THE UNIVERSITY OF MANITOBA

THE RELATIONSHIPS AMONG ACADEMIC ACHIEVEMENT, SELF CONCEPT, CREATIVITY, AND TEACHER EXPECTATION OF CREE CHILDREN IN A NORTHERN COMMUNITY

by

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Abstract

The main purpose of this study was to determine the relationships among academic achievement, self concept, creativity, and teacher expectation of Cree children in a northern Manitoba community. The Canadian Tests of Basic Skills, Torrance Tests of Creative Thinking - Figural Tests - Forms A & B, the Michigan State General Self Concept of Ability Scales, and the Teacher Rating of Pupil Attitude Scale were administered within a two-week period to twenty-two children in grade three and nineteen children in grade four. Correlations ranging from -.07 to .64 were found between pairs of variables for grade three students, while the range for grade four was .06 to .45. The major findings were as follows:

1. A significant positive relationship existed between self concept and academic achievement, and between teacher expectation and academic achievement.
2. A positive relationship existed between self concept and teacher expectation.

The results of this study should prove useful to teachers and educators of Indian children as they seem to suggest that academic success of Indian children is significantly related to positive self concept and high teacher expectation. The results indicated the need for teachers of Cree children to consider the total development of the child, and the need for positive teacher attitudes towards the children. It would be beneficial to non-Indian teachers of Cree children to take cross-cultural

courses during teacher training. Also, the orientation of new teachers should be done to acquaint them with the social, political, and economic conditions on the 'reserve' in northern communities.

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CHAPTER I

INTRODUCTION

The school system has come under harsh criticisms by school trustees, academics, and concerned parents for not preparing children adequately in the academic skill areas of the school curriculum (Schulz, et al., 1981, 1982). The current provincial assessment program in Manitoba is an attempt to determine whether these attacks are justified. This is, indeed, evidence of a strong concern for the development of the basic core skills.

In another vein, the educational literature abounds with concern over the simultaneous development of self concept, creativity, and teacher expectation (Gezi, 1969; Felker and Treffinger, 1971; Sisk, 1972; Braun, 1977; Curtis and Pandya, 1980; Uno and Leonardson, 1980; Schempp, 1981). These phenomena seem to bear a high degree of positive relationship with academic achievement (Morse, 1963; Caplin, 1966, 1969; Purkey, 1970; Schroeder and Crawford, 1970; Brookover, Schweitzer, Beady, Flood and Wisembaker, 1976; Stipek and Hoffman, 1980; Bolus, 1981). In addition to wanting to develop these (self concept, creativity, and teacher expectation) concurrently with academic achievement, they seem to have merits as educational objectives in their own rights. Consequently, children achieving well academically in the basic curricular areas should have high positive self concept, score high in creativity exercises, and be expected to perform well by their teachers. The main thrust of this study examines the potential relationship existing among the four variables - academic

achievement, self concept, creativity, and teacher expectation - in grades three and four Cree children in a northern Manitoba community school.

Many of our students today are leaving elementary school and entering junior high school lacking the ability to cope with the basic operations of Mathematics and Language Arts. This is especially true for Indian children in northern communities (Hlady, 1963; Reimer, 1975; Kirkness, 1978; Lenton, 1979; and Rudyk, 1980). The above researchers have also shown that there is an age-grade retardation that begins at grade one and tends to increase as Indian students progress through school. Researches done by Morse (1963), Caplin (1966, 1969), Purkey (1970) Brookover, et al. (1976), and Stipek et al. (1980) found that self concept was positively related to academic achievement. The literature seems to suggest that the self concept and the academic achievement of the Indian child is likely to decrease simultaneously as the child progresses through school. The need to develop a positive self concept in Indian children in the elementary school, is therefore, obvious.

Researches (Brookover, et al., 1967; Clifton, 1972) have shown that teacher expectation is also an important factor in influencing the self concept, and that the attitude of non-Indian teachers of Indian children can have a powerful influence on the self concept of Indian children (National Indian Brotherhood, 1972). Teacher expectation seems to be an important variable in influencing both the self concept and the academic achievement of Indian children.

Research has also shown that children of lower-class income group tend to be more creative than children from a middle-class income group (Gezi, 1969). This finding seems to suggest that Indian children ought to be creative as they tend to come from a lower-class income group. Also

research done by Getzels and Jackson (1958, 1962) and Torrance (1965) found that highly creative children are not the ones who score the best on achievement tests. The literature seems to suggest that children from lower-income groups and who are not the top achievers are likely to be creative.

From the foregoing discussion, there seems to be a positive relationship among self concept, academic achievement, teacher expectation, and creativity. This study intends to investigate these relationships at the grades three and four level in a northern community.

The remainder of this chapter gives a background to the study. It examines the relationship between pairs of the variables investigated, and an attempt is made to justify why the investigation is done in the elementary rather than in the junior high school. It also gives a background to Indian Education by examining some related problems and by looking at some innovations that could improve the quality of Indian Education in northern communities.

BACKGROUND TO THE STUDY

Kirkness (1978) observed that many Indian children from grade one onwards did not progress at the rate of one grade per year. It was further observed that this age-grade deceleration which involves approximately sixty percent of the Indian children in grade two increase to about seventy percent in grade four and seventy-seven percent in grade six. The most recent standardized test scores showed that Frontier School Division students are below the national norms in both Mathematics and Language Arts (Frontier School Division Records, May, 1981). In an attempt to bring about an improvement in these skills, the Stanford Diagnostic Reading Test and Mathematic Tests were administered in September, 1981; and the results were used to assist teachers in planning their instruction for the current academic year (1981-82).

The emphasis placed on teacher instruction cannot be under-estimated but it tends to make one overlook the other variables which also influence academic achievement. Three variables that seem related to academic achievement are self concept (Brookover, Thomas & Paterson, 1964; Brookover and Gottlieb, 1964; Brookover, Erickson & Joiner, 1967; Brookover, Schweitzer, Beady, Flood and Wisembaker, 1976; Caplin, 1966, 1969; Purkey, 1970; Stipek & Hoffman, 1980; Bolus, 1981), creativity (Getzels & Jackson, 1958, 1962; Guilford, 1968, 1977; MacKinnon, 1962, 1964; Torrance, 1962, 1965, 1976; Uno & Leonardson, 1980; Schempp, 1981), and teacher expectation (Rosenthal & Jacobson, 1968; Rosenthal, 1971; Braun, 1977).

Brookover, Thomas, & Paterson (1964) found a significant positive relationship between a person's self concept of ability and his academic achievement. They postulated that an individual's specific self concept

of ability was a better predictor of his academic achievement than was his general self concept of ability; while Brookover & Gottlieb (1964) concluded that the specific self concept of ability was the "functionally limiting factor of his school achievement" because it limited the individual's attempt to learn a particular subject (p. 469).

The assessment of the specific self concept of ability as a limiting factor to an individual's academic achievement seems valid to some extent (Brookover and Gottlieb, 1964). However, the self concept of ability is not the only factor which influences learning because a change in self concept is, in fact, a change of attitude towards the subject and not a change of academic ability. It is obvious, therefore, that a positive self concept of ability will be most effective in the elementary school if teachers are to foster in students a positive attitude towards learning.

From interviews with parents, students, and the priest in Brochet (a small community in northern Manitoba, population: 491) it would seem that the struggle for survival in the north is in competition with formal schooling as students must choose between attending school or helping the family. The decision "to help the family" is also a cultural tradition. Thus, students' attitude towards schooling is not always positive. Since 1977-78 a nine-month school year was put into effect in an effort to improve attendance. The Thompson report on "Spring Truancy" (1979) showed an improvement in student attendance and an increase in instructional hours by 59.8 hours. It is, therefore, most important that teachers assist their students to develop a positive self concept of ability so that students would be more receptive to teacher instruction.

Many researchers (Brookover, et al., 1964, 1967; Alvord & Glass, 1974;

Bacher, 1964; Deo & Sharma, 1970) have investigated the relationship between the self concept of ability and academic achievement in the secondary school where the individual had already associated his self concept of ability with his success or failure in that specific subject area. This paper intends to look at the relationship between these two variables in the elementary school. The rationale for focusing on these years lies in the belief that if low self concept is identified and found to be related to low academic achievement at this early stage, attempts can be made to enhance the individual's self concept of ability, thus altering his attitude towards education before he becomes a potential failure or dropout (Beaird, 1965).

Sisk (1972) stated that although it is important for an individual to have a realistic and positive self concept, his 'inner strengths' lay in the further development of his feelings about himself, and that he could only achieve creativity through the mobilization of his 'inner strengths'. Creativity, it seems, is closely related to self concept; but are high positive self concept and high academic achievement accurate indicators of high creative ability; and are low self concept and low academic achievement indicators of low creative ability?

The research done by Getzels and Jackson (1962), MacKinnon (1964), Torrance (1965), and Guilford (1968) have shown a low positive relationship between creativity and academic achievement while Wallach and Kogan (1965) found no relationship. Torrance (1965) found that although creative individuals perform better than average on intelligence tests, the top twenty percent of the individuals who scored high on measures of intelligence were not the top twenty percent of the individuals who scored high on

measures of creativity, and that this accounted for low correlation between the two variables. Guilford (1968) explained that the low correlation was due to the fact that the answers to traditional intelligence tests required convergent thinking ability while measures of creativity required divergent thinking ability.

Torrance's findings (1965) seem to suggest that creative individuals are not the most intelligent students. Thus the top twenty percent of the highly creative individuals are not allowed to exercise their talent because creative ability, which is considered an aptitude of the gifted, is only encouraged in the classes for exceptional children, and the criteria for entry here are beyond the intellectual capability of the highly creative. What this seems to imply is that it gives the inaccurate feedback to the creative individual that he possesses no exceptional ability and thus fosters an inappropriate and low self concept of his true potential.

In Manitoba, two school divisions, Lord Selkirk and St. Boniface, have programs for exceptional children and since September, 1979, the St. James Assiniboia School Division has launched a program to assist in the identification of the gifted, talented, and creative child. Student selection for the program for exceptional children in the above mentioned school divisions is based on their scores on a battery of tests: academic achievement in reading and mathematics; creativity tests; and I.Q. tests. The students are ranked and the top five percent are selected to be in the program for exceptional children. This program takes into consideration the academic, intellectual, and creative ability of the top five percent of the students while the remaining ninety-five percent are given "basic education" with little or no opportunity to exercise their creative

ability.

At the Council for Exceptional Children, 15th Annual Conference, held at the University of Manitoba, Birch (1980) pointed out that the means of identifying the creative individual should not be by tests alone as is currently done. There is, therefore, need for proper identification of creative individuals who do not possess exceptional intellectual ability so that their talent could be encouraged, channelled into the right direction, and thus avoid this loss of potential talent.

The rationale for investigating the relationship between creativity, and academic achievement during the elementary years lies in the notion that at this level the individuals who are inclined to be creative have been affected by peer pressure and social roles to a lesser extent than the individuals who have entered the secondary school. Covington (1968) assumes that all children, regardless of age or intellectual level, fall short of realizing their full potential for creative thought. It is hoped that this study will bring out the importance of identifying the individual's true potential long before he enters secondary school.

One such study was done by Spauling (1965), who investigated the correlation among achievement, creativity, and self concept in the elementary school. He found that while teaching methods and styles affected pupils' personality and educational progress, they did not affect pupils' originality. It is important, then, to investigate what teacher-pupil transactions will influence the pupils' development in the three variables. One teacher-pupil transaction which this study intends to investigate is teacher expectation.

Although educators have assumed that high positive self concept of ability is important for high academic achievement and that the individual's

creative ability develops simultaneously with his intellectual ability (Torrance and Torrance, 1963), teacher expectation may be inimical or positively influential to the individual's self concept, his creative ability and his academic achievement (MacKinnon, 1962, Brookover, et al., 1976). Rosenthal and Jacobson (1968) found that a teacher's expectation of her pupils' intellectual competence can come to serve as an educational self-fulfilling prophecy and that changes in the teacher's expectations regarding the pupils' performance have led to an actual change in the intellectual performance of the pupils.

This self-fulfilling prophecy is not universally accepted (Glock, 1972) but Brookover, et al. (1967) found significant relationship between teacher influence and the pupil's self concept of ability. MacKinnon (1962) observed, that when the teacher's expectation is that a child will not respond creatively to a task, then, the probability of the child responding creatively, is very much reduced. This is especially true if the child knows of the teacher's expectation. Getzels and Jackson (1962) found that teachers preferred to work with high achieving students rather than highly creative students. Thus, it seems that the importance of teacher expectation of the child's academic achievement lies not in how the child behaves but in how he is treated. This study intends to focus on what changes teachers can effect rather than what to expect from the students they teach.

From the foregoing discussion, it seems logical to conclude that there seems to be a positive relationship existing among academic achievement, self concept, creativity and teacher expectation. The evidence from the literature (Schroder, et al., 1970; Glock, 1972; Braun, 1977; Neufeld, 1980) points out that this might be so for Euro-Canadian children in urban

communities, but is this so for Indian children in northern communities? This study will investigate this phenomenon in the elementary school, more specifically with Indian children in a northern community at the grades three and four level. An attempt is made below to give a brief account of Indian education.

INDIAN EDUCATION

Introduction

The efficiency of an educational system should not be assessed by the amount of money that is put into the system but by its relevance to the community and by the quality of the product that comes out of the system (Glock, 1972). There has been a considerable increase of money spent on Indian education during the past decade - $3.6 million in 1971-72; $53.1 million in 1978-79 (Department of Indian Affairs and Northern Development, 1980) - yet, the quality of Indian education and its relevance to the needs of the Indians leave much to be desired. This section examines the dilemma of Indian education by looking at the background to the situation, some problems related to Indian education in northern communities, and trends in Indian education.

Background

In 1974, the Minister of Education, Ben Hanuschak, announced the formation of a Native Education Branch in his Department. The Minister observed that there were between 75,000 to 100,000 (Hanuschak, 1974) Manitobans of native origin, more than 37,000 were treaty Indians, and that more native children were remaining in the school system for longer periods. This branch assumed a consultative role in decisions affecting native education.

Who are these native Manitobans and what prompted the Minister to form the Native Education Branch? These native Manitobans - Indians and Metis - live both "on" and "off" reserves that are found throughout Manitoba. The "on reserve" Indian population remains a predominantly rural, remote, and northern population, who make their living by hunting, trapping, and fishing. About half of the Metis population is found in settlements in rural areas and sometimes close to Indian reserves. Those in northern communities earn their living on traplines, fishing boats, hunting-trails or as lumberjacks but they have no municipal government to turn to for "relief" when economic depressions strike the settlements. (Sealey, 1972, p. 1).

Recent research by Kirkness (1978) and Lenton (1979) looked at enrollment patterns, drop out rate, age-grade deceleration, attendance patterns, course placement, destination of school leavers, and staffing. Kirkness was commissioned by the Department of Indian Affairs and Northern Development (DIAND) to develop an evaluation framework for a comparative analysis of the federal and provincial educational systems for Indian students. The Lenton study (1979) was an exploratory study of the education of Indian children covering a period of fourteen years (1965-1979) while the Kirkness study (1978) was an evaluation report on the education of Indians. Both researchers recommended more native participation in decisions affecting the education of their children. For example, Kirkness (1978, p. 6) states:

> That parents, band education authorities, band councils, school staff and federal and provincial authorities be involved in a review of factors which affect formal schooling and jointly identify directions to be taken to change this situation.

Lenton (1979) who supported such a view states:

> That the Department of Indian Affairs and Northern Development, Department of Education, band councils, school divisions, and parents explore the concept 'Local Control of Education', and outline ways for Indian people to actively participate in decisions affecting the education of their children.

In order to understand why Indians did not participate in decisions involving the education of their children it is important to understand some of the factors related to their social, economic, political, and cultural organization. The Indian population has tripled from 1920 to 1980 - 100,000 to 300,000 (DIAND, 1980) with almost fifty percent of this population being under fourteen years. About seventy percent of the Indian population live on 2,242 reserves with a total area of 10,021 sq. miles. (DIAND, 1980). The Indians are organized into 573 bands (DIAND, 1980) across Canada, each varying in size from less than a hundred to over 5,000. This fragmentation impedes the growth of a strong, centralized leadership. This lack of strong leadership is probably responsible for the fact that non-Indians guide the destiny of the Indian population.

Efforts to nurture leadership were made with the formation of National Indian Council, 1961, Canadian Indian Youth Council, 1965, and National Indian Brotherhood, 1969; yet leadership remains poorly developed.

Some researchers (Davis and Krauter, 1971) feel that the social welfare subsidy has made the Indian too dependent on the Federal Government. For example, they state: (1971, p. 21)

> The paternalism of the 'Indian Act' and of the reserve system has so discouraged initiative, that Indians have come to prize the meager material advantages of their custodial care . . . The Indian now finds it . . . easier to remain secure at a subsistence level than to risk entering the competitive social and economic environment.

This dependence on external subsistence has stunted the growth of internal leadership as it has reduced the role of the "chief" to a figure-head.

It was not until 1972 that the National Indian Brotherhood (NIB) presented its policy paper on Indian education to the Minister of Indian Affairs and Northern Development, calling for Indian control of Indian Education. (NIB, 1972). But to date, the James Bay Agreement (Quebec) is the only major comprehensive claim agreement that gives the Cree and Inuit control of their education under provincial law with language and cultural protection (DIAND, 1980).

It seems that there is general agreement that initiative and responsibility for Indian programs should be in the hands of Indians (NIB, 1972, Kirkness, 1978, Lenton, 1979). There is evidence to show a gradual shifting from government to Indian control over the past decade (James Bay Project, 1975). However, the effectiveness of Indian initiated programs is caught between two opposing forces - the haste to achieve results on the part of the Indians as opposed to those who regard social assistance as destructive - and both can have negative effects. These fears are not totally unfounded because Indian control of decisions affecting them is increasing simultaneously with the amount of Indians on social assistance and welfare, which increased from a third to over half of the Indian population over the past decade (DIAND, 1980). The decision of the Minister to create a Native Education Branch has influenced the current innovation. It is hoped that his branch will work in close collaboration with the school committees whose primary function is still limited to the selection of teachers as they interview applicants and recommend their appointments to

their respective school divisions. Teacher selection may seem to be a minor role, but the Indians feel strongly that the appropriate teacher attitude is very important to the learning situation. The National Indian Brotherhood stated that

> . . . the role of teachers (Non-Indian) in determining the success or failure of young Indians is a force to reckon with. In most cases, the teacher is simply not prepared to understand or cope with cultural differences. (NIB, 1972).

Teacher attitude does not only influence the academic success or failure of the student. It can also make positive or negative contributions to the student's self concept and creative ability.

SOME PROBLEMS RELATED TO INDIAN EDUCATION AND STEPS TAKEN TO CORRECT THEM

Most studies of academic achievement of native children found that age grade retardation is a common problem. (Hlady, 1963, Reimer, 1975, Kirkness, 1978, Lenton, 1979, Rudyk, 1980). Some of the suggested causes for poor academic outcomes are poor home studying conditions, (Hlady, 1963), the subtle conflict between the school curriculum and home education, and the lack of specialization on the part of teachers (Lenton, 1979).

The need for specialized training and orientation of non-Indian teachers was recommended by Kirkness (1978).

> The courses be conducted for new teachers. . . to acquaint them with the social, economic, political, and educational aspects of reserves and to provide them with an insight into cultural differences (p. 24).

It was observed by parents that non-Indian teachers generally lacked knowledge of Indian people (Berger, 1973). Cross-cultural awareness seminars conducted throughout the year can do much to provide non-Indian

teachers with an insight into the social and economic aspects of life on the reserve. They need to understand the influence their values have on their attitude to the students they teach. Berry (1969) observed that the teachers of Indian children in America were recruited frequently from near the reservation where they teach, and they imported into the classroom the attitude of the local community which very often was prejudicial to Indians. Teacher recruitment for Frontier School Division does not follow the American pattern as 41% of the teachers employed by Frontier School Division are recruited from out of province (Thompson, 1979). Orientation then is necessary especially for those teachers who have not had any cross-cultural courses during their training.

The importance for teachers of native students to cultivate a positive attitude towards the students they teach should not be under-estimated. It is one of the key factors that determine the self concept of the child. Self theory holds that the self concept is the frame of reference through which a child reacts with his world and as a result has a powerful influence on his behavior. This theory holds true for both native and non-native children (Brookover, et al. 1967; Clifton, 1975). Thus, it is necessary for students to develop a positive attitude towards the subjects they are taught in school if they are to be successful in learning the subjects. Positive teacher expectation seems to be an important factor in influencing positive student self concept which in turn influences success in academic achievement and creativity.

Research done by Frideres (1978) and Wax and Walker (1970) showed that teaching experience of northern teachers is low. This finding suggests, that the annual teacher turnover in northern communities is high. This has

negative effect as the teacher does not really come to know the children and their problems, and is ill prepared to help the child find himself and develop a sense of personal identity. The child's self concept will therefore be low, and this in turn results in poor academic achievement (Glock, 1972).

Renaud (1964) pointed out that the Indian child comes to school with as much intelligence and curiosity as any other child. But he is constantly being ignored and what is taught is not related to his home community. As a result, the child is not motivated to learn. If he is made to feel that his way of life is not only different but wrong, his self concept may decrease to such an extent that he will find it impossible to function in the school setting. If, on the other hand, the teacher is aware of the child's cultural environment, accepts and gently guides him, then his (the child's) curiosity will be expanded to gather momentum to see himself beyond the maximum of his grade level.

Teacher orientation, it seems, is important as it helps teachers to develop the appropriate attitudes necessary to teach in Indian and northern communities (Renaud, 1963). Inappropriate teacher attitude can result in the student being made to feel inferior within the classroom. This damage to the self concept, which is dependent on school success or failure is a primary concern among parents and educators (NIB, 1972).

This study of Cree in a northern Manitoba community looks at their self concept as it is related to their academic achievement, creativity, and their teacher expectation.

TRENDS IN INDIAN EDUCATION

Current trends in Indian education seem to indicate more local involvement in decision making, increased attendance at colleges and universities, and the development of culturally relevant curriculum.

The need for more native involvement in decisions affecting their children's education springs from the fact that a greater percentage of Indian children are now attending school. There are over 70,000 students (DIAND, 1980) of Indian descent attending elementary and secondary schools. There is also increased Indian attendance at universities, community colleges and other government training programs - e.g. nursing (DIAND, 1980). This might be due to the funding for tuition and maintenance provided by the Department of Indian and Northern Affairs. It also reflects greater interest in post secondary education.

A decline in enrollment at the secondary level between ages fourteen and eighteen years (Enrollment Estimate, 1981-1986; Frontier School division) seems to suggest a high dropout rate for these age groups. This might be due to the fact that the student is failing academically, and since he is unable to relate school activity with his out-of-school activities, he can see very little relevance between the education he is receiving and the world in which he has to work. This view was also expressed in the Hawthorn Report (1967).

> Indian students see school as a place in which they spend a given number of hours each day during which they can learn few things of relevance, and in which they are faced with academic and social difficulties (Hawthorn, 1967, p. 139).

If the subject matter taught in school is meaningful and interesting to the student, and if it is also related to his environment, his chances of completing school would be increased.

The need for a more culturally related curriculum was supported by research done by Reimer (1975), Clifton (1977), Kirkness (1978), and Lenton (1979). Clifton, Kirkness, and Lenton recommended a culturally related curriculum. Reimer's study involved the implementation of a culturally related grade seven mathematics program in eleven schools and found that the students who studied the culturally related mathematics program scored significantly higher than the students who used a non-relevant program. Also, as a result of academic success, teachers perceived that their students enjoyed studying mathematics.

In view of the suggested relationships between school learning and cultural relevance, many educators have recommended that the following should be given priority:

1. The development of culturally relevant curriculum material should be encouraged. (Reimer, 1975; McManus, et al., (1981). McManus and others did an evaluation of the Native Bilingual Program pilot project (1976) and found that not only did students master both languages with equal dexterity, but that their self concept was improved, their achievement was satisfactory, and parents and community involvement developed a positive view of the school in general, and the program in particular.
2. There should be more native involvement in their children's education (Renaud, 1971; Kirkness, 1978; Lenton, 1979; McManus et al., 1981). Native involvement with regard to teacher interviews has already been discussed. The McManus report on the pilot project of Native Bilingual Program pointed out that native involvement developed positive parental attitudes towards their children's education. In Brochet school, student job experience also involve the parent and the community.

Native involvement, it would seem, has some influence on student self concept and academic achievement.

3. Teachers of Indian children should be appropriately trained, and more native teachers should be trained for certification. (Kirkness, 1978; Lengton, 1979; ITEP Conference, 1976). Appropriate teacher training should equip the teacher with a better understanding of the life and culture of the native people. With such understanding, the teacher would be in a better position to help the students to develop a positive self concept and thereby improve their academic achievement. In 1974, the Canadian Indian Teacher Education Conference at Brandon University initiated a program for the training of Indian teachers, who traditionally had not had access to professional education. Although this program has expanded tremendously through BUNTEP, IMPACTE and PENT, yet the status of the majority of Indian teachers remain as teacher-aides, and this is due to lack of certification.

4. The orientation of new teachers can help to develop better teacher understanding of student behavior. Orientation of new teachers is done by Frontier School Division before or during the first week of the fall semester. These orientations deal exclusively with curriculum planning and very little, if any, with cultural orientation. In 1981, the Northern Resource Teachers invited a professional consultant from the University of Manitoba to give the key note address on "Native Culture". This group of about forty teachers represent less than fifteen percent of the teaching staff. Apart from the feature address, the other orientation courses fall short of the recommendations made by Kirkness, (1978) and Lenton, (1979) as they do not really acquaint

new teachers with the social, economic, political and educational aspects of reserves and fail to provide insight into cultural differences.

A culturally related curriculum, more native involvement, Indian teacher certification, and the orientation of new teachers are a few steps that need to be taken to improve native Indian education in Manitoba. They seem to have relationships to the academic success or failure and the self concept of the student. This study intends to investigate the relatioship among the variables: academic achievement, self concept, creativity, and teacher expectation.

PURPOSE OF THE STUDY

This study attempts to determine the relationships among the variables of self concept, creativity, academic achievement, and teacher expectation of Cree children in a northern Manitoba community.

SIGNIFICANCE OF THE STUDY

The information gained from this study could be valuable not only to the specific school in which the sample was taken, but also to the educational community at large for the following reasons:

1. Knowledge would be gained about the creative ability of the students. Investigations have shown that 70 percent of the creative students have not been identified. (Torrance, 1965).
2. This could be a starting point from which systematic research could be done to identify the creative talents of all students.

3. Knowledge would be gained as to the extent teacher's expectation influence the students' performance. Teachers could use this information to enhance both the self concept and the creative ability of the students.
4. Curriculum planners could use this information to expand their program to include topics which will lend themselves to creative problem solving and the development of a positive self concept in the classroom.
5. The information would point out the need:
   a) to enhance students self concept,
   b) to encourage students' creative talent, and
   c) for teachers to permit students to feel that their work has value.
6. There could also be some benefits related to (a) administrative awareness of the extent to which there are (adequate or lack of) programs which foster the growth of creativity, and (b) the increase of public awareness of the importance of creativity to our educational system and the community.
7. The findings of this study could also bring to light some of the other factors that teachers should bear in mind when teaching Cree-speaking natives of northern Manitoba, in order to enhance their learning.

STATEMENT OF HYPOTHESES

The following hypotheses will be tested:

1. There is a positive relationship between self concept of ability and creativity. That is, children identified as having positive self concept are likely to score high on measures of creativity.
2. There is a positive relationship between self concept of academic ability and academic achievement. That is, children with positive self concept of ability in a subject matter area are likely to attain high academic achievement in that specific subject matter area and the children with lower positive self concept of ability in a subject matter area are likely to attain lower academic achievement in that specific subject matter area.
3. There is a positive relationship between self concept of ability and teacher expectation. That is, the childrens' views of themselves are positively associated with the performances the teacher expects of them.
4. There is a positive relationship between creativity and academic achievement. That is, the children who score high on measures of creativity are likely to score high on measures of academic achievement.
5. There is a positive relationship between, creativity and teacher expectation. That is, the childrens score on measures of creativity are positively associated with the high levels of performance the teacher expects of them.
6. There is a positive relationship between academic achievement and teacher expectation. That is, the childrens' scores on measures of

academic achievement are positively related to high levels of performance the teacher expects of them.

DEFINITIONS

SELF CONCEPT

The self concept of academic ability does not refer to some underlying mental construct, rather it refers to the "symbolic behavior" which is the individual's assessment of his academic ability and this may vary from one situation to another. The self concept of academic ability refers to:

> "the evaluating definitions which an individual holds of himself in respect to his ability to achieve in academic tasks in general as compared with others." (Brookover, et al., 1967, p. 59).

Thus an individual's self concept of his math ability may be 'A' when compared with members of his group, but 'B' when compared with all the students in the class. For the purpose of this study, "self concept" is operationally defined as an individual's perception of himself in relation to the items on the Michigan State General Self Concept of Ability Scale. These items seem to present clear examples from which scores could be obtained. A high numerical score will thus represent a more positve self concept and a lower score will represent a less positive self concept.

CREATIVITY

There is not common agreement as to an acceptable definition of "creativity" but most researchers (Torrance, 1965; Parnes, 1967; Guildford, 1976) seem to agree on four common attributes - fluency, flexibility, originality, and elaboration. Torrance (1965) defines creativity as:

> "The divergent thinking abilities . . . involved in the generation of new information from given information, where the emphasis is upon the variety and quality of output from the

> same source . . . These abilities include various kinds of fluency, flexibility, originality, and elaboration." (p. 321).

Fluency refers to the number of relevant responses given; flexibility is the number of different categories of response; originality is a sum of credits where some routine responses count zero, less common responses get a unit score and in some cases, responses too infrequently used get a credit of two; and elaboration is the count of the additional details used in each response totalled over responses. For the purpose of this study, "creativity" will be the accumulated score on these four abilities as measured by the Torrance Tests of Creative Thinking - Figural Tests Forms A & B.

ACADEMIC ACHIEVEMENT

Academic achievement usually refers to:

> "the extent or degree of mastery of certain areas or studies as measured by some specific instrument or test." (Caplin, 1966, p. 14).

In this study, "academic achievement" is respresented by the total score obtained from three subject areas: Language Arts, Mathematics, and Work Study Skills; on the Canadian Tests of Basic Skills - Levels nine and ten. Five scores will be obtained from eleven subtests - three for Language Arts, one for Mathematics and one for Work Study Skills. The composite score obtained from these five scores will represent a degree of academic achievement.

TEACHER EXPECTATION

Teacher expectation is the teacher's preconceived concept of the student's ability. In this study, "teacher expectation" will be represented

by the score from an adaptation of the Teacher Rating of Pupil Attitude Scale which was developed at the Tennessee Technology University (1969). The score obtained from the sixteen questions will reflect "teacher expectation" of the student's attitudes and ability in academic achievement and creativity.

METIS refers to a person of Indian and White ancestry and not registered as an Indian (Sealey, 1972).

INDIAN refers to

(i) a person registered or entitled to be registered as an Indian according to the Indian Act, (under the revised Canada Act, 1965, Statutes of Canada).

(ii) a person of Indian ancestry but not registered as an Indian i.e. a non-status Indian. (DIAND, 1980).

CREE refers to an Indian who

(i) has one or both parents being Cree; and

(ii) Cree is the language of communication within the family.

BAND refers to a Body of Indians recognized by government for whose benefit and use land and money have been set aside and held by government. (DIAND, 1980).

RESERVE refers to a tract of land set aside for the use and benefit of a band, the legal title of which is vested in Her Majesty. (DIAND, 1980).

NATIVE refers to Canadians of aboriginal descent and can include status and non-status Indians, Inuit, and Metis. (DIAND, 1980).

LIMITATIONS IN THE DEFINITION OF THE VARIABLES

Time constraints as well as considerations of cost made it practical to limit the extent of the sample to grades three and four with a total of forty-one students.

Self Concept. For this study, self concept will be limited to twenty-three statements which grades three and four children can read and understand. These twenty-three statements comprise only a small segment of an individual's general self concept of ability.

Creativity. It is not possible to measure every aspect of an individual's creative potential. This study is limited to those aspects of creativity which could be expressed with pictures.

Academic Achievement. This study will be limited to the academic achievement in three subject areas - Language Arts, Mathematics, and Work Study Skills. It is true that an individual's achievement in three subject areas is not enough to make a generalized statement about the individual's total achievement. However, these three subject areas form the basis for the other subject areas and should give a fair assessment of an individual's achievement. The achievement test used in this study was that used by the Frontier School Division for its annual assessment of basic skill development. Other standardized achievement tests were not considered.

Teacher Expectation. For this study teacher expectation will be limited to sixteen statements which best describe the teacher's expectation of the student's attitude and performance. These statements contain information that is relevant to the study and by no way cover every aspect of the teacher's expectations of the student's performance.

DELIMITATIONS

Subjects. The sample will consist of all the students in grades three and four in a school in Brochet, Manitoba. Although the attributes of creative ability are the same universally, and the academic achievement are measured by standardized instruments, yet, the conclusions and implications drawn from this study may not be applicable to every school in Manitoba.

This study will focus on grades three and four in the elementary school. Since the sample will be of all students in these grades in the school under study, the findings should reflect what is representative of these grade levels of the student population.

ORGANIZATION OF THE REMAINDER OF THE STUDY

A review of other investigations related to the study will be the subject matter considered in Chapter II. Chapter III will outline the design of the study in detail. The analyses of the results of the findings are examined in Chapter IV. The results are also discussed in this chapter. The implications of the findings with recommendations for the education of Indian children in northern communities and for further research will conclude the final chapter.

CHAPTER II

REVIEW OF RELATED LITERATURE

The review of the literature will be divided into nine sections as shown below. References will be made to the most relevant studies with respect to the present study.

A. Academic achievement and self concept.

B. Academic achievement and creativity.

C. Academic achievement and teacher expectation.

D. Self concept and creativity.

E. Self concept and teacher expectation.

F. Creativity and teacher expectation.

G. Special Education in Manitoba.

H. Studies related to Indian education.

I. Summary of the literature reviewed.

CHAPTER II

REVIEW OF RELATED LITERATURE

A. ACADEMIC ACHIEVEMENT AND SELF CONCEPT

There is a mutual relationship between self concept and academic achievement and each reinforces the other (Purkey, 1970). The child with a positive self concept is confident of his ability to achieve his set goals which are appropriate for his capability. Success in academic achievement generates a positive self concept (West and Fish, 1973). The opposite is also true. The child with a poor self concept tends to doubt his ability to perform a task; he lacks self confidence and fears failure which is conducive to poor self concept. Most of the studies which investigated the relationship between self concept and academic achievement found positive relationship (Brookover, et al., 1964, 1967; Caplin, 1966, 1969; Deo and Sharma, 1970; Alvord and Glass, 1974).

Brookover, et al. (1964) found positive relationship between self concept and achievement in junior high school subjects. They did a very extensive study in which they studied over a thousand seventh grade students from urban schools. They found that self concept of ability was positively related to academic performance, that the self concept can be differentiated into specific self concepts which corresponds to specific subject matter areas, and that self concept positively correlated with the student's perception of how significant others view his ability.

Caplin (1966) matched negro and white students on the basis of grade level, sex, intelligence, and socio-economic status, and found significant positive relationship between self concept and academic achievement, and between levels of aspiration and academic achievement. In a more extensive study, Caplin's (1969) results supported his earlier findings. He also found that children in segregated schools had less positive self concept than do children attending desegregated schools.

Butcher (1967) investigated the relationship of student self concept to academic achievement in six high achieving elementary schools at the grade four level. His results showed no significant relationship between the two variables. Deo and Sharma (1970) found positive relationship between the two variables in their study involving seven hundred adolescents. Alvord and Glass (1974) also found positive relationship from a more extensive sample (3,162 students from grades four to twelve). In a more recent study, Rogers, Smith, and Coleman (1978) also found significant positive relationship between self concept and reading achievement but not for self concept and mathematics achievement.

During 1977-78, the Northland School Division did a major reading project with 610 Cree-speaking Canadian students. The objectives of this project were to assist Cree-speaking students in English language acquisition and also to determine the effectiveness of the reading materials on students' self concept. Test results indicated that the materials did not improve reading achievement, but teacher questionnaires indicated student improvement in language, reading and writing skills, self concept, reading interests, and creative writing.

In a validation study of self concept interpretations (Bolus, 1981), self concept of ability was found to have a consistent causal effect on academic achievement but academic achievement did not have an effect on self concept.

SUMMARY

These investigations (Brookover, et al., Caplin, Deo and Sharma, Alvord and Glass) show overwhelming evidence of the significant positive relationship between self concept and academic achievement except for the studies of Butcher (1967) and Rogers, et al. (1978). Butcher (1967) did not get similar results to the others probably because he used an intelligence test to measure achievement, whereas, the others used standardized achievement tests. It should also be observed that all the investigations except two (Brookover, et al., 1967; and Rogers, et al., 1978) looked at self concept from a general point of view while Brookover, et al., (1967) and Rogers, et al., (1978) looked at specific self concept for specific subject matter areas. This specific approach to the self concept of ability was first investigated by Ringness (1961) when he compared self concept with intelligence. There appears to be a need for further investigations into the relationship between the self concept of ability and academic achievement using the specific subject area approach. This study investigated the relationship between these two variables using this approach.

B. ACADEMIC ACHIEVEMENT AND CREATIVITY

The relationship between creativity and academic achievement should be one of mutual reinforcement since the creative individual is generally able to think of a greater number of possible solutions for a problem and is more likely to succeed. But investigations into the relationship between creativity and academic achievement did not all reveal a high positive correlation (Barron, 1969; Tanpraphat, 1976). The results are inconclusive. This may be due to the fact that creative problem solving requires all possible solutions to the problem while academic achievement is measured by the correct solution only, and does not necessary reflect creative thinking.

Getzels and Jackson (1958) studied creativity as a dimension of giftedness, and administered tests specifically to measure creativity and intelligence. They identified the top twenty percent of their sample on I.Q. measures and found that they were not the top twenty percent on measures of creativity. However, both the top twenty percent on measures of I.Q. and creativity were superior to the general population on achievement tests. Thus, one could conclude from Getzels and Jackson's (1958) findings that a positive relationship exists between creativity and academic achievement for individuals who are very intelligent and possess high creative ability. Sears (1963) found a strong positive relationship between academic achievement and creativity for superior boys, while Barron (1969) found low positive relationship between general intelligence and creativity for three groups of creative individuals. Getzels and Jackson (1962) had found similar results but Tanpraphat (1976) found no relationship between the two variables, while Hicks (1980) found significant positive relationships between I.Q. and creativity, and reading achievement and creativity.

Barron (1969) was of the opinion that creativity tests were too short and closely timed to really engage the subjects' "deepest being". Torrance (1962) found that when intelligence tests were used to identify student with creative ability over seventy percent of the creative students were left out. Guilford (1968) explained that intelligence tests measured only some of the student's abilities. He also stated that intelligence tests measured convergent thinking abilities and measures of creativity, which are used to identify students with creative ability are measures of divergent thinking abilities. There is, therefore, need for research using achievement tests rather than intelligence tests when looking for relationship between creativity and academic achievement.

Rookey (1972) found that creative ability was a necessary correlate for academic achievement but that creative attitude was not necessary. He used the Commonwealth of Pennsylvania's Pennsylvania Questionnaire and the Stanford Achievement Tests to determine what factors were related to achievement in Language Arts and Mathematics. However, the Pennsylvania Questionnaire is not designed to measure creative ability. This study intends to use the Torrance Tests of Creative Thinking (TTCT) which is designed to measure creative thinking ability (Torrance, 1966), and the Canadian Tests of Basic Skills which is designed to measure achievement in Language Arts, Mathematics and Work Study Skills (King, 1976), to determine the relationship between these two variables.

SUMMARY

The above mentioned studies (Getzels and Jackson, 1958, 1962; Torrance, 1962; Tanpraphat, 1976) seem to suggest that creative ability is not necessarily related to intelligence although both are positively related to academic achievement for high achievers. The low positive relationship between academic achievement and creativity is probably due to the limited amount of academic ability that is applied when doing a creative task.

C. ACADEMIC ACHIEVEMENT AND TEACHER EXPECTATION

Teachers' evaluation of pupils' performance is determined by many variables which can be divided into two categories: background information and present performance. The "halo effect" which is based on background information and teacher expectation, can either lower or raise the child's performance, which, when communicated to the child may serve to fulfil the teacher's prophecy (MacKinnon, 1962).

Rosenthal and Jacobson did a number of studies (1968, 1971) investigating whether a teacher's expectation of her pupils' intellectual competence can come to serve as an educational self-fulfilling prophecy. They consistently found a positive relationship between teacher expectation and pupils' achievement. They also found that a positive change in teacher expectation can lead to improved intellectual performance. Cooper (1971) did a follow up study on Rosenthal and Jacobson's work and conducted two experiments in an attempt to discover the processes by which "teacher expectation" is communicated. One was based on the assumption that feelings of success or failure can be translated into behavior and the other was an observation

of the number of "eye glances" the teacher made at "success" or "failure" students. He found that there were differences between the way in which teachers treated children whom they expected to perform well and children who were not expected to perform well.

Good and Brophy (1977) explained that

> "teacher expectations do not, ipso facto, influence student behavior. If student behavior is influenced, it is through teacher behavior or classroom arrangement." (p. 385).

They gave a model of how teacher expectation can influence student achievement. Because the teacher expects specific behavior and achievement from particular students, he behaves differently towards different students. Thus it is the teacher's attitude which tells each student what behavior and achievement the teacher expects from him. If the teacher's behavior is consistent, over a period of time, the student's achievement and behavior will conform more and more closely to that expected from him. Good and Brophy (1977) did not advocate high teacher expectations, low teacher expectations or equal teacher expectations for all students, but they emphasized that inappropriate teacher expectations can affect achievement motivation.

Rosenthal (1971) explained that the impact of this self-fulfilling prophecy would be on teacher selection for training and placement of teachers to optimize the learning of all students. He saw this theory as affecting a change of attitude in teachers especially towards the educationally disadvantaged.

Braun (1977) described six classroom episodes and pointed out that unduly high teacher expectations should be avoided to prevent distorted perceptions and behavior as they may place undue pressure on the learner.

SUMMARY

The researchers seem to suggest that the teacher in the classroom should not regard himself as a casual passer-by. It is not conclusive whether it is the classroom arrangement, or what specific teacher behaviors or a combination thereof that influence student achievement. Many teachers do not agree that a relationship exists between teacher expectation and student achievement (Glock, 1972; Braun, 1977). If relationship exists, as the researchers seem to suggest, then teachers need to be aware of their own behavior in the classroom, because it seems that the student's interpretation of the teacher's behavior influences student performance. This study looked at teacher expectation and its relationship to student self concept of ability, creativity, and academic achievement.

D. SELF CONCEPT AND CREATIVITY

The self concept is influenced by how the individual sees himself, and the way he feels others think about him (Kinch, 1963). The individual with a positive self concept will have a feeling of confidence in his ability and will be more willing to try new tasks because he is not afraid of failure (Harris, 1971). Thus, the creative individual with a positive self concept is better able to evaluate the quality of his efforts and is able to persist at a task until he is successful. On the other hand, the individual with a low self concept and academic failures will lack the self confidence and perseverance which are essential to creative development.

Rogers (1970) explained this in terms of "openess to experience" as opposed to "defensiveness". Rogers described the purpose of creativity as "self actualization". He believed that creative production expresses a

part of the individual - his feelings, and thoughts. Parnes (1967) stated that if a person learns to apply his creativeness to all his work, he will thereby achieve maximum self-realization, which in turn gives him greater joy in the work itself. It appears that both Rogers and Parnes based their argument on Maslow's "five needs" of which self actualization is the highest form of achievement for the individual. Parnes (1971) suggested that this form of human potential should not be left to chance. Educators should, therefore, design educational programs that give individuals new scope for exercising their intellectual processes and nurture their creative talent.

Rookey (1972) investigated the correlation among self concept, creativity, and achievement. From his findings, he concluded that creative ability was related to achievement because they involved cognitive variables, but self concept was unrelated because it seemed to be influenced by affective rather than cognitive variables. However, Brookover, et al. (1964) and Caplin (1966) had found significant positive relationship between self concept and academic achievement.

Although creativity is teachable (Torrance & Torrance, 1973), yet it is generally accepted as a trait of gifted children. Runyon (1963) investigated the possibility of early identification of gifted students by assessing the differences in self concept and creative ability of grade two students in interage groups. He found no significant difference in self concept or creative ability between the groups over a period of eight months.

Sisk (1972) looked at the relationship between self concept and creativity in gifted children. She found that gifted children who were identified as "low creative" were aware of their "strengths" and that these individuals could discover their self worth if allowed to work in small groups where emphasis is on the individuals. She also emphasized the need for teachers to

recognize and develop creative thinking in students.

Spaulding (1965) studied correlates of teacher-pupil transactions in the elementary school classrooms. He found significant relationship between academically oriented teachers and students' achievement. Students' academic achievement also correlated with students' self concept, but he found no relationship between pupils' originality and creativity in teachers.

Thus, it appears that teacher orientation is important for students' academic achievement but it is not necessary for students' creativity as recommended by Sisk (1972). However, an earlier study by Sears (1963) found a positive relationship between academic achievement, creativity and self esteem as they relate to teacher attention. She studied the behavior of ten teachers in seven classrooms and found that the three variables were positively related to the proportion of time the teacher listened attentively to the children or the group. Her findings suggest that the teacher was the controlling factor in motivating pupils' academic achievement, creative development, and self concept.

Owen, Froman, and Calchera (1974) investigated the relationship between creativity and self concept by looking at environmental conditions. They found that "open education" favored the growth of creativity when creative responses were generally reinforced, and that neither "traditional" nor "open education" favored the enhancement of self concept. They reported that the student's perception of himself is the controller of his environment.

Uno and Leonardson (1980) investigated the relationship between self concept and creative behavior of mentally retarded adolescents and found no significant positive correlations. And Schempp (1981) concluded that self

concept and creativity were independent measures of a child's growth and development.

SUMMARY

The investigations (Sears, 1963; Runyon, 1963; Sisk, 1972) seem to suggest that a positive relationship exists between creativity and self concept, but that a number of other variables need to be investigated since their influence cannot be excluded. These variables include the teacher, peers, the physical environment, and the type of reinforcement the individual receives for his responses. This study investigated the relationship between creativity and self concept, creativity and teacher expectation, and self concept and teacher expectation, among Cree elementary school children. Teacher expectation is investigated as a variable because all the researchers (Sisk, Spaulding, Sears, Owen, et al.) seem to suggest that the role of the teacher in the classroom should not be underestimated.

E. SELF CONCEPT AND TEACHER EXPECTATION

The effects of teacher expectation on students' self concept are not easy to assess because of the other variables (parents, peers, significant others, academic ability) which are associated with the self concept. Rosenthal and Jacobson (1968) found that by just labeling a child or a group as "brighter" makes a difference. The child or children in the "brighter" group know that the teacher expects them to perform better than the other groups, and as a result their efforts are in keeping with the teacher's expectations. Brookover, et al. (1967) explained that self concept results from the expectations and evaluations held by significant

others as perceived by the student. Based on this premise they did a longgitudinal study of over five hundred students from grades eight to twelve and found that apart from parents, teachers' expectations were the most influential in the formulation of students' self concept. Similar results were found by Lewis (1973). Sears (1963) found that teachers' behaviors were related to pupils' self concept and achievement; Aspy (1969) found that it was the teacher's self concept and not pupil's self concept which influenced pupil's achievement; and Spaulding (1965) found that it was the teaching method and style which influenced pupils' self concept and educational progress.

SUMMARY

These studies indicate that there may be types of teacher-pupil transactions which are particularly related to the self concept of both teacher and pupils. There is need, however, for investigations into the relationship between teacher expectations and the specific self concept of ability. This study investigated the relationship between teacher expectation and self concept of ability in specific subject areas.

F. CREATIVITY AND TEACHER EXPECTATION

The role of the teacher as the controlling factor in motivating students has already been discussed (Sears, 1963). Rosenthal and Jacobson (1968) found that changes in the teachers' expectations regarding students' intellectual performance had led to an actual change in the students' intellectual performance. This view was in support of MacKinnon's (1962) observation with regard to a student's creative response to a task. He observed that the student's response was positively related to the teacher's expectation

of his performance. This was especially so if the child knew of the teacher's expectation.

If the teacher is aware of a student's ability, he should know what quality of performance to expect from him. But Guess (1967) found that teachers had little ability to identify creative pupils correctly as measured by non-verbal tests of divergent thinking. There is, therefore, need to train teachers to identify students with creative ability. Enochs (1965) had found that training was effective in helping teachers in identifying creative students, and that even teachers who did not have a positive attitude towards creative thinking in pupils had a positive change of attitude towards creative pupils' behavior.

Hutchinson (1964) found that the teacher was the controlling factor and that the student's creative response was encouraged or discouraged depending on how the teacher perceived the student. James (1965) found some positive and some negative relationship between teacher variables and pupils' creativity; and Stone (1966) found that teacher attitude stimulated creative expression.

SUMMARY

The investigations (MacKinnon, 1962; Sears, 1963; Hutchinson, 1964; Stone, 1966) suggest that the teacher is the central figure in fostering the growth of creativity in the student. Thus, there is need to identify what teacher variables are positively related to creative development.

One such study was done by Denny (1966). He used the Guilford battery of tests to identify the teacher and pupil behaviors which contribute to pupil's gain in creativity. This study looked at one "teacher" variable - teacher expectation - to determine its relationship to creative development.

G. EDUCATION OF THE GIFTED IN MANITOBA

In Manitoba, the growth of creative development is encouraged as part of the program for exceptional children. These programs are currently being done in three school divisions - Lord Selkirk, St. Boniface, and the St. James - Assiniboia. In the Lord Selkirk School Division, the identification of the gifted, talented and creative child is done by the teacher, the school psychologist, and the co-ordinator of special services. The students who score in the 95th percentile and above in the WISC test are then rated on the Renzulli Scales for Rating the Behavioral Characteristics of Superior Students (1976). These ten dimensions, each of which is made up of different sets of behavior, are weighted and a sum of the weighted totals is calculated for each student. The top five percent is considered as gifted, talented and creative, and each student is then given the Renzulli "Interest-A-Lyzer" questionnaire. This is not a test but it helps the students to think about their own interests, and it serves as an indicator to the teacher when giving individual attention to the specific student. All this is done with the approval of the parents.

In the St. Boniface School Division, identification begins in the third grade. In spring, the third grade teachers identify students on the basis of (i) their past records i.e. I.Q. tests, reading scores and math scores; and (ii) the Renzulli Scale. In the fall the selected students are received by the fourth grade teachers and given a battery of tests (i) the Otis-Lennon/ ALP, (ii) Progressive Matrices, (iii) Reading, and (iv) Math concepts. Creativity tests are not used as a means of identification. Students who score above the 95th percentile rank are given a "Thinking Enrichment Program" in groups of twelve to fifteen students. Their parents are then invited and

after an explanation they are allowed to make a choice of withdrawal or consent for their child to attend in the gifted program. In grades five and six, these students are put into segregated classrooms.

The St. James/Assiniboia program is a screening one in which three distinct components of giftedness are recognized: intelligence, creativity, and academic achievement; and these are accompanied by teacher nomination. The screening consists of tests, and the students in the top twenty percent are then ranked on total marks obtained. The top five percent of the ranked order are the students considered as gifted, talented, and creative.

H. STUDIES RELATED TO INDIAN EDUCATION

Most studies of academic achievement, self-concept, creativity and teacher expectation investigated several relevant factors and are related to this study in terms of background knowledge, though only a few deal specifically with academic achievement, self concept, creativity and teacher expectation of Indian children. The studies will be reviewed under the following headings: academic achievement, self-concept, and teacher expectation.

ACADEMIC ACHIEVEMENT

Renaud (1958) in an extended study across Canada found that Indian students' reading ability improved from grade five to eight but not at the same level as Euro-Canadian children. In a later study (1964) he pointed out that the child of Indian background comes to school with as much intelligence and curiosity as any other child, but that by being constantly ignored by his teacher his curiosity wanes and he is not motivated to be successful.

Schubert and Cropley (1972) compared verbal behavior and I.Q. of Indian children on the reserve and Euro-Canadian children from an urban com-

munity and found that Indian children from the remote reserve showed a lower I.Q. than the Euro-Canadian children. They also found that the difference in I.Q. was not due to biologically determined inadequacy but because the groups differed greatly in the amount of previous contact they had with the conventional "White" culture.

Sealey (1972) found that significant relationship existed between ability to comprehend oral English and success in an academic high school program.

Reimer (1975) investigated the effects of achievement of native students when a culturally related mathematics program was used. He found that not only did the students who studied the culturally relevant unit score significantly higher than students using a non-relevant unit but that they enjoyed mathematics more when the unit was culturally related.

Clifton (1977) defined values on two levels: general cultural values and specific values. He pointed out that some groups of Indian students do not succeed in school because conflict exists between their general values and those of society and between their specific values and those required by the school. He found that Indian children scored similarly to non-Indian children on non-verbal tests but fell behind in verbal tests.

Kirkness (1978) observed that about 30% of the Indian student population performed below grade level. This was especially so among the older students who tend to leave school prior to the official school-leaving age.

Low academic achievement is due to a number of causes. In an extensive study over a period of fourteen years, Lenton (1979) found that poor attendance, parental neglect, and negative parental attitudes were among the chief causes for the poor academic performance of native children. Next to these, she found that language difficulties, negative student atti-

tudes, low motivation and poor self concept also contributed significantly to poor academic performance.

SUMMARY

The studies (Renaud, 1958, 1964; Schubert and Cropley, 1972; Sealey, 1972) reviewed indicated that relationships exist among student attitudes, culturally related programs, verbal ability, and academic achievement. Poor academic performance was associated with negative student attitudes, conflicting values, non-cultural programs, lack of motivation and poor English verbal ability. Schools place emphasis on verbal ability and all instructions are given in English. It is, therefore, very likely that the results of tests which involve reading and verbal ability will reflect very poor performance for Indian students. Most of the studies used reading and verbal ability to assess academic achievement. None of the studies investigated the students' performance in a general sense i.e. taking all the academic subjects into consideration. This study looked at academic achievement in a general sense.

SELF CONCEPT

Lenton (1979) in her exploratory study of Indian children observed that

> Few (studies) took into account the sensitivity of a people who for generations have experienced poverty and lack of equal opportunity, acceptance, and respect. Their identity, pride, and dignity have been attacked, and they have been stripped of self determination. None of the studies directly researched the effects of outright discrimination upon the students' self concept, identity, attitudes and ability to function in school. (p. 216).

There are very few studies investigating the self concept of Indian children. This section reviews the studies that investigated self concept of the Indian child as a variable, and also studies with factors related to the self concept of the child.

Hlady (1963) in his study of Canadian Indians observed that most of them were realistic when thinking in terms of goals and local opportunities. Hawthorn (1967) reported that young Indian children fail from the onset of their educational experiences because they have little faith in their own ability, because there is the common idea that "Indians can do nothing". Clifton (1972) compared the self concept and attitudes of Canadian Indians and Euro-Canadian students, and found that both Indians and Euro-Canadians had positive self concept but that Euro-Canadians had a significantly higher positive self concept than the Indian students.

Harkins (1973) investigated the effect of a Yuk dialect instruction program upon self concept and achievement of Inuit children. She found that the children in the control schools were significantly more advanced in reading achievement than the children in schools who received their instruction in Yuk dialect. However, the children in the treatment schools showed a higher positive self concept than the children from the control schools.

The Northland School Division conducted the "Mighty Moose Reading Project" (1977-1978) to assist Cree-speaking native Canadian students in English language acquisition. The findings have been reported earlier in this study. Lenton (1979) observed that while teachers believed student attitude to be a contributing factor to poor academic achievement, students felt that student attitude and self concept are contributing factors to

poor academic performance.

McManus, et al. (1981) in their evaluation report on the Native Bilingual Project observed that the self concept of students had improved and their academic achievement was satisfactory.

SUMMARY

According to the studies reviewed (Harkins, 1973; McManus, 1981) a factor that contributed to positive self concept was instruction being given in native dialect. However, such instruction did not improve academic performance. Only the "Native Bilingual Program" reported improved academic performance, and for this, instruction was given in both languages.

Research in the area of self concept produced conflicting results - from negative to low positive and realistic. There is need for further research in this area. This study investigated this variable - self concept - to see how it is related to academic achievement, creativity, and teacher expectation of Cree children in a Northern Manitoba community.

TEACHER EXPECTATION

A few studies (Hawthorn, 1967; Lenton, 1974, 1979) dealt specifically with teacher expectation of Indian students, and some investigated factors related to teacher expectation. Hawthorn (1967) observed that the Indian's beliefs of himself in relation to his aspirations seriously limit his choices. He also found that the Indian's self image and level of aspiration drops, thus fulfilling the self-fulfilling prophecy of the "inadequate and unmotivated Indian".

Lenton (1974) in a study of Indian, Metis, and Euro-Canadian students of Northern Manitoba investigated teacher expectation of their occupational aspiration. While teachers predicted the aspirations of Euro-Canadian students accurately, over 70% of the teachers thought Indian and Metis students would choose unskilled and semiskilled jobs. In a more recent study (1979), she observed that teachers rated Indian children with negative attitude and lack of career goals, low motivation, and poor performance.

SUMMARY

The studies reviewed indicated that teachers responded in a stereotypical manner to their expectations of Indian and Metis students because they had low expectations of their students.

I. SUMMARY OF THE RELATED LITERATURE

The studies reviewed pointed out that the academic performance of native children was lower than that of non-Indian children only in verbal ability, that a culturally related mathematics program improved student mathematics performance, that program instruction in native language improved student self concept but not academic performance and that teacher expectation of Indian children is generally low.

The review indicated a changing view of Indian children. They can no longer be considered as academically inferior to Euro-Canadian children. Although they may be a grade level behind national norms in verbal tests and reading ability, this by no way, means that they are "inferior" or incapable of learning a second language. Their low achievement reflect what is normal for average children at the early stages of a second language. Any comparison of language test results of Indian children with that of an English speaking population should not be used as evidence to label Indian children as "inferior" or "inadequate".

The literature seems to suggest that a positive relationship exists between academic achievement and self concept, academic achievement and creativity; and academic achievement and teacher expectation. There is evidence in support of this (Brookover, et al., 1967, 1976; Sears, 1963; Rosenthal and Jacobson, 1968), but all the variables mentioned were not taken into consideration simultaneously. For example, it would not be quite correct to say that there is relationship between self concept and academic achievement without stating that the self concept was influenced by teacher expectation. Similarly, one cannot say that there is a

relationship between teacher expectation and creativity without first accepting that the student must be confident that he can solve a problem before he seeks possible solutions to the problem. To look at pairs of these variables in isolation would be to overlook the influence of the intervening variables. There is, therefore, need to look at the four variables: self concept, creativity, teacher expectation, and academic achievement, as a total combination because of their interacting influence on the student. This study hopes to look at the relationship among these variables from this perspective.

It was observed that several studies (Renaud, 1958; Harkins, 1963; Hawthorn, 1967; Clifton, 1972, 1977; Reimer, 1975, Kirkness, 1978; Lenton, 1979) focused on the academic achievement, self concept, and teacher expectation of the Indian child, but that none of the studies took into consideration their creative ability. It was observed that only a few studies (Northland School Division, 1977-78; McManus, et al. 1981) focused on Cree children and these investigated the variables in pairs or in isolation. But is there a positive relationship among the four variables for Cree children? If this is so, educators of Cree children will be well advised to have high expectation of these children in order for them to be creative, to have high self concept, and to do well in school.

This study investigated the relationship among the four variables - academic achievement, self concept, creativity and teacher expectation for Cree children in a northern Manitoba community.

CHAPTER III

METHODOLOGY

Introduction

This chapter describes the methods used in collecting and analysing the data. It reports the following:

a. Description of Brochet, the school and the participating students.

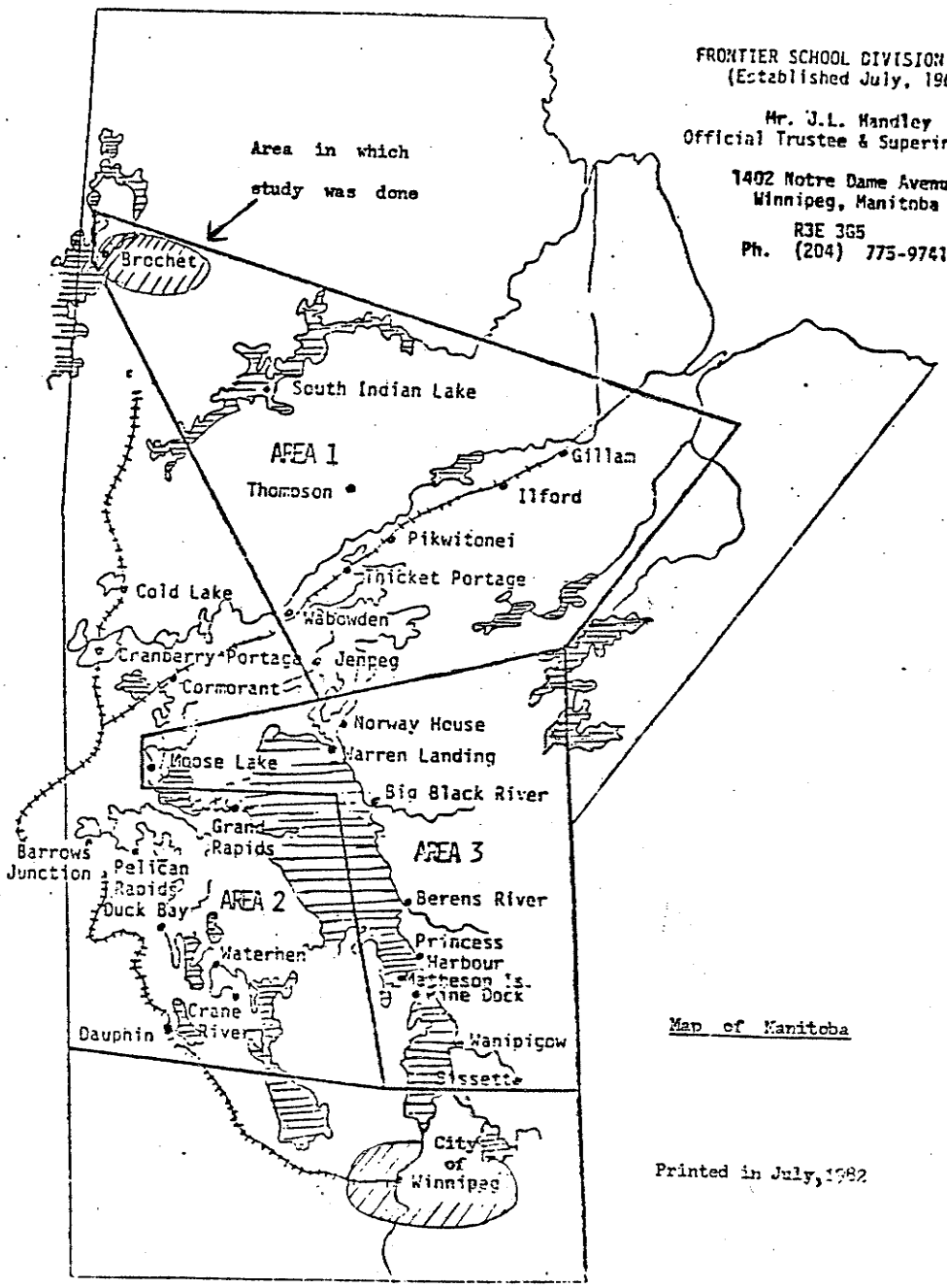
b. The instruments used.

c. The administration and scoring.

d. Scoring of responses

e. The research design.

f. The descriptive statistics employed.



FRONTIER SCHOOL DIVISION NO. 48
(Established July, 1965)

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Map of Manitoba

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DESCRIPTION OF BROCHET, THE SCHOOL AND THE PARTICIPATING SUBJECTS

Brochet school is in Frontier School Division No. 48. An attempt is made to give a very brief account of Brochet so that a better understanding of the students and the area could be obtained.

Brochet is situated in northern Manitoba: latitude 57 degrees north and longitude 101 degrees west. It is 120 kilometers by air and 290 kilometers by dogteam from Brochet to Lynn Lake. Brochet, formerly Lac Caribou was a village recognized by Treaty No. 10 of 1906 (Smith, 1978). It became a trading-post-mission complex for bands of Chipewyan and Cree Indians long before 1859 when the Hudson Bay Company established an out-post. In 1861, Bishop Grandin, auxiliary of Bishop Taché made his first visit to Brochet for confirmation and baptismal of the locals (Darveau, 1982). In 1973, the Chipewyans moved to Lac Brochet about 90 kilometers north of Brochet. The population of about 1,500 was reduced to about half. The present population of 491 includes twenty-two Euro-Canadians. Literacy in English is under fifty percent. The language spoken is Cree. Some of the Indians make their living by fishing, hunting, and trapping. About 75 percent of the population depend on social welfare subsistence. The community is 100 percent Catholic. There is no access road to this community, and no televisions, but occasionally radio broadcasts are audible for a few hours after midnight if good weather conditions prevail. Communication between Brochet and the outside world is by radio phone and air service. Travelling to and from Brochet is synonymous with being weathered in for a few days or even a week. Exorbitant airfares are charged for travelling to this community. This adds to the undesirability of qualified personnel wanting to seek employment there. The isolation and remoteness of this community coupled with lack of recreational amenities, qualifies it as a

disadvantaged environment for both the Euro-Canadians and Indians, and makes it less than desireable for educational opportunities.

Brochet school was established in 1949 by the Department of Education. The school existed as a one-teacher school for over fifteen years (Darveau, 1982). Presently, the school has an enrollment of 189 students and a staff of fourteen teachers which includes two teacher aides. The school population is 97 percent Cree speaking. There is one Chipewyan family that has returned to Brochet. The entire staff with the exception of the aides is non-native. The school caters for students from nursery to grade nine after which the graduating students attend secondary schools in other communities in the province. Teacher turnover rate is very high. (70 percent in 1980, 36 percent in 1981, 50 percent in 1982). Most of the new teachers have no previous teaching experience and stay on the job approximately one to two years. The teacher turnover rate allows very little time for the teacher to understand the cultural aspects of the community which has tremendous impact on the student's behavior. The teacher's inadequate understanding of the students' behavior can contribute to the students developing a negative self concept.

The classroom teacher and all the twenty-two students of grade three (twelve boys and ten girls) together with the classroom teacher and all the nineteen students of grade four (seven boys and twelve girls) are the subjects of this study. These forty-one students (nineteen boys and twenty-two girls) were chosen because of the willingness of teachers to permit them to participate in the investigation. The two classroom teachers were also enthusiastic in their participation.

THE INSTRUMENTS USED

The instruments used consisted of the following four tests:

A. The Canadian Tests of Basic Skills (CTBS)

B. The Torrance Tests of Creative Thinking (TTCT)

Figural Tests, Forms A & B

C. The Michigan State General Self Concept of Ability Scale (SCA)

D. The Teacher Rating of Pupil Attitude (TRPA)

A. CANADIAN TESTS OF BASIC SKILLS (CTBS), Form 3, Levels 9 - 14, 1976.

The CTBS are the Canadian adaptation of the Iowa Tests of Basic Skills. This level of the CTBS is intended for use in grades three to eight. The tests are designed to assess levels of skill development in reading, vocabulary, the mechanics of written language, methods of study, and mathematics.

The CTBS consists of one test booklet of 96 pages and is divided into six levels. Students from different grade levels start each of the eleven sub-tests at the appropriate level. The item format is multiple-choice. The time-limit directions are the same for all levels but there are separate answer sheets specific to each level.

Test scores are converted into grade equivalents. The performance of a student in a skill area is obtained by summing the scores of the sub-tests in that skill area and converting the sub-total of the raw scores to a grade equivalent. The eleven sub-tests give five sub-totals, one each for vocabulary, reading comprehension, language skills, work study, and mathematics skills. To obtain the composite score for the entire test battery, the raw scores of the eleven sub-tests are totalled and averaged.

The CTBS were revised in 1976 and all measurement items are expressed

in metric. The original standardization in 1966 was on a norm population of 30,000 English speaking children from 225 sample schools in Canada (Buros, 1972). In 1973 standardization was done with samples chosen from 137 schools representing all the provinces and Roman Catholic and non-Roman Catholic schools.

With respect to the reliability and validity of the CTBS, Birch (1972) said that:

> It is thus reassuring to be able to use tests like the CTBS for it has such a long line of respected antecedents (reputation of the test designers) that its status need never be in doubt. (Buros, 1972, p. 7).

King (1976) suggested that content validity should be established by each province since the CTBS attempts to sample curriculum across Canada and will be insensitive to local or provincial emphasis.

Reliability for the CTBS vary from test to test and grade to grade. Internal consistency reliability coefficients for the five main areas range from .87 to .96, while composite reliability ranges from .97 to .98 for all grades (CTBS manual 1982).

The entire test battery requires four hours and four minutes to complete in four sessions each varying from 65 to 70 minutes or in eight sessions with no session longer than 42 minutes. (See Table 1 on next page).

B. TORRANCE TESTS OF CREATIVE THINKING (TTCT)

Thinking Creatively with Pictures (Figural Tests, Forms A and B) (1966). (See Appendix C, p. 108).

The TTCC was designed to measure four aspects of "creative thinking" - fluency, flexibility, originality, and elaboration.

The Figural Tests consists of two forms - A and B and include three

Table 1

No. of Items for Each of the CTBS Subtests

Levels Nine and Ten*

Sessions & Time		No. of Items Level 9 Grade 3	No. of Items Level 10 Grade 4
1st	V: Vocabulary	30	36
57 mins.	R: Reading (Comprehension)	44	49
2nd	L: Language Skills		
65 mins.	L-1: Spelling	30	36
	L-2: Capitalization	28	29
	L-3: Punctuation	28	29
	L-4: Usage	27	29
3rd	W: Work Study Skills		
75 mins.	W-1: Visual Materials	36	40
	W-2: Reference Materials	37	44
4th	M: Mathematics Skills		
80 mins.	M-1: Math Concepts	28	32
	M-2: Math Problems	23	25
	M-3: Math Computation	39	42

* Reliability coefficient obtained for this study

	Grade 3	Grade 4
Kuder-Richardson Reliability coefficient =	.89	.41

activities with an over-all administration time of 30 minutes for each form. In activity one- "picture construction activity" the subjects are required to think of a picture in which the given shape made of coloured paper, is the integral part. This activity yields two scores - for originality and elaboration. Activity two - "incomplete figures activity" has ten incomplete figures on each form. Each figure is scored for fluency, flexibility, originality, and elaboration.

In activity three - "repeated figures activity" - the stimulus material in Form A is 30 sets of vertical parallel lines while in Form B it is 40 circles. On Form A subjects are allowed ten minutes to see how many objects or pictures they can make from the parallel lines. Also on Form B they are allowed the same amount of time to see how many objects or pictures they can make from the circles. For this activity scores are obtained for fluency, flexibility, originality, and elaboration.

In the first task, the primary motivation is for originality or unusualness while elaboration is the secondary motivation. In task two, flexibility is added to originality and elaboration, and fluency is a minor consideration. In the third task, fluency is added to the other three creative tendencies. Four scores are obtained for each form. The scores on both forms are paired and summed according to creative tendencies thus giving four figural scores - one each for fluency, flexibility, originality and elaboration. A composite total of the figural scores "gives a rather stable index of the total amount of creative energy a person has available or is willing to use". (Torrance, 1974, p. 56).

The TTCT has test-retest reliabilities ranging from .50 to .93 over one to two-week periods, and from .35 to .73 over three-year periods

(Buros, 1972). The Norm-Technical Manual (1974) reports test-retest reliabilities ranging from .34 to .79 over a fall to spring period, for children in each grade from two through five. Reliability coefficients obtained for the Figural Test were .76, .63, and .79 for the first, second and third testings (Yamamoto, 1962).

"The concept of an overall validity coefficient for tests of creative thinking ability is grossly inappropriate". (Torrance, 1974, p. 21). Torrance (1974) suggests that it is much more useful to think in terms of a variety of kinds of criteria of creative behaviors and of creative thinking ability as a person can behave creatively in an almost infinite number of ways. Because of the difficulty to establish content validity, the author has made a consistent and deliberate effort "to base the test stimuli, the test tasks, instructions, and the scoring procedures on the best theory and research now available". (Norm-Technical Manual, 1974, p. 22).

The TTCT has low but significant concurrent validity for peer nomination and teacher nomination. The correlation coefficients between the TTCT and the California Achievement Test were all positive and ranged from .36 to .42 for grades four, five and six (Bish, 1964, Cicirell, 1965). The TTCT has also been used in long range predictive validity studies. Torrance (1969) obtained correlation coefficients ranging from .46 to .51 for twelfth-graders over a seven year period for predicting creative achievement while Cropley (1971) obtained .51 for seventh graders over a five-year period for predicting creative achievement out of school. "The TTCT appears to have useful reliability and validity for research purposes . . . they will become powerful and valuable tools for research and practice." (Buros, 1972).

Table 2

List of Items for the Torrance Tests of Creative Thinking:

Thinking Creatively with Pictures - Forms A & B

Activity	No. of Items Form A	No. of Items Form B
Activity 1		
Picture Construction	1	1
Activity 2		
Incomplete Figures	10	10
Activity 3		
Repeated Figures	30	40

Table 3

Intercorrelation of measures of TTCT (Figural Forms A & B)*

Measures	1	2	3	4
1. Fluency	1.00			
2. Flexibility	.77	1.00		
3. Originality	.68	.66	1.00	
4. Elaboration	.20	.18	.34	1.00

* (Norms-Technical Manual, 1974, p. 65)

Reliability coefficients obtained for this study		Grade 3	Grade 4
Spearman-Brown Reliability Coefficients	=	.82	.94
Kuder-Richardson Reliability Coefficients	=	.95	.97

C. SELF CONCEPT

General self-concept of ability is operationally defined as the sum of scored responses of a subject to the Michigan State General Self-Concept of Ability Scale (SCA). This scale comprises of eight multiple choice items with each item scoring from five to one with the highest self-concept alternative receiving the highest. The Perceived Parental Evaluation of Ability (PPEV), the Perceived Friends Evaluation of Ability (PFEV) and the Perceived Teachers' Evaluation of Ability (PTEV) consist of five multiple-choice items each and scoring is the same as the SCA. On the SCA the subject is asked to compare himself with others on his academic competency. The PPEV, PFEV and PTEV determine the effects of a student's perceptions of his academic ability as seen by others - parents, friends, teacher. The student evaluates himself on the three scales: firstly as his parents/guardian would evaluate him, secondly as his friends would evaluate him, and finally, as his teacher would evaluate him. The student's choice on each item is weighted as explained before and then summed to give a self concept score for that student.

The Hoyt's analysis of variance reliability coefficients of the SCA range from .77 to .88 for grade seven through grade twelve while reliabilities to the PPEV, PFEV and PTEV range from .75 to .92 (Brookover, et al. 1967, p. 61). The Michigan State General Self Concept of Ability Scale was developed under U.S.O.E. Co-operative Research Project No. 845 and was used as a self concept measure for a number of researches investigating the relationship between self concept and other variables - "The Self Concept of Academic Ability for hearing impaired students", Joiner, 1966; "Self Concept of Ability and School Achievement", Morse, 1963, Brook-

over, et al. 1967; "Comparative Study of Self Concept of Ability: Delinquent and Non-Delinquent Boys", Hareer, 1964; "A comparative Study of male high school students who stay in school and those who dropout", Harding, 1966.

Table 4

No. of items on the SCA, PPEV, PFEV and PTEV and Hoyt's Reliability Coefficients

Self Concept Scales	No. of Items	Hoyt's Reliability Coefficients*
SCA	8	.86
PPEV	5	.84
PFEV	5	.88
PTEV	5	.92

* Brookover, et al., 1967, p. 61.

Reliability Coefficients obtained for the study		Grade 3	Grade 4
Spearman-Brown Reliability Coefficients	=	.87	.84
Kuder-Richardson Reliability Coefficients	=	.96	.91

D. TEACHER EXPECTATION

The Teacher Rating of Pupil Attitude (TRPA) as used in this study is an adaptation of the Teacher Rating of Pupil Attitude that was developed at the Tennessee Technology University for use in assessing teacher expectation of pupils who needed help in overcoming their cultural, social and educational deficiencies. The TRPA was chosen as a measuring instrument for this study because it was originally designed for use with culturally dis-

advantaged children and minority groups who had enrichment programs to develop their creative expressions and self concept, and this study involved the academic achievement, self concept and creativity of subjects from a similar background.

The TRPA in its original form consisted of eleven statements and the teacher rated the student twice - at the commencement of the academic year and at the end of the last semester. On the adapted form, five more statements were added to include the teacher's assessment of the student's academic ability; and the teacher rated each student only once, at the end of the last semester. Each statement is rated on a five-point scale: never, seldom, occasionally, often, always; with the fifth receiving a teacher rating of five and the first receiving one point. The weighted scores are summed to give a teacher expectation score for that student. The statements on the TRPA reflect all the areas in which the teacher is expected to assess each student's academic ability, self concept, creative ability, attitude towards schooling and the student's relation with his classmates.

Reliability coefficients for the TRPA are not available, but reliability coefficients for this study were computed using the Kuder-Richardson reliability formula (KR-21). The reliability coefficients obtained were .83 for grade three and .93 for grade four. The TRPA was used in a three year demonstration program sponsored by Project Upper Cumberland (Flanders, 1969).

TEST ADMINISTRATION AND SCORING PROCEDURE

The tests were administered in accordance with the developer's specified directions. The CTBS was administered over a four-day period in both grades

three and four classrooms. Each of the four testing sessions lasted from 65 to 80 minutes. A test booklet and an answer scoring sheet were distributed to each child. Pencils and erasers were also supplied. The students, after writing their names, school, and grade were asked to follow the class teacher as she read the directions and sample questions. The answers to the sample questions were checked. The grade three students were asked to turn to page ten in the test booklet and begin the exercises for level nine while the grade four students were asked to turn to page twelve and begin the exercises for level ten. After each testing session the testing materials were collected and redistributed just prior to the next testing session.

The TTCT was conducted during the week following the testing on the CTBS. The TTCT Figural Form A and Form B were administered on separate days. The booklets, pencils, and erasers were distributed. The students were asked to write their names, grade and school and to follow the directions as the teacher read them. All student responses were done on the test booklets which were collected after each session.

The SCA, PPEV, PFEV and PTEV were administered on the same day. The SCA questionnaire was distributed to each child. After writing their names and grades they were asked to follow the instructions of their teacher. She read each question after which the children indicated their responses by circling their choice on the questionnaire. The PPEV, PFEV and the PTEV were administered in the same manner.

The Teacher Rating of Pupil Attitude was done by the classroom teachers during the final week of the school year. The two classroom teachers were given a rating sheet for each student. The sheets were completed and

returned within a week.

SCORING OF RESPONSES

The scoring of the raw scores was done by the investigator. Four scores were computed for each student, one each for academic achievement, self concept, creativity and teacher expectation. For grade three, twenty two sets of scores were computed and for grade four, nineteen sets of scores were computed.

RESEARCH DESIGN

Data for the four tests collected on the 22 grade three children and the 19 grade four children were analyzed descriptively (mean, standard deviation, correlation) for each grade, according to sex, and all the children as a single group. Simple correlations among the four variables were computed to identify the relationships between pairs of variables.

DESCRIPTIVE ANALYSIS EMPLOYED

The Kuder-Richardson (KR - 21) reliability coefficient was used to estimate an internal consistency for each test. Five inter-correlation matrices were run on the computer. One for all the subjects as a group, one for each of the two grade levels, one each for sex.

The scores obtained from the tests were fed into ST32, a statistical program run on the AMDAHL 470/V7 computer at the University of Manitoba. This is a multiple linear regression and correlation program from which is obtained the mean, standard deviation, simple correlation matrix, partial regression coefficient and T-value for each, multiple correlation coefficient and its square. These descriptive data will be presented in the next chapter.

CHAPTER IV

RESULTS, ANALYSIS AND DISCUSSION

Introduction

The purposes of this chapter are to present the descriptive and inferential statistics and to discuss the findings of the study.

The means, standard deviations, and the correlation coefficients among the variables were computed on the AMDAHL 470/V7 computer and run on ST32. Tables 5-7 present the means and standard deviations and tables 8-12 present the correlation matrices for the variables - self concept, creativity, teacher expectation, and academic achievement - for grades three and four students. Table 13 presents a summary of the five matrices. Correlations were examined using the Pearson Product-Moment coefficient and each was subject to a test of statistical significance at the .05 level to control the probability of a Type I error.

PRESENTATION OF DATA

Age. The ages of the twenty two grade three subjects ranged from nine years to thirteen years with an average of ten years nine months. The age range of the nineteen grade four students was ten years to fourteen years with an average of eleven years seven months.

Descriptive Statistics

Table 5 contains the results of a descriptive statistics of the four variables. The means and standard deviations are presented in five groups: with all the students (N = 41), grouped in grade levels, and sex.

Self Concept. The mean self concept score obtained on the four subtests for all the students was 90.73 and the standard deviation was 14.5. The mean score for the grade four students was 93.11 compared to 88.68 for all the grade three students. The mean score obtained for the grades three and four girls was 91.96 compared to 89.68 for the grades three and four boys. The mean scores for one subtest - the Self Concept of Ability (SCA) was 29.96 for grade three, 30.30 for grade four and 29.90 for all the students as a group (N = 41).

Creativity. The mean raw score obtained on the TTCT - Figural Forms A & B was 303.15 for all the students, 304.45 for grade three and 301.63 for grade four. The mean score obtained for the boys was 303.73 compared to 297.26 for the girls (Table 5). Tables 6 and 7 present the means and standard deviations for the four measures of creativity: fluency, flexibility, originality and elaboration for Figural Forms A & B for grades

Table 5

Means and standard deviations of scores on self concept, creativity, teacher expectation and academic achievement for all the subjects as a group, for each grade level and when grouped by sex.

TESTS	GRADE				
	3 & 4 (N-41)	3 (N=22)	4 (N=19)	3 & 4 Boys (N=22)	3 & 4 Girls (N=19)
Self Concept					
Mean	90.73	88.68	93.11	89.68	91.96
S.D	14.55	15.99	12.69	17.70	10.10
Creativity					
Mean	303.15	304.45	301.63	303.73	297.26
S.D	88.59	78.49	103.17	75.04	111.23
Teacher Expectation					
Mean	59.71	58.86	60.68	60.55	58.74
S.D	10.86	9.12	12.78	10.69	11.27
Academic Achievement					
Mean	128.83	126.59	131.42	131.41	125.84
S.D	22.27	28.31	12.38	18.08	26.51

three and four. For purposes of comparing the norms are also presented.

Teacher Expectation. The means and standard deviations obtained for teacher expectation are presented on Table 5. The mean for the grade three students was 58.86 compared to 60.68 for the grade four students. The mean score for the boys (60.55) was higher than the mean for the girls (58.74).

Academic Achievement.

Grade 3. The range of scores was 79 to 168. The class mean and standard deviation was 126.59 and 28.31. The mean grade equivalent score for grade three students is 193-197 (CTBS Teachers' Guide, 1982). The mean score of 126 is equivalent to a 2.5 grade average. The raw score 79 is equivalent to a grade average 1.6 or 2.3 below grade average while the raw score of 168 is equivalent to 3.4 grade average or .5 below grade average. Nine of the twenty-two students performed one grade or less below the grade average, four students performed 1.5 below grade average and nine students performed more than 1.5 below grade average. In vocabulary and language usage, the students were two grades below average but in mathematics computation their performance was .6 below grade average.

Grade 4. The range of scores for grade four was 106 to 156. The mean score was 131.42 which is equivalent to 2.6 grade average or 2.3 below grade average. A raw score of 106 is equivalent to a 2.1 grade average or 2.8 below grade average while a raw score of 156 is equivalent to 3.1 grade average or 1.8 below grade average.

Table 5 presents the means and standard deviation for all the students

as a group (N = 41). The mean score of 128. is equivalent to a 2.6 grade average. The mean for the boys was 131.41 compared to 125.84 for the girls.

Descriptive Analysis

Self Concept. The mean self concept score obtained for all the groups was high. The grade four students seemed to have a more positive self concept of ability than the grade three students. The mean self concept score obtained for girls was 91.96 compared to 89.68 for boys, but the difference in the mean self concept scores was not significant. This supports the findings of Bruck (1959). The mean score obtained for the SCA for all the students (N = 41) was 29.90 compared to 27.33 obtained by Brookover, et al., 1967, (N = 97) and 27.76 (N = 516). The higher mean self concept score obtained on the SCA indicated that the students studied attached importance to their ability but the range of the scores - 22 to 40 - showed that not all the students had a high positive self concept of ability. However, twenty-five of the students scored above the mean.

Creativity. The mean raw scores obtained for all the groups were fairly high (Table 5). There was no significant difference between the mean scores for grade three and grade four but the difference between the mean scores for boys and girls indicated that the boys tend to perform more creatively than girls.

Figural Form A. The creative performance of the grade three students in each of the four measures of creativity were similar to that of the norms for that grade level (Table 6). However, on this form the grade four students performed well below the mean of the norms in each of the four

Table 6

Means and standard deviations for the TTCT Figural Forms A & B for grade three

Measures of Creativity	Figural Form A				Figural Form B			
	Student Performance		Normative Data*		Student Performance		Normative Data*	
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
Fluency	22.9	9.5	22.2	7.7	25.9	8.6	18.7	6.9
Flexibility	15.5	3.5	16.2	4.7	20.0	7.1	13.7	4.4
Originality	26.0	15.3	26.8	11.4	39.7	18.0	24.7	10.8
Elaboration	68.5	24.0	64.2	28.5	79.2	26.3	71.3	27.9

* Norms Technical Manual, p. 49.

Table 7

Means and standard deviations for the TTCT Figural Forms A & B for grade four

Measures of Creativity	Figural Form A				Figural Form B			
	Student Performance		Normative Data*		Student Performance		Normative Data*	
	Mean	S.D	Mean	S.D	Mean	S.D	Mean	S.D
Fluency	15.4	8.1	22.7	7.1	28.0	5.9	20.9	6.8
Flexibility	13.4	8.0	17.1	4.9	22.8	8.5	15.2	4.6
Originality	25.3	20.5	30.1	11.5	40.1	19.4	24.1	11.0
Elaboration	52.6	24.8	66.7	28.4	88.4	26.7	78.5	30.1

* Norms Technical Manual, p. 49

area (Table 7). This finding indicated that as the students became older they tend to become less experimental, probably due to peer pressure.

Figural Form B. It will be observed that on this form both grades three and four students have scored above the norms in each of the four areas of creativity. This is especially so in originality. This observation does not indicate that the subjects being studied were able to produce more original work when compared with the norming population. Rather, it was that the objects they choose to draw on this form were not the popular objects chosen on the scoring guide and as such they were considered original.

Teacher Expectation. The mean score for teacher expectation was 59.71 (Table 5). Although the mean score for grade four is higher than the mean score for grade three, there is no significant difference between the means. Both teachers tend to expect the boys to perform better than the girls, but not high enough to make a significant difference.

Academic Achievement. The data was collected during the last month of the school year. The grade equivalent for the grade three students should be 3.9 or greater. Similarly, the grade equivalent for the grade four students should be 4.9 or greater. The grade equivalent for the grade three students studied (2.5) was 1.4 below their grade average, with the poorest performer being more than 2.0 below average. The grade equivalent for the grade four student (2.6) was more than 2.0 below their grade average. These findings support the finding of Kirkness (1978) and Lenton (1979) that there was an age-grade deceleration for native children in Canada and that the deceleration tended to increase as the grade level increased.

Table 5 showed that the boys have performed academically better than the girls. There was also a wider spread of score among the girls than for the boys, but the difference between the mean scores only showed a difference of grade equivalent to 0.1.

Summary:

The subjects studied had a high positive self concept, and no significant difference was found between the self-concept of ability for boys and girls (Table 5).

The creative ability of the students was similar to the norming population except for originality in which the subjects studied seemed to have performed significantly better than the norm. This difference was due not necessarily to their creative ability, rather it was a discrepency in the scoring guide. The students at the lower grade level tend to be less restrictive than the older students.

There was no significant difference between teacher expectation at the different grade levels. There was no significant difference between the boys and girls.

The academic performance of the students studied was below their grade equivalent and this tendency seemed to increase as the grade level increased.

Inferential Statistics

The correlation matrix of the variables for all the students as a group (N=41) is presented in Table 8. Correlations range from -.01 to .50. All the relationships are positive with the exception of the correlation between self concept and creativity.

Table 8

Simple Correlation Coefficients among the variables Self Concept, Creativity, Teacher Expectation and Academic Achievement Grades 3 & 4 (N = 41)

Variables	1	2	3	4
1. Self Concept	1.00			
2. Creativity	-.01	1.00		
3. Teacher Expectation	0.35	0.19	1.00	
4. Academic Achievement	0.48	0.08	.50	1.00

Critical value of r at $\alpha = .05$ is .2605

Coefficients underlined indicate correlations significant beyond .05 level.

The correlation matrix for grade three students is presented in Table 9. Correlations range from -.07 to .64 with the correlation between self concept and creativity showing a low negative relationship.

Table 9

Simple Correlation Coefficients among the variables Self Concept, Creativity, Teacher Expectation and Academic Achievement

Grade 3 (N = 22)

Variables	1	2	3	4
1. Self Concept	1.00			
2. Creativity	-0.07	1.00		
3. Teacher Expectation	0.36	0.38	1.00	
4. Academic Achievement	0.51	0.11	0.64	1.00

Critical value of r at $\alpha = .05$ is .352

Coefficients underlined indicate correlations significant beyond .05 level.

Correlations among the variables show a positive relationship (Table 10) for grade four students. Correlations range from .06 to .45, with creativity showing a low positive relationship with all the variables.

Table 10

Simple Correlation Coefficients among the variables Self Concept, Creativity, Teacher Expectation and Academic Achievement

Grade 4 (N = 19)

Variables	1	2	3	4
1. Self Concept	1.00			
2. Creativity	0.06	1.00		
3. Teacher Expectation	0.35	0.08	1.00	
4. Academic Achievement	<u>0.43</u>	0.06	<u>0.45</u>	1.00

Critical value of $\underline{r}$ at $\alpha = .05$ is .378

Coefficients underlined indicate correlations significant beyond .05 level.

The correlation matrix for all the boys of grades three and four is presented in Table 11. Correlations range from -.04 to .61 with creativity again showing low negative relationships but with all the variables.

Table 11

Simple Correlation Coefficients among the variables Self Concept, Creativity, Teacher Expectation and Academic Achievement

Grades 3 & 4 (N = 22)
(Boys)

Variables	1	2	3	4
1. Self Concept	1.00			
2. Creativity	-0.11	1.00		
3. Teacher Expectation	<u>0.46</u>	-0.04	1.00	
4. Academic Achievement	<u>0.61</u>	-0.14	<u>0.52</u>	1.00

Critical value of r at $\alpha = .05$ is .352

Coefficients underlined indicate correlations significant beyond .05 level.

Table 12 presents the correlation matrix for all the girls of grades three and four. Correlations among the variables show positive relationships with r ranging from .09 to .49. Here also, as in all the other tables, creativity shows a low relationship with self concept.

Table 12

Simple Correlation Coefficients among the variables Self Concept, Creativity, Teacher Expectation and Academic Achievement

Grades 3 & 4 (N = 19)
(Girls)

Variables	1	2	3	4
1. Self Concept	1.00			
2. Creativity	0.09	1.00		
3. Teacher Expectation	0.21	0.29	1.00	
4. Academic Achievement	<u>0.48</u>	0.19	<u>0.49</u>	1.00

Critical value of r at $\alpha = .05$ is .378

Coefficients underlined indicate correlations significant beyond .05 level.

Table 13 which is a summary of tables 8 - 12 enables one to view the inter-correlations among the variables at a glance.

Table 13

Summary of Correlations

Variables	GRADE				
	3 & 4 (N=41)	3 (N=22)	4 (N=19)	3 & 4 BOYS (N=22)	3 & 4 GIRLS (N=19)[a]
Self Concept and Creativity	-.01	-.07	.06	-.11	.09
Self Concept and Teacher Expectation	.35	.36	.35	.46	.21
Self Concept and Academic Achievement	.48	.51	.43	.61	.48
Creativity and Teacher Expectation	.19	.38	.08	-.04	.29
Creativity and Academic Achievement	.08	.11	.06	-.14	.19
Teacher Expectation and Academic Achievement	.50	.64	.45	.52	.49

a. Numbers in parenthesis indicate the number of students who completed all tests.

Coefficients underlined indicate correlations significant beyond .05 level.

DISCUSSION

Hypothesis one

Hypothesis one stated that there was a positive relationship between self concept of ability and creativity. The findings tend to show that there was a low relationship between these two variables - low positive relationship for grade 4 and for grades three and four girls, but low negative relationship for the combined classrooms and grade 3. These findings tend to support the earlier findings of Rookey (1972) that self concept of ability was not a necessary correlate of creative ability.

Hypothesis two

Hypothesis two stated that there was a positive relationship between self concept of academic ability and academic achievement. The findings, which showed a significant positive relationship between these variables for all the groups, support the previous findings of Brookover, et al; (1967) and Caplin (1969). The correlation for boys (Table 13) appeared to be larger than for girls. This tendency support the findings of Brookover, et al; (1967) for secondary school students, but Bruck (1959) had found no significant sex difference between the relationships in grades three to nine.

Hypothesis three

Hypothesis three stated that there was a positive relationship between self concept of ability and teacher expectation. The findings suggest a positive relationship between the child's self concept of ability and teacher expectation (Table 13). The correlations for grades three and

four as a group, for grade three, and for all the boys were significant (see Table 13). The findings also suggested that the grade three teacher showed a better awareness of her students' self concept of ability and that both teachers were more aware of the boys' self concept than they were for the girls in their classrooms.

Hypothesis four

Hypothesis four stated that there was a positive relationship between creativity and academic achievement. All the findings (see Table 13) did not support this hypothesis. The findings showed a low positive relationship between the two variables for all the groups except for boys (see Table 11). The findings also suggested that there was a low negative relationship between the variables for boys. This is contrary to the findings of Sears (1963) and Rookey (1972). However, the four positive correlations support Barron's (1969) findings of low positive relationship.

Hypothesis five

Hypothesis five stated that there was a positive relationship between creativity and teacher expectation and was found to be so for all the groups except for boys (see Table 11). The findings showed a negative relationship between the two variables for boys, and a high positive relationship for girls. The findings also showed a significant positive relationship for grade three but low positive relationship for grade four. The instability between these variables was also found by James (1965), but Guess (1967) found a negative relationship.

Hypothesis six

Hypothesis six stated that there was a positive relationship between academic achievement and teacher expectation. All the findings support this hypothesis. Correlations between these variables were all significant. The correlations for boys and girls seem to be about the same level but the correlation for grade three tend to be greater than for grade four. The findings support that of Rosenthal and Jacobson (1968) and Cooper (1971).

SUMMARY

The findings provide evidence to support hypotheses two, three and six. The results suggested that a positive relationship existed among self concept of ability, academic achievement, and teacher expectation. It also suggested that there was no relationship between creativity and self concept, and between creativity and academic achievement.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

This study began with a discussion about the weakness of the school system to adequately prepare children in the academic skill areas of the school curriculum. This was especially so for Indian children in northern Manitoba who seem to have an age-grade retardation that tends to increase in the junior and senior high school. The need for academic success is perhaps the most urgent need of Indian students. The findings of this study suggest that academic success of Indian students is significantly related to positive self concept ($r = 48$) and high teacher expectation ($r = 50$). It would seem reasonable to conclude that high teacher expectation and a positive self concept are perhaps among the most important elements for fostering the academic success for Indian students.

Although the creative ability of Indian children is obvious in their beadwork and leather work, yet the findings of the study suggest a lack of confidence in their creative ability. The investigator concluded that either the children's creative ability is totally neglected or they are made to feel that they do not have creative talent. Teacher awareness of students' creative ability needs to be emphasized and this can be done by teacher orientation courses which point out the social and cultural aspects of life in the community.

The descriptive analyses of the data revealed that most of the subjects under study had high positive self concept yet these subjects were

performing well below grade level. The data also revealed that the teachers expected the subjects to perform well academically. Their academic performance was low compared to educational norms but compared to the population studied - a community in northern Manitoba - the performance of the subjects may be considered good, and compared to the native population in Canada their performance would be considered normal.

There is evidence from the SCA that students' attitude toward their ability to achieve is positive. The importance of securing good grades in specific school subjects cannot be over emphasized if the students are to maintain a positive self concept.

At this point of their school career the students have begun to perform below their grade level but they still seem to have confidence in their ability to achieve. It is when they get to higher grade levels and their performance continue to fall below their grade equivalent that their self concept of ability begins to degenerate.

The inferential statistics revealed significant positive relationships among the variables - self concept, teacher expectation and academic achievement. The obvious question is how can the teacher be expected to maintain high expectations of the students when she is aware that their performance is below their grade level? In order to avoid negative teacher expectations which could be as detrimental as low self concept of ability it is suggested that the teacher concentrate on individualized education. The performance of each student would be compared to his previous performance. This would enable the teacher to maintain positive expectations of each student based on previous performance and the teacher setting a mastery level which is within the grasp of the individual's ability. This success would also help

to maintain a positive student self concept of ability which would see him through his school career and beyond.

It is recommended that further investigation into these four variables as a whole be done, using larger numbers of students from a cross section of schools in northern communities. This would validate or invalidate the findings of this investigation. It is further suggested that a cross validation study be done using Euro-Canadian and Indian students from northern communities.

The investigator also recommends that in educating and orienting teachers for northern communities, emphasis should be placed on the relationship of self concept and teacher expectation to the academic achievement of Indian children.

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A P P E N D I C E S

A Canadian Tests of Basic Skills (CTBS)

(Copy not attached)

B Michigan State General Self Concept of Ability Scales

C Torrance Tests of Creative Thinking (TTCT)

i. Thinking Creatively With Pictures - Booklet A

ii. Thinking Creatively with Pictures - Booklet B

D Teacher Rating of Pupil Attitude Scale

APPENDIX "A"

CANADIAN TESTS OF BASIC SKILLS (CTBS)

APPENDIX "B"

Michigan State General Self Concept of Ability Scales

1. Self Concept of Ability - general
2. Perceived Parental Evaluation of Ability
3. Perceived Friends' Evaluation of Ability
4. Perceived Teachers' Evaluation of Ability

SELF CONCEPT OF ABILITY - GENERAL

(Form A)

Michigan State University
Bureau of Educational Research

Circle the letter in front of the statement which best answers each question.

1. How do you rate yourself in school ability compared with your close friend?

   a. I am the best
   b. I am above average
   c. I am average
   d. I am below average
   e. I am the poorest

2. How do you rate yourself in school ability compared with those in your class at school?

   a. I am the best
   b. I am above average
   c. I am average
   d. I am below average
   e. I am the poorest

3. Where do you think you would rank in your class in high school?

   a. among the best
   b. above average
   c. average
   d. below average
   e. among the poorest

4. Do you think you have the ability to complete college?

   a. yes, definitely
   b. yes, probably
   c. not sure either way
   d. probably not
   e. no

5. Where do you think you would rank in your class in college?

   a. among the best
   b. above average
   c. average
   d. below average
   e. among the poorest

6. In order to become a doctor, lawyer, or university professor, work beyond four years of college schooling is necessary. How likely do you think it is that you could complete such advanced work?

   a. very likely
   b. somewhat likely
   c. not sure either way
   d. unlikely
   e. most unlikely

7. Forget for a moment how others grade your work. In your own opinion how good do you think your work is?

   a. my work is excellent
   b. my work is good
   c. my work is average
   d. my work is below average
   e. my work is much below average

8. What kind of grades do you think you are capable of getting?

   a. mostly A's
   b. mostly B's
   c. mostly C's
   d. mostly D's
   e. mostly E's

PERCEIVED PARENTAL EVALUATION OF ABILITY

Please answer the following questions as you think your PARENTS would answer them. If you are not living with your parents, answer for the family with whom you are living.

CIRCLE the letter in front of the statement that best answers each question.

1. How do you think your PARENTS would rate your school ability compared with other students your age?

   a. among the best
   b. above average
   c. average
   d. below average
   e. among the poorest

2. Where do you think your PARENTS would say you would rank in your high school graduating class?

   a. among the best
   b. above average
   c. average
   d. below average
   e. among the poorest

3. Do you think that your PARENTS would say you have the ability to complete college?

   a. yes, definitely
   b. yes, probably
   c. not sure either way
   d. probably not
   e. definitely not

4. In order to become a doctor, lawyer, or university professor, work beyond four years of college is necessary. How likely do you think your PARENTS would say it is that you could complete such advanced work?

   a. very likely
   b. somewhat likely
   c. not sure either way
   d. somewhat unlikely
   e. very unlikely

5. What kind of grades do you think this FRIEND would say you are capable of getting?

   a. mostly A's
   b. mostly B's
   c. mostly C's
   d. mostly D's
   e. mostly E's

PERCEIVED TEACHERS' EVALUATION OF ABILITY

Think about your favourite teacher - the one you like best; the one you feel is most concerned about your school work. Now answer the following questions as you think this TEACHER would answer them.

CIRCLE the letter in front of the statement which best answers each question.

1. How do you think this TEACHER would rate your school ability compared with other students your age?

   a. among the best
   b. above average
   c. average
   d. below average
   e. among the poorest

2. Where do you think this TEACHER would say you would rank in your high school graduating class?

   a. among the best
   b. above average
   c. average
   d. below average
   e. among the poorest

3. Do you think that TEACHER would say you have the ability to complete college?

   a. yes, definitely
   b. yes, probably
   c. not sure either way
   d. probably not
   e. definitely not

4. In order to become a doctor, lawyer, or university professor, work beyond four years of college is necessary. How likely do you think this TEACHER would say it is that you could complete such advanced work?

   a. very likely
   b. somewhat likely
   c. not sure either way
   d. somewhat unlikely
   e. very unlikely

5. What kind of grades do you think this TEACHER would say you are capable of getting in general?

   a. mostly A's
   b. mostly B's
   c. mostly C's
   d. mostly D's
   e. mostly E's

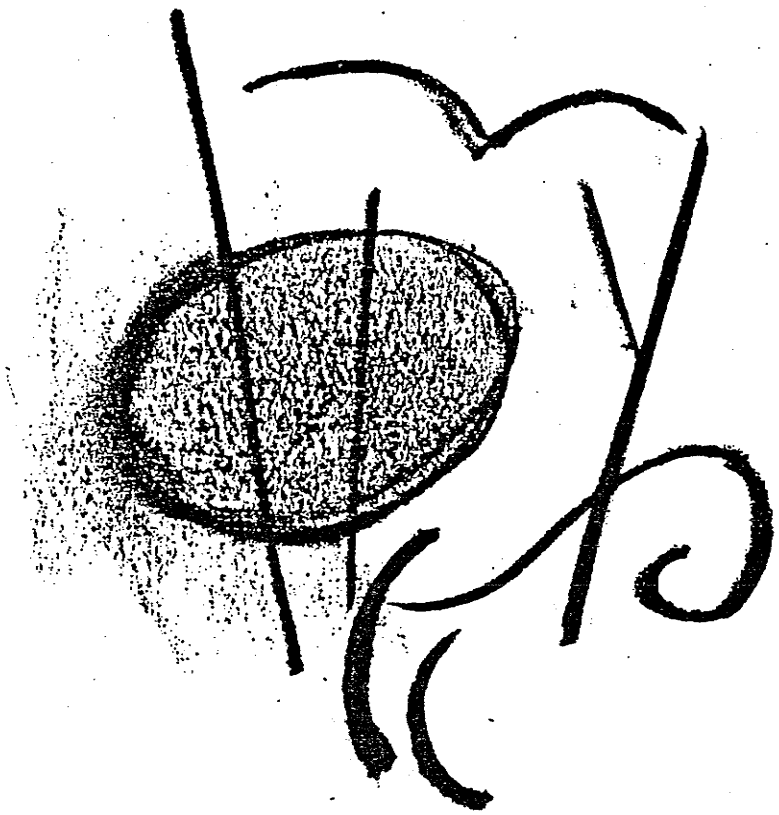
Thinking Creatively With Pictures

By E. Paul Torrance

Booklet A

Name _____ Age _____ Sex _____ Grade _____

School _____ City _____ Date _____



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Activity 1. PICTURE CONSTRUCTION

On the opposite page is a curved shape. Think of a picture or an object which you can draw with this shape as a part.

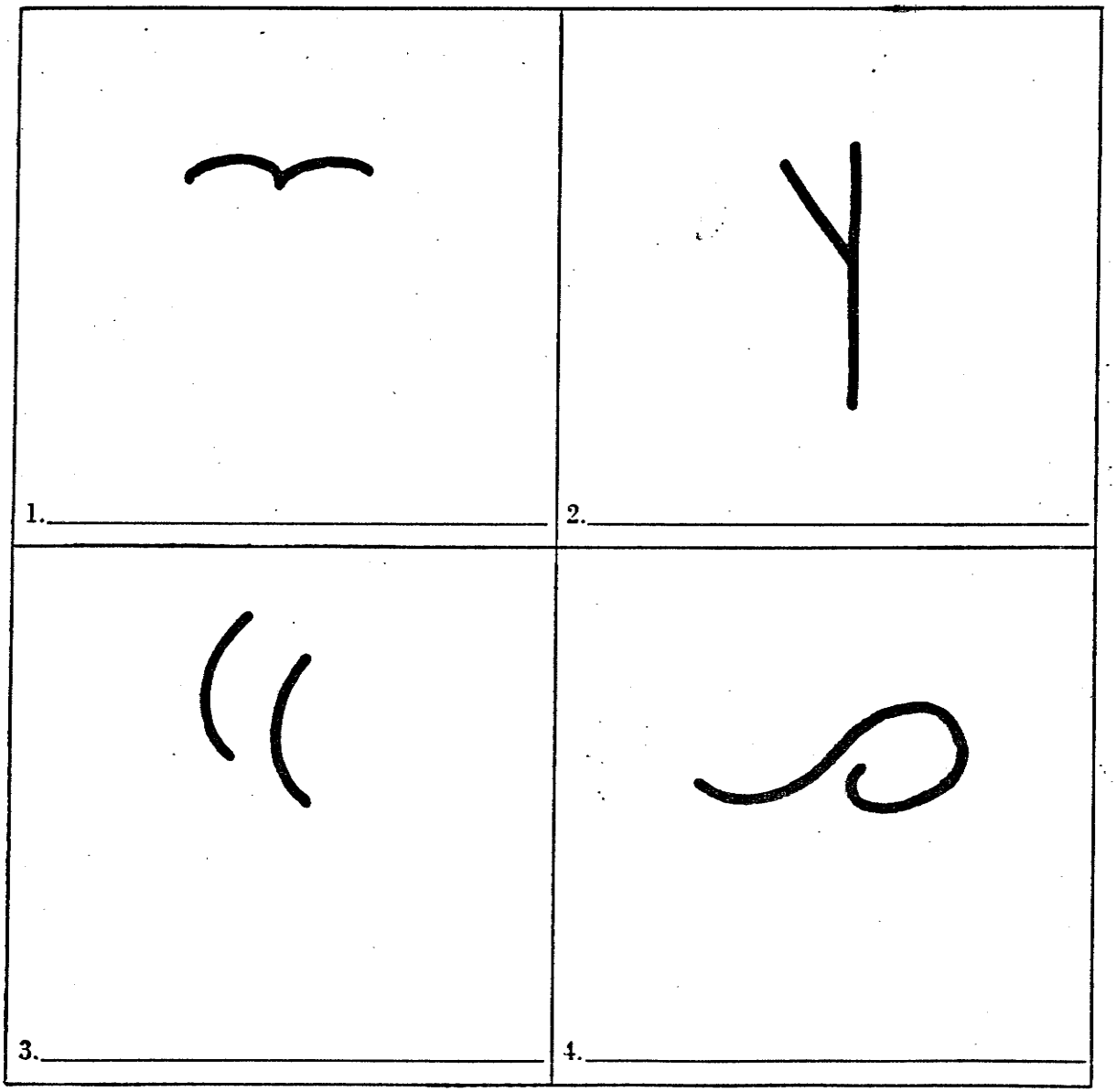
Try to think of a picture that no one else will think of. Keep adding new ideas to your first idea to make it tell as interesting and as exciting a story as you can.

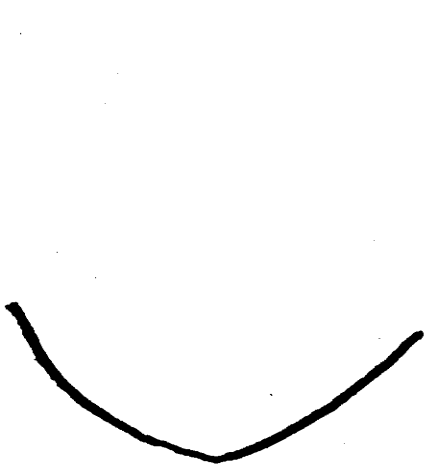
When you have completed your picture, think up a name or title for it and write it at the bottom of the page in the space provided. Make your title as clever and unusual as possible. Use it to help tell your story.

YOUR TITLE:_____

Activity 2. PICTURE COMPLETION

By adding lines to the incomplete figures on this and the next page, you can sketch some interesting objects or pictures. Again, try to think of some picture or object that no one else will think of. Try to make it tell as complete and as interesting a story as you can by adding to and building up your first idea. Make up an interesting title for each of your drawings and write it at the bottom of each block next to the number of the figure.





5.

6.

7.

8.

9.

10.

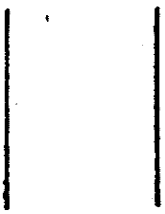
Activity 3. LINES

In ten minutes see how many objects or pictures you can make from the pairs of straight lines below and on the next two pages. The pairs of straight lines should be the main part of whatever you make. With pencil or crayon add lines to the pairs of lines to complete your picture. You can place marks between the lines, on the lines, and outside the lines—wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Make them tell as complete and as interesting a story as you can. Add names or titles in the spaces provided.

1._____

2._____

3._____



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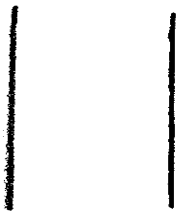

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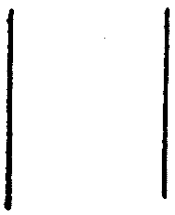

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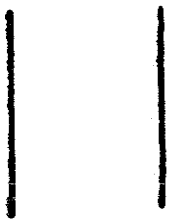

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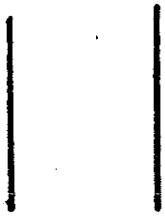

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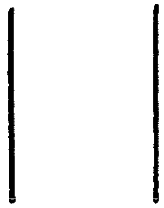

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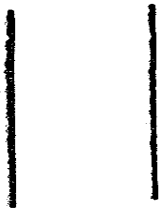

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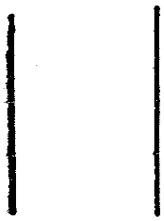

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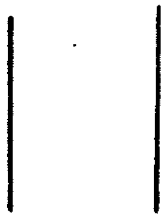

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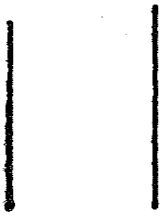

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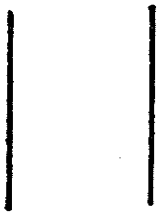

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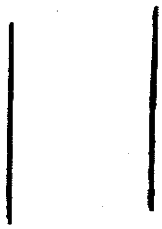

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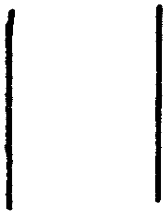

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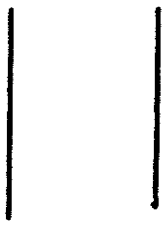

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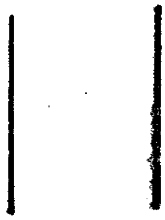

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GO ON TO NEXT PAGE

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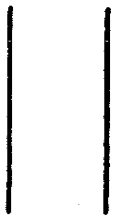
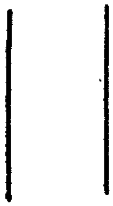
21. 

22. 

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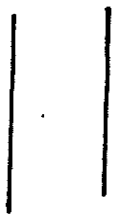
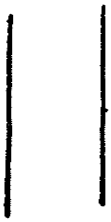
24. 

25. 

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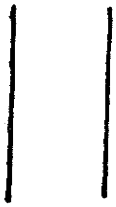
27. 

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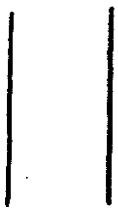
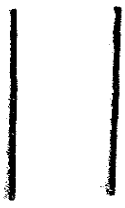
29. 

30. 

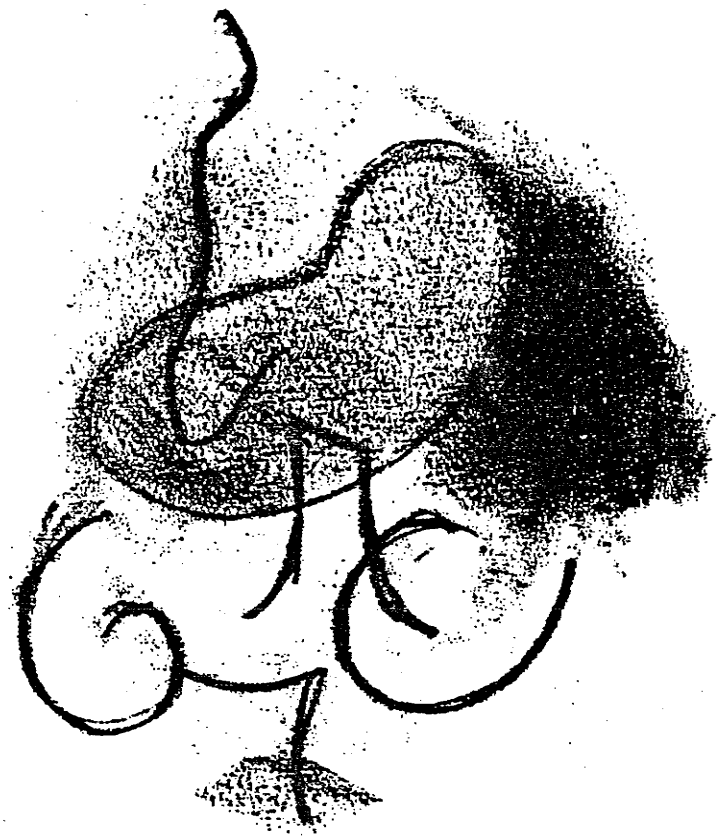
Thinking Creatively With Pictures

By E. Paul Torrance

Booklet B

Name _____ Age _____ Sex _____ Grade _____

School _____ City _____ Date _____



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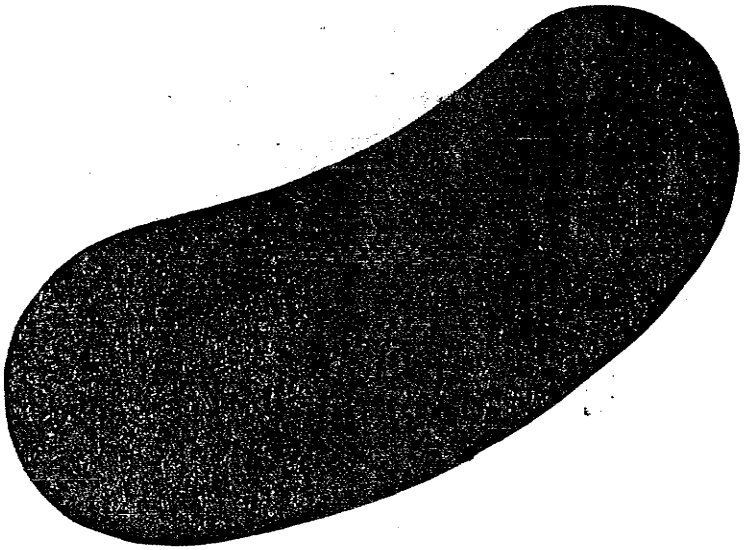
Activity 1. PICTURE CONSTRUCTION

On the opposite page is a curved shape. Think of a picture or an object which you can draw with this shape as a part.

Try to think of a picture that no one else will think of. Keep adding new ideas to your first idea to make it tell as interesting and as exciting a story as you can.

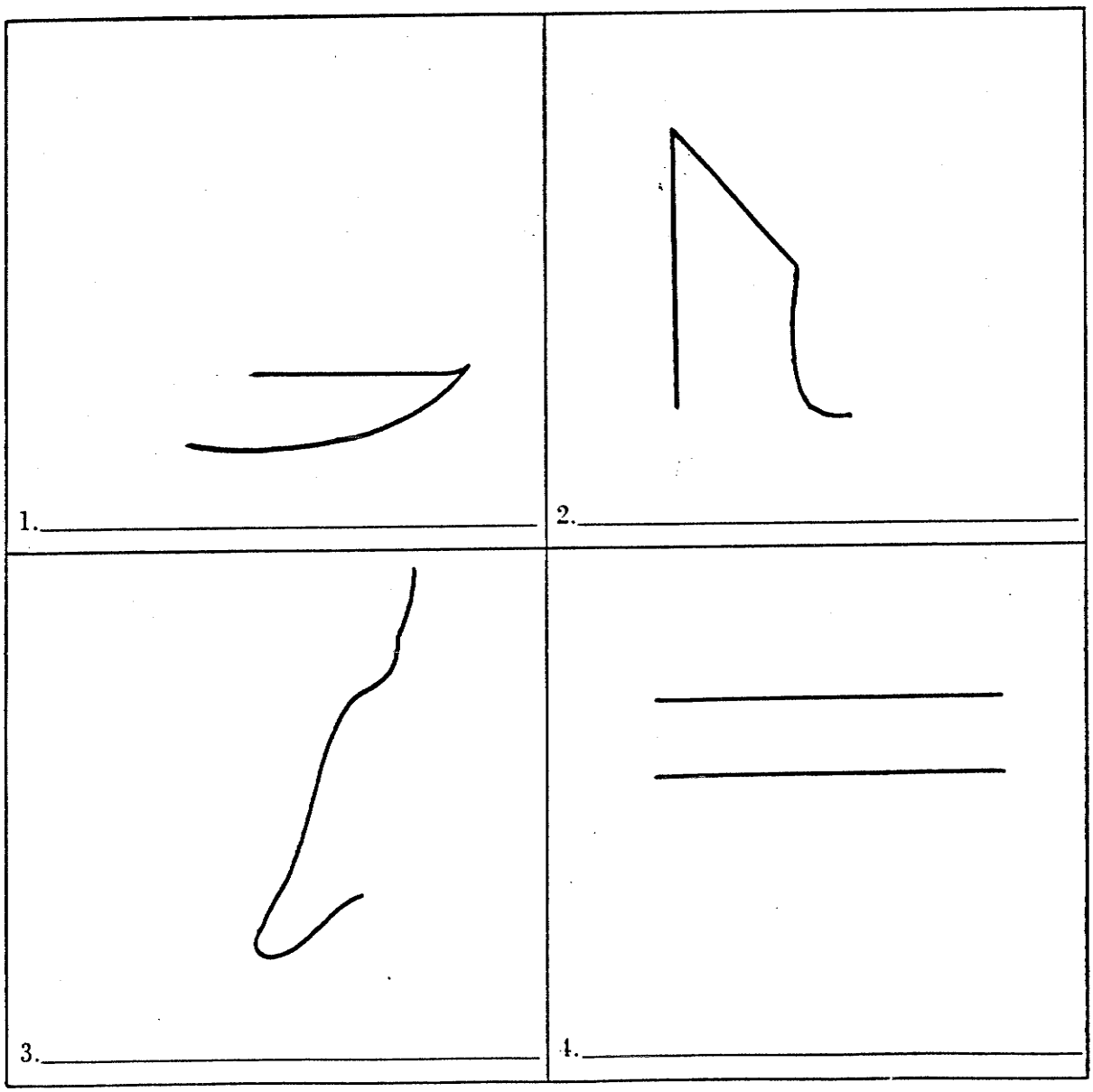
When you have completed your picture, think up a name or title for it and write it at the bottom of the page in the space provided. Make your title as clever and unusual as possible. Use it to help tell your story.

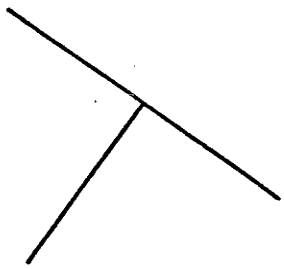
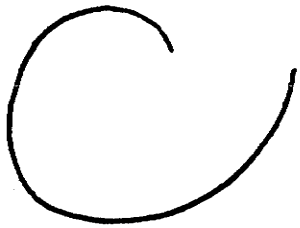
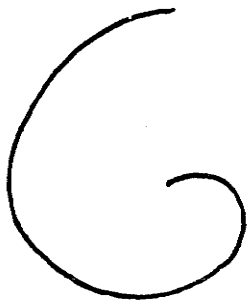
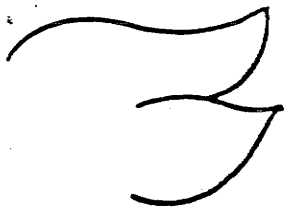
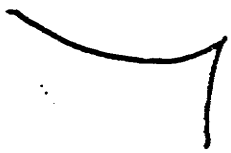
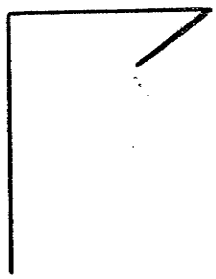


YOUR TITLE:_____

Activity 2. PICTURE COMPLETION

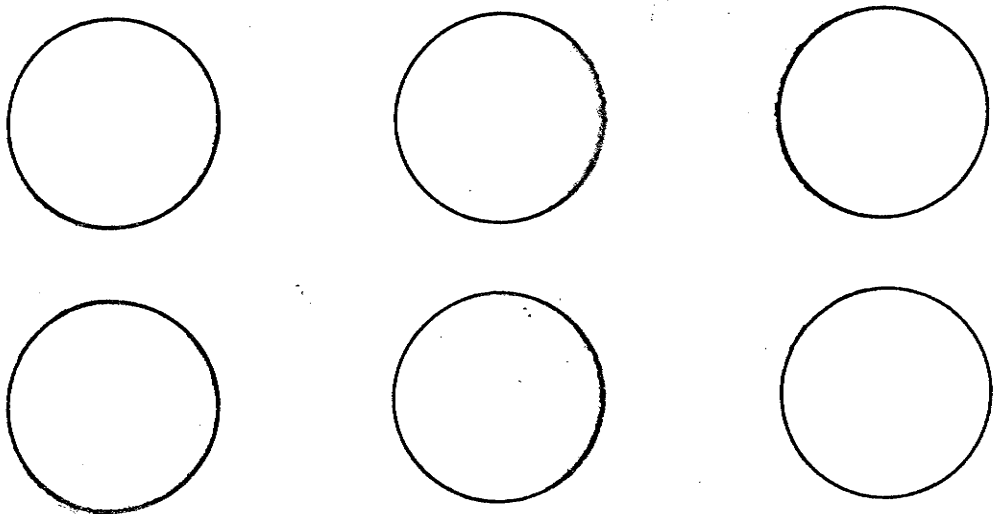
By adding lines to the incomplete figures on this and the next page, you can sketch some interesting objects or pictures. Again, try to think of some picture or object that no one else will think of. Try to make it tell as complete and as interesting a story as you can by adding to and building up your first idea. Make up an interesting title for each of your drawings and write it at the bottom of each block next to the number of the figure.

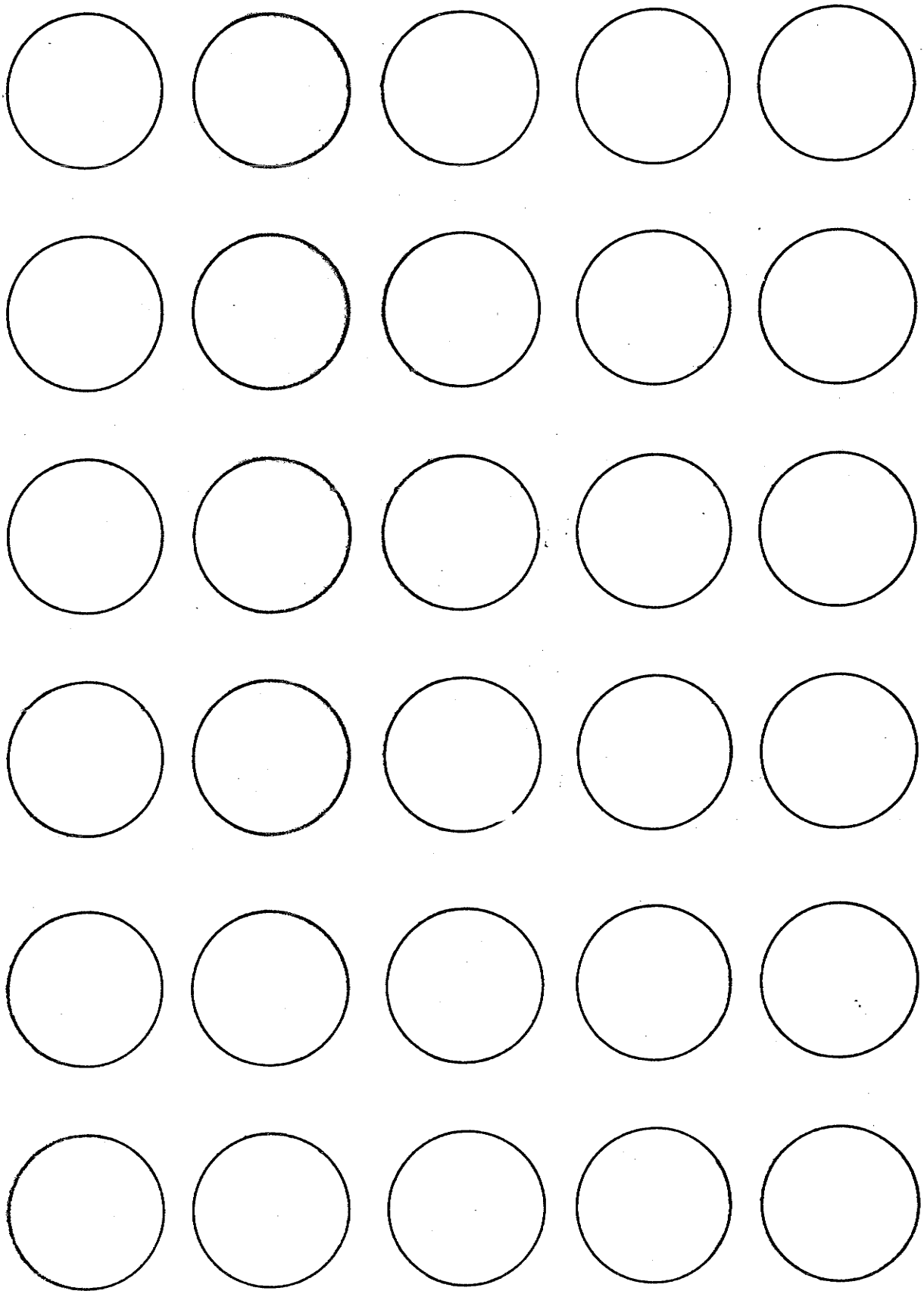


 5._____	 6._____
 7._____	 8._____
 9._____	 10._____

Activity 3. CIRCLES

In ten minutes see how many objects or pictures you can make from the circles below and on the next page. The circles should be the main part of whatever you make. With pencil or crayon add lines to the circles to complete your picture. You can place marks inside the circles, outside the circles, or both inside and outside the circles—wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Make them tell as complete and as interesting a story as you can. Add names or titles below the objects.





TEACHER RATING OF PUPIL ATTITUDE *

School ..... Teacher ..... Date .....

Pupil ..... Grade ..... Age .....

Directions: Below are some items that are indicative of pupil attitude toward school. Rate the pupil on each item by circling the appropriate rating. Follow this procedure for each item using the rating scale below in making your judgments.

RATING SCALE

1	2	3	4	5
Never	Seldom	Occasionally	Often	Always

ITEMS	RATING				
	1	2	3	4	5
A. Cares about improving himself	•	•	•	•	•
B. Likes school	•	•	•	•	•
C. Has confidence in himself	•	•	•	•	•
D. Shows an interest in voluntary activities	•	•	•	•	•
E. Tries to do his best	•	•	•	•	•
F. Has a good attitude toward learning	•	•	•	•	•
G. Takes pride in his appearance	•	•	•	•	•
H. Makes an effort to come to school	•	•	•	•	•
I. Wants to achieve more in school	•	•	•	•	•
J. Comes to school on time	•	•	•	•	•
K. Gets along with classmates	•	•	•	•	•
L. Does well in Mathematics	•	•	•	•	•
M. Does well in Language Arts	•	•	•	•	•
N. Does well in Social Studies	•	•	•	•	•
O. Does well in Science	•	•	•	•	•
P. Responds creatively to a task	•	•	•	•	•

* Adapted