for this situation, it is important to determine exactly what is going on in Australian schools, why it is that teachers choose the thinking skills programs, tools or methodologies that they use and whether those approaches are actually doing what we want them to do. A gap currently exists in the literature and such research is clearly overdue.[5]

Critical thinking skills

If, as the Paul, Elder and Bartell study suggests, most teachers are unable to articulate what they mean by the term 'critical thinking', we need to be clear here about what it means and the sorts of sub-skills inherent in our definition. This is no simple matter: the term itself means different things to different people, even within the critical

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[3] Of school websites visited as part of a random (and very brief) initial investigation, only one claimed to use one of the formal, structured programs listed above (Edward de Bono's CoRT). No details were provided regarding its use.

[4] Of the schools that proclaim on their websites to employ particular thinking skills tools or programs, over 85% included both the Thinking Hats and the Thinker's Keys on their list.

[5] This topic is the subject of current PhD research by the author.

thinking debate. Psychologist Irving E. Sigel has said that 'I don't like the term "critical thinking" because it gets confused with literature and critiquing' (quoted in Lewis & Smith, 1993, p. 135) and, while this may seem a somewhat spurious reason for rejecting the term, it does raise a very relevant and important issue: many teachers will have been swamped in recent decades with approaches to the teaching of criticality going under the banners of critical *pedagogy*, critical *thinking* and critical *literacy*, and it is easy to imagine this causing much confusion for teachers about precisely what is meant by critical thinking, as distinct from the other two. Without wanting to dismiss critical pedagogy and critical literacy altogether, this paper focuses on the philosophical notion of critical thinking. While there exists significant disagreement within the literature about particular aspects of critical thinking, how it ought to be taught and even whether such things as *general* as opposed to *domain-specific* thinking skills exist[6], there is substantial agreement among most in the field about the sorts of skills that characterise critical thinking. Something like the definition proposed by Ennis (1987, p. 10), that critical thinking is 'reasonable reflective thinking that is focused on deciding what to believe or do', seems sufficiently broad and uncontroversial for our purposes. More specifically, in his Taxonomy of Critical Thinking Dispositions and Abilities, Ennis (pp. 12-15) provides a comprehensive list of skills and dispositions that characterise good critical thinking. These include, amongst other things, focusing on questions, analysing arguments, clarifying questions, judging credibility, deducing, inducing, identifying assumptions and making value judgements (the 'skills'); and being open-minded, looking for reasons and respecting or being sensitive towards others' feelings and views (the 'dispositions'). For the purposes of this paper there seems to be sufficient consensus about the types of skills that characterise critical thinking and similar lists of skills can be found throughout the literature (Lipman, 1985 and 2003; Nickerson, 1987; Quellmalz, 1987; and Paul, Elder & Bartell, 1997).

It is fair to say, then, that any thinking skills program that purports to improve children's critical thinking skills must first articulate a definition of critical thinking

[6] This itself has been a significant debate within the field of critical thinking but it is beyond the scope of this paper to address.

upon which it is based (including specific sub-skills that are being developed) and that such a definition should be something like the one outlined above (or, if it is substantially different, good reasons should be provided for why this is the case). This may sound obvious but it is a point worth remembering when considering the merits, or otherwise, of popular approaches such as the Six Thinking Hats or the Thinker's Keys.

What the research says

Thinking skills programs generally

Agreeing that the sorts of skills mentioned above characterise good critical thinking is one thing; knowing which particular programs or approaches are the best method for developing the skills is another thing altogether. Any thinking skills programs or methodologies that are to be used regularly within schools as a means of teaching critical thinking skills therefore ideally ought to be supported by both reliable empirical research findings and rigorous theoretical underpinnings – that is, we would want to know both *that* they work and *why* they work. In the words of Kennedy, Fisher and Ennis (1991, p. 30):

> Although we know that there is some brilliant and creative teaching going on in our schools, we need to make the techniques and variables that allow for such instruction known to educators so that the teaching of critical thinking to our students becomes the rule and not the exception. We currently have many critical thinking programs and procedures that are enthusiastically endorsed: we need to be able to distinguish between those that justifiably deserve our support and those that do not.

What does the research say about the effectiveness of the thinking skills programs currently used in schools? In the words of Kennedy, Fisher and Ennis, which of the programs being used today 'justifiably deserve our support'? According to Pressley and McCormick's meta-analysis in their book *Cognition, Teaching and Assessment* (1995, p. 269), even many of the best researched thinking skills programs (de Bono's CoRT, Covington's Productive Thinking

Program, Feuerstein's Instrumental Enrichment and Marzano's Dimensions of Thinking):

> ...are constructed by amalgamating a large number of individual instructional procedures, each of which has been validated in basic research, and thus, there are claims by program developers that their inventions are based on research. At best, however, these programs have been understudied, with many never evaluated as wholes in anything even resembling an experimental or quasiexperimental evaluation.

Concern about research reliability is a theme that is a constant throughout the research literature. Two recent meta-analyses of thinking skills programs raise concerns about the reliability of previous findings of program effectiveness, citing such problems as the lack of adequate control groups, the reliability and/or validity of measurement instruments, the inability to 'replicate controllable conditions in complex real life situations' and the serious lack of either short-term or long-term follow up (Trickey & Topping, 2004, p. 368). Such concerns have been echoed in the meta-analysis conducted by García-Moriyón, Rebollo and Colom (2005). While the majority of their findings relate specifically to their evaluation of the Philosophy for Children program (discussed in more detail below), they also raise general concerns about the reliability of research findings of thinking skills program efficacy, arguing that the evidence is 'scarce and scattered' (p. 20). Another issue is the tendency of some research papers to report extensively on outcomes, without providing sufficient detail about the program itself or how it is implemented (Higgins et al, 2005), something that is crucial when trying to determine *why* particular programs work.

García-Moriyón, Rebollo and Colom argue that a reliable meta-analytical study of thinking skills programs (like they have conducted in relation to Philosophy for Children programs) is needed to determine their impact on student cognitive performance. Higgins et al have recently conducted just such an analysis and the results are more positive than the García-Moriyón paper suggests. The study by Higgins, Hall, Baumfield and Moseley, 'A meta-analysis of the impact of the implementation of thinking skills

approaches on pupils', is the second of two significant recent reviews conducted by the Thinking Skills Review Group at the EPPI-Centre at the University of London's Social Science Research Unit. Including only those studies that, amongst other things, specifically evaluated the impact of thinking skills interventions on students and reported on measurable empirical data using 'pre- and immediate post-intervention measures' (Higgins et al, 2005, p. 12), the review reports an 'overall effect size' of 0.62 in tests of cognitive ability. What this indicates in lay terms is that 'an "average" class of pupils who received such interventions would move from 50th place in a rank of 100 similar classes to about 26th (a gain of 24 percentile points)' on standard cognitive tests (p. 28). As significant as this figure seems, it should not be surprising as it is broadly consistent with earlier positive findings by the likes of Hattie, and Marzano in particular (p. 35). However, the authors do preach some caution when interpreting their results: there are 'considerable differences' (p. 28), they say, in the approaches and programs assessed, and knowing that thinking skills interventions tend on the whole to produce favourable results does not necessarily tell us which specific programs work most effectively, nor why. Having said that, the overall effect size reported for Feuerstein's Instrumental Enrichment program, to name just one, was found to be 0.58 (p. 36), again a significant figure and again broadly consistent with previous findings. If only we had such an analysis and positive findings for approaches like the Six Thinking Hats or the Thinker's Keys!

Philosophy for Children

Of all the approaches to thinking skills, one that reports consistently favourable outcomes is the Philosophy for Children program pioneered by Mathew Lipman and since adapted by scores of practitioners worldwide. Trickey and Topping (2004), Reznitskaya (2005) and García-Moriyón, Rebollo and Colom (2005) are just the most recent among a long list of researchers who have found that using Philosophy for Children materials and methodologies produces significant improvements in students' cognitive abilities. García-Moriyón, Rebollo and Colom, for example, report an overall effect size of 0.5848 in cognitive testing

ability, while Trickey and Topping report a mean effect size of 0.425 (2004, p. 375).

As with other thinking skills programs, some of the research proffered in its support has come in for criticism, particularly its anecdotal nature (Reznitskaya, 2005; García-Moriyón, Rebollo & Colom, 2005). García-Moriyón et al (2005, p. 15), for example, found that a large number of studies of Philosophy for Children programs had to be excluded from their meta-analysis because they did not 'follow the basic rules established by the scientific community for the presentation of research reports'. While a range of criteria was used in this analysis, it was in the area of methodology that most studies were found to be lacking. They argue that 'there are two kinds of research designs that can be used in order to test the effectiveness of a treatment or program: Independent Groups and Repeated Measures' (p. 17), but that both approaches are needed: 'The most reliable and least biased design is a combination of the ... two, testing an experimental and a control group before and after the program application.' Of the eighteen programs finally considered for inclusion based on their overall inclusion criteria, only eight satisfied both of these criteria. Despite their misgivings, however – and they are misgivings that, by and large, apply to all thinking skills program research – 'the quality and quantity of evidence [for the effectiveness of Philosophy for Children programs] nevertheless bears favourable comparison with that of many other methods of education' (Trickey & Topping, 2004, p. 374).

One apparent benefit of the Philosophy for Children program is its transferability, that holy grail of thinking skills programs. If thinking skills programs genuinely improve children's cognitive abilities in a meaningful way that can be applied to the real world outside of the classroom, then any cognitive improvements shown in immediate post-test results ought, at the very least, to show up in later tests as well. This is notoriously difficult to quantify and very few studies have even sought to investigate it (Higgins et al, 2005, p. 12). While this is an important issue for any thinking skills program, Reznitskaya (2005, p. 8) asks of specifically Philosophy for Children's dialogical approach whether students, whose development has largely occurred in a social context, internalise 'useful strategies that would allow them to

perform better on reasoning tasks when social support is no longer available?' The lack of follow-up studies was highlighted by Trickey and Topping (2005), who then sought to remedy this in their most recent study, charting the progress made by secondary students two years after completing a Philosophy for Children program. What they found was that the pre post-test gains in cognitive ability reported in their 2005 study as a result of use of the Philosophy for Children program were maintained by students two years later using the same measure, despite those students having had no further exposure to the program in the intervening period (Topping & Trickey, 2007), a finding of enormous significance.

What is needed in Australia?

What is the upshot of all this? Despite some misgivings about research methodologies, the evidence would seem to suggest, firstly, that structured, formal thinking skills programs do, on the whole, improve children's thinking skills, and secondly, that we can say, to some degree at least and with some level of confidence, which particular programs or approaches work. This begs the question: if the evidence is so strong, why do such approaches to the teaching of thinking skills appear not to be in favour in Australian schools? And perhaps more crucially, for proponents of Philosophy for Children, why, in the words of Trickey and Topping (2004, p. 375), is Philosophy for Children 'not more firmly embedded in teacher development and routine classroom practice?'

The reasons for the apparent lack of formal and structured thinking skills programs in Australia are as yet unresearched[7] and could be many and varied. However, some preliminary comments can be made as a precursor to such research. New Zealand researcher John Hattie has argued that there is a culture within teaching that does not necessarily predispose teachers to choose classroom methodologies on the basis of sound research evidence. He says, for example, that the transition to evidence-based research that occurred in the medical profession in the first half of the twentieth century:

[7] The approaches used by Australian teachers to teach thinking skills is the subject of research currently being undertaken by the author.

> ...has yet to occur in Education. Educational research remains largely prescientific and educational practice remains a craft. This is despite there being millions of studies that move education beyond craft and opinion (Hattie, 2003, p. 12).

Based on extensive research findings, Hattie goes on to argue that, even where sound research exists, it is often ignored by the teaching profession, and anecdotally this appears to be the case with the research on critical thinking, at least in Australian schools.[8] John Wilson goes further, suggesting that the problem goes far deeper than just classroom practice, arguing that educational research generally does not have a 'solid corpus of knowledge analogous to natural science' or medicine on which it can draw (Wilson, 1998, p. 162).

According to Hattie, however, the problem is not that we don't know enough about what works in the classroom: the problem lies in how we use (or don't use) the plentiful information at our disposal; the result, he says, is that we as teachers 'rarely combine the texture of the learning experience with the rigour of asking whether there is an impact on student learning' (Hattie, 1999, pp. 1-2). He goes on to say that we must 'make relative statements about what impacts on student work' (p. 2), not just in general terms (e.g. 'thinking skills programs are beneficial') but in relation to specific methodologies ('Philosophy for Children works *because...*'). 'It is not good enough to say that this works because lots of people use it' (p. 2), which Hattie argues is precisely the sort of reasoning used to justify much classroom practice. It remains to be seen whether this type of thinking contributes to the approaches teachers use for the teaching of thinking skills in Australian classrooms.

Trickey and Topping have postulated many reasons why Philosophy for Children in particular has not flourished in schools. Citing evidence from a range of studies included in their meta-analysis, they suggest that the 'biggest barrier' to its use might be 'pedagogical beliefs in the traditional culture of teaching' (Trickey & Topping, 2004, p. 375). In addition, Philosophy for Children is not a simple 'tool-kit'

[8] Research currently being conducted by the author will also attempt to shed light on the question of why teachers choose the approaches they do.

approach: it is, rather, 'dependent on the quality of interaction and dialogue engendered, rather than rigidly following a step-by-step procedure' (p. 370). As such, it is not an approach that can easily be picked up and used by teachers like, say, the Six Thinking Hats or the Thinker's Keys. It is, in the words of one of the studies cited, 'highly teacher sensitive and requires extensive teacher training' (Sternberg & Bhana, quoted in Trickey & Topping, 2004, p. 368), which makes its implementation and use a much more costly and complicated approach than many others.

It remains to be seen whether any of the reasons discussed above have contributed to the way thinking skills are taught in Australian classrooms. While there is some anecdotal evidence that formal, structured programs are not widely used, and that a more ad hoc approach utilising such stand-alone tools as the Six Thinking Hats and the Thinker's Keys has been preferred, what is clearly needed is research that provides us with:

1. A picture of the current 'state of play' in Australian classrooms: the thinking skills programs, tools or methodologies that are used by teachers; and
2. The reasons these approaches are chosen by teachers, i.e. the specific skills they are intended to foster and develop (this should also shed light on teachers' understanding of what constitutes critical thinking skills).

It is only after such initial research has been completed that a rigorous analysis and assessment of those programs currently being used in Australian classrooms can be conducted, with reference to the available international literature from the fields of education, philosophy and cognitive psychology, to determine whether or not they are grounded in prior research findings or underpinned by rigorous philosophical justification. We may then be able to say, with some level of confidence, whether such approaches are successful, in terms either of imparting critical thinking skills or, where this is not the stated objective of the program, in meeting the program's own stated objectives (where such objectives exist). Until this is done, we are continuing to work in Australia with approaches that are neither tried nor true and, in the words of Collins (2005, p.

34), 'we have little or no reason to believe that such activities will help students to become logically cogent ... thinkers.'

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Rethinking Middle School Building Design to Support Progressive Educational Pedagogies

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Abstract

This article explores middle school building design and the progressive constructivist pedagogies and technologies that can support student learning appropriate to modern society. Evidence drawn from the literature is used to make a case for the adoption of a holistic approach to middle school reform that includes the implementation of progressive constructivist pedagogies, the integration of pedagogically supportive technologies and, of utmost importance, the construction of learning spaces specifically designed to facilitate these pedagogies.

Ensuring there is positive student engagement in today's technology driven society requires reforms that will promote student learning in an atmosphere that values curiosity, creativity, questioning and the development of deeper thinking skills. Learning through social interaction and working successfully with technology are also skills integral to the development of students who will become life long learners and active members of the Knowledge Society.

Keywords: progressive, constructivist, pedagogy, integrated technology, school building design, middle school, Knowledge Society

Introduction

> Schools usually have one thing in common – they are institutions of today run on the principles of yesterday. 15-year-old girl (Blishen, 1975, p. 7)

> One way forward is through a campaign which relates...space directly to changes in pedagogy, curriculum and ICT by placing spatial literacy firmly on the agenda of teachers' own learning. (Fisher, 2004, p. 37)

Experience teaching school students from Prep to Year 12 has provided this author with insight into the issues that face students as they make the transition between primary and secondary schooling. Of particular concern is the problem of students, upon arrival at secondary schools, being thought of as incapable individuals by teaching staff. A lack of awareness persists in many schools regarding the fact that most of these students are able to manage many aspects of their own learning and make a positive contribution to their school.

Year 6 students, frequently considered the leaders of their primary schools, are often confidently engaged in many aspects of their schools' community, contributing through the sharing of creative ideas, collective decision-making and on-the-ground organisational efforts. In such settings, students build their own levels of engagement and subsequently create much of their own learning. These students view school as a meaningful social system, rather than an environment over which they have little control, and subsequently feel part of a community (Harber, 1995). This level of engagement and feeling of community is often lost when primary students enter secondary school.

Middle schooling in Victoria (Years 5-9) requires substantial reform to better cater for and empower these young people so that they may continue to utilise the skills and abilities honed during their primary school years. As they enter the secondary phase of education, students' independent learning and management skills must be built upon and utilised as powerful tools to assist them along their personal learning journeys.

The Victorian Government policy document, *The Middle Years: A Guide for Strategic Action in Years 5-9*

(DEET, 1999), identified the essential aim of middle years' reform as being the re-engagement of young people in learning. It cited engagement as a key factor leading to the achievement of learning outcomes related to adolescents' understandings of themselves, the world, and their place in it.

With many students showing virtually no growth in reading, writing, speaking and listening during the middle years, and an actual decline in achievement in these areas for the lowest 25 per cent, particularly in Year 7 (Hill & Russell, 1999), a response from schools is required that will appeal to students and encourage them to continue learning during their early adolescence. Research indicates that the greatest contribution made by schools to students' achievement is made at the classroom level (Scheerens & Bosker, 1997) and therefore the environments in which students learn should be one of the key targets for change.

The transformation of educational learning environments may prove to be an important catalyst for middle school reform, potentially leading to substantial improvements in students' educational experience (Fisher, 2004).

Although there may be an educational revolution gathering speed (Loader, 2007), substantial improvement to students' educational experience will only occur when progressive philosophies, pedagogies and new technologies, these drivers of the 'revolution', are supported by appropriate modern learning spaces.

Progressive educational philosophies and pedagogies for student learning in the Knowledge Society

Progressive education, which is concerned with supporting students to make meaning from educational opportunities and the development of thinking skills that can aid constructivist learning, may assist students to engage in modern society. The ability to operate as an independent learner, capable of dealing with the unfamiliar, is becoming an increasingly valued trait as modern society becomes more complex and the exposure to new situations and ideas becomes more frequent. Well-developed thinking skills are essential for productive engagement in today's Knowledge Society.

John Dewey's work from the late 1890s and early 1900s regarding experiential inquiry learning established a philosophy of progressive education. More recently, others have built on concepts that challenge the validity and effectiveness of education based on the transmission of knowledge via the traditional teacher-student relationship. The concept of democratic education, whereby students as individuals and as members of small learning communities become the focus of the learning, has led to the development of educational philosophies and tools designed to extend student learning beyond the level requiring only the recital of facts.

Bloom et al's Taxonomy of Educational Objectives (1956) exposed teachers to the need for promoting higher-level thinking in their classes, and led them to designing activities and promoting discussions that involved students using the skills of analysis, synthesis and evaluating, in addition to the traditional educational objectives of knowledge acquisition and comprehension of subject matter.

Vygotsky's work from the 1960s furthered progressive educational theory by contending that collaboration and dialogue within educational settings was essential for the development of deeper conceptual understandings. He believed that 'students performed at higher intellectual levels than otherwise expected when in collaborative situations' (Wilks, 2005, p. 2).

Gardner's Theory of Multiple Intelligences (1993) provided another tool that broadened the scope of progressive education. He recognised the need to educate the 'whole child', placing importance on the development of a variety of preferred ways of learning: learning that may support students in a wide range of settings. He championed the value of learning that involved social interaction, physical activity and interface with the natural world and creativity.

Lipman's philosophical inquiry model for the development of thinking and reasoning assumed that students' thinking skills could be improved with practise, when provided within a supportive setting and an engaging, intellectually stimulating curriculum (Wilks, 2005).

Progressive educational pedagogies based on inquiry and shared dialogue, including project-based and problem-based learning, are now on the middle school education

agenda. However, a number of questions need to be investigated regarding progressive pedagogies in order to assess how successful their implementation may be and to fully appreciate the potential impact that such pedagogies may have on student learning in middle school settings:

- Are progressive pedagogies being successfully employed in today's schools?
- What constraints restrict the implementation of progressive pedagogies?
- Do these pedagogies fit with the educational environments, or spaces, in which they are employed?

Findings from research into school-based learning spaces and the integration of technology into school-based learning spaces may reveal some answers to these questions.

Are progressive pedagogies being successfully employed in today's schools?

Although by the 1990s it was acknowledged that progressive pedagogies enhance student engagement and learning (Harber, 1995; Barratt, 1998; DEET, 1999), this information appears to have been largely ignored by schools, or at least not acted upon.[1] In 1993 Rex Brown (1993, p. 233) wrote that:

> Great teachers have always known how to make students think about and apply their knowledge...but seldom [do] we see the majority of teachers in a school practising or stimulating a literacy of thoughtfulness.

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[1] In 1993, Rex Brown reported on case studies undertaken in the mid 1980s in the United States by representatives of the Education Commission. He commented that none of the school districts they studied in the United States was committed to fostering, on a wide scale, the kinds of activities known to lead to a literacy of thoughtfulness (Brown, R. G. (1993) *Schools of Thought: How the Politics of Literacy Shape Thinking in the Classroom.* Jossey-Bass Inc., San Francisco). In a research paper entitled, 'Getting to scale with good educational practice', Elmore, in 1996, reported from the United States that during the past century the implementation of progressive pedagogies, followed by sustained practice, has occurred only in a discrete number of schools, and often only within discrete classrooms within schools (*Harvard Educational Review*, Vol. 66, No. 1, Spring, pp. 1-26).

In 2000 De Corte (2000, p. 251) commented that:

> Education has until now not been improved in ways that reflect the substantial advances made over the past decades in our knowledge and understanding of the processes of learning and teaching.

The *Middle Years Research and Development (MYRAD) Project* (DEET, 2002) report identified many constructivist educational practices common within progressive pedagogies, recommending them for implementation in Victorian schools. They included:

- Strengthening teacher-student relationships;
- Involving students in decision-making about content, process and assessment;
- Presenting authentic tasks that require complex thought and allowing time for exploration;
- Inclusion of processes involving co-operation, communication, negotiation and social competencies generally; and
- Providing for individual differences in interest, achievement and learning styles.

These constructivist approaches were described as the most critical in the process of middle school reform. It was also identified, however, that such reforms were historically very slow to be adopted (DEET, 2002), indicating that although desirable, they were not employed widely in Victorian schools. Other Australian states, including New South Wales, Queensland and the Northern Territory, have also recently released middle years education strategy documents recommending the adoption of pedagogical reforms similar to those recommended in Victoria (DEET, 2007; DET, 2006; DETA, 2003). If adoption of progressive pedagogies has been slow, it does not appear to be due to a lack of state government policy direction but rather a problem of implementation at the level of individual schools.

What constraints restrict the implementation of progressive pedagogies?

Reforms involving the establishment of new paradigms in communication relationships between teachers and students, and students and students, may be hard to establish due to traditional space and time settings that persist in schools. It is recommended, however, that transformational changes to space and time can act as strong catalysts for the fundamental reform of middle schooling.

In addition to space and time constraints, other factors confound the pedagogical change process in Australian middle schools. These include: apprehension and resistance to change from school community stakeholders (Beare, 2000); conflicting opinions regarding change and the processes of change; limited time available to teachers and administrators to implement change while concurrently performing their daily work (Fisher, 2004; Brown, 1993); unrealistic perspectives of the timeframes required for the implementation of change; and a lack of teacher and administrator incentive to adopt fundamental reforms (Elmore, 1996).

Perspectives of change may also be clouding the reform initiative. As change may be considered a permanent feature of today's schools (Elmore, 1996; Brady & Kennedy, 2001), whether it involves changes to class sizes, length of teaching periods, or ways of handling content, school communities may consider transient changes to established conventions as sound achievements. However, changes that do not alter the fundamental way in which teachers and students go about the process of teaching and learning may be diverting attention away from the need for more holistic reforms (Elmore, 1996).

A perceived loss of efficiency in the education of students, especially during the implementation phases of introducing progressive pedagogies, may also be a contributing factor in limiting the adoption of pedagogical change. Social change of this magnitude requires the substantial re-education of secondary school teachers, administrators, parents and, vitally, students. Expectations of the way in which middle school-based education is conducted are well entrenched in the minds of students already in the 'system'. Students require a period, possibly a

lengthy period, of time to adapt to fundamentally different social settings, such as those compelled by progressive pedagogies. Many students are unlikely to 'get it' straight away and will therefore require time for adjustment – a process which may be unsettling for all involved.

Initiating students into a progressive learning environment as they enter Year 7 (or implementing middle school year level arrangements to cater for students from Year 5) may be the most efficient method of implementing progressive reforms. Engaging students in the new progressive model prior to indoctrination into the traditional model will provide them with a smoother continuum from primary school, thus allowing them greater opportunity to utilise their learning and personal management skills immediately upon entering their next phase of schooling.

Do these pedagogies fit with the educational environments, or spaces, in which they are employed?

The implementation of progressive pedagogies becomes exceedingly difficult if flexible and varied spaces appropriate to multimodal communication are not available. With many school buildings and organisational structures conceived and constructed to support the educational philosophies and practices of Industrial Society – 1850-1949 (Lackney, 1998; McGregor, 2004b), it is no wonder that schools have found adoption of progressive pedagogies a challenging and possibly ineffective process. Traditional classrooms that maintain a spatiality where the teacher holds the position of power at the front of the class and controls the flow of information and discussion support direct instructional approaches to teaching and learning. These spaces are designed for students to passively receive information (McGregor, 2004b), rather than engage with knowledge in a progressive way to form new understandings via a range of interpersonal relationships, information sources and experiential activities.

A number of factors hinder the practice of progressive teaching and learning models in traditional classrooms. With a clearly designated focus towards the teacher and information displayed at the front of the classroom, there is little suggestion that establishing a community of inquirers is an objective. Such spatial arrangements limit dialogue to teacher-student interactions

and are not conducive to student-student discussions or the expression of ideas. They also restrict opportunities for collaborative group interaction as the analysis, synthesis and evaluating of concepts is generally difficult due to the enduring arrangement of furniture. This situation is compounded by the difficulty presented by rearranging furniture due to the lack of floor space. Student access to a variety of information sources, including texts, artworks and artefacts, is also generally limited because traditional classrooms are not designed to cater for displaying and storing such materials. In addition, traditional classrooms are not designed to incorporate the educationally supportive technologies that are available today: technology that can allow students greater independence as learners.

The challenge for schools is to create learning spaces modelled on the educational philosophies and practices of the 21st Century, spaces that will support progressive pedagogies, incorporating opportunities for multimodal communication and the appropriate integration of technology. The creation of such learning spaces will not be easy, especially in relation to the appropriate integration of technology. Thompson found that 'despite revolutionary changes in technology, its use in traditional classrooms, coupled with inaccessible masonry walls (Brubaker, 1998), makes the integration of computers difficult'. She suggests that, 'in keeping with best practice, and subject to cost constraints, school and classroom infrastructure requires updating to create learning centres grouped by type of activity', and decrees the importance of 'creating workspaces for specific tasks...such as face-to-face lessons, class meetings, planning group-work, carrying out group-work, distance learning, and self-paced or individual work (Thompson, 2005, p. 252).

Modern pedagogies and technologies need modern spaces

Today's middle schools require a significant rethink of how educational environments should be arranged and of how future buildings may be designed. As outlined by Fisher, 'pedagogical concepts such as constructivism...multiple literacies...multiple intelligences, distributed learning...and integrated curricula will all require a rethink of the spatiality of learning' (Fisher, 2004, p. 37). Schools must

keep pace with the social constructs that new technologies allow and move on from pedagogies and environments within which teachers have been obligated to remain principally transmitters of information (Upitis, 2004). No longer should the traditional classroom model with teachers standing at the front of the class 'teaching themselves' be accepted as educationally adequate. In addition, government and school-based testing requirements should be reconsidered within this context in order to reduce the pressure on teachers to 'teach for tests'. Traditional testing requirements may be placing pressure on teachers to maintain reliance on traditional pedagogies, thus limiting their ability to adopt the progressive model. Conducting tests may not be a problem in itself. The problem may reside in the types of tests being administered. By designing testing regimes that are supportive of the outcomes of the progressive model, obligation to direct instructional teaching may be further reduced.

With the implementation and successful ongoing practice of progressive pedagogies as the goal, a move from the traditional classroom environment must be undertaken in order for students to gain the full benefits of inquiry and dialogue-based learning settings.

Without the constraints placed on the later years of schooling, middle school educators should feel free to look beyond the content-based curriculum as the primary driver of student learning and consider the acquisition of skills suited to modern society as an equally important goal of school-based education. Beare suggests that, with the 'production of information now exponential, and the skill of accessing data-bases becoming more important than the rote-learning of basic information', there may be 'very little that is necessary to be learnt by heart now' (Beare, 2000, p. 146). Further to this, Horne (2004) contends that:

> Schools should strive not just to create knowledgeable young people but people who know how to use and apply their knowledge in a way that is meaningful and valuable to them beyond the formal setting of the examination hall.

Therefore, school-based learning for today's students should be designed in a way that supports their journey towards becoming life-long learners – individuals with the ability to engage with an ever more complex world.

Today, students are initiated early in life into the Knowledge Society, whether supported in this process by schools or not. Even very young people are able to take control of technology and navigate their way through the wealth of information that is so readily at hand. Whether they can do so with purpose and productively is another question!

With communication and information acquisition so reliant on technology in the 'real world', it would surely be a grave injustice to not support students to develop the required skills and information management techniques that can allow them to be active and empowered participants in 21st Century life. In order to do this we need to adapt teaching and learning practices, and educational spaces, to incorporate new technologies, and subsequently utilise these technologies on an everyday basis.

Planning and design considerations for middle school buildings in the Knowledge Society

The design of middle school learning spaces that will support progressive pedagogies requires the creation of flexible and varied environments in which students and teachers may work together for the acquisition of knowledge, the creation of conceptual understandings, and the development of skills. Planning for these spaces requires careful consideration of the information sources, social contexts and the range of activities that will best support student learning.

Student access to computers within the areas where they spend the majority of their time is also a key requirement for learning in the Knowledge Society. Students should be granted access to computers on an as-needed basis, as new technologies provide previously unprecedented support to student learning based on progressive pedagogies, reducing the need for teachers and textbooks to be 'fountains of all knowledge' and giving students greater possibilities for the output of their work.

It is no longer appropriate to house computers in dedicated labs, limiting when and for how long students may use them. In a progressive learning environment, students,

once educated in the social requirements related to computer use, should be able to utilise these tools frequently. In addition, the integration of computers must not necessitate students working in isolation. Computers can be used in a range of social settings that encourage communication between students, whereby the technology may become an integrated part of the social interaction process (Thompson, 2005).

Allowing for flexible social arrangements, regardless of computers, is also a key requirement for progressive learning environments. Opportunity should be created for students to work in a range of social settings and learning spaces. Environments that allow a range of interpersonal relationships including teacher-student group communication, teacher-student one-to-one communication, student-student group communication and student-student one-to-one communication are required.

Appropriate spaces are needed to facilitate these interpersonal relationships, i.e. those that accommodate whole class, small group, one-to-one and individual work. They should also allow for the 'flow of activity' (Lipman, 2007, p. 2), or movement of students from one social setting to another. Such spatiality, 'the production of space through the interaction of the physical and the social' (McGregor, 2004a), is vitally important when seeking to cater for progressive pedagogies. As the schools' architect Peter Lippman concluded, 'the research indicates that the social and physical environments cannot be viewed as the backdrop for knowledge acquisition, but rather as influencing learning' (Lippman, 2007, p. 6).

What should middle school buildings in the Knowledge Society look like?

Design principles and concepts considered supportive of progressive pedagogies are too extensive to be discussed here in rigorous detail. The following list provides a snapshot of some key features found in learning environments that are enabling of progressive pedagogies. The principles of flexibility of space and variety of space underpin these features.

Key features of learning environments supportive of progressive pedagogies:

- Dynamic environments such as 'learning commons' or 'breakout spaces' in which students may work as self-directed learners, engaged in learning activities supported by structured frameworks.
- Provision for student movement across and between physical space(s) to enable the 'flow of activity'.
- Teacher guided instructional settings.
- Readily accessible specialist learning areas housing specialised equipment – enabling experiential learning activities.
- Collaborative spaces for working in pairs and small groups.
- Individual work space for reflective thinking and production of work.
- Readily accessible computers situated to enable use within a shared dialogue of inquiry.
- Multimedia presentation technology, such as data projectors and interactive whiteboards, supporting group work, interdependent thinking, and teacher and student digital presentations.
- Teacher supported targeted learning spaces for conferencing with students who require additional assistance.
- Extensive use of glass to facilitate sightlines for supervision and the creation of a sense of belonging to a shared learning community.

The floor plan shown in Figure 1 illustrates how these key features may be incorporated into a middle years learning environment designed to support a progressive constructivist learning approach.

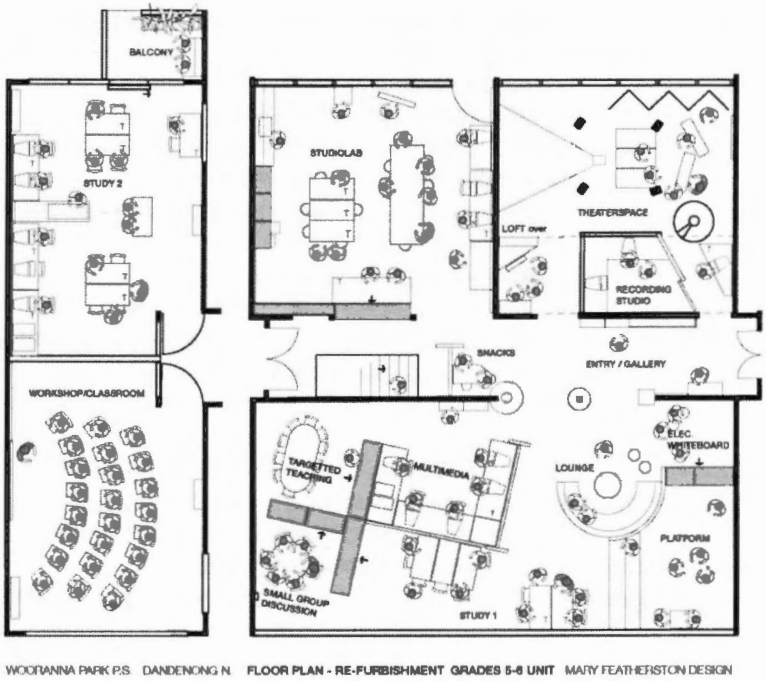

Figure 1: Wooranna Park Primary School Year 5/6 Learning Unit Floor Plan -designed by Mary Featherston

Further details of potentially suitable middle school design concepts may be found in the work of Fisher (2005), Nair and Fielding (2007) and Featherston (2008).

Can we agree to change?

As 'there is very little research on how space dictates what is learned and how it is learned' (Upitis, 2004), greater evidence of the advantages of learning spaces designed specifically to enable progressive pedagogies may be required before change will be strongly sought. As suggested by Fisher (p. 37):

> Teachers in all educational sectors will continue to resist change and revert to the time-tested concept of the classroom unless it can be demonstrated that the physical learning environment can influence learning outcomes...There has been no sustained attempt at a holistic change to approaches to educational

> reform that integrates all the forces acting on it and especially including the power of space.

Fisher (2004, p. 37) also found that:

> The impact of the physical environment and the rapid changes in information technology and communications on learning has spawned literally hundreds of studies on educational architecture by educational researchers worldwide. Most of these, however, are quantitative studies which attempt to link student test scores to the condition of school buildings, with little attention paid to qualitative perceptions of students and teachers about their learning environments.

It would appear that more qualitative research is desired to provide evidence for, or against, the progressive model – research investigating the use of progressive learning spaces and the resultant perceptions of the users of these spaces, the students and teachers.

Conclusion

As stated by Hill and Russell (1999, p. 21):

> The movement for whole-school reform in the middle years is not a passing fad but a major issue confronted by systems everywhere in order to better meet the needs of young people.

Progressive pedagogical learning frameworks, such as project-based and problem-based learning, have a significant role to play in this reform process, as increased levels of student engagement may be achieved with the employment of progressive pedagogies (DEET, 1999: Barratt, 1998: Harber, 1995: Dewey 1966). Such teaching and learning models encourage the development of skills suited to modern society, including the ability to learn through experience and social interaction, and the ability to work successfully with technology. These pedagogical frameworks also encourage a learning atmosphere that values curiosity, creativity and questioning and the development of deeper thinking skills.

In order to adopt a progressive model for middle schooling that is aligned with the Knowledge Society, there

remains a significant need for school buildings to be designed, or modified, specifically to support progressive pedagogies, incorporating the appropriate integration of technology. Only when educational philosophies, pedagogies, technologies and school building design are considered as a whole, will the reformation of middle schooling for today's technology driven society be a success. Such related issues as curriculum and school organisational matters can follow this lead as part of a holistic whole school reform process.

It is changes to the ways in which students go about their learning that should be at the forefront of middle school reform. Middle school students require a learning environment in which they have a degree of control over the ways and means by which they engage in learning, thus encouraging them to participate in a social system that leads them to feel that they are members of a learning community and empowered participants within today's Knowledge Society.

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Teaching Ethical Strategies through the Maths Curriculum

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Abstract

Mathematics involves problem solving. So too does ethical decision-making. Ethical dilemmas which appear intractable yield solutions when subjected to ethical strategies. Mathematical strategies which appear dry and abstract become interesting when applied to human problems. Using Mathematics as a vehicle for introducing ethical competencies can benefit both disciplines. This paper reports upon the development and trial of a curriculum unit, which provides a useful combination of ethical and mathematical techniques.

Rationale and assumptions

The rationale for philosophy in the classroom has been discussed at length in this journal (e.g. Cam, 2006; Sharp, 2007; Wightman, 2007). Rather than rehearse those contributions, we make some assumptions for the purposes of this paper, as follows. Ethics can usefully be defined as the study of how people should treat each other (Wolff, 2000; Solomon, 1989; Klemke et al, 1982; Flew, 1979). It is a fact of life that people need to learn how to get along with each other, and the success of any community depends upon how well its members achieve this. The life-long happiness and success of any individual depends upon how well that person develops dispositions and strategies that enable them to get along with others.

The authors recognise that contemporary society is characterised by rapid change, and we would assert that a citizenry that is democratic and well-educated is best placed to cope with these changes. Well-educated people can discuss how to treat each other, negotiating agreed outcomes when

confronting technical, social and ethical challenges. Although Ethics is a study in its own right, it is not generally taught as an identifiable part of the school curriculum (White, 1988; Beauchamp, 1991; Robinson, 1996; Ruggiero, 1997; Jewell, 2000). (The exception is when Ethics is taught within the subject of Philosophy. Philosophy, however, is not widely available as a subject for school students.)

Many of the most important problems faced in life involve opportunities for ethical decision-making. Making ethical decisions relies on understanding the nature of the problem and the nature of potential solutions to the problem. When people get interested in a public issue, for example, they often do so without any idea of what the relevant statistics might reveal. The less the general public knows about how to accurately interpret statistical data and information, and what questions should be asked about them, the more it is vulnerable to manipulation by parties with vested interests.

Moreover, knowing the technical aspects of problem solving alone is not always enough. People using abstract models, developed by others, may apply them to real-life situations in pursuit of a narrow range of outcomes, ignoring the broader consequences of their policies. Stopping to consider the ethical implications of various courses of action can help people select better solutions to existing problems.

The more a community knows about risk assessment and checking the validity of stereotypes, the better it is defended against undue influence by charlatans. Given that government decisions on ethical issues are largely determined by community pressure, it is vitally important that the community is adequately prepared with the ability to use knowledge and skills in the service of ethical decision-making, and the ability to apply an ethical perspective to general problem solving.

Engaging students with Mathematics through Ethics

There is a concern amongst Mathematics educators that the standard approach in Mathematics classes is rather abstract, and could benefit from an infusion of concrete, interesting problems (Bidddle, 1998; Lilburn & Rawson, 1993). The curriculum module described below is a response to this concern. Mathematic knowledge, and in particular

statistical understanding, has essential application to solving real-life, communal dilemmas. Mathematics contains a vast body of knowledge, some of which can be applied in a wide range of situations, and some of which is specific to particular fields of endeavour. Yet despite its usefulness, Mathematics is one of the least-liked subjects taught in schools. Biddle (1988) argues that students are more likely to take an interest in Mathematics when it is presented in a meaningful context. Particularly in secondary Mathematics programming, 'real-world' application of mathematical techniques may be overlooked.

When developing the curriculum module discussed here, we were aware that students had an interest in the issues of juvenile crime and of gender stereotyping. At the same time, the issue of population was being debated by the wider community. These issues, we argue, are not only of interest to our Mathematics students, but have ethical dimensions as well. We speculated that harnessing Mathematics with Ethics might be of benefit to the fruitful teaching of both subjects. Potentially, problem solving is an area in which Mathematics and Ethics working in tandem could be particularly effective, since both disciplines provide us with useful problem solving strategies not reliant on specific content. Bell, Wigley and Rooke (1978, p. 2) identify several characteristics of mathematical problem solving, some of which happen to be shared with Ethics:

> Mathematics provides the most readily accessible form of problem solving in the classroom because it does not depend on the pre-existence of a substantial body of knowledge. Involvement in problem solving enables pupils to exercise and acquire confidence in their intellectual powers. Thinking independently and expressing arguments in a logical and ordered manner does not always come easily. Good habits can be acquired by being in an environment in which thinking is explicitly valued, and by coming to recognise the general value of reasoning. One may also acquire some strategies which are more generally useful.

To put it another way, both Mathematics and Ethics are skill-based, and the skills acquired are then applicable to content. We were also cognisant of claims that providing

interesting content can facilitate the acquisition of the skills (e.g. Lilburn & Rawson, 1993).

Writing the curriculum module

Because, to our knowledge, there were no curriculum modules of the type we envisaged, we had to generate one. We decided that an example of a meaningful context might be juvenile crime statistics, which would allow us to:

- combine Mathematics and Ethics;
- provide an interesting context; and
- provide an opportunity to analyse statistics critically.

We wanted to engage students in asking questions like:

- Is it true that boys are more criminally-inclined than girls?
- What do the statistics show?
- What do the statistics *not* show?
- Are there different ways of presenting the figures?

We drew on reports like the following (Table 1) from The Australian Institute of Criminology, and wrote other material ourselves.

Table 1: Juvenile Crime Statistics provided to students[1]

South Australian Juvenile Serious Criminal Trespass Offences		
	1993–94	2002–03
Males	1835	1173
Females	110	110
Persons	1945	1283

We reasoned that students could make an appropriate graph of this data, and then, considering both the table and their own graphs, analyse (i.e draw appropriate meaning from) the data to examine what the

[1] Adapted from Australian Institute of Criminology 2002, *Juvenile Crime and Justice,* and South Australia Police 2003, *South Australia Police Annual Report 2002-2003.*

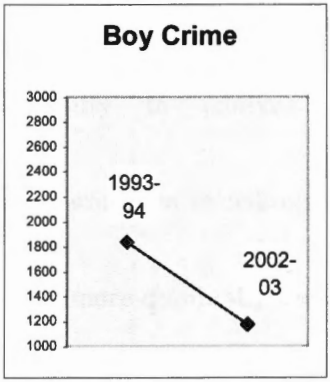
statistics seem to show, what they actually show and what they do not show.

The figures can be interpreted, and represented, in various ways. The representations themselves can be value-laden, biased, or indeed, unethical. To illustrate this, we concocted two fictional media reports based on the above table. These fictional media reports are shown in Figures 1 and 2.

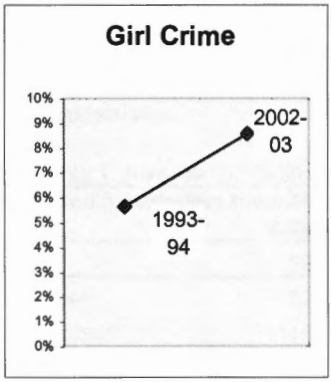
'Boyzrule' Magazine

Who's Bad?
Female Crime Rate Soars!

Recent government statistics show that the proportion of juvenile crimes committed by girls has skyrocketed, while boy crime has taken a dive.



South Australian Police statistics indicate that the number of break, enter and stealing offences committed by boys between the ages of 10 and 17 fell by 36% in the last nine years, according to analyst Frank Furphy. 'The proportion of these offences committed by girls jumped by an enormous 50%!' he said.



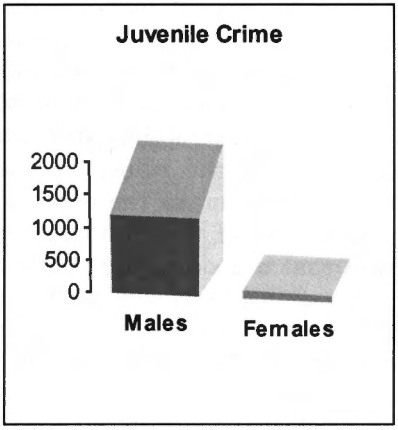
Activist Sean Stirrer was thrilled with these findings. 'These statistics support what we've been saying all along. It's time the authorities got off our case and paid attention to where it's really needed,' he said, 'They should go after the girls for a change!'

Figure 1: 'Boyzrule' Magazine

'Girlzone' Magazine

Boy Crime Sky High!

Boys have always committed much more crime than girls. They still do, and recent government statistics prove it.



South Australian Police statistics show that males committed 91% of all juvenile serious criminal trespass offences in 2002-03, and as many as 94% of offences in 1993-94, while the number of crimes committed by girls had remained stable, according to analyst Fran Furphy.

How we compare		
Boys	1173	1835
Girls	110	110

Activist Sandy Stirrer was thrilled with these findings. 'Boys have committed a whopping 17 times as many offences as girls. These figures support what we've been saying all along,' she said, 'Boys are rotten, sleazy criminals!'

Figure 2. 'Girlzone' Magazine

We planned for students to examine the articles to determine whether the claims matched their own data analysis, whether either of the articles showed any kind of bias and whether the claims made were supported by the original data. They would be asked to attempt to identify as many distortions as they could find in each article and explain how the data had been distorted.

Moral competence

We were interested in whether it was possible to give students tools to help them make ethical decisions. No instruction, by itself, will dissuade people who are inclined to do the wrong thing. Instructing students that copying another's work is against the rules, for example, will not ensure that lazy students make the effort to produce their own work. Aristotle, one of the first philosophers to write about ethics, said that a good choice is the result of sound reasoning and right desire (Aristotle, 1139, a16-b2, Thomson translation 1955, p. 205). Both are necessary. We suggest that the components of a positive ethical climate might include:

- discipline aimed at helping students become self-disciplined, and willing to take responsibility for their own actions;
- communication which is open and respectful;
- family support and a responsive learning environment;
- attitudes and examples by teachers and peers that reflect values such as justice, cooperation and respect for others; and
- teaching behaviours that aim to develop the students' positive self-esteem.

While good intentions are necessary for ethical action, they are not sufficient in themselves. If people want to do the right thing, they need to know how to decide what the right thing is. They need to be provided with the cognitive tools that allow for the development of moral competence. The fundamentals of moral competence include the recognition of the fact/value gap and the selection of appropriate strategies. That is, a statement that makes claims about what *is* the case can be verified by observation

and measurement. A statement that makes claims about what *ought* to be done can be examined with ethical strategies. We wondered whether students could learn to compare tables with graphs whilst making judgements about the differing types of claims ('is' versus 'ought') and applying appropriate strategies (Hare, 1981).

For the purposes of this project, we reviewed the literature in Philosophical Ethics and extracted significant features, which we summarised and described as four strategies: principles, consequences, agreements and virtue (Gauthier, 1986; Hare, 1981; Hume, 1978; Mackie, 1980; Mill, 1972; Rawls, 1971; Solomon, 1993; Stevenson, 1944). Table 2 provides brief descriptions of these strategies.

Table 2: Four ways of thinking about ethics

Principles	**Consequences**
Principles are like duties or rules that apply to any set of circumstances. So, for example, when we argue that it is never right to tell a lie, we are thinking about principles. Principles are useful for dealing with large groups of people. Many laws are based on principles. Some common principles are: Do no harm. Always tell the truth. Keep your promises. Be fair. Respect others' rights.	What makes an action right is whether it has good consequences. That is, whether it increases the welfare of those affected by it. If large numbers of people are affected, we might try to consider the greatest good for the greatest number. By 'good', we might mean happiness, well-being, pleasure, interest or satisfaction.
Agreements	**Virtues**
A good way to decide the best way to treat people is to ask them how they want to be treated. People can then come to agreements about how to treat each other. A group of friends might agree to play sport on Saturdays, or a community might make laws.	Virtues are character traits. A virtuous person does the right thing out of habit. To put it the other way around, the right thing to do is what a virtuous person would do. Some commonly recognised virtues are integrity, courage and compassion.

Principles incorporate such notions as justice, impartiality and honesty. Mathematical skills can be used to judge whether statistics such as those in the articles about juvenile crime (Figures 1 and 2) are fair or biased, are

honest or deceitful. The class discussions of different ways of graphing figures can illustrate this.

Appeal to *consequences* includes the measurement of the effects of a decision on people's welfare. One such consideration is 'the greatest good for the greatest number', which clearly involves mathematical strategies.

Community *agreements* can be established though the use of surveys. Should penalties for crime be higher, lower, or about the same? Mathematical skills can be applied to ensure the surveys are sound.

A sound survey has integrity, and integrity is essential for the people who design and conduct it. Integrity is a *virtue*.

Implementing the module

This curriculum module was offered as an elective for students in Years 10 and 11 at the Australian Science and Mathematics School. The class consisted of 14 students (six female and 8 male) aged between 14 and 16 years of age.

The Australian Science and Mathematics School is a specialist public school, which is open to a wide range of applicants and caters for the three final years of schooling (Years 10-12) before entry into higher education. As part of its focus, the school uses highly collaborative, interactive, student-directed approaches to promote authentic, vigorous and applied learning. This is often achieved through project-based and interdisciplinary activities.

The elective program provides a broad range of short course electives without the assessment pressures associated with the main Central Studies program. This elective was entitled 'Aussie Population Rules' and promoted as an interdisciplinary unit combining politics, ethics and statistics. Most participants selected this elective as a first or second preference.

A brief outline of the seven major activities planned for the curriculum module follows.

Activity 1: Community of Inquiry

Conduct a Community of Inquiry on the issue of Australian population and resources. Supply students with discussion ideas as in Table 3. A Community of Inquiry can be seen as a pervasive characteristic of the ideal classroom, a fundamental mode of organisation. It can also be seen as a

pedagogical exercise, or as a response to specific issues, such as Australian population or juvenile crime.

Table 3: Discussion ideas for a Community of Inquiry on Australian population and resources

Tick a position (0 to 10) alongside each of the ideas listed, saying how likely you think it is that the statement is true. Compare responses with your classmates. Then make a list of other statements that you think would produce interesting discussion.	
very unlikely very likely 0 1 2 3 4 5 6 7 8 9 10	
	Australia's population is too low.
	Australia has an ageing population.
	Australia's population is greater than our ecology can handle.
	We need to increase our birth rate.
	We need to increase immigration to Australia.
	We need to increase our standard of living.
	Australia has an ageing population problem.
	Increasing immigration will destabilise Australian society.
	Australia's population is not a problem.
	Increasing immigration will increase unemployment.
	We need to decrease consumption and pollution.
	Increasing immigration will increase demand for goods and services.
	Too many Australians live in big cities.

This discussion naturally leads into a research phase, since it will not take long for the question, 'How do we know?' to emerge. It is common for people to form opinions quickly on the basis of their own assumptions, or the opinions of others. Statistical research provides an opportunity to develop an evidence-based approach to ethical decision-making. If, for example, we focus on the question, 'Should we raise the level of immigration to Australia?', an interesting range of further questions is likely to emerge, such as:

- What is the current population? How has this changed over time?
- What size population should Australia have?

- What is the current immigration rate?
- What effect does the rate of immigration have on population?
- What are our environmental obligations?
- What effect does immigration have on Australian society?
- What are our obligations to people already living in Australia?
- What are the current migration trends?
- What factors influence migration trends?
- What are our obligations to people living in other countries?
- Is the rate of immigration all that matters?
- What type of migrants should we allow?

Activity 2: Facts versus values

When looking at an issue in depth, it is often useful to check whether the questions being considered are factual or moral questions. Most issues involve both factual and moral questions. Distinguishing between the two can help students to clarify their thinking and better organise their investigations.

Factual questions

Factual questions ask about the way things are. They consider the facts, or the objective truth, about a situation. Facts are usually established through observation, although in practice people often rely on the authority of others who have done the observing, since there are too many facts in the world for any one person to establish independently. How can students answer factual questions? They can:

- make their own observations and conduct experiments; and
- research other people's observations, or look things up in books or on the Internet.

It is important for students to keep thinking critically in order to avoid errors whenever possible. They need to check the validity of their observations, of experimental results, and of the sources they take as authoritative.

Moral questions

Moral questions ask about the way things *should be*, and are based on value systems (Solomon, 1989). People ask moral questions in order to determine how good or bad a situation is, what should be done about it, and who should be responsible for it. Students can answer moral questions by applying the four moral reasoning strategies of Principles, Consequences, Agreements and Virtues (see Table 2).

Facts and values are both important. Factual questions help establish a basis of evidence to support decision-making. If people do not know the facts of a situation, they are likely to make decisions based on prejudices and misconceptions, which can produce disastrous consequences. Facts, however, will never produce a moral response on their own. Moral questions add motivation and direction to the facts. There is little point in knowing what the likely effects of increasing immigration are if nobody cares about them. Factual questions help establish where people are. Moral questions help establish where they want to be. They need to know both where they are and where they want to be in order to decide which way they should go.

Some useful guiding questions (see Table 4) for considering the factual and moral dimensions of an issue, which we planned to incorporate in the module, include:

- Which of these questions are factual questions, and which are moral questions?
- What facts need to be known in order to establish the truth of these statements?
- What are the value questions that should be asked?

Table 4: Distinguishing facts and values

Questions of fact	Questions of value
• What is Australia's population? • What is our birth rate? • How has it changed? • What relationship does birth	• Is there a problem here? • How much is too much? Too little? • Are there any principles involved?

rate have to population? • What factors increase population? • What factors decrease population?	• What are the possible consequences? • Have any agreements been made? • What would a good society do? • Does something need to be done here? If so, who should do what?

Activity 3: Misleading statistics

Discuss how statistics can be represented with integrity or misleadingly. Compare tables, graphs and interpretation of juvenile crime rates (e.g. see Table 1 and Figures 1 and 2).

Activity 4: Conducting a survey

This exercise is designed to provide students with the opportunity to explore moral questions using simple statistical methods.

Step 1. Students are required to propose a law/rule/policy to be considered.
For example:

- Family size should be restricted to no more than two children.
- Mothers should be paid to have more children.
- Immigration should be stopped until our population is reduced to ten million.
- The current immigration rate should be increased.
- Migrants should move to low-population centres.

Ideally, the proposition should be related to the questions explored in the previous activities, and be chosen by the students.

Step 2. Students identify the concerned parties, those who would be affected by this proposition.
This step encourages students to consider the stakeholders in any given issue, and is based on the presumption that stakeholders should be consulted when decisions are made concerning them. There is room here for discussion about who should be allowed to decide these kind of questions and why,

and also about the survey design implications. Do we limit our survey to Australians? Or should we include people overseas who are potential migrants? Is it feasible to include overseas people?

Step 3. Students design and conduct a survey to gauge the opinions of the concerned parties. (See Table 5.)

Students may use this scale as a guide, and develop their own weighting system, or they may use the scale as given. This weighting system simplifies the process of analysing the data once it is collected.

Table 5: Survey[2]

Conduct a survey in which you ask people to respond to your proposition according to this scale:		
Rating	**Description**	**Weighting**
☺☺☺☺	This will make me ecstatic with joy	4
☺☺☺	This will make me very happy	3
☺☺	This will make me quite happy	2
☺	This will make me mildly content	1
☹	This will slightly displease me	-1
☹☹	This will make me quite unhappy	-2
☹☹☹	This will make me very unhappy	-3
☹☹☹☹	This will fill me with despair	-4

Step 4. Students collect and analyse their data.

The data analysis in this exercise involves recording the frequency of each rating, multiplying the frequency by the weighting and finding the sum of the weighted scores. The ratings are weighted so that there is some balance between strength of opinion and the strength of numbers. In this exercise, the response, 'this will make me ecstatic with joy' is four times as strong as the response, 'this will make me mildly content', so one person indicating the strongest response will produce the same weighted score as four people indicating the weakest response. The positive and negative weightings will centre the balance around 0. No sitting on the fence is allowed, which is why no responses have a 0 weighting. What is the total weighted score?

[2] Adapted from Robinson & Garratt 1996.

Step 5. Students interpret results.
A positive score indicates support for the proposition. A negative score indicates rejection of the proposition. The more positive or negative a score is, the stronger the overall preference. A 0 score indicates that there is no preference either way. A 0 score will be achieved by an even mix of positive and negative responses. Students can divide the Total Weighted Score by the number of people surveyed, and refer back to the rating scale to determine the overall response. For example, if the Total Weighted Score for 100 people is 380, the overall response weighting would be 3.8 (which rounds off to 4), indicating strong support for the proposal. A Total Weighted Score of -120 would indicate mild opposition to the proposal.

Step 6. Students evaluate the statistical validity of their opinion poll.
Considerations:

- Representative samples:
  Were the people surveyed representative of all of the concerned parties?
  Were all the concerned parties accurately identified?

- Bias in survey design:
  Was the weighting scale fair?
  Were leading questions avoided?

- Interpreting survey results:
  Were appropriate conclusions drawn?

- Opinion versus factual data:
  Did the people surveyed know how they would be affected by the proposition, or were they just guessing?

How appropriate is it to use this kind of information as the basis for making ethical decisions? What other concerns might students have? Can they identify any flaws in this approach? These are open questions

which could lead to further investigations, or be briefly discussed to stimulate evaluative thinking.

Reflecting on the module

Students were highly engaged in the module, and appreciated the chance to freely exchange views and ideas, as well as to learn effective ways to reason and to argue. Students were asked to complete the sentence, 'In the first session I learned...'. Their responses included:

- '...that to understand my own point of view I had to totally understand those opposing it.'
- '...that when we talked about a thinking machine, we included that fact that emotions are important to thinking, which was really interesting and added appeal to the first session.'
- '...that people decide on where they stand on an issue even if they know nothing about it then they defend it with all their debating skills.'
- '...that in debates, other people's opinions should be accepted, and when debating, it is not good practice to criticise the person to win the argument.'
- '...the rules of an argument, e.g. you must be willing to accept other evidence and be willing to change your opinion.'

Throughout the eight-week module, students continued to vigorously and enthusiastically discuss issues raised for consideration, apparently keen to exercise their developing skills and understandings.

Sometimes the students meandered away from the initial focus of a discussion, and one of the leaders would raise an 'irrelevancy flag' to help students return to their agreed purpose. Student responses to these interventions were positive and cooperative, although they sometimes drifted again rather quickly.

The students found some of the statistical issues quite difficult to understand, which became evident when they conducted their own surveys and generated two reports for each survey, one 'honest' report and one misleading report. The reports generated indicated students needed more guidance throughout the survey and reporting process,

probably over a longer time and with multiple opportunities for feedback.

Assessing outcomes

After teaching the module, we wanted to assess how well students were now able to engage in reasoned ethical discourse.

In order to assess students' abilities to distinguish between facts and values, we prepared a questionnaire involving eight statements, which students needed to classify as statements of fact or value statements. Students were asked to support their choice with reasons. These questionnaires clearly indicated that they now knew how to distinguish between facts and values for seven out of the eight statements (see Table 6).

Table 6: Distinguishing between Facts and Values

1. Australia's population is too low.
2. Australia has an ageing population.
3. Australia's population is greater than our ecology can handle.
4. We should increase our birth rate.
5. We should increase our standard of living.
6. We should increase immigration to Australia.
7. Australia has an ageing population problem.
8. Increasing immigration will increase unemployment.

It was interesting that the statement they found most difficult to classify as a factual statement was, 'Increasing immigration will increase unemployment'. This statement was included because it is a debatable statement, even though it deals with a matter of fact. Only two students withstood the temptation to consider it a value statement on the grounds that it was debatable.

Another assessment task determined whether students could correctly identify the ethical tools being used to construct a range of arguments. They were asked to identify whether each in a series of six statements (see Table 7) was based on principles, consequences, agreements or virtues, and to support their decision with reasoning.

Table 7: Identifying the Four Ethical Tools

Statement 1	We should increase the birth rate because that would be good for the economy. In the long term, it would be good for most Australians.

Statement 2	It is just plain wrong to lock up refugees and asylum seekers.
Statement 3	The Australian community should decide who comes to Australia and how many immigrants there should be.
Statement 4	We should not have a big population because that will be bad for the environment and therefore people's well-being.
Statement 5	We should be kind to asylum seekers. Decent people are kind to those in need.
Statement 6	It's not fair that some people who want to immigrate can and others cannot.

Again, although they had little understanding of how these four tools might be used at the beginning, almost all students were able to reason effectively and correctly classify most of the statements by the end of the module.

Statements based on consequences and virtues tended to be better identified than those based on principles or agreements. Correct choices backed up by sound reasoning were most often made for the first statement, 'We should increase the birth rate because that would be good for the economy. In the long-term, it would be good for most Australians', and for the fifth statement, 'We should be kind to asylum seekers. Decent people are kind to those in need.'

Students were least successful in identifying the final statement, 'It's not fair that some people who want to immigrate can and others cannot' as a statement of principle. Three students identified it as a virtue statement, probably on the grounds that fairness was a virtue discussed throughout the course. A couple of students identified agreements as the appropriate tool, and their reasoning suggested that they were engaging with the statement rather than classifying it. One student selected both consequences and agreements, suggesting that these were the tools used by the government to develop immigration policy. Each of these errors seemed to be based on a misunderstanding of the task (possibly due to attention lapse) rather than misunderstanding the ethical tools they had been working with.

We also wanted to see how well students could construct their own arguments using each of the four ethical tools they had learned about. The final questionnaire presented students with a provocative statement to address: 'We should remove all restrictions on immigration to Australia', and a four-cell table with the headings principles,

consequences, virtues and agreements. Students were asked to address this statement from each of the four ethical perspectives, placing each argument in the appropriate quadrant. This enabled us to see whether students could generate a range of arguments using each of the four perspectives, as well as to identify whether students understood which perspectives they were working from to construct their arguments. Each quadrant was given a score out of three for reasoning that addressed the question from the appropriate perspective. One or more arguments might appear in each quadrant. We were not concerned so much about how many arguments could be produced, as with how successfully students could classify their own arguments.

The students were very successful in constructing arguments based on consequences, and almost as successful generating arguments based on principles and agreements. They found it more difficult to develop arguments based on virtues.

Conclusion

For this project, we developed some innovative curriculum material. This allowed us to provide some real-life issues that could be subjected to both ethical and mathematical analysis. We took genuine statistics which could be represented and interpreted in various ways, and we concocted some media articles which facilitated a discussion of statistics and misrepresentation. Our hunch that juvenile crime rates and gender differences would be of interest to the age group we taught proved correct. Australian population is also an issue that attracts discussion in the media and provides an opportunity to distinguish between mathematical/factual approaches on the one hand and ethical analysis on the other. By the end of this curriculum module, there was some evidence that the students understood the difference between factual analysis and ethical approaches. Their learning experience in both Ethics and Mathematics was enriched by combining the two.

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'Because it's Being Nice': An Exploratory Study of Moral Reasoning, Tolerance and Values in Early Childhood

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Abstract

This article describes the implementation of a research project exploring young children's moral reasoning in light of the introduction of the National Framework for Values Education in Australian Schools in 2005, and in particular, the value of 'tolerance' within that framework. The project investigates the complexity of young children's reasoning and their ability to take the perspective of protagonists from both cultural minority (African) and dominant culture (Anglo-Celtic) groups within hypothetical moral dilemmas. These two areas of moral development were measured using a Quality of Argument coding system adapted from Collins (2005). The study used a matched pair design and involved two repeated semi-structured interviews that were audio-taped and transcribed to ensure accuracy of children's verbal responses. The sample consisted of 22 children from a Year Two classroom in a South Australian state government primary school in the Adelaide Greater Metropolitan area. Data from the study were assessed using quantitative measures including the Wilcoxon Signed-Rank Test and Spearman Rank-Order Correlation. Findings indicate that children produced high Quality of Argument scores for scenarios involving protagonists from the dominant culture and that there was a statistically significant relationship between the Quality of Argument scores for reasoning and perspective taking for hypothetical moral dilemmas. It is recommended that children in early childhood settings be taught philosophical inquiry and critical thinking skills to foster effective moral reasoning.

Key Words: moral development, reasoning, perspective taking, tolerance, values education, National Framework for Values Education in Australian Schools

Introduction

With the introduction of the National Framework for Values Education in Australian Schools (Department of Education, Science and Training 2005), there has been renewed debate about the most effective method for teaching values to students across all levels of education and care, including the very young. The National Framework for Values Education identifies 'understanding, tolerance and inclusion' as one of nine key values to be taught in Australian schools and describes this value as the need to *'be aware of others and their cultures, accept diversity within a democratic society, being included and including others'* (DEST 2005, p. 4).

Children are aware of racial difference and are engaging with notions of tolerance from an early age (Wardle 1992, cited in Van Ausdale & Feagin 2001), with racial stereotypes emerging during the preschool period (Aboud 1992, cited in Killen & Stangor 2001). In light of the current influx of political refugees and migrant children from African countries into South Australia, and indeed across the Australian nation, it is timely to explore the value of tolerance in relation to school children from identifiably different cultural backgrounds, and how this paradigm impacts on young children's moral reasoning when facing moral dilemmas. The aim of this study is to examine children's Quality of Argument responses for the dual variables of reasoning and perspective taking and relate these to the potentially relativistic value of tolerance.

There has been a steady focus recently in the media, and in general society, on the increasing number of migrants from Africa settling in Australia. These include migrants from sub-Saharan and north African regions, and in particular families arriving from Sudan. The Australian Bureau of Statistics (2007b) states that the number of permanent arrivals born in Sudan has risen dramatically from 0.1% of the population in 1984-85 to 5.7% of Australia's population in 2004-05. Furthermore, 73% (around 14,000) of Australian residents born in Sudan have arrived since 2001

(ABS 2007a). Of the 13,200 migrants coming to Australia in 2004-05 under the Humanitarian Program, the majority were born in north Africa and the Middle East (61%), followed by migrants from sub-Saharan Africa (28%) (ABS 2007b).

Rowan (2007) highlights the increasingly prevalent discourse in the media to *'generate anxiety about the differences between various groups in our society'* (p. 13) along with the Federal Government's adoption of public policies that portray immigrants as 'others'. Together, these encourage segregation through a focus on the identifiable differences between people, such as cultural background and physical features (Knowles 2003; Miles & Brown 2003). Further to this, Troyna and Hatcher (1992) suggest that children's attitudes and beliefs relating to racial difference can be affected by the 'interactional ideologies' presented in the media.

Teaching young children involves the acknowledgement and accommodation of individual children's cultural differences. Australia has a rich history of immigration and acceptance of culturally diverse citizens (Babacan 2007), and is becoming an increasingly pluralistic society (Lovat 2005). However, despite this, there is still a strong link within educational institutions to *'the learning and cultural preferences of the hegemonic white, largely Anglo-Celtic...population'* (Lovat 2005, p. 36) that can leave children from culturally different backgrounds at an educational and social disadvantage within school settings (Nieto & Bode 2008; Romo, Bradfield & Serrano 2004).

Bradfield and Romo (2004) contend that in the United States, primary schools intentionally and unintentionally transmit the values of the dominant culture, and that teachers give preference to and interact more positively with students whose culture, language and physical features are like their own. This favouring of the dominant culture within educational institutions is of particular concern in the Australian context where there are a high percentage of students with a dominant cultural background.

In this study, children's justificatory responses to hypothetical scenarios involving moral dilemmas with protagonists from the dominant culture and a culturally identifiable minority group are explored by measuring the

independent variables of reasoning and perspective taking using the dependent variable of Quality of Argument. It is hypothesised that there will be a positive relationship between the independent variables, with high Quality of Argument for reasoning being associated with high Quality of Argument for perspective taking. Furthermore, it is expected that young children will produce higher Quality of Argument scores for both independent variables when the protagonist is from the dominant cultural group.

Literature review

In response to a perceived decline in values within Australia, the Federal Government implemented an extensive process of inquiry through the Values Education Study (DEST 2003). This led to the implementation of the National Framework for Values Education in 2005, which set out nine key values (including tolerance) which are mandated to be taught to children in all state government schools.

While the prescribed values themselves are not unrealistic or irrelevant, the Framework (DEST 2005) offers no support for resolving conflict between the specified values. Knight and Collins (2006) suggest that the values presented within the Framework (DEST 2005) are vague in their interpretation and reflect a moral relativist standpoint whereby all points of view should be considered equally, even if ethically opposed by a majority of Australian society. In addition, there is no consistent pedagogical principle, with only a series of suggested approaches provided within the Framework (DEST 2005) for the teaching of these values in schools.

While it may be easy to posit that any conflict between values may be resolved using logical reasoning, the reality is that in humans, and particularly young children, reasoning does not occur without emotional affect. The development of empathy, and particularly the ability to take the perspective of others, are aspects of young children's emotional affect that are considered in this study as being central to moral reasoning. This view is supported by Nucci (2005) who states that *'emotions and feelings are an integral part of the construction of our social and moral cognition'* (p. 116).

Furthermore, the cultural backgrounds that children are socialised into work to shape the affective or emotional aspects of moral cognition (Nucci 2005). Therefore, it can be seen that all children will have significantly varied affective responses when reasoning morally, resulting in incongruence between their emotional states, and their ability to take the perspective of children from culturally different backgrounds (Eisenberg, Losoya & Guthrie 1997; Nucci 2005).

Much of the literature from the past several decades concerning children's moral development has been focussed on the cognitive-developmental approach to psychology of which Jean Piaget was a key proponent. Piaget (1932), and later Damon (1977), both theorised that children's moral development, and their ability to make moral judgements, were primarily influenced by their social relationships and peer interactions.

Kohlberg (1958) built upon the cognitive structures that Piaget proposed and theorised that moral development is directly related to cognitive functioning. Therefore, it can be seen that as children develop more complex cognitive structures, their ability to reason about ethical dilemmas at higher moral levels increases (Kohlberg 1958, cited in Schemrich 2003). Selman (1971a) elaborated on Kohlberg's work by theorising that children also needed to be able to take the perspective of others to reason effectively about moral concerns. Selman's work emphasises the importance of the affective component of moral reasoning.

Hill (2005) suggests that it is important for values education to help children explore empathy and express their feelings about values within a cognitive structure. Selman (1971b) found that the emotional component of moral reasoning, that is, children's ability to take the perspective of others, and the cognitive development of moral reasoning are reciprocal in nature.

Therefore, it can be seen that children's reasoning about moral conflicts will be influenced by their ability to have empathy for, and take the perspective of, others. This is supported by Egan (1979), who states that *'children's major intellectual tools...are not rational and logical but emotional and moral'* (cited in Goodman & Lesnick 2001, p. 238).

The National Framework for Values Education in Australian Schools (DEST 2005) includes 'understanding, tolerance and inclusion' as one of the nine values on the basis that it is a part of Australia's common way of life. This value is defined as: *'Be aware of others and their cultures, accept diversity within a democratic society, being included and including others'* (p. 4).

The inclusion of this value appears to flow from the view that multi/intercultural education in Australia is *'...a pedagogical enterprise that predominantly involves lessons in tolerance for all'* (Leeman & Reid 2006, p. 66). Knight and Collins (2006) suggest that 'tolerance' as defined by the Framework (DEST 2005) is ambiguous and implies that all values should be respected. Moreover, this approach to tolerance discourages critical thinking by encouraging students to accept all points of view without question.

Nieto and Bode (2008) define 'tolerance' as the act of putting up with something that is unacceptable or unpleasant, but that needs to be permitted. The implication is that differences which are tolerated are objectionable to the general population but should be allowed until such time as they can be altered or dismissed. Nieto and Bode (2008) emphasise this when they state that *'to tolerate differences means to endure them, although not necessarily to embrace them'* (p. 426).

It can be assumed that primary school students are able to, and do, 'endure' other children with culturally different practices and appearances. However, the deeper concept of tolerance involves the recognition of the fundamental worth of children from culturally different backgrounds who are *'committed to certain cognitive systems'* (Heyd 1996, cited in Goodman & Lesnick 2001, p. 212) such as social rules and moral values. It is expected, then, that to be truly 'tolerant', children must be aware of and take into account the fact that other children may have opposing values, beliefs and ways of thinking and appreciate these as being as valid as their own value structures.

Consequently, tolerance can be seen to be a major factor in influencing young children's reasoning about moral dilemmas. Tolerance thus conceived would require that all views, even unethical ones, must be accepted and cannot be challenged and therefore, can be seen as the basis for relativist thinking about moral dilemmas. Vardy (2005)

states that *'[t]he idea of tolerance is subversive of a search for values'* (p. 19) and that values education in general has been undermined by these underlying themes of relativism and tolerance.

This notion of tolerance, and its complexity when considering the educational and social implications of its teaching, is important due to the nature of Australia's increasingly pluralistic society. Australian society exists within a hegemonic context influenced by institutional discrimination against, and a long-standing intolerance of, physically and culturally identifiable difference (Castles & Vasta 1996).

For young children to be able to tackle the many issues that occur within the dynamic context of the school setting, and particularly in the 'socially fluid' context of the playground, it is argued that philosophical and inquiry-based skills are needed (Cam 2006; Fields 1995; MacNaughton & Williams 2004; Splitter 1985). Cam (2006) proposes that the primary aim of philosophical education (which incorporates inquiry-based skills) is the fostering of *'social and intellectual dispositions'* (p. 40). If children can be taught to use these dispositions to think critically and creatively about ethical and social issues that encourage the consideration of the feelings and perspectives of others, it is maintained that this can lead to more democratic and productive ways of dealing with conflict in the school context and, by extension, the democratic society to which they belong (Cam 2006; Law 2007).

The development of critical reasoning skills in young children can be seen to encourage reflective analysis of deeply held beliefs and ideas about morality through justificatory reasoning, as well as fostering positive social and emotional outcomes (Kwak 2007; Law 2007; MacMullin & Scalfino 2007; Trickey & Topping 2007). Nucci (2005), in his cross-cultural research, describes morality as being concerned with conceptions of welfare, justice and human rights (Turiel 1983, cited in Nucci 2005).

Lipman's (1981) 'Philosophy for Children' program incorporates key aspects of critical reasoning and inquiry-based learning that can be used by educators to encourage children's cognitive, social and emotional development (Trickey & Topping 2007). By guiding young children through their reasoning about moral dilemmas, educators

are better able to expand students' perceptions of the possibilities within and beyond their current system of beliefs and understanding about moral dilemmas (Kwak 2007).

Collins (2005) suggests that children's social well-being is dependent upon their ability to justify their beliefs rationally and logically through reasoning that takes account of the welfare of others. Thinking that takes this form is known as 'justificatory thinking' and involves the skills of making decisions based on reasoning that is both logically cogent and ethically grounded (Collins 2005). In short, reasonable arguments should be well thought out and take the perspective of others to consider the implications for the welfare of those involved in the decision.

To be able to reason effectively about moral conflicts, and take action in response to social transgressions, young children need to be able to identify and be aware of the large range of emotional states that may be displayed by their peers (Nucci & Turiel 1978). While children are able to display empathic responses to the emotional states of their peers from an early age, it is the cognitive component of empathy, that is, perspective taking, that allows young children to begin to discriminate between the inner emotional states of others (Santrock 2007).

Santrock (2007) goes on to suggest that a key to reducing children's misunderstandings about, and intolerance of, children from culturally different backgrounds is the ability to take the perspective of others. Furthermore, it is proposed that children should be taught to think critically and explore cultural differences deeply through critical reflection of their own feelings and actions towards peers from culturally different backgrounds (Santrock 2007).

The use of Kohlbergian moral dilemma interviews provides one of the most effective methods for researching and exploring children's moral reasoning (Langford 1997). It is argued by many researchers that these moral dilemmas predominantly focus on only one dimension of moral development, that of adjudicating moral conflicts, while ignoring other equally important aspects of moral development (Mathews 1997). However, researchers focussing on the cognitive-developmental approach to examining children's moral reasoning have predominantly

employed the use of Kohlbergian moral dilemmas as paradigms for eliciting responses from children, particularly when adjudication or justification is being explored.

Incongruence and inconsistencies between children's *expressed responses* to moral dilemma interviews and their *actual responses* outside of any hypothetical situation are a constant cause for concern for researchers exploring children's moral reasoning abilities (Eisenberg, Losoya & Guthrie 1997; Kochanska, Padavich & Koenig 1996). Nevertheless, Dockett and Perry (2007) suggest that researchers can act to improve the trustworthiness of children's responses by building strong relationships, increasing interactions and developing awareness of the research context. This view is supported by Kochanska, Padavich and Koenig (1996) who add that the gathering of extensive behavioural data can increase the likelihood of gaining correspondence between children's attitudes and their behaviour.

Within the scope of this study, the use of multiple tools to observe and measure children's behaviours in a variety of settings was not feasible. However, the use of narratives such as those employed in this study has been reported to be useful as a tool for showing complementary relationships between children's social and moral responses (Eisenberg et al 1994; Mize & Ladd 1988, cited in Kochanska, Padavich & Koenig 1996).

The discourse presented within the literature review shows that moral reasoning in a pluralistic society is informed by the value of tolerance as it relates to cultural difference. Effective moral reasoning involves an ability to take the perspective of others through awareness of their emotional states (Nucci 2005; Selman 1971a), due to the fact that children from culturally different contexts incorporate varied emotional narratives into their moral concepts (Nucci 2005).

To this end, this study will test the hypothesis that in a semi-structured interview, children at an average age of seven years and eight months old will produce higher Quality of Argument for the independent variables, reasoning and perspective taking, when presented with hypothetical moral dilemmas involving protagonists from the dominant culture as compared to protagonists from a cultural minority. Further to this, it is hypothesised that

there will be a positive relationship between the independent variables, with high Quality of Argument for reasoning being associated with high Quality of Argument for perspective taking to further support the theory that perspective taking and moral reasoning are inextricably linked (Damon 1977; Egan 1979; Nucci 2005; Selman 1971b).

Methodology

Subjects

The interviews were conducted at a state government primary school located in the North East suburbs of Adelaide, South Australia. The sample was a convenience sample consisting of 22 students from a combined Year 2 classroom. The children ranged in age from seven years and four months to eight years and eight months, with an average age of seven years and eight months.

Apparatus

The study consisted of a set of two interviews conducted two weeks apart. Each interview consisted of two hypothetical scenarios that presented values-based moral dilemmas, with measures for the study derived from children's responses to questions about these scenarios. The scenarios were based on the values of 'honesty' and 'fairness' and involved protagonists whose gender matched the child to whom the stories were presented.

The photograph of the protagonist presented to children was either a culturally dominant child, with Anglo-Celtic appearance, or a child from a cultural minority, with physically identifiable features of African background. Photographs of the protagonists were matched in terms of facial expression and socio-economic status, and then digitally re-sized to ensure both cultural groups were in proportion with each other. Backgrounds were removed from photographs to eliminate confounding variables that might influence the children's perception of protagonists.

Children were presented with the protagonist with culturally dominant features for one interview then presented with the protagonist from a cultural minority at the next interview. The names of the protagonists remained the same for both protagonists. A description of the two scenarios is given below:

Scenario 1:
Sarah is at the playground at recess. She is swinging on the monkey bars when one dollar drops out of her pocket. Sarah does not realise that she has dropped her money and only you see it happen.

Scenario 2:
You are waiting in the line-up at the canteen during lunch. David comes along and gets in line in front of you.

The questions for the scenarios were:

Scenario 1:
1. Can you tell me what happened in that story?
2. How do you think Sarah/David would feel if she/he lost her/his money?
3. Why do you think they would feel that way?
4. If Sarah/David dropped her/his money and only you saw it, what would you decide to do?
5. Can you tell me your reasons for making that choice?

Scenario 2:
1. Can you tell me what happened in that story?
2. How do you think Sarah/David would feel if she/he got in line in front of you?
3. Why do you think they would feel that way?
4. If Sarah/David got in line in front of you, what would you decide to do?
5. Can you tell me your reasons for making that choice?

Procedure

The photograph of the protagonist was presented to each child and a brief hypothetical vignette was read to provide a context for the protagonist. The scenarios were then presented in story form to each child in a measured tone of voice. The order of the protagonists and scenarios was alternated for consecutive participants to counter-balance any carry-over effects. Participants were shown photographs of the actual settings within their school that the hypothetical scenarios occurred in to help contextualise the scenarios and facilitate children's understanding. After each

scenario was given, the children were asked a series of questions. Responses from children were recorded using an audio voice recorder. These were later transcribed for coding and analysis.

Data

Transcribed data were categorised using an adapted and streamlined component of Collins' (2005) 'argument quality coding system'. The two variables of perspective taking and reasoning were examined separately, with a count of the number of reasons provided for the questions relevant to each context. Data from questions 2 and 3 were examined to determine the number of reasons offered for the perspective taking component of the interview. Data from questions 4 and 5 were examined to determine the number of reasons offered for the reasoning component of the interview. Data for both components were then given a 'Quality of Argument' score based on the number of reasons given by participants that supported the particular independent variable being measured.

Quality of argument coding system

0 = No relevant reasons offered
(e.g. *'David would feel pretty sad because my Mum sent me to the canteen to buy something special.'* – scenario 2, question 2))

1 = Poor argument – one or more unsupported reasons
(e.g. *'Give the money back to David because I don't want to be a thief and I'd feel sad for him if he loses it.'* – scenario 1, question 4)

2 = OK argument – one or more supported reasons adding to the participant's stance
(e.g. *'Say "Excuse me, you just pushed in front of me, can you move back?" because I wouldn't want to be mean, I wouldn't want to do that. I'd just tell her to go back because she pushed in front and I didn't like that.'* – scenario 2, question 4)

3 = Good argument – more than one well supported reason that strongly supported the participant's stance
(e.g. *'She would be sad because she has lost her money and she can't find it and she would be feeling a bit sad because she can't find it and only I can...but she wouldn't really know that she had dropped her money so she wouldn't be feeling sad.'* – scenario 1, question 2)

In order to ensure reliability, a co-rater independently coded the data from responses for both perspective taking and reasoning components. Inter-rater agreement for the perspective taking and reasoning coding was 100 per cent.

Results

Reasoning

Of the 18 participants whose Quality of Argument scores for reasoning changed (Figure 1), 13 had increased Quality of Argument scores for protagonists from the dominant culture as compared to protagonists from the cultural minority. Over half of the participants (26) did not alter their Quality of Argument scores for reasoning between protagonists.

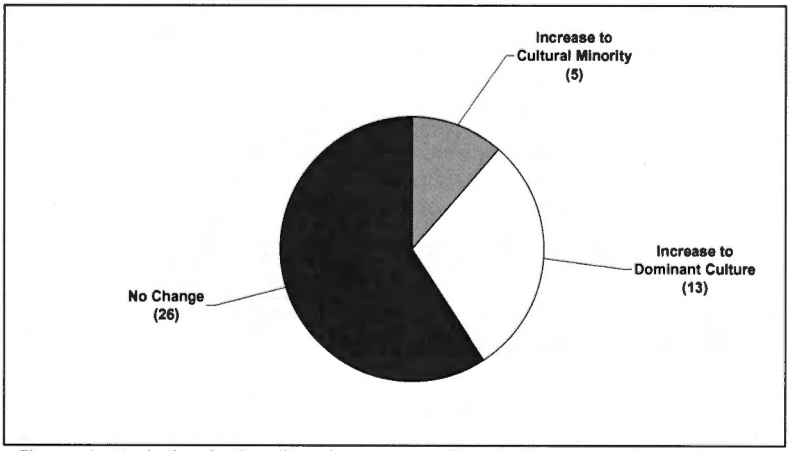

Figure 1: Variation in Quality of Argument Scores for *Reasoning* between Protagonists

All three participants who had a Quality of Argument Score of 'no relevant reason' [0] for scenarios involving the cultural minority protagonist produced higher Quality of Argument when presented with scenarios involving the dominant culture protagonist (Table 1). Of the 21 participants who had a Quality of Argument Score of 'poor' [1] for scenarios involving the cultural minority protagonist, nine demonstrated higher Quality of Argument when the protagonist was from the dominant culture.

Table 1: Matching Change in Quality of Argument Scores for Reasoning

Cultural Minority Score	n	Dominant Culture Score			
		0 (no reason)	1 (poor)	2 (OK)	3 (good)
0 (no reason)	3		2	1	
1 (poor)	21		12	8	1
2 (OK)	17		2	14	1
3 (good)	3			3	
Total	44		16	26	2

An example of the increase in Quality of Argument for the reasoning component can be seen in the following comparison of participant responses for both protagonists from an individual participant's answers to questions four and five for scenario two (Table 2):

Table 2: Comparison of Child 11's Reasoning for both Protagonists for Scenario Two

Child 11, Scenario 2, Cultural Minority Protagonist, Responses to Questions 4 and 5
4. *'Maybe tell him that do you know that you've cut in front and if he just turns around and ignores me then you can tell the teacher that he's just cut in front because the line's usually long.'* 5. *'Because to be a nice person, but, to David it would probably feel to him that you are not being really nice.'* **(Poor/1)**
Child 11, Scenario 2, Dominant Culture Protagonist, Responses to Questions 4 and 5
4. *'Tell him "hey you've cut in front", if he says like "who cares" I'd tell the teacher or just ask him again.'* 5. *'Because one, well he's cut in front of lots of people so he's making it one person longer in the line so that I would have to wait even longer, also he's probably sometimes pushing sometimes they like push them out the way and try to get back in front of them and then they sometimes push back and sometimes they push back even harder then they say that "you push me again and I'll push you back even harder".'* **(Good/3)**

Perspective taking

Over half of the participants (24) did not alter their Quality of Argument for perspective taking between dominant culture and cultural minority protagonists (Figure 2). Of the 20 participants whose Quality of Argument for perspective taking changed, 12 had increased Quality of Argument scores for protagonists from the cultural minority. Of the 12 participants whose Quality of Argument scores for perspective taking increased for protagonists from the cultural minority, nine of these were in response to Scenario Two (fairness: pushing in line).

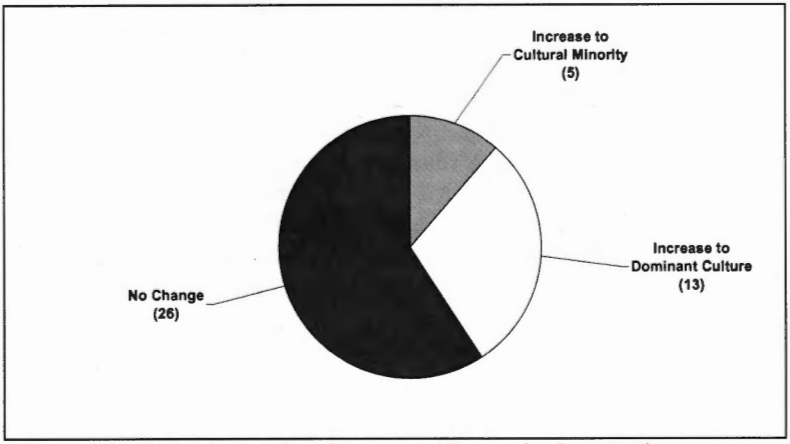

Figure 2: Variation in Quality of Argument Scores for *Perspective* between Protagonists

Variation in participants' Quality of Argument scores between the different protagonists for the perspective question was mixed (Table 3). Of the 25 participants who produced a Quality of Argument score of 'poor' [1] when presented with scenarios involving the cultural minority protagonist, seven demonstrated an increase in perspective taking for the protagonist from the dominant culture. Half of the participants (8) who had a Quality of Argument Score in the 'OK' [2] category for scenarios with cultural minority protagonists exhibited reduced perspective taking when presented with scenarios involving the dominant culture protagonist. The two participants who produced Quality of Argument Scores of 'good' when presented with scenarios involving cultural minority protagonists both had reduced

Quality of Argument scores of 'OK' for protagonists from the dominant culture.

Table 3: Matching Change in Quality of Argument Scores for Perspective

Cultural Minority Score	n	Dominant Culture Score			
		0 (no reason)	1 (poor)	2 (OK)	3 (good)
0 (no reason)	1	1			
1 (poor)	25	2	16	7	
2 (OK)	16	1	7	7	1
3 (good)	2			2	
Total	44	4	23	16	1

The Wilcoxon Signed-Rank Test (one-tailed) was conducted to explore the comparison between responses to cultural minority protagonists and dominant culture protagonists for reasoning and perspective. There was a statistically significant difference between Quality of Argument scores on the reasoning questions for protagonists from the dominant culture and protagonists from the cultural minority [$W=-86$, $z=-1.86$, $p<0.031$]. There was no statistically significant difference between Quality of Argument scores for perspective taking questions for protagonists from the dominant culture and protagonists from the cultural minority [$W=50$, $z=0.92$, $p<0.357$].

The relationship between perspective taking and reasoning (as measured by the Quality of Argument scale) was investigated using Spearman Rank-Order Correlation (one-tailed). There was a positive correlation between the two independent variables [$r=0.243$, $n=88$, $p<0.011$], with high Quality of Argument scores for perspective taking questions associated with high Quality of Argument scores for reasoning questions.

Examples of participants' responses that highlight the relationship between perspective taking and reasoning scores are presented below (Tables 4 and 5):

Table 4: Comparison of Child 20's Perspective and Reasoning Scores for Scenario Two

Child 20, Scenario 2, Responses to Questions 1 and 2 (perspective)
1. *'She would feel mean.'* 2. *'Because she pushed in front of me.'* **(Poor/1)**
Child 20, Scenario 2, Responses to Questions 4 and 5 (reasoning)
4. *'I would ask her "can you please line up behind me".'* 5. *'Because I don't like people pushing in front of me.'* **(Poor/1)**

Table 5: Comparison of Child 8's Perspective and Reasoning Scores for Scenario Two

Child 8, Scenario 2, Responses to Questions 1 and 2 (perspective)
1. *'She'd feel happy that she got in front of me.'* 2. *'Because she got to push in and maybe she didn't notice so she actually just pushed and maybe didn't mean it.'* **(OK/2)**
Child 8, Scenario 2, Responses to Questions 4 and 5 (reasoning)
4. *'I'd just say "excuse me, you just pushed in front of me can you please move back".'* 5. *'Because I wouldn't want to be mean like "hey you pushed in, go back". I wouldn't want to do that so I'd just tell her to go back because she pushed in front of me and I didn't like that.'* **(OK/2)**

Discussion

The results of this study show that young children at an average age of seven years and eight months display higher Quality of Argument scores for reasoning when presented with a hypothetical moral dilemma that involves a dominant culture protagonist as compared to a hypothetical moral dilemma involving a protagonist from a cultural minority. This finding supports the hypothesis being tested in this study that young children will display more complex justificatory reasoning (as measured by the Quality of Argument scale) for hypothetical moral dilemmas involving a protagonist from the dominant culture.

However, despite the findings showing that Quality of Argument scores for the independent variable for reasoning were higher for scenarios involving dominant culture protagonists, the findings do not show increases in Quality of Argument for both independent variables when the protagonist is from the dominant cultural group compared to protagonists from a cultural minority.

While not conclusive, these findings lend support to the work of researchers such as Wardle (1992, cited in Van

Ausdale & Feagin 2001) and Aboud (1992, cited in Killen & Stangor 2001) who raise the issues of young children's engagement with racial awareness and stereotyping in early childhood settings. Similarly, the findings support the notion that children who are not from the dominant cultural background may experience social disadvantages within school settings (Lovat 2005; Nieto & Bode 2008; Romo, Bradfield & Serrano 2004).

Additionally, the findings of this study demonstrate that there is a significant relationship between young children's Quality of Argument scores for questions relating to perspective taking and their Quality of Argument scores for questions relating to reasoning. This supports the well-established work of Selman (1971a; 1971b) and Damon (1977) who theorised that children's reasoning is inextricably linked to their ability to take the perspective of others.

As the results confirm, young children's moral reasoning involves the dual aspects of emotional affect (in the form of perspective taking) and justificatory reasoning. These findings lend support to Collins' view (2005) that for young children to be effective and critical thinkers they need to be ethically grounded and be able to reason cogently. While it is uncertain whether young children would engage in both of these components of moral reasoning in the absence of prompting questions (such as those used in this study), there is much evidence to support the notion that children who demonstrate advanced reasoning and complex ethical thought are more likely to act ethically when confronted with actual moral dilemmas (Peterson 2004).

Of the 44 possible responses by the 22 participants for the reasoning component of both scenarios, 26 responses showed no alteration in Quality of Argument scores between protagonists. This can be viewed in three ways. Firstly, it could be assumed that these children's moral reasoning skills are static and did not change regardless of cultural difference between protagonists. It could be seen that while children may alter their perspective taking for cultural minority and dominant culture groups, their ability to reason would not change as this is linked to maturational effects. This supports Kohlberg's theory that young children produce moral reasoning at higher levels with developmental increases in cognitive functioning regardless

of perspective taking abilities (1958, cited in Schemrich 2003).

Secondly, and perhaps more encouragingly, these children may take into account the perspectives of both protagonists, but may not be influenced by identifiable cultural differences when reasoning about moral dilemmas.

Thirdly, it is possible that these children are exhibiting the deeper concept of tolerance proposed by Heyd (1996, cited in Goodman & Lesnick 2001) as being necessary for eliciting true 'tolerance', that is, tolerance that is the foundation of relativist thinking. These children may be engaging with the notion that both protagonist's actions are equally valid because their moral stance is unchallengeable, which is of concern for children's moral reasoning.

In light of the complexities involved in the concept of 'tolerance' and the ability to develop effective moral reasoning in young children, it is a recommendation of this study that children within South Australian junior primary schools and preschool settings should be encouraged to develop critical reasoning skills through programs such as 'Philosophy for Children' (Lipman 1981), and through an increased focus on philosophical inquiry and moral reasoning (MacMullin & Scalfino 2007). By incorporating philosophical and critical thinking elements into early childhood settings, educators can help to foster children's cognitive, social and emotional development (Law 2007; Trickey & Topping 2007) leading to increased potential for perspective taking and sound reasoning about moral dilemmas involving children from culturally different backgrounds.

There was a significant relationship found between Quality of Argument scores for reasoning and perspective taking. There was also a statistically significant difference in Quality of Argument scores for reasoning involving the dominant culture protagonist compared to reasoning for the cultural minority protagonist. It could be assumed, then, that there would also be a significant finding for Quality of Argument scores for the perspective taking component, with high Quality of Argument scores associated with scenarios involving dominant culture protagonists compared to protagonists from a cultural minority. However, there appeared to be no relationship between Quality of Argument

scores for perspective taking questions and the different protagonists.

This was an unexpected finding. Therefore, it is recommended that there needs to be a more comprehensive study into the specific area of young children's perspective taking when reasoning about hypothetical moral dilemmas involving culturally different protagonists. It is suggested that a more specific measurement tool be designed for future research to measure Quality of Argument scores for questions about perspective taking to help investigate this crucial element of moral reasoning.

The 'argument quality coding system' (Collins 2005), as the foundation for the measurement tool used to analyse the data in this project, was sufficient to provide results that were considered valid and reliable within the scope of this exploratory study. However, it is recommended that future research that draws upon children's verbal responses to ethical dilemmas should incorporate additional measurement tools that utilise techniques to draw out more of the intricate syntactic differences in similarly coded responses.

Conclusion

This study has clearly shown that there is a need for further research into children's moral reasoning in light of the continuing implementation of the National Framework for Values Education in Australian Schools (DEST 2005) and the various interpretations that may be applied to the value of 'tolerance', and how it, and indeed all values, may be taught in school settings.

It is vital that early childhood educators work to foster sound moral reasoning in young children through the development of perspective taking and sound reasoning skills (Cam 2006; Fields 1995; MacNaughton & Williams 2004; Splitter 1985). By developing these skills and dispositions in young children through engagement with philosophical inquiry and critical thinking, educators can play an important role in ensuring that children can *'partake in the good life as members of a democratic society'* (Collins 2005, p. 17).

One of the incidental points raised in this paper, that there is a distinct possibility that 'tolerance' is being interpreted in overly relativistic ways, further highlights the

need for increased exposure of children within early childhood educational settings to philosophical and critical thinking. Law (2007) advocates a liberal approach to education that includes philosophy programs and critical thinking activities, as being fundamental for ensuring that children do not think relativistically about issues of morality. Furthermore, research shows that there are significant academic, emotional and social benefits for students engaging in philosophy for schools programs (Law 2007, pp. 36-39).

Therefore, value of 'tolerance' within schools, and indeed throughout the wider society, is of particular importance within Australia's increasingly pluralistic society (Babacan 2007; Lovat 2005), and needs to be about the acceptance and acknowledgement of cultural difference within well reasoned limits, not just *'because it's being nice'* (Lucy, 7 years 8 months).

Acknowledgements

The research contained in this paper was part of my fulfilment of the Honours program in Early Childhood Education at the University of South Australia, Magill Campus. I would like to sincerely thank my supervisor, Virginia Tregenza, who challenged me to do my best and steadfastly guided me to think critically and creatively throughout the entire process. Without her encouragement, good humour and belief in my abilities, this paper would certainly have only graced my own bookshelf.

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From Thinking Skills to Thinking Classrooms: Preparing Teachers for P4C Level 1 Certification – The Singapore Way

Ho Wah Kam (Singapore)

Introduction

This report focuses on the efforts of the Singapore Teachers' Union (STU) to prepare Philosophy for Children (P4C) teachers for Level 1 Certification, which is validated by the Federation of the Australasian Philosophy in Schools Associations (FAPSA). The model used is based on that of the Victorian Association for Philosophy in Schools (VAPS), with some modifications to suit local conditions. While more than 400 teachers (from primary and secondary schools and junior colleges) have been exposed to the ideas of the P4C programme in Singapore, with the cooperation of VAPS and FAPSA, STU did not start the formal validation of these teachers' experiences until after the successful organisation of a two-day conference on developing a Community of Inquiry in 2006, to which FAPSA trainers made a major contribution. The institution of formal training for P4C teachers has strengthened this STU-FAPSA relationship, and has already seen two groups of teachers working towards Level 1 Certification. Using examples from the training programme that was undertaken by the second group of 25 teachers early in 2008, this report will address two main questions: 1) What did the training programme involve? and 2) How was the training received?

Background information

It should be noted briefly that teaching thinking skills in Singapore goes back to the early 1990s, when P4C was introduced in 10 schools on a project basis. The project was overtaken by new educational initiatives from the education authorities, among which was the Thinking Programme for

Schools, with R. J. Marzano's 'dimensions of learning' forming the conceptual framework for teaching thinking. In advocating the teaching of thinking in schools, STU drew a distinction between approaches that target general thinking skills and those that are domain specific, e.g. thinking in science, mathematics, etc. It was felt that teaching thinking purely as a skill to be imparted directly has its limitations. As a result, when Singapore's learning environment became more constructivist (under the 'Teach Less, Learn More' initiative) with students encouraged to talk more, ask questions, and dialogue (while remaining focused on the learning objectives), we at STU thought that an inquiry-based approach, as distinct from a skill-based one, was required in order to develop a thinking classroom. Hence, our banner title – 'From Thinking Skills to Thinking Classrooms'. Following Matthew Lipman, 'thinking classrooms' are ones where students listen to one another with respect, build on each other's views or ideas, challenge them if necessary, and together identify assumptions and draw inferences from what has been said. Or what a former prime minister of Singapore, in his speech promoting 'Thinking Schools, Learning Nations' (1997), called the development of schools as 'crucibles for questioning and searching'.

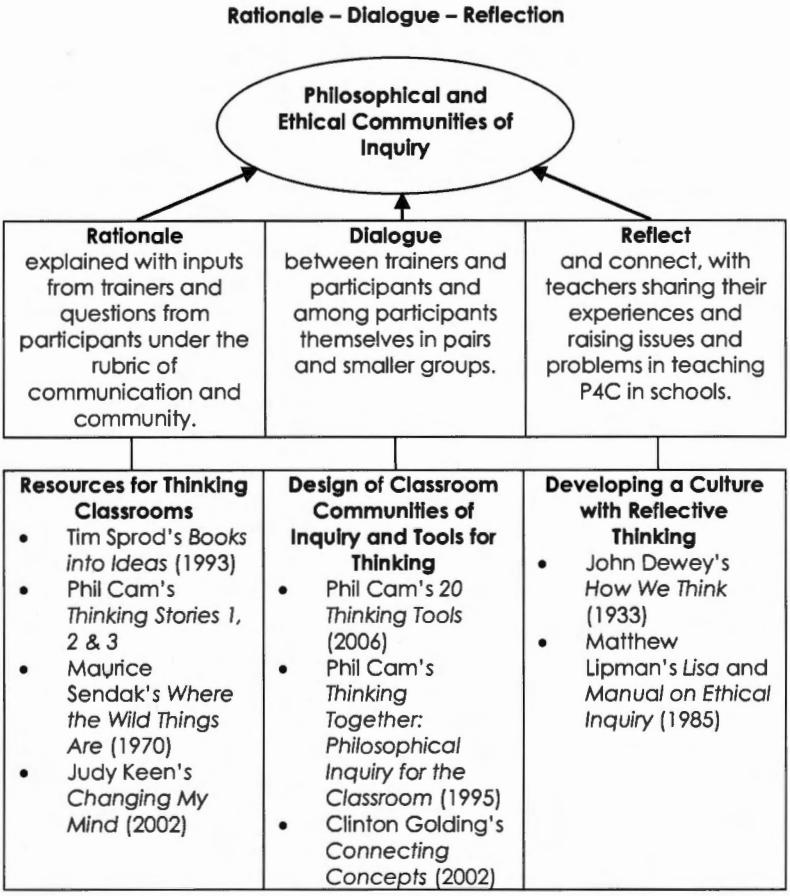
Thrust of the programme

P4C is essentially inquiry-based. As is well-known, P4C's main methodology is based on a community of inquiry, which is most relevant, STU thought, to the 'Teach Less, Learn More' initiative for Singapore schools. The ideas underpinning P4C were drawn from those of John Dewey (philosopher), Lev Vygotsky (psychologist) and Matthew Lipman (philosopher and teacher); so while Dewey conceived of thinking as experience, Vygotsky saw learning and thinking as social. It is this coming together of philosophy and psychology, which is the driving force behind STU's Level 1 training programme.

Structure of the programme

The training programme is made up of three modules of six hours each, followed by a fourth module of three hours (totalling in all about 21 hours of face-to-face contact time with the trainers). Participants are also required to

submit, after the lapse of one or two months of more reading, reflection, practise and writing (totalling another 20 hours in all), a written assignment to be marked by FAPSA-approved trainers in Australia. Together with the written assignment, candidates must provide empirical/visual evidence (with the submission of video-taped lessons) of being able to use the community of inquiry approach to teach P4C. Successful completion of the modules and assignment leads to the award of the Level 1 Certificate. As required by FAPSA, the written assignment has to be based on experience in, and reflections on, teaching P4C in a Singapore classroom. The STU's Rationale-Dialogue-Reflection (RDR) training model is structured thus:



What did the training programme involve?

This year, the first two modules of the training programme (i.e. PS101 and PS102) were taught by Dr Tim Sprod on 30 and 31 January, with Associate Professor Phil Cam teaching PS103 and PS104 on 25 and 26 February 2008. The three-week break before the second two modules was necessary to allow the teacher-participants to read up and reflect on what they had learnt in PS101 and PS102. These four modules formed the basic content of the P4C Level 1 training programme.

PS101: Nature and practice of community of inquiry in P4C

PS102: Community of ethical inquiry and the nature of questions

PS101 and PS102 focused on the development of (a) a community of inquiry in Singapore classrooms and (b) a community of *ethical* inquiry. Dr Sprod makes a useful distinction between 'a community of *philosophical* inquiry' and 'a community of *ethical* inquiry'. In PS101, for example, he explained in detail the features of a community of philosophical inquiry, and then put the group through what he called the 'fish-bowl' experience. Dr Sprod also explained that the methodology of a community of inquiry in P4C:

> ...gives a picture of philosophy as a *cooperative* effort...This does not rule out competition between ideas, for some positions are incompatible, and then it may be a matter of deciding which is better.

Interpersonal communication and respect for each other's ideas are key features of a community of inquiry, which commonly employs a narrative (the 'trigger'), which has puzzles, most often philosophical, embedded within them. Examples of 'triggers' used in both PS101 and PS102 were *The Knife* by Philip Guin in Phil Cam's *Thinking Stories 1*, *Double Trouble* by Phil Cam himself, Judy Keen's *Bicycle Thief*, and Chapter 1 of *Lisa* by Matthew Lipman, the originator of P4C, the latter 'backed up by manuals which flag the philosophical issues and offer discussion plans, exercises and background notes for the teacher to use'. Other trigger material, such as picture books, novels, movies, and newspaper articles, may also be used, provided

they contain promising 'triggers'. Dr Sprod's well-known text for schools, *Books Into Ideas*, was also referred to. It was argued that the 'trigger' is an important means for establishing a shared commitment to inquiry. Dr Sprod also dealt with concept formation and the use of concept games.

In PS102, as background information, Dr Sprod explained P4C's debt to John Dewey, Lev Vygotsky and Matthew Lipman. He devoted a good part of the module to discussing a community of *ethical* inquiry, which is a specific instance of a community of inquiry. In Lipman's manual entitled *Ethical Inquiry*, associated with the novel *Lisa*, it is explained that there is a need to 'introduce the students to the tools, techniques, methods and procedures which are characteristic of ethical inquiry'. The concern of such inquiry is with moral matters and how moral judgement and character development can be strengthened through a consideration of moral dilemmas. Reference was made by Dr Sprod to the importance of values, Mill's utilitarianism, and Aristotelian understanding of character and virtue.

Among the implications for the classroom, Dr Sprod said that the teacher has an important role to play, especially in helping the class avoid ethical relativism. The community of ethical inquiry would serve as an excellent forum for moral and civics education in Singapore since moral instruction by itself cannot lead from judgement to morally good action. Dr Sprod concluded the content of PS102 with a discussion of the nature of questioning and a classification of questions, using Phil Cam's question quadrant.

PS103: Using and creating stimulus materials
PS104: Thinking together and sharing experiences in teaching P4C

Involvement in PS103 and PS104 helped participants see how philosophical inquiry might function as an educational activity by examining the nature of philosophical questions (as distinct from comprehension questions, for instance) and the kinds of tools and procedures that a philosophical inquiry employs.

In PS103, Phil Cam covered both the philosophical and pedagogical dimensions of using and creating stimulus materials through the following sessions:

1. The first session focussed on the development of an understanding of what it means to select appropriate stimulus materials for the Community of Inquiry and an appreciation of the ways in which such materials have traditionally been supported by the construction of discussion plans, exercises and activities;
2. This session built upon the first session as well as on the work on the character of philosophical questions begun in PS102. Together with a partner, each pair of participants developed discussion plans for some stimulus material in order to further appreciate how they are constructed and to begin to develop the ability and confidence to construct them for themselves;
3. In this session, participants discovered how to construct exercises that can be used to strengthen particular intellectual skills as well as how to devise activities that can be used to extend class discussion; and
4. The last session focused on the systematic development of the tools of thinking in the Community of Inquiry, illustrated by reference to Phil Cam's book *Twenty Thinking Tools*, as well as by more recent work.

A lot of sharing took place in module PS104, with teachers from both primary and secondary schools providing inputs and raising philosophical and pedagogical questions. This gave Phil Cam the opportunity to elaborate on, among other things, the distinction between giving reasons and reasoning, comprehension and speculative questions, ethical vs metaphysical vs epistemological issues, materials as stimuli only, teaching vs teacher intervention, and ways of distributing questions in a large class to ensure equitable participation among the students. One of the interesting aspects of teaching P4C in primary schools is when 'mother tongue' teachers (i.e. those teaching Chinese, Tamil or the Malay language) use a bilingual approach, in which the stimulus text used is in English while the discussion that follows is in one of the 'mother tongues'. This bilingual approach is peculiar to the situation in Singapore's primary schools where in the national curriculum civics and moral

education are incorporated into the mother tongue curriculum. In concluding PS104, Phil Cam spoke at length on the requirements of the written assignment based on the VAPS model, modified in 2007 for Singapore schools.

How was the programme received?

Both the quantitative and qualitative feedback spoke very well of the content and delivery of the four modules. (See Figure 1, Figure 2 and Tables 1, 2 and 3.)

Figure 1

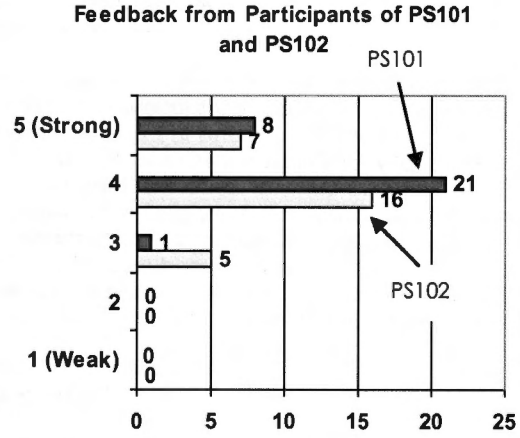


Figure 2

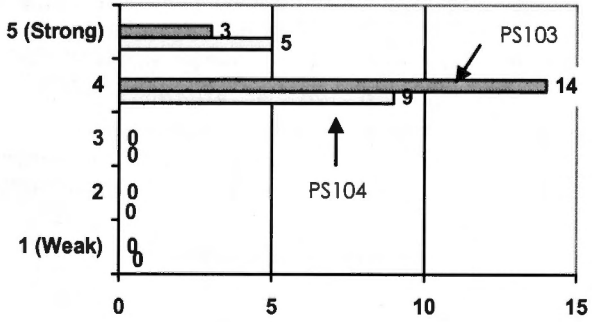


Table 1: Sample of the written comments and reactions of participants on PS101, PS102, PS103 and PS104

'As a newcomer to P4C and COI, I found the experience of being in a community of inquiry stimulating and engaging. The trainer conducted the discussions with skill and clarity so that even newcomers such as myself were able to fully appreciate the process that unfolded. His expertise could be seen in the way he facilitated COI sessions, interacted with participants, and responded to participants' questions. The 'just-in-time' handouts in the form of articles or materials were distributed at the point of use to avoid confusion. These were short enough to encourage reading while still providing the repertoire to capture the range of thought of this domain.'

Ms Low Chee Moon of Clementi
Woods Secondary School

'Philosophy in Schools sounds like an impractical topic, especially for teachers in neighbourhood schools struggling to teach their students the core curriculum; a luxury only for students in better-performing schools. As it turns out, Philosophy for Children (P4C) has very practical benefits for students of all ages and ability. It deals with real ethical and moral issues that students face in their daily lives; dilemmas of integrity, loyalty, responsibility, identity, etc. The workshops successfully model this through creating actual Communities of Inquiries and reflecting on the process together. P4C can be incorporated by teachers in their daily teaching, or implemented on a school-wide basis.'

Mr Akmal Abdul Rahman
North View Secondary School

'My colleagues and I conducted a couple of lessons on Community of Inquiry after attending the first module of the P4C workshop. The students found the lessons refreshing – being able to voice their opinions on issues that were close to their heart and appreciate the different views of their classmates. The sharing of the experiences of the other participants in the second module was very helpful for us – we learnt how to improve on the structure of our own lessons so that the objectives can be better achieved. Community of Inquiry is indeed very effective in inculcating higher order thinking skills among our students as well as promoting the awareness of social and moral values. All teachers as educators should be exposed to the P4C.'

Ms Wong Wee Ling and the P4C Team
Pioneer Secondary School

Table 2: Comments from other participants at PS101 and PS102

'A lot of depth in how the Community of Inquiry (COI) should be carried out – how pupils can ask questions; how questions can be linked. I have learnt how to carry out a COI for philosophy lessons in my class with more confidence.'

'Well thought-out and planned series of activities. Outstanding, clear and precise explanations and modelling.'

'Pushes me to think of what I can incorporate in my [P4C] lessons – being a history and social studies teacher.'

Table 3: Comments from other participants at PS103 and PS104

'Definitely there were a lot of activities and thinking tools that we can bring back to our classrooms. I've got more ideas now on how to make my history lessons alive.'

'The sessions on creating stimulus [materials] for P4C inquiry was helpful and practical. Tools for inquiry were explained and we were shown how to use them appropriately.'

'The presenter is very experienced – giving us helpful comments and opinions. I've learnt a lot and gained many useful insights [into P4C].'

Concluding remarks

While there cannot be a precise definition of a community of inquiry, it is clear from the feedback received from teacher-participants that the key concepts of community and inquiry acquired in the workshops took on a new aspect for them as they applied them in their individual classrooms. These classrooms can vary, in terms of academic ability and/or other background factors, across Singapore's schools. What the four modules have shown the teacher-participants is that dispositions of open-mindedness and reasonableness, good thinking, learning to communicate ideas and interact in groups, and better understanding of each other in a small multicultural city such as Singapore can be developed by all students of whatever learning ability. In brief, it was this coming together of philosophy and psychology leading to personal and social growth that became the driving force behind the Level 1 training programme.

The Hale School Philosothon

Matthew Wills (Hale School, Perth)

Does God exist?
Do human beings have free will?
What is the nature of the human mind?
Is it morally worse to actively kill a person than to passively allow that person to die?

These were just some of the questions explored in depth at the Hale School 'Philosothon' held in Western Australia late last year. Thinking critically, carefully and respectfully were the hallmarks of the event, which will become a regular feature on the school's calendar. This article is written in order to commend the event to other teachers, who might like to use the model in their own schools.

A 'Philosothon' encourages students to involve themselves in 'wicked' philosophical problems. A wicked problem is a term coined by Horst Rittel (a pioneering theorist at the University of California, Berkeley) and refers to problems which are messy and circular:

> Wicked problems have incomplete, contradictory, and changing requirements; and solutions to them are often difficult to recognise because of complex interdependencies.[1]

Rittel stated that when one attempts to solve a wicked problem, the solution of one of its aspects may reveal or create another even more complex problem or problems. He contrasts wicked problems with 'tame' problems in science, mathematics, chess or puzzle solving. Philosophy deals with wicked problems and the 2007 Hale Philosothon dealt with four such problems.

We provided students with a resource kit, which included pre-reading on each of the four topics. A selection

[1] Wicked problems: http://en.wikipedia.org/wiki/Wicked_problem.

from Richard Dawkins' book *The God Delusion* was used as background reading for the question 'Does God exist?'. Other resources included a selection from John Stuart Mill's *On Liberty and the Subjection of Women* (1879 ed.) and a CD presentation from Peter Singer on Euthanasia. Students received this material about a month before the Philosothon.

Students were then asked to come up with questions arising from their reading. These were some of the questions students came up with in relation to the first problem:

- Does God exist in a physical or metaphysical state?
- If there is no God, where do our morals (e.g. don't steal) come from?
- Could infinity be possible?
- How does one define God?
- Has he ever made contact?
- Is God there to give meaning to our lives?

The process used in the Philosothon was a 'Community of Inquiry' model. This is a model initiated by Professor Matthew Lipman, the founder of the Philosophy for Children movement, and is a major component of the new West Australian Philosophy and Ethics course. There is an outline of what a Community of Inquiry model looks like in the appendix of this report, and a helpful resource site is to be found on the Tasmanian Education Department website.[2]

The idea of a Philosothon started in July 2007. Having recently participated in an interschool Spellathon, the Gifted and Talented Coordinator at Hale School, Leanne Owen, approached me with the idea of creating an interschool Philosophy competition. She had in mind the needs of gifted children, and saw such an event as an excellent opportunity to promote higher order thinking and the new Philosophy and Ethics course. From there the hard work began as we put together an event which was in the end a great success.

The first thing we did was flag the idea with other local Perth schools and a total of ten schools accepted the invitation to participate: Methodist Ladies' College, Christ Church Grammar, Hale School, St Hilda's, John Septimus Roe, Penrhos College, Wesley College, Perth College,

[2] Tasmanian Education Department Website – Community of Inquiry: http://ltag.education.tas.gov.au/proflearn/pedagogy/communityofinquiry/.

Guilford Grammar and St Mary's Anglican Girls' School. We asked each school to prepare a team of five students, one from each participating year level (8-11) and a reserve from any of these year levels. We were cognisant of the inherent competitive nature of independent schools and this no doubt helped in the process. Various resources were developed, links were made with the Philosophy departments in all the major Perth universities, trophies and medallions were ordered and we set up a website for the event (http://www.philosothon.org).

Philosothon Trophy

On the 7th of November 2007, ten teams of five students from each of the participating schools came together in the John Inverarity Music and Drama Centre. Following a light meal and drinks, participants, their teachers and parents gathered for introductions and a detailed outline of the format. We divided into four Community of Inquiry groups, which ran for 30 minutes each. Four students representing each school participated in each discussion, with the reserve able to replace them on a maximum of two occasions. Students remained in year level groups for the first two Communities of Inquiry and, after a short break, were then mixed up for the final two discussions.

Points were assigned to individual students and used to work out team and individual scores on the evening. A magnificent trophy was awarded to the winning school at the end of the evening and medals were awarded to various categories. All students received a certificate to honour their

selection to represent their school. From all reports the evening was a great success and the fact that Hale won the event made it even better! The medal winners were Robert Gillam (Year 8) from Hale School, who won the 'Curtin Centre for Applied Ethics and Philosophy Prize', and Hugh Edwards (Year 8) from Christ Church Grammar, who received the 'Haynes Prize', which is awarded by the Association for Philosophy in Schools (APIS).

The winning team from Hale School (left to right): Arjun Kaushik, Shane Chandra, Blair Hurley, Robert Gillam and Lee Fitzmaurice

One of the strengths of this initiative was that it involved collaboration between the tertiary sector and secondary school sector. Discussions were facilitated by PhD students in Philosophy from the University of Western Australia (UWA) and Murdoch University, and closely watched by the judging panel. The judging panel consisted of university academics in Philosophy, Dr Nic Damnjanovic (UWA), Dr Felicity Haynes (UWA), Dr Alan Tapper (Chairman of APIS), Dr Richard Hamilton (Notre Dame University) and Chair of the Judges Dr Raymond Driehuis (Curriculum Council Officer for Philosophy and Ethics). They were all very impressed with the standard and quality of the discussion.

Philosothon judges and facilitators (left to right):
Dr Richard Hamilton, Dr Felicity Haynes, Nin Kirkam, Laura D'Olimpio, Andy Lamey, Mark Brown and Dr Alan Tapper

The only similar event to this one that I have come across in my research occurs in the USA and is called an 'Ethics Bowl'. The event is run in a similar format, but involves the discussion of specific ethical situations and is open only to university colleges. More information can be found at the Ethics Bowl website.[3] This event has now run for several years and its growth in the USA has been phenomenal. Having started with a small group of colleges, it now consists of 32 regional centres and culminates each year with a regional final.

With this in mind, we have recently invited twelve interstate schools to send teams to Perth in 2008, where we hope to share the Philosothon model with them. Because Perth is such a long way away, we are dubious as to whether people will come. Nevertheless, we will endeavour to share these ideas in the hope that our guests might return to their own state and host a similar local event. Contact me at Hale School if you are interested in participating or organising your own Philosothon (mpw@hale.wa.edu.au).

Thirteen WA schools have booked in for the 2008 Hale School Philosothon, which will take place in October

[3] Ethics Bowl: http://ethics.iit.edu/eb/index.html.

2008. This includes three state schools, which of course we are eager to see participate.

This model has been tremendously enriching for both the school and individual students in our Philosophy and Ethics classes. There is also a growing body of evidence to suggest that encouraging collective philosophical debate has measurable educational benefits for students, enhancing their intellectual, social and emotional intelligence. At the very least it has shown me the incredible depth of understanding which students possess, often despite their age, and the profundity of their insights never ceases to astound us.

Matthew Wills is the Head of Philosophy, Values and Religion at Hale School in Perth.

Appendix: Guidelines for community of inquiry group facilitators

- Have students seated in a way that maximises opportunity for communication and democratic behaviour. This is usually a circle.
- Establish appropriate guidelines.
- Encourage protocols:
  I agree with...because...
  I disagree with...because...
- Remind students of 'trigger material' text/CD and then brainstorm.
- Ask students what they found interesting or puzzling.
- Gather students' questions/comments either on the board or write them on your clipboard. Group questions that are the same or similar.
- Discuss the questions/comments in an order decided by a variety of methods, such as voting for the most interesting or discussing those that have easy answers first. In order to fast track this you might like to pick the matters to be discussed yourself.
- Facilitate the use of 'wait time' during the discussion.
- Encourage participants to talk to the whole circle or directly to the person they are answering, rather than always through the teacher.
- Have students raise hands or use 'talking cards' to facilitate 'taking turns'.
- Participate in the discussion, but as the facilitator, also 'hold back' sometimes so as not to influence too much.
- Facilitate questioning that signals cognitive moves that might encourage meta-cognition.
- Encourage recognition in the community that many questions are complex and may never be answered.
- Have students take responsibility for their comments and be prepared to defend, modify or change them as appropriate.

We are drowning in it

Review of *How Mumbo-Jumbo Conquered the World*, by Francis Wheen

Peter Lavskis (University of South Australia)

The humorous title understates the serious and damaging nature of the 'mumbo-jumbo' discussed in this book. The reader expects to be entertained, and certainly is, but in retrospect should be alarmed (as well as alert). It is hard to think of a more accurate title; an academic sounding title could not convey the book's purpose so succinctly. Indeed, the American version is titled, *Idiot Proof: A Short History of Modern Delusions*. The basic thesis of this book is that very well-educated and influential people, such as heads of state and prominent opinion leaders, have substituted superstition and self-righteous hypocrisy for the Enlightenment values of respect for truth, rationality, and the empiricism exemplified in science.

Not all the chapters are about disturbingly serious matters; Wheen delves into business motivational bestsellers such as *In Search of Excellence* and *The Seven Habits of Highly Effective People*, and with the benefit of hindsight, tells us which of their heroes are now broke, and who is in jail. Reading what they recommend and their praise for ENRON'S business model makes one glad of never having read any of them.

It is surprising to find Al Gore exposed as cynically manipulating the media on par with Bill Clinton and Tony Blair, all made possible by the media's propensity to exploit the emotional surges, which its consumers are ever ready to consummate. Wheen's chapter on this topic is replete with examples, which would be merely hilarious if they weren't so much more dangerous than the stereotypes which we are so

accustomed to swallow; the manipulated sentimentality over Princess Diana or the perceived danger from the existence of 110,000 paedophiles, whose names *The News of the World* promised to publish.

Wheen has a track record of serious scholarship and has written a biography on Karl Marx. Another of his books won the George Orwell prize in 2003. His work in journalism goes back to the early eighties when he wrote for the *New Statesman*, and where he first met Tony Blair, who wrote left-wing articles advocating ideological positions opposite to what he was promoting as prime minister. Wheen's main weapon is humour and ridicule, but this isn't inconsistent with sound scholarship. Every one of the almost unbelievable quotations is comprehensively referenced in a section just before a detailed index. Not only does this make the book a valuable resource, but in addition, after the index, there is a brief description of a collection of websites which address and complement sections in the book. They include mumbo-jumbo and history, sites on democracy, free-thinking forums for geopolitical debate, investigations of the paranormal, Alan Sokal's archive on his hoax, a watch on secular and religious liberty, the unofficial Christopher Hitchens website, observations on political follies, an urban legend check, and one on creationism to see what the enemy is up to.

Tony Blair appears to be Wheen's chief victim, not necessarily because the author particularly wanted to elevate him, but probably because of the wealth of material. Blair has written and spoken in parliamentary debates, and all on the public record. Despite Blair's skills in wheedling out of previously-advocated positions through bland statements and blatant denials, Wheen finds outlandish statements to which there is no defence, leaving Blair's political supporters no plausible reaction other than a stunned silence. Cherie Blair's antics complement him very nicely, and all this before he revealed God's role in his going to war, and before his recent conversion to Catholicism. Incidentally, not all of Cherie's new age beliefs are completely her own work; she had some help from Hillary Clinton.

There is something ridiculous about a po-faced critique of astrology or alien abduction, but a humorous approach makes it more than bearable. Analogously,

rational and evidence based criticisms of the over-permissive gun ownership laws in the USA lack impact because it has all been said before. Mike Royko and Michael Moore, by their use of ridicule and humour, were able to land a few telling blows. Wheen is in that tradition.

It is not the main aim of this book to demolish the many foolish and damaging beliefs and practices currently doing the rounds – Wheen knows that is asking too much. His main concern is to show that the abandonment of Enlightenment values puts us in danger of repeating and promoting pre-Enlightenment superstitions. The book is a warning, clothed as entertainment, except perhaps for the Tony Blairs of this world, who may find it less than funny.

In 1952 Martin Gardner published his study on gullibility, *Fads and Fallacies in the Name of Science*, and in 1981, the much bigger book, *Science: Good, Bad and Bogus*. Wheen's book demonstrates that the problem is growing. Once the question of whether aliens built the pyramids before they turned to abducting American psychiatrists would have been considered in terms of how such structures could be built with existing technology, but now postmodernist assertions for the non-existence of reality compete with earlier 'explanations'.

The chapters are short and free from waffle. The origin and impact of postmodernism is clearly presented, complete with an account of the Sokal Hoax. Several chapters would be more useful for those with some specific knowledge of economics, for example, the detailed analyses of the economical policies of Reagan, Thatcher and Blair. Similarly, Wheen's argument against Huntington's thesis in *The Clash of Civilizations and the Remaking of the World Order* (an expansion of his 1992 article, 'The Clash of Civilizations?', which was translated into twenty-six languages) would be of most interest to students of international politics.

The book has been spectacularly praised. It casts an alternate slant on events and the doings of international celebrities. We already know who did what, but with the addition of a few additional facts, we are forced to new interpretations. Much of the material is *so* strange that without the references in the Notes section, the reader could be left wondering what Wheen might have been smoking. The book begins with an eight page comparison between the

change of government in Iran and England in 1979; the ascent of Ayatollah Khomeini and Margaret Thatcher – a surprisingly apt comparison. The next eight pages consist of a very clear exposition of the Enlightenment and Enlightenment values. From then on, it's no holds barred.

How Mumbo-Jumbo Conquered the World
By Francis Wheen
Harper Perennial, 338 pp., $24.95

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