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ABSTRACT

This study examined the effects of a cross-age training program on the interpersonal conceptions of the students serving as trainers. A total of 24 sixth graders participated in the study, 12 in the training group and 12 in the control group which received no training. The training group met twice a week, once to lead dilemma discussion groups with first graders and once with the experimenters to discuss their experiences as discussion leaders. The training program lasted for 22 weeks. Pretesting and posttesting was done in the areas of interpersonal conceptions, moral reasoning, means-end social problem solving, and referential communication. Posttest analyses of variance indicated significant treatment differences favoring the experimental group on the interpersonal conceptions measure, but no significant group differences on means-end social problem solving on referential communication. Results also indicated that the experimental subjects were significantly more sure than the control subjects that they did not want to accept lower level moral reasoning responses. There were no sex differences for any measure. It was concluded that the results of posttesting in both interpersonal and moral development areas support the notion of increased complexity in social-cognitive developmental thought for the experimental group. (JMB)

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A Social-Cognitive Developmental Intervention with Sixth and First Graders [1,2]

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One child says, "If you don't give me what I want, I won't be your friend."

Another may say, "I can understand why I didn't get what I want and I can still be your friend."

Each of these children is demonstrating a different level of interpersonal conception. It would seem that the latter response reflects a competence in social thought that is missing in the former. It is educators seeking such competencies in children that has led to a growing interest in social-cognitive training programs. By viewing social thought as developing from the simple to the complex, the educator then has a guide based on empirical research (Piaget, 1960; Flavell, 1968; Kohlberg, 1969) for his program.

Recently, several training studies have been successfully completed in the broadly defined area of social cognition. Chandler (1973) has used role-playing to bring about an increase in role-taking skills with delinquent boys. Van Lieshout (1973) trained nursery school children with a variety of techniques such as discussing story characters' feelings and predicting others' feelings to increase role-taking. Blatt and Kohlberg (in preparation) and Selman and Lieberman (in press) have demonstrated that dilemma

discussion groups can promote growth in moral development. This paper will focus on a cross-age intervention program in which sixth graders led discussion groups with first graders using Selman's (1974) levels of interpersonal conceptions as the content area.[3] Some of the methods used by the experimenters in bringing about growth in interpersonal conceptions will be emphasized. All of the methods to be described were derived from a formal theory of intervention (Enright, in press). Unlike the above studies, the emphasis in this program is on the effects of training for the sixth grade trainers rather than for the trainees. The discussion to follow, therefore, concerns the sixth graders only.

The Intervention Program

The cross-age program consisted of twenty-four randomly chosen sixth graders stratified by sex. Of the twenty-four, six males and six females were randomly chosen for the training condition with the other twelve serving as the control group which received no training. The training group met twice a week, once to lead dilemma discussion groups with the first graders and once with the experimenters to discuss their experience as discussion leaders. While leading the groups, the sixth graders taught in pairs with each pair having four or five first graders. The training program lasted for twenty-two weeks. Within that time three basic methods were employed to bring about change in both interpersonal conceptions and behavior as a result of those conceptions.

For one method, hypothetical dilemmas were used in three different ways as a means of promoting growth. The first use of the dilemma was similar to both Blatt and Kohlberg's (ibid). in the moral area and to Cooney's (1975) in the interpersonal area. In their "traditional" use of the dilemma, a story with conflicting alternatives is read or shown for children to discuss. The leader tries to induce cognitive conflict by formulating responses one level above a child's own. The sixth graders experienced such interpersonal cognitive conflict through selecting filmstrips or story books to use with their first grade students. The dilemma was used in a second way by the experimenters as a means of discussing with the sixth graders how younger children may solve a given dilemma. For instance, it was pointed out and discussed how first graders may not be able to see two or more emotions occurring simultaneously within one character. This was done to increase the sixth graders' understanding of how first graders view interpersonal encounters. By understanding how first graders organize their world, the sixth graders may have added to their understanding of their students in particular and of persons in general. For the third use of the dilemma, the sixth graders thought of direct comparisons between first grade responses and sixth grade responses to the same dilemma. For example, the sixth graders could understand that good friends usually do not break up their friendship after an argument. The first graders, in comparison, would often think that one argument is enough to make people become enemies. These discrepancies were pointed out to increase the sixth graders' understanding

not only of first graders but also of themselves as persons. It seemed that the comparisons helped the sixth graders to think more about their own ways of conceptualizing persons and relations.

The second major method utilized the process of behavioral interaction between the sixth and first graders in promoting growth. Instead of concentrating on story content, the sixth graders would discuss the quality of first grade interactions that they saw as discussion leaders. This emphasis seemed to help them think more complexly about interpersonal relationships. The methods utilizing the hypothetical dilemma differ somewhat from this method. With the former, we sought for the sixth graders a better understanding of others' and the self's thoughts; with the latter, we sought a better understanding of interactions. Taken together, these two methods were a way of exposing the sixth graders to both qualities of persons and of relations.

Excluding the traditional use of the dilemma, the above two methods take advantage of the actual interpersonal experiences of a child. This often seems to lead to greater depth of understanding persons and relations than does a situation in which the child is not directly involved. Barbara, as an example, had difficulty conceptualizing a mutual perspective of sharing until she found that cooperation with the first graders led to more productive sessions. By making inferences about mutuality once she had behaviorally demonstrated cooperation, she began to gradually more from level one to level two on the Selman paradigm.

The final method emphasized, not a vertical increase in

cognitive complexity, but rather a bridge between what the sixth graders could conceptualize and what they actually did behaviorally with the first graders. For instance, if Barbara was capable of inferring that it hurts the first graders when she yells at them, but then continued to yell, the experimenters would then concentrate on pointing out discrepancies between thought and action. The pointing out of discrepancies in this area appeared to be a moderately effective way of bridging thought-action gaps. This aspect was included as part of the program for three reasons. First, it helped promote better discussion sessions for the first graders. Second, it was a way in which a sixth grader could understand both his own thoughts and behavior at a given time. Third, it could be a way, once behavior changes, to promote deeper inferences about self and others by reflecting on the changed behavior.

Every week the experimenters diagnosed through audio and video tapes the level of interpersonal conception that the individual sixth graders were on. It was also determined which of the above methods worked best with each student during the previous week. Planning for the forthcoming week was based on these diagnoses.

Results

Only the major results directly related to the training will be discussed here because of space limitations. A detailed evaluation and analysis of all dependent measures is currently being prepared.[4]

Level of interpersonal conceptions was measured with a

filmstrip dilemma developed by Selman which evaluates reasoning in the categories of Persons and of Relations. The short term stability coefficient derived by correlation of the control group's pre-test and post-test scores was .93. Internal consistency between the Persons category and the Relations category using the Spearman-Brown formula was .63. This could be slightly inflated since both categories were scored one after the other for each child. Inter-rater reliability for five protocols was 93%.[5]

Two way analyses of variance revealed no pre-test differences in treatment condition between groups. Post-test analyses of variance indicated significant treatment differences favoring the experimental group for the Selman Persons category, $F=(1,20)=13.91$, $p < .002$; for the Relations category, $F\ (1,20)=12.29$. $p < .003$; and for the Selman total score, $F\ (1,20) = 13.78$, $p < .002$ (see Table 1). In the area of moral development it was found at the post-test that neither the experimental nor the control subjects were sure which level of moral reasoning they wanted to accept. The data do show, however, that the experimental subjects were significantly more sure than the control subjects that they did not want to accept lower level responses. No group differences were found in means-end social problem solving or in referential communication. No sex differences were found for any of the measures.

Discussion

Because the experimental group showed such dramatic changes in level of interpersonal conceptions, it could be that the

changes reflect not only cognitive-structural growth but also a confounding with memory or practice effects. Since post-testing took place two weeks after training ended, some responses may reflect a child's knowing what the "right" answer is. It does not seem, however, that the changes could reflect memory exclusively. Given a thirty minute post-test Selman interview, it would seem difficult under careful probing for any child to verbalize concepts without cognitively understanding them. Also, the moral development results show a greater increase in critical thought for the experimental group than for the control group. Deliberate attempts to increase moral development were not incorporated into the program. The results of both interpersonal and moral development when analyzed in relation to each other support the notion of increased complexity in social-cognitive developmental thought for the experimental group. It also appears that the intervention produced results specific to only social-cognitive stage thought rather than to other types of social-cognitive processes. For instance, social problem solving involves quantitative thought processes rather than the qualitative processes used in the interpersonal area. A high score in social problem solving would reflect ability to generate several steps and many alternatives toward reaching a desired goal. Whether the steps include hitting another child or sharing with him is not distinguished. Because no change was found in this skill or in referential communication, it does appear that the present program may be linked to only the structural developmental domain.

It was hypothesized that the use of hypothetical dilemmas,

the analysis of actual interactions, and the bridging of thought-action gaps would produce growth. The data do not falsify the hypothesis. The data, however, certainly do not confirm that it was the combination of methods that produced growth. It is possible that one or two of the methods simply constitute extra steps which do not in any way lead to an effective outcome. Yet, because each method seems to compliment the others in a complete program dealing with awareness of persons, of relations and of self-awareness, further work using the combined methods is indicated. It would seem, however, if diverse social-cognitive skills are desired, a combination of the methods described with others would be required.

Although cross-age training appears to be effective for producing growth in interpersonal conceptions for the trainers, clinical aspects of the program suggest, at this point, that it is not a general program that could be implemented with all sixth graders. It appears now that some children can not deal effectively with the demanding variables of teaching. We suggest a pre-sereening such that any sixth grader who consistently shows level one reasoning or below in the interpersonal area perhaps should not participate in such a program. Obviously, a child who predominately reasons at level one when twelve years old has shown a very slow growth pattern throughout the elementary school years. To expect him to advance much beyond level two may introduce stress into the system. From pilot work this past Spring it appears that many first graders reach level two reasoning in interpersonal conceptions at the end of the year. This means that a sixth grader reasoning at level one, if he does not grow, will be below the level

of his students; if he does grow, he will be at best only on his students' level of reasoning. This would mean that he would not be able to talk one level above, thus not helping his students. Such a situation would seem to set up negative consequences whereby the subject's competence may be little enhanced by the intervention. It is not being suggested that such a child should not take part in a developmental program. All that is being suggested is that the child participate in a program with less demanding performance variables.

Another problem incurred is the child who shows marked discrepancies between his thought and action. For instance, if any of his first grade students called Andy a name, he would snap back with a better one. He was capable, however, of conceptualizing such situations on a complex level. His non-reflective behavior certainly did not seem congruent with level four or five conceptions. In a case like this, pre-screening seems difficult since the teacher must observe over a long period of time to define thought-action discrepancies. One solution for now could be to reduce teaching demands. Leading discussions with only two first graders could help students like Andy cut discipline to a minimum.

Finally, the variable of time must be seriously dealt with in such a program. Because most of the students are present-centered, consistency is important if cognitive restructuring is to occur. It could be that in order to fully realize the potential of the methods described and of the children themselves, such a program should be implemented as part of the regular classroom environment rather than as a twice-a-week activity. It would seem

that problems of bridging thought-action gaps and of generalization would be reduced if the intervention occurred over an extended period. Such speculations, however, are questions for future research.

Because the intervention described here is still in the pilot phase, the methods used are only a first step toward a systematic social-cognitive developmental intervention program. In their present form, the methods are far from being finalized. By continued analysis of both the formal and functional aspects of the program, a foundation can be laid for further work in the area.

Footnotes

[1]This research was partially funded by the Minnesota State Department of Education under Title III of the Elementary and Secondary Education Act of 1965 and by the University of Minnesota Computer Center.

[2]Special thanks to Daniel Keating for his statistical advice, to Larry Clark for assistance in data analysis, and to Nancy Enright for assistance in data analysis and in the preparation of this manuscript. The cooperation of the Minneapolis Public Schools is also gratefully acknowledged.

[3]Interpersonal conceptions is defined as an ordered sequence of thought about other persons, the self, and relationships. All children pass through the sequence but do not necessarily reach the highest levels. Piaget's stage descriptions (1960) are assumed to hold in theory for these levels. Longitudinal and cross-cultural data must be taken to empirically validate this assumption (Selman, 1974).

[4]The four dependent measures were a Selman dilemma (1974), Carroll's objective morality measure (1974), means-ends social problem solving (Shure and Spivack, 1972), and Flavell's referential communication task II B (1968). WISC-R vocabulary was given at the post-test only.

[5]Forty of the forty-eight protocols were scored totally blind for each measure. Eight were scored with one blind and one non-blind rater with agreement above 90% for each measure. When there were discrepancies between the raters, the blind rater made the final scoring decisions.

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Table 1

Post-test Analyses of Variance of the Selman Categories Comparing Experimental and Control Groups

A) Person's Category

Source	df	MS	F	p
treatment	1	52266.67	13.90	.0013
sex	1	66.67	.18	.89
trt x sex	1	6337.5	1.69	.21
error	20	3758.75		

B) Relation's Category

Source	df	MS	F	p
treatment	1	70959.37	12.29	.0022
sex	1	84.37	.14	.90
trt x sex	1	4143.37	.72	.41
error	20	5772.29		

C) Selman Total Score

Source	df	MS	F	p
treatment	1	61206	13.78	.0014
sex	1	.17	.37	.99
trt x sex	1	5221.5	1.17	.29
error	20	4440.98		

TABLE 2

Means for the Experimental and
Control Groups on the Selman Total Score

	Pretest	Posttest
Experimental Group	219	340
Control Group	235	239