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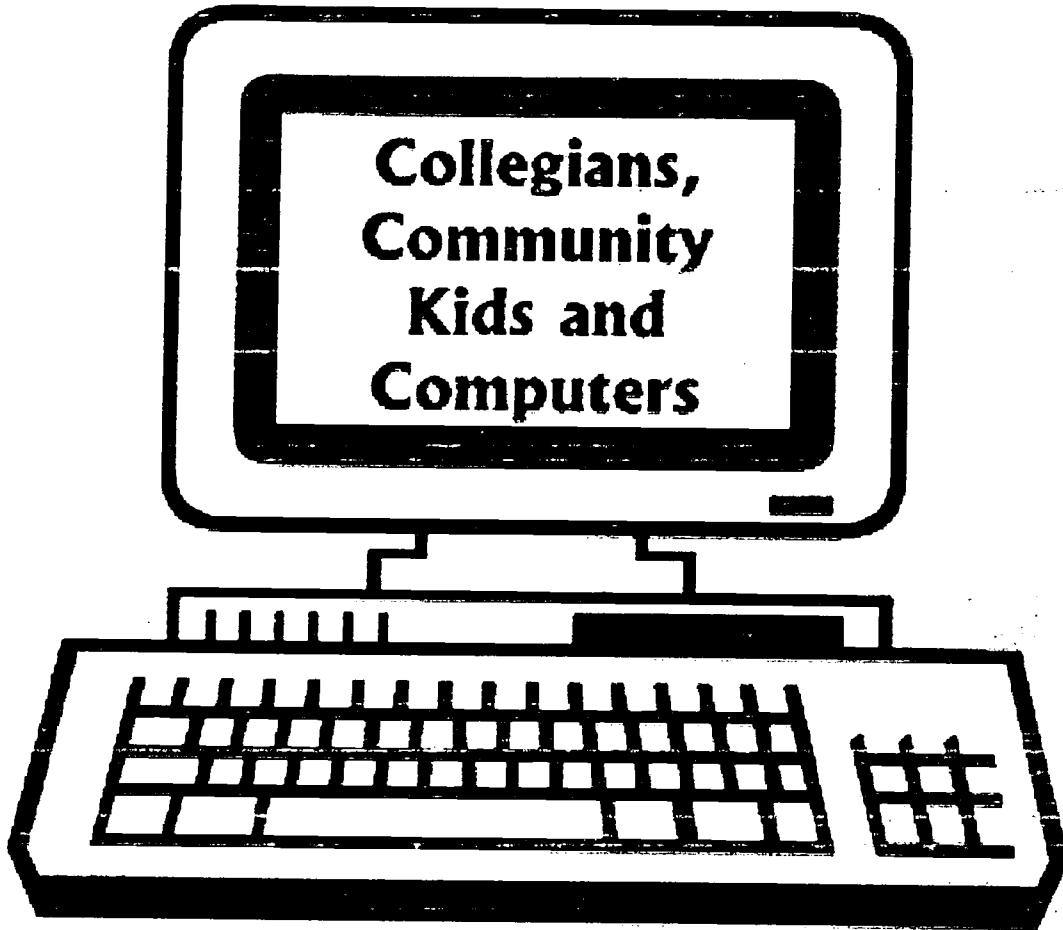
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ABSTRACT

This paper describes a pilot mentoring/tutoring program which paired undergraduate and graduate students with homeless, at-risk, urban elementary students. The project addressed students' poor school performance and disparities in access to technology for minority and disadvantaged students. It purchased computer software and established a computer lab. Tutors provided weekly computer sessions and individualized attention in order to influence tutees' attitudes toward math, reading, and science and improve academic achievement. To improve the consistency of support networks for students, parents and teachers were involved. The goal for college students was to increase knowledge of assessment issues and techniques, practice using tests, write and implement individualized remediation outcomes based on tutee needs, write psychoeducational evaluations, and collaborate to design a Webquest project. Elementary students completed various assessments at the beginning of the project and were compared to their peers. Parents received a final progress report showing individualized program gains and recommendations for future instruction. Reports were forwarded to classroom teachers. Tutees made between 3- and 8-month gains toward grade equivalency. Though students made greater academic gains in reading, greater attitude change was made toward math. There was no difference according to tutee age or gender. (SM)



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Content

This pilot project was developed to provide a mentoring/tutoring program which paired upper level college and graduate students with homeless elementary school students from an at-risk community school district in New York City. The school district had shown a need for intensive remediation from results of a standardized test that ranked them as one of the poorest performing school districts. The project also provided a unique opportunity to address the glaring disparity in access to technology for minority and economically disadvantaged children as previously reported in research (Ysseldyke, Algozzine & Thunlow, 1992; Lindsay, 1997). It was called "Collegians, Community Kids, and Computers".

Besides providing outreach initiatives between the college and surrounding urban community, the hope was to incorporate technology into assessment and instruction to facilitate the achievement of higher academic standards and to establish an educational environment that promoted positive attitudes toward learning. Research on the use of technology in education has shown a positive impact on instruction (MacArthur, 1988; Bryant & Dix, 1999; Johnson & Bender, 1999). Research has also shown that attitudes toward what children study in school may very well be more crucial to their futures than the knowledge accumulated (Cramer, 1975; Levine, 1984; Anderson-Inman, Knox-Quinn & Horney, 1996).

This project further examined the impact that technology has on assessment, remediation and attitude change of at-risk students. It also provided an excellent opportunity for students in two programs, Special Education and Counseling, to practice collaborative and consultation skills. Upper level college and graduate students taking counseling, assessment and remediation courses were paired with 25 at-risk students from a homeless shelter in the Bronx. The students got transportation by bus to the college once a week for two semesters (assessment in Fall, 1999 and remediation in Spring 2000) in order to attend a structured assessment/remediation clinic with the infusion of technology to facilitate the testing and teaching process. The student "tutees" ranged in age from 5 to 12 years old, and attended kindergarten through seventh grade at local public schools. There were 10 boys and 15 girls who attended this project. All had been reported by their classroom teachers as having learning difficulties either for math and/or reading, and 3 tutees had previously been held back a grade due to lack of educational progress. The college/graduate students were responsible for implementing the project under the supervision of the course instructor and a computer consultant. Counseling students were responsible for an intake and two consultation sessions with the Special Education students. In addition, two attendants from the homeless shelter and a social worker from the school district helped with the provision of snack and personal needs of the tutees after school. The students and tutees spent an hour working together for 12 weeks each semester, and then the tutees went home, at which point the students had another hour of coursework and discussion.

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Project Goals

The infusion of technology goal was accomplished by purchasing software and setting up a classroom/computer lab. The hope was that through the use of weekly computer sessions, coupled with one-to-one attention, tutee attitudes toward learning would change; particularly in the three areas examined: math, reading and science. In addition to attitude change, the hope was that reading and math scores would also improve by the end of the project and the target criteria was 3 months growth toward the grade equivalent.

The outcomes of the college courses were to increase knowledge of assessment issues and techniques as measured by a written exam, practice using the actual tests, write and implement individualized remediation outcomes based on tutee needs, write a psychoeducational evaluation, and to collaborate as a group to design a Webquest project to be used with a group of tutees. The Counseling students had to consult and collaborate with a Special Education student and his or her tutee, and write a consultation report.

Another goal of the project was to improve the consistency of the support network surrounding the at-risk child, so both parent and classroom teacher components were built in. Parents attended the first and last sessions of each of the two courses, met with their child's tutor, provided background information and discussed their concerns. At the end of each course, the parents were also invited back to receive progress reports and evaluations of their children.

The classroom teacher was contacted initially to complete a preliminary checklist detailing what strengths and weaknesses the child presented at school, which was shared with the college student. At the end of each course, parents were encouraged to share their child's final evaluation reports and recommendations for future planning of instruction with their child's classroom teacher. College/graduate students were also encouraged to visit their tutee's classroom, schedules permitting.

The first course in September was the college assessment class. The process consisted of giving the tutee an interest inventory to help build communication and bonding between the student-tutee dyad. It proved to be an enjoyable and relaxing way for each individual to learn about the other. The Piers-Harris Self-Esteem Test and Estes Attitude Scale Toward Learning were given to obtain baseline scores for the next year. Next, in conjunction with the course outline for the semester, various reading and math assessments were given, which varied a bit depending on the age and functioning level of the child. Most students used the Key Math Diagnostic Test, the Qualitative Reading Inventory II, the Slosson Oral Reading Test-Revised, the computerized Star Assessment for Reading and Math, and the Phonological Awareness Test. Four students chose to use the Brigance Diagnostic Inventory of Elementary Skills and the Peabody Individualized Achievement Test. This test battery was chosen because of its ability to pinpoint different areas of performance for later remediation. Math performance was looked at in terms of Basic Concepts, Computations and Applications. Reading performance consisted of

Vocabulary, Word Attack Skills and Comprehension. Tutees were compared to their age and grade equivalents. The college students practiced scoring and interpreting the results on each other before the tests were administered to the tutees. The college students also wrote up final psychoeducational evaluations at the end of the course and shared these with the parents at a mid-year conference party.

The Spring remediation class brought a few changes due to typical attritional occurrences, such as changing residences and logistical difficulties. However, the returning tutees and college students were happy and excited to see each other again and renew their relationship for the one hour, once a week sessions. At this time, college students used their assessment results from last semester to plan an individualized remediation program for their tutees, which again focused on the three areas of math, reading and science. The college students were responsible for writing three weekly lesson plans, actively engaging their tutees with instruction and evaluating the performance for that day. As a reward for hard work, and to support the instructional environment, tutees were able to use educational software from the following list of choices: Reading Blaster (ages 6-9), Reading Blaster 2000, Word Blaster, Reading Rabbit 1, Math Rock, Kids Work Deluxe, Kids Pix, Phonics 4 Kids, and the Magic Schoolbus (Animals, Rainforest, Solar System, Dinosaurs, Inside the Earth, Bugs and Ocean).

Mid-semester, the college students were divided into groups of five according to the age and functioning level of their tutees, and were assigned a science-based Webquest to prepare and implement with their tutees during the final two sessions. A consultant instructed the students on how to develop a Webquest and review already existing ones from the Internet. Topics chosen by the students were: Dinosaurs, The Solar System, Butterflies and Endangered Species.

Results

At the end of the project a final progress report was given to the parents at a meeting/awards ceremony. These reports consisted of individualized program gains in reading and math and future recommendations for instruction. The reports were forwarded to the tutees' classroom teachers. Tutees made between 3 and 8 month gains toward grade equivalency as indicated by the Slosson Oral Reading Test-R and the Star Assessments for Reading and Math. The average monthly gain across tutees was 4 months for the area of reading and 3 months for the area of math. For younger students (ages 5 and 6) who were not testable by the formalized assessments, informal letter and number symbol, letter/sound and numerical/quantity recognition tests were used. Results showed a 30% average score improvement from February until May. In addition, a re-administration of the Estes Attitude Scale Toward Learning was given, and positive attitude changes were indicated for the desired areas of reading, math and science. The average gains in the factor analytic indicators showing positive change (difference scores) for all students were: 7 questions out of 14 in math (50%), 3 questions out of 14 in reading (21%) and 2 questions out of 14 in science (14%). There was no difference related to age or gender of the tutee, which was consistent with the interpretation of the test as indicated in the manual. It was interesting that although greater academic monthly

gains were made in reading, greater attitude change was made toward math, although the results were not significantly different.

Other indicators of success were tutee printouts, letters and drawings, stating how much they enjoyed the experience with the college students and computers, and how much they hoped that they could return the next year. Parents also verbally stated that they were pleased with the project. Those that moved out of the homeless shelter requested that their child continue the program, but sometimes this was not feasible due to logistics or travel time. Overall, the results exceeded expectations for success. The final awards ceremony/party was a very happy yet tearful one.

The pilot project demonstrated how academic advances and attitude change can be fostered through the introduction of computer technology to the assessment/remediation process of education of at-risk children. It documented how the college community could successfully outreach to community children, schools and families. It also showed the many benefits of collaboration between the two disciplines of Special Education and Counseling. Next year further study will look into the consistency of results over time, and providing more services to parents.

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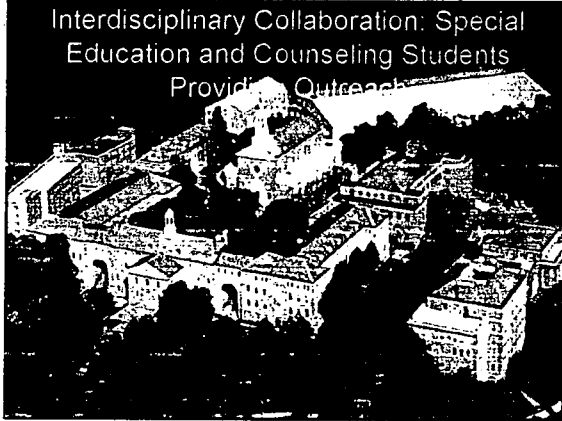
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Collegians, Community Kids, and Computers



Learning Through Helping Urban Children

Interdisciplinary Collaboration: Special Education and Counseling Students Providing Outreach



The Special Education and Counseling Programs at Manhattan College

- Location
- Area Schools and Agencies
- Graduate Placements

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Learning Assessment and Providing Outreach Services

- Initial Meetings
- Intakes
- School and Agency Collaboration
- Collaboration with other Graduate Students
- Other Assessment

John Ben Snow Memorial Trust Grant

- Strengthens and extends collegial partnership and outreaches to the surrounding urban community school district.



John Ben Snow Memorial Trust Grant

- Establishes an educational environment that promotes positive attitudes towards learning.
- Incorporates technology into assessment and instruction of at-risk students to facilitate the achievement of higher academic standards.



John Ben Snow Memorial Trust Grant

- Pairs MC students taking counseling or special education courses with elementary and middle school students from homeless shelters in the Bronx.
- Students get transportation to MC once a week for two college semesters, to attend the clinic, with the infusion of computer software to facilitate the testing and teaching process.



Student Descriptions

- 25 students were referred to the clinic over the course of the year (Sept. 1999 through May, 2000).
- Student range: 5 - 12 years old, K - 7th grade.
- Ten boys and fifteen girls.



Student Descriptions

- All were reported as having low scores for math and/or reading. 3 were held back a grade due to lack of educational progress.
- The teams spent an hour together for 12 weeks each semester, and the MC students had an extra hour of coursework and discussion.



Project Goals

- The immediate goal of the project was to infuse technology into the assessment remediation process of at risk students in local public schools.
- A second goal was to give graduate students in counseling and special education practice in collaboration and consultation.
- Graduate students and shelter students were trained by the technology consultant.

Project Goals Student Outcomes

- Through the use of weekly computer sessions, coupled with the one-to-one attention, student attitudes toward learning would change, particularly in math, reading and science.
- Reading and math scores would also improve by the end of the project, and the target criteria was three months growth toward the grade equivalent.

PROJECT GOALS GRADUATE STUDENT OUTCOMES

- Increase knowledge of assessment issues and techniques.
- Practice using the actual tests with students.
- Write and implement individualized remediation outcomes based on student needs.
- Collaborate as a group to design a Webquest project to be used with a group of students.
- Writing a consultation report - counselors.

Project Goals Ecological Outcomes

To improve the consistency of the support network surrounding the at-risk child.

- Parents attended the first and last sessions, met with the MIC student provided background information and discussed their concerns.
- At the end of each course, parents were invited back for progress reports and evaluations.
- Parents were encouraged to share their child's final evaluation and recommendations for future planning of instruction with their child's classroom teacher.
- Graduate students were encouraged to visit their student's classroom teachers filled out a skills checklist.

Assessment Course Method

- The Project Was Coordinated With an Assessment Course.
- Assessments Included: Attitude Scales (Interest Inventory, Piers-Harris Self-Esteem Test, Estes Attitude Scale Toward Learning)
- Diagnostic Tests Included: Key Math Diagnostic Test, Qualitative Reading Inventory II, Slosson Oral Reading Test -Revised, Computerized Star Assessment for Reading and Math, Phonological Awareness Test, Brigance Diagnostic Inventory of Elementary Skills, Peabody Individualized Achievement Test

Assessment Course Method

- Students were compared to their age and grade equivalents.
- The MIC students wrote up a final psychoeducational evaluation at the end of the course and shared these with the parents at a mid-year conference party.
- Parents shared these with the classroom teachers.



REMEDATION COURSE METHOD

- The Spring remediation class brought reduced numbers due to attritional occurrences such as changing residences and logistical difficulties.
- MC students used their assessment results from last semester to plan an individualized remediation program for their students, focusing on math, reading and science.

REMEDATION COURSE METHOD

- The MC students were responsible for writing three weekly lesson plans, actively engaging their students with instruction and evaluating the performance for that day.
- Students used educational software: Reading Blaster, Reading Blaster 2000, Word Blaster, Reading Rabbit 4, Math Rock, Kids Work Deluxe, Phonics 4 Kids, and the Magic Schoolbus (Animals, Rainforest, Solar System, Dinosaurs, Inside the Earth, Bugs and Ocean).

REMEDATION COURSE METHOD

- Mid-semester, the MC students were divided into groups of 5 according to age and functioning level of their students, and were assigned a science-based Webquest to prepare and implement with their students during the final two sessions.
- A consultant instructed the MC students on how to develop a Webquest and review existing ones from the Internet. Topics chosen by the students were: Dinosaurs, The Solar System, Butterflies and Endangered Species.

RESULTS

- A final progress report was given to the parents and classroom teachers, consisting of individualized program gains in reading and math and future recommendations for instruction.
- Students were evaluated for gains toward grade equivalency for math and reading.
- Math was evaluated in terms of basic concepts, operations and applications.
- Reading was evaluated in terms of vocabulary, word attack skills and comprehension.

RESULTS

- Students made between three and eight month gains toward grade equivalency as indicated by the Slosson Oral Reading Test-R and the Star Assessments for Reading and Math.
- The average monthly gain across students was 4 months for reading and 3 months for math.
- For younger students (age 5 and 6) who were not testable by the formalized assessments, informal letter and number symbol, letter sound and numerical quantity recognition tests were used. Results showed a 30% average improvement from Feb until May.

RESULTS

A re-administration of the Estes Attitude Scale Toward Learning showed positive attitude changes for the desired areas of reading, math and science. The average gains in the factor analytic indicators showing positive attitude change (difference scores) for all students were:

- 7 questions out of 14 in math (50%)
- 3 questions out of 14 in reading (21%)
- 2 questions out of 14 in science (14%)

There was no difference related to age or gender, which was consistent with the interpretation of the test as indicated in the manual.

RESULTS

- Other indicators of success were student printouts, letters and drawings, stating how much they enjoyed the experience with MC students and with the computers, and how much they hoped that they could return the next year.
- Parents also stated that they were pleased with the project. Those that moved out of the shelter requested that their child continue in the program, but often this was not feasible due to travel time. Overall, the results exceeded expectations for success.
- Social Values and friendships were realized at end of term parties for students, parents and staff.

PROBLEMS AND RECOMMENDATIONS

- Absenteeism. Next year, a mandatory attendance policy will be put into effect, and children who cannot attend consistently will be dropped and replaced from a waiting list. Communication will also be made to the parent stressing the importance of regular attendance.
- Classroom skills checklist was not returned by classroom teachers. Next year, parents will be asked to contact their child's teacher earlier in the program to get a commitment, and consult with the administrative staff of the school if necessary.

PROBLEMS AND RECOMMENDATIONS

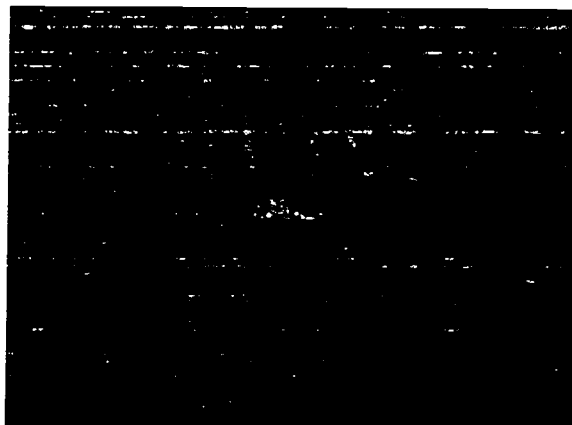
- Possible regression of academic gains over the summer: future planning could include target dates over the summer where the students can return to MC for remedial practice.
- This may be especially important because for some children, this project was their only contact with computer technology.
- In Spring of 2001, computer workshops will be set up for the parents of the tutees.

Benefits for Graduate Students

- Naturalistic Settings
- Real Clients
- Providing a Service
- Less Difficult Problems
- Scheduling
- Location
- Ages of Clients
- Less Difficult Problems

John B. Snow Grant Photos





Name: _____

HISTORY

1. Name of student:

First

Last

Middle

2. Sex: M _____ F _____

3. Age: _____

4. D.O.B. _____

Month Day Year

5. Home Address: _____

6. Home Phone: (____) _____ - _____

7. School Name: _____

8. School Address: _____

9. Date child began school: ____ / ____ / ____

10. Has child attended other schools previously? Yes ____ No ____

11. Current Grade: _____

12. Is the child repeating the grade? Yes ____ No ____

13. If Yes, what is the reason for being held back? _____

14. Class Orientation: Monolingual ____ Bilingual ____ Intervention ____ Special Ed. ____

15. Reason for referral: _____

16. Child's first language: _____ 17. Language spoken at home: _____

18. If first language is different, when did child begin to verbally communicate in English? _____

Name: _____

FAMILY COMPOSITION:

*Married() *Single parent () *Divorced () *Remarried () *Deceased parent ()

19. Mother's name: _____

20. Mother's Place of Birth _____

21. Father's name: _____

22. Father's Place of Birth: _____

23. Is mother employed? Yes ___ No ___

24. Does the mother work outside of the home? Yes ___ No ___

25. Type of occupation: _____

26. Is the father employed? Yes ___ No ___

27. Does the father work outside of the home? Yes ___ No ___

28. Type of occupation: _____

29. Family members who reside in the home:

* Parents: Mother: _____ Father: _____

* Siblings: sisters: _____ brothers: _____

* Grandparents: _____

* Other relatives: _____

* Pets: _____

30. Who cares for the child when parents are absent? _____

31. Does the child go to school on his/her own? Yes ___ No ___

32. If the answer is No, who takes the child to school? _____

33. Does the child go home alone after school? Yes ___ No ___

34. If the answer is No, who picks the child up from school? _____

35. Is there someone at home, when child arrives from school? Yes ___ No ___

36. Who? _____

Name: _____

HOUSEHOLD SETTING

In what room of your home do you do your homework? _____

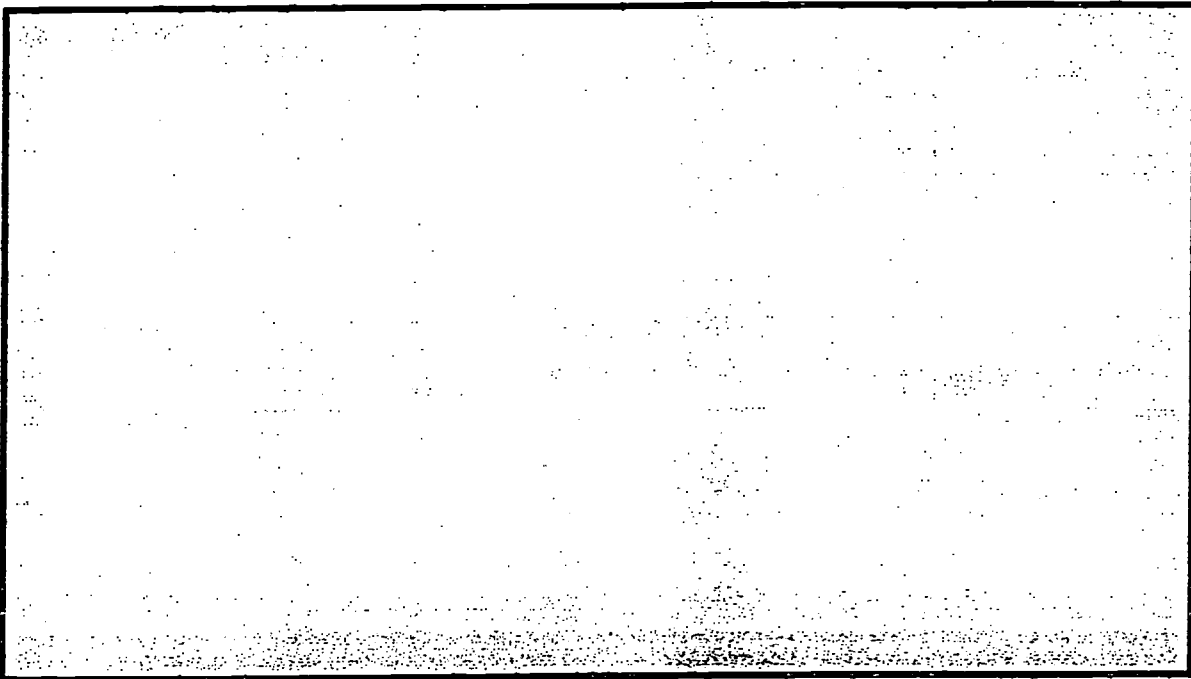
What type of furniture is in that room? _____

Is there a television set in that room? Yes ___ No ___

Does anyone else use that room? Yes ___ No ___

What for? _____

Draw a picture of yourself in this room.



SLEEPING ARRANGEMENTS

Do you sleep in your own room? Yes ___ No ___

Who do share your room with? _____

Do you share your bed or have separate beds? _____

Name: _____

INTERPRETATION OF LEARNING ENVIRONMENT

1. What do you like best about school? _____

2. What don't you like about school? _____

3. What is your favorite subject? _____

4. What is the first thing you do when you get home from school? _____

5. What are activities you like to do when you are not in school? _____

6. Who do you do these activities with? _____

7. Who are your friends? _____

8. What games do you like to play? _____

9. When you grow up, what do you want to be? _____

10. How much do you enjoy reading? Very much () Not much () Not at all ()

11. How much do you enjoy writing? Very much () Not much () Not at all ()

12. Complete the statements on the next page:

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