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SAN FRANCISCO, CALIFORNIA 94143

No date

Project: Computerized Intervention Strategies for Minority Children
with Emotional Problems

Submitted by: Dr. Marc Lehrer
Psychologist
Child Study Unit
University of California San Francisco
Department of Pediatrics

Purpose:

The purpose of this project is to provide an innovative alternative to traditional methods of dealing with emotional problems in children of minority groups. Most traditional methods have focused upon reapplying methods of psychotherapy or counseling approaches to minority groups with the expectation of obtaining similar results as obtained in the population at large. From this thinking has developed a wide variety of applied approaches perhaps modified in terms of language to better relate to the communication differences of the minority child, but still in essence the same psychotherapeutic sheep in wolfs clothing. The overwhelming disadvantage of any of the traditional approaches when applied to minority children (including family therapy approaches) is the ultimate discrepancy between the power of the applied methods when used by trained professionals and/or trained non-professionals and the size of the population that would or could benefit from these methods. That is to say, assuming a psychotherapeutic method is useful on a small scale when applied at the clinic or in the school context by a trained professional what happens when the same method is used to treat the whole school population, or even used to treat all of the identified problem children of that particular school or area? The unfortunate, all-too-obvious answer in most cases is that there are just not enough personnel available to ever accomplish this goal and in addition the cooperation of the children in question is at best, questionable. Too often the issue for the individual child and even for the group of minority problem children as a whole is in what way would doing "x" benefit me. For instance, approaches which focus on symptomatic changes such as various forms of behavior modification ultimately are clearly linked to a goal for the child of not doing "x" (stealing, truency, etc.) While we as adults can often see the advantages of such changes in behavior, the minority child with emotional problems often cannot or may not be aware of advantages in such changes in his behavior. This is due to various influences in his natural environment including the influence of his upbringing, what is and what is not acceptable behavior in his home neighborhood and more importantly within the context of his peer grouping, and finally and to a considerable extent highly underrated as a factor, the degree of intellectual development and sophistication of the child's thinking processes linked to his behavioral responses.

The innovative approach advocated in this proposal shall concentrate upon a development of and the implications that follow from an approach stressing the last of the above mentioned points. It is the contention of this project to provide a comprehensive approach to remediation of emotional problems in children of minority

groups through an approach that modifies the way the child interacts with his world. In a fundamental sense this goes far beyond the possibilities for change inherent in a symptomatic approach, and as it shall be outlined below, shall be linked to the development of socially acceptable behavioral responses as well. The proposal also shall consider the question of generalizing the results to the population of minority children with emotional problems at large.

Methods:

This project is designed to implement and to test the efficacy of the application of training comprehensive intellectual and social development using advanced computerized technology to enhance the appeal to and possibilities of implementation of patterns of comprehensive change. An overview of the study program reveals the following aspects. First, the application of Guilford's Structure of Intellect to assess minority children with emotional problems. To a great extent the raw data for this has already been accumulated within the cases seen at the Child Study Unit and allied Adolescent Treatment Program at the University of California. Guilford's Structure of Intellect Model has been extensively investigated by Mary Meeker at UCLA during the past ten years. Among her many findings has been the demonstration that minority group children have different patterns of intellectual development as measured by the comprehensive testing materials developed to measure the Guilford factors. Many of the Guilford factors can be obtained from alternative and commonly used intelligence tests such as the Weschler Intelligence Scale for Children and the Stanford Binet Scale. In addition to the investigations of patterns of intellectual development among minority children, Mary Meeker and her colleagues have shown specific patterns of delinquent youth of minority background. The approach using the Structure of Intellect Model has been not only diagnostic but in addition has stressed remediation via various teaching materials related to the Structure of Intellect model. These materials have been shown to be effective in developing functional intelligence in the under achieving, culturally disadvantaged or learning disabled child. However, it has also been demonstrated over and over again that many programs specifically designed for minority children fail to stimulate their curiosity or perhaps are applied to a population that has been so turned off to regular remedial methods that even attention to normal classroom discipline is often disputable. For this reason many programs fail to get initial cooperation or are perceived by the minority child as nothing fundamentally new, or something that he has to do which is either too difficult or will be in direct conflict with many of his previously acquired behaviors. The aim of this presently proposed program is to meet these challenges in the following manner. First, the structure of intellect training programs shall be written for computerized application. The computer in this case is a Control Data Plato system. This computer is capable of many unusual operations, including presenting letters in various sizes, at differing speeds of presentation, and in different combinations of presentation. In addition, the Plato system has the ability to use a touch sensitive screen on top of its TV monitor face that allows touch to be used as an indicator of correct response. For instance, a graphic display of boys going to play on a basketball court can be programmed to show actual movement from house or school classroom to the basketball court. Then various questions can be presented which require a response. The response can then link by control to show a basketball being thrown at a hoop with programmable different probabilities of successful outcome (going through the hoop). In addition, the screen is programmable to allow touch on specific spots of the screen to activate other contingencies. For instance, another boy comes to the court as a possible

substitute. His height, race and any other desirable characteristics are under computer control. To substitute him all that is necessary is to touch the player that is being removed. So many children to whom school represents associations of regimentation, learning that is frustrating and more importantly irrelevant to their immediate concerns can be observed playing pong and similar games for as long as their money holds out. These children even include youngsters with known fine-motor problems. Often these children, especially in minority groups where expertise in physical coordination and physical activity is highly prized, suffer from both inability to obtain reinforcements from regular learning and reinforcements from peer group approval. The type of remediation advocated in this proposal would be especially relevant to this group of children. A program which is truly responsive to the needs of minority children with emotional problems must consider not only the large percentage of identified problem children but in addition, the even larger numbers of unidentified children with emotional problems whose response style do not include highly visible acting out behaviors or who do not demonstrate obvious emotional lability or marked inability to relate to their peers. Those easily identified children are often singled out for special attention. Many have received several different types of therapeutic and/or environmental interventions. The not so easily identified minority child with emotional problems may usually be more apt to be known for difficulties in learning. The goal of this proposal is to create a learning orientation toward educational and social change in many children rather than in just a few of them. The specific format of the proposal is presented below.

Project Design:

Phase 1

During Phase 1 Structure of Intellect Patterns based upon previous research and based upon previous records of testing from the Child Study Unit shall be tabulated. Typical patterns for the two large minority groupings, Black and Latino shall be constructed.

Phase 2

Phase 2 shall consist of writing programs for the computer system that correspond to the remediation for specific deficits. The programs shall be also modifiable to be applicable to children with other patterns of deficit.

Phase 3

During phase 3 additional programs shall be written to depict typical social situation, learning situation, and home situation problems facing the minority child with emotional problems. The design of these programs shall be such as to be based upon the same patterns of deficit the minority problems children with one specific difference: the programs shall be constructed so that in addition to requiring learning based upon deficits the child can switch to alternative approaches based upon his pattern of strengths. The nature of these programs are such that

similar problems with humorous contents or relevant variables can be continuously substituted to make for continuing interest in the tasks. Both the programs from phase 2 and phase 3 shall be ordered in such a way to provide criteria for advancement within each submodality. In addition, each type of specific problem area shall have several gradations within the same example to allow entry into the example at the appropriate level for any child. Additional programs for group presentation and for teacher specialty training dealing with the same issues shall also be constructed.

Phase 4

While both phase 2 and phase 3 will involve field testing for specific language of the programs and interest level, phase 4 in contrast shall be a direct implementation phase. Fifty children with known emotional problems shall be given training at the Child Study Unit. They shall be selected from schools that the Child Study Unit has had on-going contact for treatment of various related learning and emotional problems. The schools shall be told that the program is designed to deal with both learning difficulties and emotional difficulties through the use of computerized learning and modeling procedures related to conflict areas often faced by the child with emotional problems. The design of these programs is applicable to children of ages 6 through 16. For the purposes of phase 4 only children of ages 8 through 14 shall be selected. Every child selected for the program shall receive parental permission and school permission for the program. Each child shall have specific behavioral problem checklist filled out by his parents, his teachers and himself relating to a large number of deviant behaviors. In addition the child shall fill out the Piers Harris Self Concept Inventory and a brief sentence completion and a drawing of a person and a Wide Range Achievement Test. The duration of the program for each child will be determined by his or her rate of progress through the materials. The programs shall be constructed however, toward an optimal 8 session procedure, 1 hour/session. Post testing using the same battery shall be done after each child completes the program. In addition to the pre and post testing, the computer shall accumulate a learning file on each youngster based upon presented examples of behavior interspersed within the context of the learning and behavioral strategies.

Phase 5

Phase 5 is an evaluation phase. The accumulated data shall be analyzed. A 3-month follow up shall be conducted on all of the children who have come through the program. That data shall then be added to the previously analyzed data.

Phase 6

The longer term goal for this program is to provide the types of programs to the individual schools in a format where they can be used in a library or school classroom context. At this moment computerized technology is such that this is almost financially possible. By the end of 1978 more than likely it will be within financial feasibility to provide a package using programs of the type being described in this proposal at the individual school level using computers that are programmed to only perform the programs that are electronically wired into their memory banks. This type of set up has many advantages: the computer cannot be erased; its programs are always available just by turning on their power. Phase 6 shall involve the programming and demonstration of such a package program suitable at the individual school level. Five demonstration computers shall be programmed and field tested at cooperating schools.

Phase 7

Phase 7 is a training and dissemination of materials phase. It is expected that the implementation of this project shall provide a focus of school related computerized assisted programs to be established through the Child Study Unit at the University of California, S.F. The type of programs being discussed shall be then modified and expanded to meet the needs of many other special groups including those of children with special handicaps such as spastic and motor problems, mental retardation, brain damage and a great number of other related specific disorders. As previously stated the long term goal of this project is to provide a basis for large scale programs of school learning that can be used by all students to promote adequate socialization and learning processes. The feasibility of computerized assistance increases each month as prices of computers drop and knowledge of the potential of computerized structural learning increases. Thus this program is conceived as an expanding pyramidal program designed for the specific problems of minority children with emotional problems yet ultimately applicable to many specialized childrens' groups.