

## Philosophy for Children *really* works! A report on a two year empirical study.

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I would like to dedicate this work to the wonderful faculty of the Junior School of Collingwood School in West Vancouver, BC, Canada.

### DISCUSSION

P4C ought to nourish moral development

Aside from its capacity to nourish "skilled" thinking (the narrow view of "critical thinking" \ it has been theorised by man) that, *Philosophy for Children* – or P4C as it is often fondly referred to - ought also to nourish good thinking in the moral sense (the "deeper" view of critical thinking). That is, it has been theorised that youngsters who partake in a *Philosophy for Children* program over an extended period of time ought to become better people as well as better thinkers.

There are a number of reasons why one would predict that this ought to be the case. The first thing that comes to mind is the content of the program, i.e., philosophy. Since philosophical inquiry so often focuses on value issues, it offers participants the opportunity to objectively (i.e., without bias) discuss the difficulties, consequences, benefits, and rationale of adopting any given value in any given situation. In so doing, P4C helps participants create a comprehensive picture of the sort of people they want to be and the kind of world they want to live in. As well, since such discussions serve as "moral practice," i.e., youngsters experience in their imagination the consequences of choosing out of various alternative courses of action - P4C ought also to ensure that, when push comes to shove, those values will in fact mould behaviour.

As impressive as analyses of such value issues would seem to be, it can be argued that, paradoxically, it is the "value neutral" process, i.e., participation in a *Community of Inquiry*, which contributes most powerfully to moral development (though the content uniquely energises the process<sup>3</sup>). The principal reason why participation in a *Community of Inquiry* can be expected to fuel such development is that participants (i) are chronically exposed to the points of view of others, and (ii) inevitably come to view others' perspectives as an invaluable contribution to understanding the complexity of any issue, i.e., perspective-taking is chronically positively reinforced.

Perspective-taking: a developmental model

In terms of a developmental continuum, the initial or most primitive position of an individual's perspective-taking capacity can be described - using one of Piaget's terms<sup>4</sup> - as "egocentric," i.e., viewing the world strictly from one's own point of view. In theory the opposite pole is held down by the *regulative ideal* of being able to view any given situation from an infinite number of perspectives, i.e., a God's eye view. In between these two poles, again in concurrence with Piaget's theory of cognitive development, it can be presumed that the capacity for perspective-taking - or what is sometimes referred to as differentiation - grows in a stepwise progression.

Given this cognitive developmental model and given the assumptions about the dynamics of the *Community of Inquiry*, one would predict that long term participation in a *Community of Inquiry* ought to facilitate

both the capacity and the propensity of participants to take into account even greater number of viewpoints at any one time when attempting to think through complex issues. It is this assumption that formed the foundational focus of this research project.

The qualitative impact of perspective-taking

Being able to access many points of view when making decisions in complex situations seems in and of itself a laudable goal. However, one could argue that studying the perspective-taking impact of participation in a *Community of Inquiry*, *per se*, merely focuses on a necessary rather than sufficient condition of moral thought<sup>5</sup>. That is,

one could argue that an individual might access a large number of viewpoints but then not fairly take them into account when making decisions. In terms of measuring the "deep" impact of *Philosophy for Children*, therefore, it is important to attempt to also measure the qualitative changes in participants' reasoning styles that are theorised to accompany increased perspective-taking.

Developmental literature is replete with theories on how increasing differentiation might have an impact on the qualitative way that an individual reasons. The qualitative styles and/or attitudes that were the focus of this study were:

- 1) the degree to which an individual is "self-protective";
- 2) degree of conformity;
- 3) the degree to which an individual engages in principled thought, or what Kant referred to as "universalisation;"
- 4) tolerance of ambiguity;
- 5) external orientation;
- 6) self-esteem

There were three primary reasons for picking the six variables listed above.

- 1) There were already "objective" questionnaires available, i.e., measurement protocols, that could be easily and inexpensively marked<sup>6</sup> that purported to measure these qualitative ways of thinking.
- 2) These questionnaires had already been independently assessed for reliability and validity.
- 3) Their relation to perspective-taking is relatively transparent.

I will briefly discuss point '3' i.e., the relationship of each of the above reasoning styles in relation to perspective-taking in turn.

The first three styles of reasoning, i.e., self-protective, conformity, and principled thought, can be discussed together. Together they mirror major developmental qualitative changes described by such renowned ego and moral developmental theorists as Loevinger<sup>7</sup> and Kohlberg<sup>8</sup>. Both Loevinger and Kohlberg depict development as occurring in three broad steps (each having its own subdivision). Individuals at the lower levels of development are described as having a "self-protective attitude." Loevinger describes the self-protective individual as one who is manipulative, exploitive, and opportunistic; whose major concern is that of control who fears being caught and who tends to externalise blame. That these attitudes should cluster together at the bottom of the developmental scale become self-explanatory once one presumes that those in the initial stages of development suffer from a severely limited perspective of the world. If someone can not understand the viewpoints of others, that individual will obviously have a correspondingly limited understanding of the actions and intentions of others, as well as

a lack of predictive power. Naturally such individuals are concerned about control; naturally they will resort to manipulation and exploitive manoeuvres in the face of lack of overt power; naturally, interpersonal or social ignorance will fuel the tendency to externalise blame.

Loevinger, along with Kohlberg, argue that the middle step in development is characterised by conformity-- an attitude that requires that one at least be able to understand the perspectives of one's reference group. Although conformist individuals must have superior perspective-taking abilities than those who are in the primary egocentric self-protective position, precisely because conformist individuals one can not see beyond the perspective of their reference group, they tend to think that the dictates of that group are inviolable. Goffman<sup>9</sup>, for example, says of

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conformists that they

... are likely to sense that their rules for participating in gatherings are crucial for society's well-being - that these rules are natural, inviolable, and fundamentally right. (Thus) these persons will need some means of defending themselves against the doubts that are cast on these rules by persons who break them.... One way of correcting situational offences is to look upon the offender as someone who is unnatural, who is not quite a human being, for then the offence becomes a reflection on him and not on what he had offended.

Precisely because there is solidarity in numbers, it is often difficult for conformists to move out of their comfortable position to viewing issues from an even wider, i.e., from a potentially universal point of view. "Universalisation" is the prototypical form of moral reasoning<sup>10 11</sup> "Universalisation" refers to a process whereby one imaginatively puts oneself in the place of every person who might be affected by one's act, in order to determine whether, given one's reflective equilibrium<sup>12</sup>, one would still will that that act be carried out. Clearly, in order to universalise, an individual needs to be able to take into account a large number of points of view at one and the same time. Loevinger refers to persons who have reached a post-conformist stage of ego development as "conscientious." She describes them as individuals who have a deep concern for human intentions as opposed to mere concrete forms of behaviour, who recognise the necessity of critical self-evaluation, and who understand the over-riding value of communication between persons

- all of which are characteristic of what might be referred to as principled thought.

With regard to the first three predicted qualitative changes which can be presumed to result as a function of an increase in perspective taking-capacity, therefore, one would anticipate that if *Philosophy for Children* in fact enhances participants' perspective-taking capacities, they ought to demonstrate a movement away from the primary position of self-protection, through conformity, toward higher moral thought. Since conformity stands mid-way between the two poles, and since predictions with regard to conformity would vary depending on the initial position of the subjects, this study only attempted to measure movement with respect to the two extreme poles, i.e., the degree to which subjects exhibited self-protective attitudes in comparison principled thought. The specific prediction was that if *Philosophy for Children* indeed enhances participants' capacity and propensity for perspective-taking, they ought to demonstrate a decrease in self-protective attitudes and an increase in principled thought.

Besides the sequential qualitative progression which corresponds to, but is not dependent upon, independent theories of moral and ego develop-

ment, one can argue that an increase in perspective-taking capacity can also be expected to (i) increase tolerance for ambiguity, (ii) decrease concern over external cues, and (iii) increase in an individual's self-esteem..

Individuals who perceive an issue from only one point of view, perceive issues as relatively unambiguous: things are either black or white (there is no grey); either you are for me or against me; either you are right or wrong. Martin and Westie<sup>13</sup> describe individuals who are intolerant of ambiguity as tending to perceive dimensionalised stimuli as absolutely dichotomised, to seek unambiguous solutions for complex problems, and to demonstrate rigid categorical thinking. Given that participants in a *Community of Inquiry* are chronically and inevitably exposed to multiple points of view, one would predict that, after long term experience, members would develop an ever higher tolerance for ambiguity defined quite literally as the opposite of tending to view issues from only one clear but unambiguous perspective at a time.<sup>14</sup> This prediction reflects the work of Harvard Psychologist William Perry<sup>15</sup> who reported that, as students became progressively enriched by their studies at University, they moved progressively farther away from the initial position rigidly categorical thinking, through radical relativity, to finally begin able to make reflective judgements about the adequacy of varying perspectives.

Perspective-taking is not literal: one can not actually see another person's point of view. One can only imagine it (presumably more or less accurately depending upon the communicative opportunities and capacities of relevant individuals). In contradistinction to external representations, i.e., cues that are publicly perceivable (e.g., the chocolate cookies that are sitting on the counter for all to see), the imagined view points of others can be described as internal representations. On the assumption that both kinds of perceptual cues influence behaviour, it can be theorised that an increase in perspective taking, i.e., an increase in internal cues, will result in a corresponding increase in the behavioural influence of those cues. Given that *Philosophy for Children* is theorised to enhance participants' perspective-taking capacity, one would predict that exposure to *Philosophy for Children* ought to result in a decrease in the behavioural influence of external cues, i.e., subjects ought to become less externally oriented.

With regard to an individual's self-esteem, all of the variables mentioned thus far can be presumed to have an impact. An individual who is self-protective, i.e., who is preoccupied with control due to a dim understanding of the intentions of others, can be expected to have a precarious self-esteem, particularly when exposed to complex situations. Similarly, individuals who are intolerant of ambiguity, since they perceive novelty, and insolubility as threatening, and since this in turn results-- according to Martin and Westie<sup>16</sup> - in such responses as repression, denial, anxiety, discomfort, destructive and avoidance behaviour, can also be presumed to have a less than optimal self-esteem, again particularly in complex situations. On the other hand, individuals who are able to understand complex issues from multiple points of view and who receive positive social feedback as a result of making decisions that are perceived by others as "moral," can be expected to have a relatively robust self-esteem. Similarly, individuals who are internally, as opposed to externally, oriented ought to feel that they are more a product of themselves than puppets at the mercy of external cues, and hence ought to exhibit a more secure self-esteem. For all these reasons,

due to a decrease in self-protective attitudes, an increased tolerance for ambiguity, an increase in the propensity to utilise principled thought, and a decrease in external orientation, therefore, one would expect that increasing differentiation ought to result in a relatively more robust self-esteem.

In summary then, since long term participation in a *Community of Inquiry* continuously and consistently requires participants to view issues from multiple perspectives, one would predict that this experience ought to result in (prediction 1) a decrease in attitudes characteristic of low moral development (self-protective) and (prediction 2) an increase in principled thought. One would also expect (prediction 3) an increased tolerance for ambiguity (corresponding to an increased comfort with seeing issues through multiple perspectives); (prediction 4) a decrease in external orientation (due to an increase in internal representations); and (prediction 5) an increase in self-esteem corresponding to all of the above. These were the specific predictions that this study set out to investigate.

## THE STUDY

### The sample

This research was carried out at a private school<sup>17</sup> in West Vancouver, British Columbia, Canada, which had undertaken to institute *Philosophy for Children* in all its primary grades from kindergarten to grade 5. All teachers underwent an extensive 80 hour P4C training program under the direction of the author. The plan was to do a control study of the students nearing completion of the fifth grade before P4C was instituted (i.e., in 1994)<sup>18</sup> and then to test students at the end of grade 5 in each subsequent year for the next several years so as to measure the cumulative impact of participating in the *Philosophy for Children* program. The data presented here shows the results of the first 2 years of the study (1995, 1996).

It ought to be noted at this juncture that the overall numbers are small: the control group had 50 subjects, the 1 year group had 37 subjects, the 2 year group had 38 subjects (subjects who did not complete all the parts of the more extensive research project were eliminated). From a statistical point of view, such small numbers make the possibility of recording real differences between groups proportionately more difficult. However, given the rare occurrence of having a school instituting P4C throughout all its grades, all at the same time, made this experimental opportunity too good to pass up.

### Measurement tools

A questionnaire was devised that consisted of 50 randomly interspersed statements taken from other questionnaires already checked for validity and reliability (see Appendix). Subjects were asked to indicate their degree of agreement or disagreement to each of these statements using a 9 point scale: 1 indicating strong agreement; 9 indicating strong disagreement.

The questionnaire consisted of 20 self-esteem statements which themselves were divided into 5 subsets (as it was theorised that situational contingencies might result in self-esteem itself being a multi-dimensional variable, e.g., one's attitude about one's body or family experience might be immune to the otherwise positive benefits of *Philosophy for Children*). All of these were taken from the Murray, Holroyd, Harrington Test for Self-Esteem for Children<sup>19</sup>. The self-esteem state-

ments consisted of 4 designed to measure global self-esteem (e.g., "I'm happy the way I am"); 4 that focused on academic self-esteem (e.g., "I'm proud of the work that I do in school"); 4 designed to measure bodily self-esteem (e.g., "I like the way I look"); 4 that focused on family (e.g., "I'm an important member of my family"); and 4 that looked at social self-esteem (e.g., "I feel good about myself when I am with my friend").

Ten statements were included to measure external orientation. Since subjects in this study were children, 5 of these *were* adapted from the Nowicki, Strickland Test for Locus of Control<sup>20</sup> to measure external orientation with respects to parents in particular (e.g., "It is nearly impossible to change my parents minds about anything"). The 5 remaining were taken from the originally designed questionnaire to *asure* external orientation in general (e.g., "When 90Jne01le doesn't like me, there is little that I can do about it").

The remainder of the questionnaire consisted of 5 self-protective statements (e.g., "Never tell anyone why you did something unless it will help you") taken from the Christie Kiddie Mach questionnaire<sup>21</sup>; 5 designed to measure intolerance to ambiguity (e.g., "A person either knows the answer to a question or he doesn't") taken from the Martin and Westie Intolerance of Ambiguity questionnaire<sup>22</sup>; 5 designed to measure social values heretofore referred to as principled thought (e.g., "Individuals should feel responsible for helping others to be moral"). The Social Values items were taken from the Perloe's Social Values Questionnaire though slightly modified to increase comprehensibility for the young subjects. A 5 item lie scale, taken from Murry et. al. Self-Esteem Questionnaire was also included. The inclusion of a lie scale was considered important as a measure of whether subjects who answered high on the social values questions might be doing so more as a function of a wish to produce socially acceptable responses than what subjects actually believed (e.g., "I always go to bed without complaining when it is bedtime").

#### Method of analysis

Where necessary, scales of individual items were transposed so that high scores on the final grouped statements indicated the presence of the relevant characteristic (i.e., a high score on the group designed to measure a self-protective attitude indicated that that individual was relatively self-protective}. Total scores were computed for each set and subset: self-protective (self-pro); intolerance to ambiguity (intol. to amb.); general external orientation (extern); external orientation with respect to parents (parent); social values (values); the lie scale (lie); and self-esteem (global; family; social; academic; body). Each statement was correlated (Pearson  $r$ ) with the total score of the group to which it belonged. These item-total correlations served as a guide in evaluating the internal validity of each statement in the group. All statements correlated with their parent group at a significance level of  $p < .001$ .

The mean scores for each variable was then computed for the control group (1994) as well as the groups who had participated in the P4C program for 1 year (1995) and for 2 years (1996) T-tests were done to measure whether or not there was a significant difference between the means of all three groups, i.e., between the control and the 1 year group; between the 1 year and 2 year group; and between the control and the 2 year group.

## Results

Table 1 presents the results of the analysis. The "significance columns" indicate the degree to which the difference between the means is significant. The highlighted cells between the "mean columns" show the degree of significance between adjacent year. The highlighted rows indicate the significant difference between the 1994 control group and the group who participated in 2 years of P4C, i.e., it indicates a cumulative effect. A significance level of ".000" indicates that the chances of the difference between the means occurring as a result of chance is so small that the computer could not compute it. The last column shows the highest possible score for that variable, as well as the mid-score.

TABLEt

|                         | 1994       |      | 1995       |      | 1996       |        |
|-------------------------|------------|------|------------|------|------------|--------|
|                         | n=50       |      | n=37       |      | n=38       |        |
| variable                | mean (s.d) | sig. | mean (s.d) |      | mean (s.d) | high/2 |
| <b>1. self-pro</b>      | 20.2 (8.7) | .03  | 16.4 (7.1) | .06  | 13.7 (5.1) | 45/25  |
|                         |            | .000 |            |      |            |        |
| <b>3. intol.to amb.</b> | 24.8 (8.3) | .05  | 20.3 (6.5) | -    | 17.9 (5.4) | 45/25  |
|                         |            | .000 |            |      |            |        |
| <b>4a. extern.</b>      | 16.6(6.3)  | -    | 17(5.2)    | .01  | 13.7(5.8)  | 36/20  |
| <b>4b. parent</b>       | 18.9(8.3)  | -    | 17(6.2)    | -    | 18.9(8.3)  | 45/25  |
| <b>2a. values</b>       | 27.2 (5.2) | -    | 27.3 (6.8) | .003 | 32.1 (6.1) | 45/25  |
|                         |            | .000 |            |      |            |        |
| <b>2b. lie</b>          | 25.4 (9.1) | -    | 25.8 (6.5) | -    | 23.2 (7.9) | 45/25  |
|                         |            |      |            |      |            |        |
| <b>5. esteem</b>        |            |      |            |      |            |        |
| <b>a. global</b>        | 24.9 (6.6) |      | 27.1 (7.5) | -    | 28.3 (5.9) | 36/20  |
|                         |            | .03  |            |      |            |        |
| <b>b. family</b>        | 26.5 (5.1) | .02  | 29.7 (7)   | -    | 30.2 (7)   | 36/20  |
|                         |            | .003 |            |      |            |        |
| <b>c. social</b>        | 27.7(5.8)  | -    | 25.5(6.9)  | -    | 26.4(7.1)  | 36/20  |
| <b>d. academic</b>      | 26.0(7.6)  | -    | 26.7(6.4)  | -    | 27.8(5.6)  | 36/20  |
| <b>e. body</b>          | 25.5 (7.3) | -    | 24.3 (7.2) | -    | 25.2 (6.6) | 36/20  |
|                         |            |      |            |      |            |        |

Table 1 shows that the measures used were able to track a number of the qualitative changes in reasoning styles that were predicted to occur in subjects as a result of participating in *Philosophy for Children*.

## Prediction 1

To begin with, it shows a significant drop in the mean scores for self-protective attitudes after one year of participating in the P4C program, with a continuing significant drop after the second year. The control group's mean score was 20.2; the 1 year group's scores was 16.4, while the 2 year score was 13.7.

## Prediction 2

The scores on the social values variable did not increase after the first year but did show a significant increase for the 2 year group. As there was no difference in the lie scores over the 2 year period, this serves as evidence that the higher score on the social values variable was not a function of participants merely wishing to produce socially acceptable

responses. The score on the social values variable for the control group was 27.2, while the mean score for the 2 year group was 32.1.

#### Prediction 3

There was a significant drop in intolerance to ambiguity after 1 year, with a continuing drop which increased in significance after 2 years. The mean score for the control group was 24.8, the mean score for the 1 year group was 20.3, the mean score for the 2 year group was 17.9. It should be noted that these drops are all the more impressive given the initial position of the control group, i.e., these children - to begin with - were not highly intolerant of ambiguity.

#### Prediction 4

The general external orientation variable did not show any change until the second year. The mean score for the control group was 16.6, for the 1 year group was 17, while for the 2 year group it was 13.7. There was no change at all on the variable which attempted to measure external orientation with respect to patents. Again it is of note that subjects started off with a low score on both these variables to begin with.

#### Prediction 5

With regard to the self-esteem subsets, there was a significant increase in family self esteem after the first year with a modest continuing increase after the second year. The mean score for the control group was 26.5, for the 1 year group it was 29.7, for the 2 year group it was 30.2. There was an increase in global self-esteem after the 1 year period which continued to become significant after the 2 year period. The mean score for the control group was 24.9, for the 1 year group it was 27.1, for the 2 year group it was 28.3. There was no significant change in the other subsets of self-esteem. Again it should be noted that these subjects began with relatively high scores on self-esteem: all scores were well above the mid-point.

## DISCUSSION

It was argued earlier that since long term participation in a *Community of Inquiry* continuously and consistently requires participants to view issues from multiple perspectives, one would predict that this experience ought to result in (prediction 1) a decrease in attitudes characteristic of low moral development (self-protective) and (prediction 2) an increase in principled thought. One would also expect (prediction 3) an increased tolerance for ambiguity (corresponding to an increased comfort with seeing issues through multiple perspectives); (prediction 4) a decrease in external orientation (due to an increase in internal representations); and (prediction 5) an increase in self-esteem corresponding to all of the above.

The questionnaire used, though carrying with it many of the disadvantages of a structured instrument (e.g., structured questionnaires impose constructs upon respondents that may not be relevant to them outside the test situation), itself received some measure of validity from the fact that the significant differences in the mean scores between the control group and the 2 experimental groups were all in the direction predicted. Scores on self-protection, intolerance for ambiguity, and general external orientation decreased as expected; while scores on the social values variable increased. There was also an increase in subjects' overall self-esteem, as well as their self-esteem relative to the family. It could be hypothesised that the latter might be a result of an increase in inter-

personal communication that families often experience as a result of having a child engage in *Philosophy for Children*.

The study failed to measure a significant difference in two areas where change was predicted: external orientation with respect to parents, and remaining subsets of self-esteem. This lack of significant difference may be due to: a) the fact that P4C did not have a significant impact in these areas; b) a failure on the part of the instrument used to pick up changes (note that the "parent external orientation" was constructed for this study and hence had not been previously validated); c) the fact that these youngsters had such relatively low and high scores respectively to begin with which gave them very little room for movement; or d) any combination of the above.

Nonetheless, the results are impressive. The fact that predicted qualitative changes were empirically measurable despite the inherent short-comings of the structured questionnaire, and despite the statistically small number of subjects, and despite the privileged background of the subjects which left relatively little room for movement, lends enormous credence to the already overwhelming theoretical support for the claim that *Philosophy for Children* helps youngsters become better people, as well as better thinkers.

#### NOTES

- <sup>1</sup> See Richard Paul's booklet, *"Pseudo Critical Thinking in the Educational Establishment: A Case Study in educational Malpractice."* Santa Rosa: published by the Foundation for Critical Thinking, 1993.
- <sup>2</sup> See, for example, S. Gardner "Fair Minded from the Beginning," in *Analytic Teaching*, April 1997, vol. 17, no. 2, pp. 35-44.
- <sup>3</sup> Since philosophical questions do not readily lend themselves to pre-packaged ready-made answers, they are uniquely suited for genuine inquiry, i.e., the teacher/facilitator does not already know the answer before the discussion begins.
- <sup>4</sup> Piaget, J. "The Mental Development of the Child," in J. Piaget, *Six Psychological Studies*. New York: Random House Inc., 1967
- <sup>5</sup> Although an attempt to measure the perceptive-taking ability of youngsters as it pertains to argument construction was also undertaken. The results of that aspect of the overall study will be reported by Mort Morehouse. (in this issue of CCT - Ed)
- <sup>6</sup> A "subjective" social reflection questionnaire was also used, but due to the labour power necessary to mark this subjective tool, it has not yet been analysed.
- <sup>7</sup> Loevinger, J. *Ego Development*. San Francisco: Josey-Bass Inc., Pub., 1976.
- <sup>8</sup> Kohlberg, L. "Stages and Sequences: The Cognitive-Developmental Approach to Socialisation," in D. Caslin (ed.), *Handbook of Socialisation Theory and Research*. New York: Rand-McNally, 1969.
- <sup>9</sup> Coffman, E. *Behaviour in Public Places: Notes on the Social Organisation of Gatherings*. New York: Macmillan, The Free Press edition, 1963, p. 234.
- <sup>10</sup> Kant, I. *The Groundwork of the Metaphysics of Morals*. Translated by H.J. Paton. New York: Harper and Row, Pub., 1967.

- <sup>11</sup> Hare, R.M. *The Language of Morals, and Freedom and Reason*. Oxford: Clarendon Press. 1952 and 1963.
- <sup>12</sup> Rawls, J. *A Theory of Justice*. Oxford: Clarendon Press, 1971.
- <sup>13</sup> In J.P. Robinson and P.R. Shaver, *Measures of Social Psychological Attitudes*. Ann Arbor: University of Michigan, 1978, p. 401.
- <sup>14</sup> On a personal note, I have found that often the first sign of a successful *Community of Inquiry* is the discomfort students experience as they begin to lose confidence in their comfortable but rigid way of perceiving the world.
- <sup>15</sup> W. Perry, *Forms of Intellectual and Moral Development*. Holt Rhinehart, 1970.
- <sup>16</sup> Martin and Westie, *Op. Cit.*
- <sup>17</sup> My sincere thanks to all the wonderful of the Junior school of Collingwood School, and in particular to Mandy Richmond, who was head of the Junior School during this research period. Mandy was largely responsible for ensuring that the data was collected. It was also due to her general enthusiasm for the program that it remained vibrant over the two year period despite inevitable obstacle that all new pedagogical methodologies invariably encounter.
- <sup>18</sup> As the study started later than was originally planned, the control group consisted of students in grade 6 who were tested in October.
- <sup>19</sup> Contained in J.P. Robinson and P.R. Shaver. *Measures of social Psychological Attitudes*. Ann Arbor: The Institute for Social Research, 1979, revised in 1973.
- <sup>20</sup> Ibid.
- <sup>21</sup> Ibid.
- <sup>22</sup> Ibid.

## APPENDIX

### "WHAT DO I THINK" QUESTIONNAIRE.

I AGREE I DISAGREE  
 1-----2-----3-----4-----5-----6-----7-----8-----9

1. (16) I'm proud of the work I do in school.
2. (IV4) First impressions are very important.
3. (119) When someone doesn't like me, there is very little I can do about it.
4. (17) I feel good about myself when I am at school.
5. (V2) Things work best when people concern themselves with their own welfare and let others take care of themselves.
6. (117) When people are mean to me it is usually for no good reason at all.
7. (115) I'm a good daughter/son.
8. (Hit) Never tell anyone why you did something unless it will help you.
9. (IV) There is only one right way to do anything.
10. (112) I would like to look like somebody else.
11. (VI4) I get angry when my parents won't let me do something that I really want to do.
12. (12) I'm an interesting person.
13. (114) Most people won't work hard unless you make them do it.

14. (II4) It is nearly impossible to change my parents mind about anything.
15. (I20) I'm lonely.
16. (V3) Individuals should feel responsible for helping others to be moral.
17. (VIS) I brush my teeth after every meal.
18. (I16) I think my parents would be happy if I were a lot different.
19. (litO) Planning ahead makes things tum out better.
20. (II0) I would like my weight to be different.
21. (I12) Most of the time parents listen to what their children have to say.
22. (IV2) A person either knows an answer to a question or she doesn't.
23. (I17) Other kids make me feel like I'm not good enough.
24. (V4) Some of life's greatest satisfactions are found working cooperatively with others.
25. (VI2) If I get mad at a friend, I might call him or her a name.
26. (I3) I'm happy with the way I am..
27. (IV1) There are two kinds of people in the world: the weak and the strong.
28. (I13) When I get punished, it is usually for no good reason.
29. (I18) I'm dumb at school work.
30. (II8) It is useless to try and get my own way at home.
31. (I11) I have a nice smile.
32. (VI3) I always go to bed without complaining when it is bedtime.
33. (III5) It's better to tell someone why you want her to help you than to make up a good story to get her to do it.
34. (I14) I make my parents unhappy.
35. (VII) It doesn't bother me when I lose a game.
36. (I19) I feel good about myself when I am with my friends.
37. (I5) I'm disappointed with my school grades.
38. (V5) It is wrong to point it out if somebody does something wrong.
39. (I18) My friends listen to my ideas.
40. (VI) A person should not be respected for her achievements if they were obtained by interfering with the welfare of others.
41. (IV3) You can classify almost all people as either honest or crooked.
42. (I4) I'm not good at things.
43. (liS) When I do something wrong, there is little I can do to make it right.
44. (III2) It is smartest to believe that all people will be mean if they have a chance.
45. (I13) I'm an important member of my family.
46. (I16) Whether or not people like me depends upon how I act.
47. (III3) Sometimes you have to hurt other people to get what you want
48. (I1) I wish I were somebody else.
49. (I11) Most of the time it doesn't pay to try hard because things never tum out right anyway.
50. (I9) I like the way I look.

"WHAT DO I THINK" QUESTIONNAIRE taken from the following:-

#### I. SELF-ESTEEM

(Murray, Holroyd, Harrington test for self-esteem for children)

Global scale

- 48 (I1). I wish I were somebody else.(-)
- 12 (I2). I'm an interesting person.
- 26 (I3). I'm happy with the way I am.
- 42 (I4). I'm not good at things. H



**Academic Scale**

- 37 (IS) I'm disappointed with my school grades (-)  
 1 (16) I'm proud of the work I do at school.  
 4 (17) I feel good about myself when I am at school.  
 29 (18) I'm dumb at school work.(-)

**Body Scale**

- 50 (19) I like the way I look.  
 20 (110) I would like my weight to be different(-)  
 31 (111) I have a nice smile  
 10 (112) I would like to look like somebody else.(-)

**Family Scale**

- 45 (113) I'm an important member of my family.  
 34 (114) I make my parents unhappy (-)  
 7 (115) I'm a good daughter/son.  
 18 (116) I think my parents would be happy if I were a lot different. (-)

**Social Scale**

- 23 (117) Other kids make me feel like I'm not good enough.(.)  
 39 (118) My friends listen to my ideas.  
 36 (119) I feel good about myself when I am with my friends.  
 15 (120) I'm lonely. H

## II. EXTERNAL ORIENTATION (An adaptation of the Nowicki, Strickland test for locus of control for children.)

**A- Parents**

- 21 (112) Most of the time parents listen to what their children have to say(-)  
 28 (113) When I get punished, it is usually for no good reason.  
 14 (114) It is nearly impossible to change my parents' mind about anything.  
 30 (118) It is useless to try and get my own way at home.  
 43 (115) When I do something wrong, there is little I can do to make it right.

**B- External**

- 49 (111) Most of the time it doesn't pay to try hard because things never turn out right anyway.  
 46 (116) Whether or not people like me depends upon how I act. (-)  
 6 (117) When people are mean to me it is usually for no good reason at all.  
 3 (119) When someone doesn't like me, there is very little I can do about it;  
 19 (110) Planning ahead makes things turn out better.(-)

**III. SELF-PROTECTIVE ATTITUDE**

(from the Christite Kiddie Mach <Machiavellianism>)

- 8 (111) Never tell anyone why you did something unless it will help you.  
 44 (112) It is smartest to believe that all people will be mean if they have a chance.  
 47 (113) Sometimes you have to hurt other people to get what you want.  
 13 (114) Most people won't work hard unless you make them do it.

33 (IIS) It's better to tell someone why you want her to help you than to make up a good story to get her to do it. (-)

#### IV. INTOLERANCE OF AMBIGUITY (from Martin and Westie)

27 (OV1) There are two kinds of people in the world: the weak and the Strong.

22 (IV2) A person either knows an answer to a question or he doesn't.

41 (IV3) You can classify almost all people as either honest or crooked.

2 (IV4) First impressions are very important.

9 (IV5) There is only one right way to do anything.

#### SOCIAL VALUES

(an adaptation of Perloe's Social Values Questionnaire)

40 (V1) A person should not be respected for her achievements if they were obtained by interfering with the welfare of others.

5 (V2) Things work best when people concern themselves with their own welfare and let others take care of themselves. ( )

16 (V3) Individuals should feel responsible for helping others to be moral.

24 (V4) Some of life's greatest satisfactions are found working cooperatively with others.

38 (VS) It is wrong to point it out if somebody does something wrong. (-)

#### LIE SCALE (From the self esteem scale)

35 (VII) It doesn't bother me when I lose a game.

25 (VI2) If I get mad at a friend, I might call him or her a name. (-)

32 (VI3) I always go to bed without complaining when it is bedtime.

11 (VI4) I get angry when my parents won't let me do something that I really want to do. (-)

17 (VJ5) I brush my teeth after every meal.

Switch: 1; 2;3; 4; 6;7;8; 9; 12;13; 14; 16;17; 22;24; 26;27; 28; 30;31;32;35; 36;39;40;41;43;44;45;47;49;50).

1=9;2=8;3=7;4=6;6=4;7=3;8=2;9=1.