DOCUMENT RESUME

ED 127 276 SP 010 311

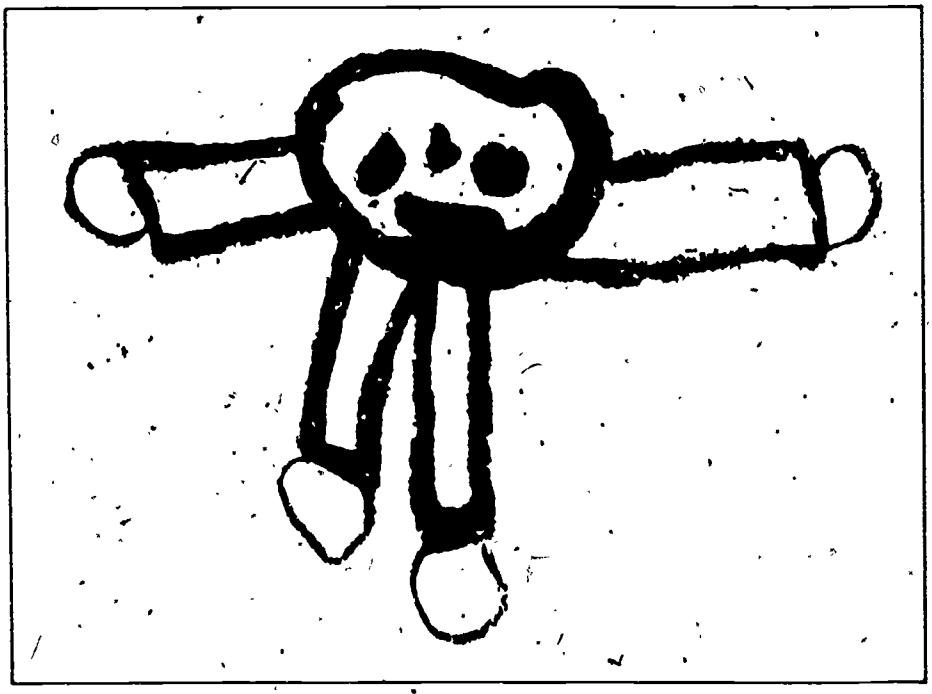
AUTHOR Feiman, Sharon
TITLE Teacher Curriculum Work Center: A Descriptive Study.
INSTITUTION North Dakota Study Group on Evaluation, Grand Forks.
SPONS AGENCY Rockefeller Bros. Fund, New York, N.Y.
PUB DATE Feb 75
NOTE 63p.
AVAILABLE FROM Center for Teaching and Learning, University of North Dakota, Grand Forks, North Dakota 58201 ($2.00)

EDRS PRICE MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS Case Studies; *Curriculum Development; *Educational Research; Effective Teaching; *Inservice Teacher Education; Research; Resource Centers; Schematic Studies; Teacher Behavior; *Teacher Centers; Teacher Developed Materials; Teacher Educators

ABSTRACT

This monograph is one of a continuing series initiated to provide materials for teachers, parents, school administrators, and governmental decision-makers that might encourage reexamination of a range of evaluation issues and perspectives about schools and schooling. This monograph is a descriptive study of the Teacher Curriculum Work Center, which opened in October 1972. It tries to capture the way of life of one functioning teacher center by exploring the viewpoints of various participants. The findings of the study are organized around the following topics, which head each of the eight chapters: (1) History; (2) Philosophy; (3) Setting/Environment; (4) People Who Use the Center; (5) Organizational Structure; (6) Program Highlights; (7) Teacher Behavior in the Center; and (8) Major Themes. Most of the empirical results are drawn from three sources: (1) sign-in/out forms; (2) personal data sheets filled out by visitors; and (3) observational data. In addition all the Centers' written records were reviewed and taped interviews conducted with the staff. The chapters are preceded by an introduction and followed by appendixes that include: a sample of personal background forms; a map of schools the Center draws from; a sample of the Center newsletter; a list of workshop topics; a sample of sign-in forms; a sample of the observation form: and a bibliography. (DMT)

North Dakota Study Group on Evaluation



Sharon Feiman

TEACHER CURRICULUM WORK CENTER: A DESCRIPTIVE STUDY

University of North Dakota
Grand Forks, N.D. 58202
February 1975

First published in 1975

North Dakota Study Group
on Evaluation, c/o Vito Perrone,
Center for Teaching & Learning
University of North Dakota
Grand Forks, N.D. 58201

Library of Congress Catalogue
Card Number: 75-276

Printed by University of
North Dakota Press

A grant from the Rockefeller Brothers Fund
makes possible publication of this series

Editor: Arthur Tobier

In November 1972, educators from several parts of the United States met at the University of North Dakota to discuss some common concerns about the narrow accountability ethos that had begun to dominate schools and to share what many believed to be more sensible means of both documenting and assessing children's learning. Subsequent meetings, much sharing of evaluation information, and financial and moral support from the Rockefeller Brothers' Fund have all contributed to keeping together what is now called the North Dakota Study Group on Evaluation. A major goal of the Study Group, beyond support for individual participants and programs, is to provide materials for teachers, parents, school administrators and governmental decision-makers (within State Education Agencies and the U.S. Office of Education) that might encourage re-examination of a range of evaluation issues and perspectives about schools and schooling.

Towards this end, the Study Group has initiated a continuing series of monographs, of which this paper is one. Over time, the series will include material on, among other things, children's thinking, children's language, teacher support systems, inservice training, the school's relationship to the larger community. The intent is that these papers be taken not as final statements--a new ideology, but as working papers, written by people who are acting on, not just thinking about, these problems, whose implications need an active and considered response.

Vito Perrone, Dean
Center for Teaching & Learning,
University of North Dakota

Contents

	Introduction	1
1	History	3
2	Philosophy	7
3	Setting/Environment	9
4	People Who Use Center	11
5	Organizational Structure	14
6	Program Highlights	18
7	Teacher Behavior in Center	26
8	Major Themes	36
	Appendices	39
	Sample of Personal Background Form	
	Map of Schools the Center Draws From	
	Sample of Center Newsletter	
	List of Workshop Topics	
	Sample of Sign-In Form	
	Sample of Observation Form	
	Bibliography	53

Introduction

Sharon Feiman is on the faculty of the School of Education, University of Chicago.

This study was supported by the Study Commission on Undergraduate Education and the Education of Teachers.

I want to express my appreciation to the staff and teachers at the Teacher Curriculum Work Center who cooperated so fully with us.

I also wish to acknowledge the assistance of my research team. Tom David helped extensively with the observation component and also the writing of the final report. Margaret Riel observed and coded most of the data. Ken Zeno collected historical and organizational data. I also appreciate the computer programming skills of Larry Dornaker. The use of "we" throughout most of the text reflects my indebtedness to the first three students mentioned and to the Center staff.

Finally I wish to thank my colleague and friend Susan Stodolsky, for her help with instrumentation. S.F.

This is a descriptive study of the Teacher Curriculum Work Center, which opened in October 1972, in a YMCA on Chicago's southside. It tries to capture the way of life of one functioning teacher center by sampling aspects of the center program and by exploring the viewpoints of various participants.

The study was motivated by both theoretical and practical concerns. On the one hand we were intrigued by the possibility that teacher centers had a special role in teacher education, which neither universities with their concern for the discovery of knowledge nor schools with their concern for the education of children could play. Theoretically, centers might bridge the gap between theory and practice in teacher education and development and implementation in curricular reform. We wanted to conceptualize the role of centers in the context of a larger support system responsive to teachers' needs at different stages of professional development. At the same time, we were excited about the widespread use of a local teacher center and curious about the nature and effects of its operations. The center seemed to be the locus for a genuine community of teachers. We wanted to know how it came to be and what was going on there.

The goals of the Study Commission on Undergraduate Education and the Education of Teachers, which funded the study, and the particular focus of the Chicago network of community-based, field-oriented alternatives seemed directly related to our research interests. (August Document, 1972). We proposed, therefore, to conduct a descriptive study of one center as a first step towards assessing its effects on teachers and teaching, and as a way of informing our understanding of centers in general.

While the literature on teacher centers has proliferated, to date most of it pays little attention to the kinds of questions which interested us. As another observer of the center movement points out:

> Problems of coordination and government have consumed much of the energy of the planners of teacher centers, and these concerns, rather than the substantive focus of training and the training process are reflected in the literature....Apparently we shall have to await a second generation of literature before we will find much of educa-

tional substance to add to the political substance of the present literature (Joyce, 1974).

Despite their promise and widespread appeal, teacher centers could become just another illustration of the bandwagon phenomenon so characteristic of educational reform in America. One antidote against this is critical dialogue informed by practical, empirical, and theoretical knowledge. Hopefully this study will contribute to such a dialogue.

Our findings are organized around the following topics: 1) History; 2) Philosophy; 3) Setting/Environment; 4) People Who Use the Center; 5) Organizational Structure; 6) Program Highlights; 7) Teacher Behavior in the Center; and 8) Major Themes. Most of the empirical results are drawn from three data sources: 1) sign-in/out forms which all center users were asked to fill out each time they came during the period of study (January-February 1974); 2) personal data sheets filled out by visitors during the same period of time; 3) observational data obtained from sampled time periods during the two months. In addition, we examined all the center's written records and conducted taped interviews with the staff.

We have tried to integrate the data into a coherent account with few methodological digressions. The validity of this study depends on the faithfulness with which the various sources of information are woven together to reflect not only factual happenings but also their meaning and underlying dynamic.

1

History

This is a story about how a group of teachers started a teacher center. It is also a story about the emergence of an organization as the embodiment of a common purpose. Too often the origins of educational innovations go undocumented. Because we felt this part of the tale should also be told, we gathered together founders and friends of the Center on February 10, 1974, and asked them how and why it all began. From their recollections and from early documents, we reconstructed the Center's beginnings.

The place is Chicago, Illinois, more specifically, the southside. The time is 1970. The main characters are Joan Bradbury, Carol Brindley, Hannah MacLaren, Sandy Lang, Myles Jacobson, and eventually Barry Hammond. Joan had been teaching at Coop #3, an alternative elementary school, which she helped to start. Carol was a head teacher at the Laboratory Nursery School at the University of Chicago. Hannah taught five- to seven-year-olds at Ancona, a Montessori-based school and directed their teacher training program, (Early Education Course/Chicago). Sandy was coordinating the Cluster Classroom Project, a community initiated program to develop open classrooms in Hyde Park-Kenwood public schools. Myles was a graduate student in Education at the University of Chicago and actively working with several alternative schools. Barry, who joined the group later, was also a student in education at the university.

These people knew each other through a variety of formal and informal channels. In particular, their involvement as parents, teachers, and friends of Coop #3 provided a valuable common experience in starting an alternative educational institution. Collectively, they also knew a handful of people both locally and nationally who were active in open classroom experiments, alternative schools and innovative efforts at teacher training. Mostly they enjoyed getting together to make curricular materials for their classrooms and to talk about the problems of open education.

In the fall of 1970, Carol hosted a meeting at the nursery school, the most central location, to talk about setting up a teacher center. The group met regularly for several months in an effort to define the kind of center they wanted. Sometimes others joined their meetings and presented alternative points of view. One friend, involved in a center on the northside, advocated more direct

political action, but the core group felt more comfortable focusing on changes in classroom organization and new curricula. They toyed with the idea of a storefront to sell home-made materials and a recycle center for turning "waste materials" from local industries (i.e. cardboard boxes, metal punchouts, IBM boxes, scraps of plexiglass) into usable classroom equipment. Gradually the idea of a place where teachers could talk and make their own materials emerged.

When the group got cold feet about doing something on a large scale or individuals began to wonder whether they were wasting their own time, all could justify getting together because they liked each others' company.

Carol: The momentum had to do with the group that exists. We enjoyed sitting around and brainstorming ideas.

Sandy: It was stimulating to be together and we were also making things.

When the University of Chicago relocated its curriculum resource library so that teachers without formal university affiliation no longer had easy access to these materials, the group felt an impetus to act. In February 1971, Hannah went to the board of her school and obtained permission to use part of the basement and $90 for materials to create a space. Through the spring, the group concentrated on designing an area in the basement rather than on discussing the center's purpose. Recalling that time, Joan and Sandy made the following observations:

Joan: I remember times when we were planning to build that space. We really couldn't figure out what the center was to be. We would always stick to the concrete planning of the space.

Sandy: I also have the feeling that we got into designing that space and building the designs and painting because we didn't know what else to do at that time.

Joan: It was a step on the way.

From the fall of 1971 through the spring of 1972, Joan, Carol, Hannah and Sandy met twice a week in the basement of Ancona. On Mondays, they continued their discussions and made materials, which the three teachers used in their classrooms. On Thursdays, they invited the teachers from the Cluster Classroom Project to drop by. When teachers came, they tended to copy whatever materials they found. This frustrated the group, who had expected teachers to enjoy and be able to do exactly what they themselves found so satisfying. Moreover, the same teachers did not necessarily return each week. Restric-

tions on when the space could be used and inadequate supplies and materials were felt to be real limitations. Similarly, open-ended meetings seemed unproductive. The group began to spend more and more time on Mondays trying to figure out what to do on Thursdays. They experimented with a different focus each week.

During this time, Hannah and Joan were teaching an extension course for the National College of Education, called "Techniques of Individualizing Instruction." They asked Barry to offer a session on math. Shortly after, Barry did a series of math workshops in the basement of Ancona, which was open to the public and sponsored jointly by the Ancona training program and the teacher center. The workshops concentrated on making and using specific math materials, i.e. balance beams and geoboards.

The group never questioned the merit of their 'center' idea. As Carol put it: "We ourselves got a big kick out of creating our own materials, seeing an idea in a catalogue and duplicating it rather than ordering it, and we felt that other teachers could enjoy that, too." Despite real uncertainty about the general demand for such a facility, we tried to figure out the conditions necessary to make it work. A critical mass of teachers, an accessible and 'neutral' space, tools, and raw materials, a supply of homemade models and room to display them, and a staff person with ample time to plan seemed critical.

Through her work with the Cluster Classroom Project, Sandy knew the executive director of the Wieboldt Foundation, who gave the group his encouragement. Joan, ready for a break from teaching, wanted an opportunity to work on curriculum. She took the initiative in writing a proposal that outlined a series of activities and requested funding to staff, equip and organize the Center for one year. With the help of Hannah's neighbor, a lawyer, the group began working on incorporation papers and procedures for tax-exempt status. In June 1972, the Wieboldt Foundation gave the Center $20,000.

The next step was finding a place. The group felt strongly about the advantages of an independent, 'neutral' location rather than a school-based site. Originally they wanted a storefront in Hyde Park but none was available. Finally, in August, they secured two small adjoining rooms in the Hyde Park YMCA.

Joan and Carol planned the space. Joan assumed the directorship; Sandy and Carol volunteered to work part-time and without pay. Hannah planned to spend the year in Boston studying for a master's degree and working at the Teacher Resource Center at the Boston Children's Museum.

Posters were placed in neighborhood schools. Articles appeared in local newspapers and in the New School News, a local alternative schools publication. In addition, local principals were contacted and teachers in the Cluster Classroom Project were informed of the Center's new location.

On October 15, 1972, the Center held an open house.

attended by approximately 25 people, many of whom had heard about the beginning center in the basement of Ancona. Indirectly connected with the Cluster Classroom Project, they became the first active users of the Teacher Curriculum Work Center.

The Center had been opened as an act of faith and everyone was excited by the reception. By January, according to the daily logs, the Center could boast of an average weekly attendance of 100 teachers and/or parents. In addition to daily consultations and Saturday workshops, the Center contracted to teach the course on open classrooms originally sponsored by the Cluster Classroom Project. On request, it also offered to schools and teacher training institutions a variety of special workshops. After seven months of operation, the Center drafted a second proposal, which called for an expansion of staff and services with no major changes in its orientation.

2

Philosophy

While the Center staff does not typically engage in philosophic discussions about the nature of man and his universe, their educational outlook might well be characterized by Maxine Greene's (1970) description of humanistic education:

> Humanistic education means the kind of education primarily concerned with the growth of persons and the autonomy of individuals, each one encouraged to discover meanings, to create his own identity in the situations of his life.

Humanistic education grows out of a long philosophic tradition and rests on a foundation of psychological theory and research that has accumulated over the past 50 years. The Teacher Curriculum Work Center is a concrete embodiment of this orientation.

In order to uncover the mission of the Center, we searched for statements that would reflect the values, assumptions, expectations and beliefs of the staff. At an international conference on teacher centers and mathematics held in St. Louis and sponsored by the National Science Foundation, Barry Hammond identified the Center with emergent values of "increased autonomy and democracy, a flattening of hierarchies and a decrease in the size and extent of bureaucracies." He set forth a number of assumptions about the process of change as it relates to teachers and the process of learning as it relates to schools and children.

These statements, modified in subsequent staff discussions, capture the Center's philosophy. We have relied primarily on Barry's own words, incorporating the additional suggestions of other staff members:

> ...Let me review some of the assumptions which shaped the Teacher Center. The five of us who began the Center hold most of the following beliefs in common:
>
> 1. Fundamental educational reform will come mainly through those charged with basic educational responsibility; that is, the teachers.
> 2. Teachers are likely to adopt alternative methods if they have considerable input in de-

fining their own educational problems and needs and if they receive concrete help on their own terms.

3. In order to overcome their isolation and take fuller responsibility for their own development, teachers need access to a small, voluntary, supportive professional community

4. Children, too, have different needs, interests, styles of learning that call for alternative learning environments.

5. One promising alternative is a more 'open' type of education characterized by increased student autonomy, more learning through reality-based activities and more contact with parents and community.

6. Especially in elementary schools, learning is enhanced if apparatus is available, which students can manipulate and transform.

Based on these beliefs, we designed a Center around the following intentions:

1. To provide raw materials that teachers and parents can transform into curricular materials, furniture, and other learning apparatus.

2. To provide teachers with source books for idea starters and home-made models, which teachers and staff have invented.

3. To emphasize the variety of materials that are available for Piagetian-based curricula and for personalized or self-directed study in the open classroom mode.

4. To provide resource people who offer suggestions and counsel in dealing with teachers' concerns.

5. To encourage sharing and collaboration in the development of new materials and the mastery of new skills.

6. To provide a model of a learning environment, which may be transferred to schools.

7. To create an environment where teachers and parents may become more 'conscious' of their ability and significance in the design of educational opportunities.

3

Setting/Environment

The Teacher Curriculum Work Center is housed in an old brick YMCA in the central business district of an integrated neighborhood.* Light and colorful, it stands at the end of a long corridor painted 'institutional tan'. Two high windows on either side of the door permit the viewer to look inside. Children and adults (particularly children) using the building for other purposes are often drawn into this place, which presents a dramatic contrast to its immediate surfoundings.

The first room of the Center presents opportunities in every direction. The space is intimate in scale and full of stimulation. A cubbyhole on the right contains copies of recent Center newsletters. Nearby is a phonograph that is put to frequent use. On the left wall is a display of simple machines with directions for making the machines out of scrap materials. A bulletin board is covered with pamphlets announcing summer programs for teachers in England and America. Straight ahead is the reception desk. As one steps into the room, one is met with a display of home-made and commercial curriculum materials from a wide variety of sources. A small window-display case cut in the wall on the right permits one to look through to the well-lighted room next door, where visitors are busy at a work table or at the laminating machine.

Against the wall behind the reception desk are shelves of home-made games developed and/or constructed by the staff and other Center users. In front of the shelves stands a work table surrounded by chairs and stocked with cans full of marking pens and pencils. Also in the corner is a library of contemporary books on education. The environment reminds one of a good informal classroom.

The next room contains a tall bank of shelves stocked with raw materials of every description in labeled open boxes: washers, blocks, labels, seeds, plexiglass, mirrors, wire, switches, string, etc. The smell of spiced tea is noticeable and water boils on the hot plate by the door. Plants line the window sills and hang by elaborate pulley systems from the ceiling. Alongside the windows is a paper cutter, and under its table a stock of railroad board in many colors. To the right is a large closet filled with supplies, and around the corner past the refrigerator is a quiet carpeted corner for reading,

*See Figure 1 and Figure 1a for floor plan of the Center.

with a rack of catalogs and magazines, such as *Outlook, The Teacher Paper, Learning, Ms, Notes from the Workshop Center on Open Education, The Urban Review,* and *New School News*. Also in the corner is a tri-wall bookshelf containing books on crafts, gardening, making things and environments.

The sounds of a power saw can be heard from the annex down the hall, which houses tri-wall cardboard, lumber and a variety of power tools for larger projects. Along one wall runs a long work table and the facing wall is lined with shelves supporting tools and materials. At the end of the room on another table stand the ditto machine and the new thermofax machine for the production of transparencies and ditto masters. There is ample space for storage of unfinished projects and often the opposite end of the room is crowded with half-completed tri-wall creations.

Although the spatial arrangement tends to draw people together, encouraging interaction, it also provides for other spatial needs. There is private space for reading, quiet conversation, and reflection, and there is open space for construction. In addition, the Center has access to small and large meeting rooms for workshops. The small scale of the Center and the presence of food contribute to conviviality. No space is set aside purely for conversation. All spaces serve the dual function of socializing and work.

The Center environment is neutral, associated neither with a particular school nor with a university. Freed from the distractions of home and work, teachers can come to unwind or to work on various projects. At crowded times, distraction is inevitable, but otherwise the atmosphere is peaceful and relaxed.

The environment serves as a 'magnet' drawing visitors into a variety of activities. This function is a product of the open *display* of materials and options with clear instructions to facilitate inquiry; the proximity and high *visibility* of others, and the *interactive* nature of the space. The Center provides visitors with stimulation, concrete ideas, space, materials and tools to follow through on their ideas, and the staff provides technical assistance if needed.

The homemade nature of much of the Center's furnishings and materials communicates something about the staff--their personalities, and their beliefs. It is also an implicit invitation to make things and explore together. The stage is set for idea-sharing with no pretensions of expertise and a willingness to learn from the experience of others.

Staff members are very sensitive to space and its contribution to the 'way of life' in the Center. They are continually rethinking arrangements and modifying what exists. Since space is at a premium, they consciously work to make the most of what they have.

4

People Who Use Center

Information about Center users was drawn from the personal background forms, which visitors were asked to fill out during the two months under study. (See Appendix A for copy of form.) 121 visitors filled out forms, which accounts for almost half of the people who came during open hours.

As one would expect, teachers dominated the sample accounting for 85, or 70 percent, of the background forms. Student teachers, who comprise the second largest category of users (17.3 percent), came mainly from the University of Chicago and the University of Illinois, Circle Campus. Other visitors included parents, day care workers, family and friends of the staff, a few education professors, and some out-of-town visitors. The majority of teachers work with pre-school and primary school children. The Center is not set up for middle and high school teachers and it has few resources for students at those levels.

Although the Center is predominantly a community resource, visitors do come from all over the city. Over half of the visitors in our sample live on the southside of Chicago (66.8 percent), with the largest percentage coming from the immediate community (52.8 percent). Still, slightly over a quarter of the population (28 percent) came from the area north and west of the Center with a small percentage traveling in from the suburbs (4.9 percent). The map, Appendix B, gives some indication of the Center's geographical sphere of influence by indicating the locations of schools where teachers using the Center work.

There is some pressure on the staff to enlarge the Center in order to serve a wider clientele. The staff believes, however, that centers should be small learning communities for local teachers. They have responded to increased requests for services by initiating plans for an internship program to train staff for other teacher centers around the city.

Slightly more than a quarter (27 percent) of the entire sample of teachers were newcomers during the two-month period under study. The same percentage indicated that they started coming to the Center sometime during the second full year of operation. This strongly suggests that the Center continues to attract a substantial number of new clients while it simultaneously serves the needs of 'old timers'. The table below indicates when teachers in our sample first started using the Center:

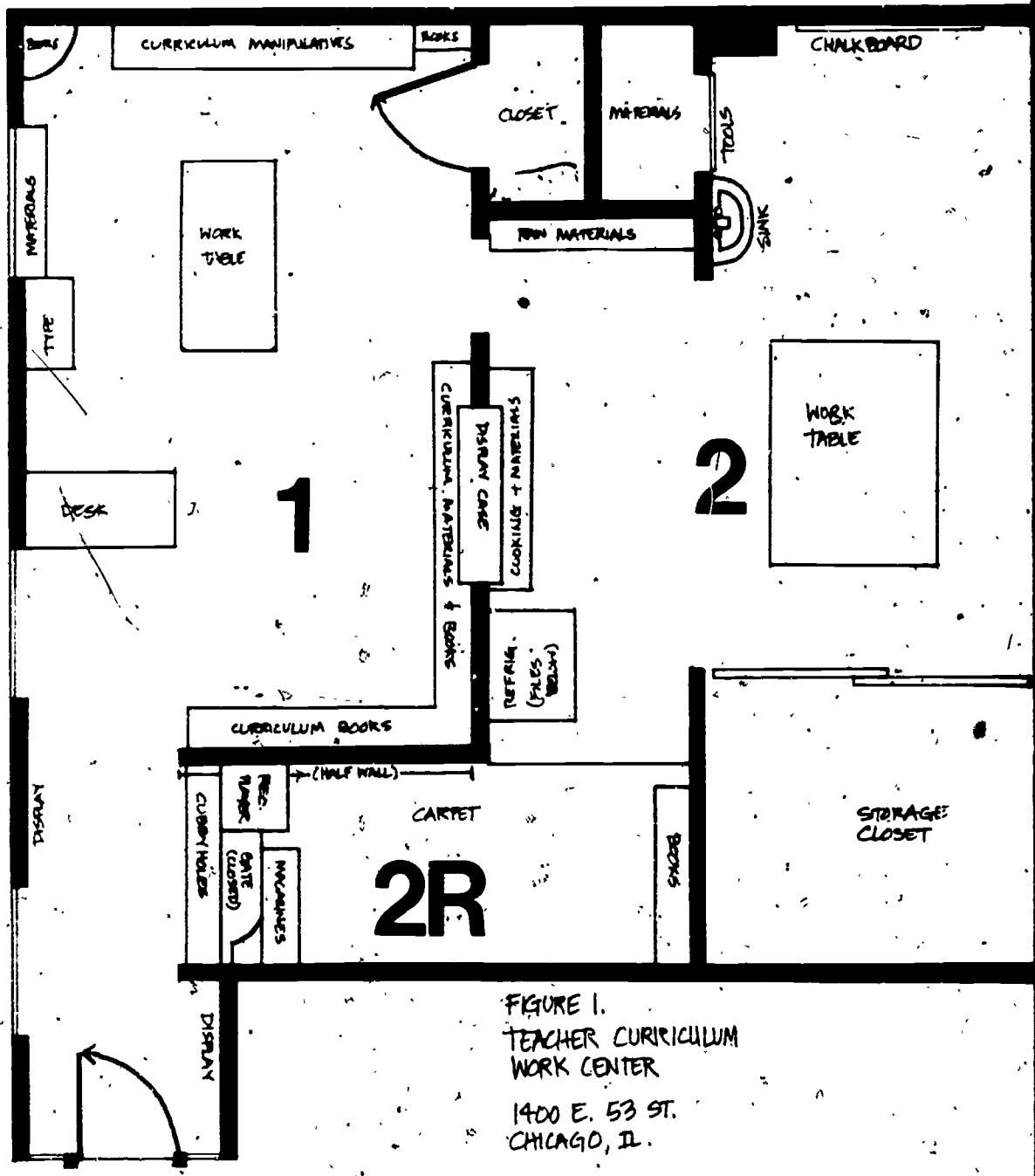


FIGURE 1.
TEACHER CURRICULUM
WORK CENTER

1400 E. 53 ST.
CHICAGO, IL.

SCALE 1:32 ←N→

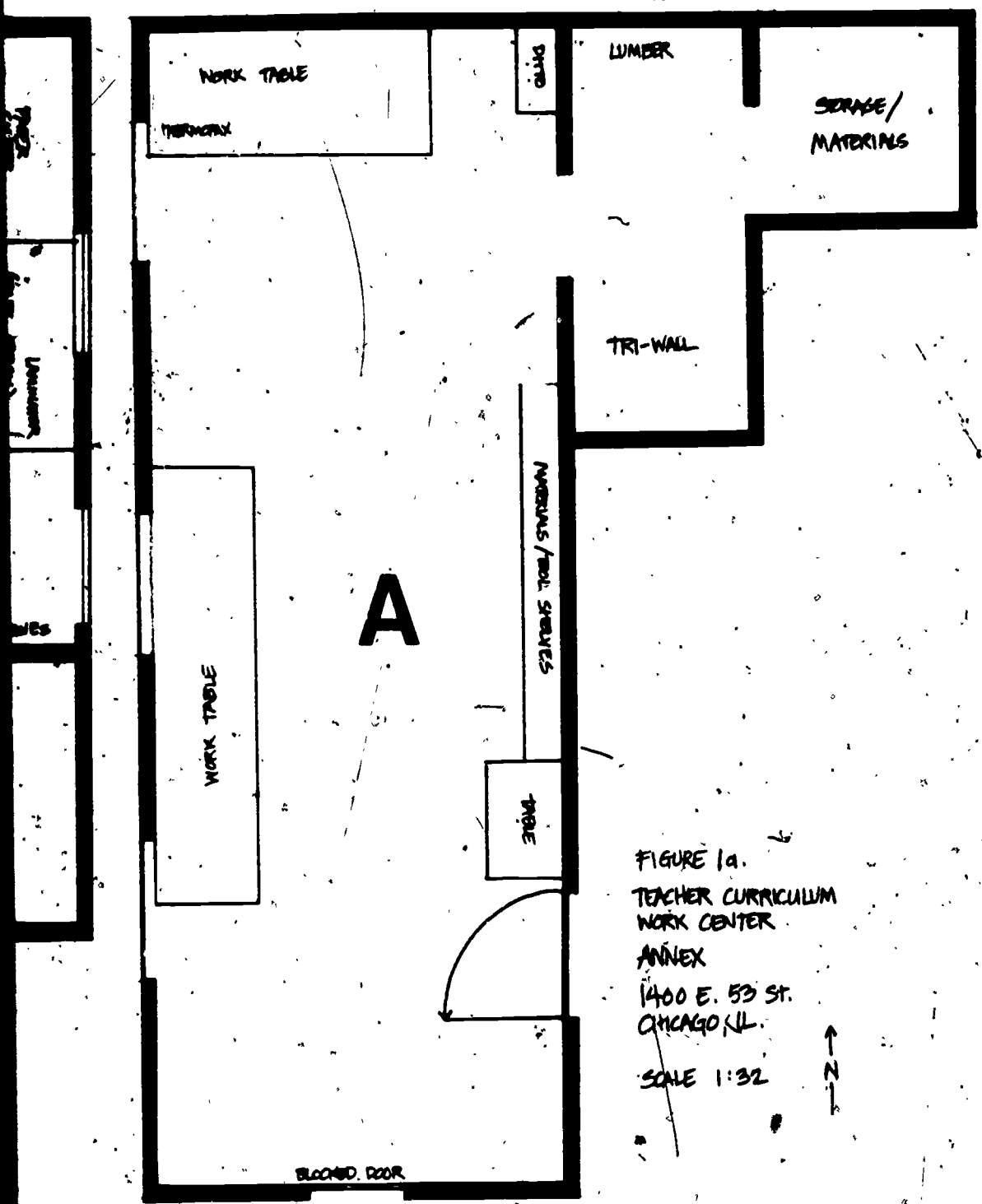


FIGURE 1a.

TEACHER CURRICULUM
WORK CENTER
ANNEX
1400 E. 53 St.
CHICAGO, IL.

SCALE 1:32

N

Table 1: Teachers' First Contact with the Center

Year Months	1971 Oct.-Dec.	1972 Jan.-Dec.	1973 Jan.-Dec.	1974 Jan.-Feb.
N	3	23	32	23
%	3.5	27	35.6	27

Most of the teachers learned about the Center by word of mouth--from friends (22 percent), fellow teachers (16 percent), and staff (21 percent). Some responded to announcements in the media (15 percent). The personal testimony of someone who knows what the Center offers is probably the most reliable advertisement. It further illustrates how much of the Center's style relies on face-to-face contact.

The Center was particularly interested in classifying teachers by type of school, since much of the staff's prior experience and some of their current work takes place in alternative and private schools. We found 52 percent of the teachers come from public schools; 41.1 percent from private and alternative schools, and 8.2 percent from day care centers, a diversity which is valued. To support this diversity activities are designed to increase awareness of the common problems faced by all teachers.

The Center advocates an approach to teaching and learning that differs radically from the practices in most public schools. In light of this, the fact that so many public school teachers use the Center suggests its potential for supporting teacher-initiated changes within the system.

Moreover, the Center attracts teachers at every stage of professional development, from neophyte to veteran. We expected to find a larger proportion of beginning teachers, but in fact teachers in their first three years of experience constituted only 25 percent of the sample. The largest group of teachers had four to six years of experience and almost a quarter of the sample had been teaching for 10 or more years. Table 2 shows the distribution of teachers by years of experience:

Table 2: Distribution of Teachers by Years of Teaching

Years	1-3	4-6	7-9	10+
N	22	26	17	20
%	25	30	20	23

We used three years as the basic unit of experience because it generally takes about three years for a begin-

ning teacher to work through the problems of 'survival' and find her own teaching style.

Table 2a shows the age distribution of teachers in our sample. The youngest teacher was 21 and the oldest, 64. The largest group was evenly divided between 20-24 and 25-30 years of age.

Table 2a; Distribution of Teachers by Age

Age	20-30	30-40	40-50	50-60
N	76	21	13	4
%	62	17	10	3

These statistics seem quite important from the viewpoint of inservice teacher education. Many believe that teacher education should be a career-long process with a gradual transition between preservice and inservice training, and continuing opportunities for teachers to strengthen existing skills and develop new ones. Typically, however, beginning teachers have to manage on their own without support from the university that trained them or the school system that hired them. Nor has inservice training been particularly responsive to the problems of practicing teachers as they cope with daily institutional demands and changing educational needs.

The Center seems to be performing a function that neither the universities nor the schools here have performed. It has also connected with a group of older, more experienced public school teachers who could be powerful agents of change.

5

Organizational Structure

One typology of teaching centers identifies seven organizational patterns: independent, almost independent, professional organization center, single unit, free partnership, free consortium, legislative/political consortium (Yarger, 1974). The Teacher Curriculum Work Center exemplifies the independent type:

> This type of center is characterized by the absence of any formal affiliation with an established institution. Without the red tape of bureaucracy, program directors and implementers experience a tremendous amount of freedom and flexibility. They also, however, experience the lack of financial security that bureaucracy often provides. Teachers become involved with this type of center on a purely voluntary basis; thus the center tends to have a high teacher credibility. Independent teaching centers typically deal with individual teacher needs rather than complex institutional concerns.

The same typology specifies four functional types: 1) facilitating; 2) advocacy; 3) responsive; 4) functionally unique. The first "serves a heuristic, 'colleagueal', almost social-education function..." The second type of teaching center is characterized by a particular philosophical or programmatic commitment..."such as open education." The third assesses individual and/or institutional needs and develops programs in accordance with mutually derived objectives. The fourth serves "limited unique functions," i.e. materials development. The Teacher Curriculum Work Center exhibits some characteristics of all four types, as the following exerpts from the 1972-73 proposal reflect:

> At the simplest level, the Center is a comfortable, relaxing place for teachers to come after school to do their regular work and planning. It is also a place where teachers can bring their teaching problems and find sympathetic listeners and concrete suggestions...
>
> ...the five of us who staff the Center are committed to 'open education'. We are vitally interested in seeing the expansion of viable choices for children and teachers within any classroom...
>
> ...We are also committed to the use of concrete

manipulative materials within the classroom and we encourage teachers to make their own teaching materials.

...The Center is an open classroom for adults. It is an informal, supportive learning environment in which teachers make choices, pursue interests, explore new ideas, techniques and materials according to their individual styles, priorities and needs.

Perhaps the best statements about how the Center functions come from the users themselves. In the spring of its first year, the Center sent a questionnaire to teachers in order to get some feedback on its work. The following testimony illustrates how two public school teachers and one parent perceive the functions of the Center and how the Center, in turn, serves their needs:

I can't say enough good things about the Center... It makes me feel that I'm not the only one struggling along to do the best possible for the children. It always boosts my morale to go to the Center or attend a workshop. The people there are always going out of their way to help or answer questions...Also they make us feel like we are so welcome; it's been a pleasure to go.

Teacher, public school

The Teacher Center has been for me what 'methods' courses in Teacher Education never were - with concepts of child development and educational psychology thrown in. The fact that so many of us are anxious to spend our time, without benefit of credits for work done, shows how valuable we feel the Center's program has been. The materials suggested for use in various disciplines have been relevant, interesting, practical, inexpensive to make, and best of all - all necessary equipment to make them is available...The staff has given of itself completely. Their dedication and willingness to help has been an inspiration to me. They have been the rock of strength and comfort to many who know that the direction toward open classrooms and the realization of kid's potential through their needs and interests are the direction in which education must go, but who struggle alone in a hostile world of educators, fellow teachers and testing equipment. The Center itself is a warm, comfortable place where each one of us enjoys talking with others. It is really an open classroom for teachers.

Teacher, public school

The Center is...like a workshop with really skilled craftsmen in residence who help you to learn. I like to go there if I'm just browsing for ideas -

no one rushes me - it's comfortable. If I want to make something, things are organized so that materials are easy to find. The staff is always willing to guide when necessary. The Center is a place of wonder.

Parent, public school

We did not conduct a systematic analysis of the organizational structure. Still, some description of the structural properties of this organization with its attendent roles and functions is critical to an understanding of how the Center operated at this point in time. What follows is a beginning description based on interviews with staff, attendance at staff meetings, and our own impressions.

The Center is a nonprofit organization. It has a board of directors with four officers and one member-at-large. At the time of the study, the Center had 151 members. According to its by-laws, the board of directors must meet at least once a year following a membership meeting. The first annual membership meeting was held in May 1974, and was billed primarily as a party.

(Actually, there is little distinction between paying members and other users, since the Center is open to all free-of-charge. A $10 membership fee is recommended, but no one has been barred from membership for financial reasons. Members receive a newsletter,* a membership card, and an invitation to the annual meeting. Anyone can receive the newsletter on a regular basis for $1 or pick up single copies at the Center.)

The board of directors, who are the founders of the Center, also serve as the nuclear staff. To describe the organizational structure, therefore, is to describe the *modus vivendi* which developed among the paid and voluntary staff and was operating during the period under study.

The Center opened with one full-time paid staff member (Joan) designated as director and four volunteers (Sandy, Carol, Hannah, and Barry). By the fall of the second year, the Center had three full-time paid staff members (Joan, Barry, and Sandy), designated as co-directors. Since then, two additional staff members have been hired part-time to help with administrative and clerical work and to serve as in-house consultants to teachers one afternoon a week. Both have contributed materials to the Center's homemade collection. This gives the Center seven staff members - three full-time paid, two part-time paid, and two volunteers.

Weekly staff meetings provide a forum for planning and policy-making. The meetings that we observed were usually attended by the three co-directors and the two volunteers, and open to all. An agenda was developed by one of the co-directors, but additional items were added by anyone present. Sample agenda items included 1) approving the workshop schedule for a three-month period; 2) editing a proposal; 3) brainstorming about the summer; 4) deciding on the purchase of a thermofax machine; 5) initiating a new Wednesday class.

*An example of the newsletter from the period of study is included in the Appendices.

Internal decisions about daily tasks seem to have been made informally by the three co-directors, but no decisions of major consequence were reached without the consensus of the entire staff. When no immediate decision was required, the group tended to talk through an issue and then return to it closer to the time when action needed to be taken. Typically one of the volunteers played the role of 'task master' by returning the discussion to the immediate problem at hand. No official minutes were kept, but major decisions were reported in the newsletter, and notes, usually in the form of reminders, were kept in a notebook.

Most of the educational and administrative work was the mutual responsibility of all paid staff, not the exclusive responsibility of any one individual. A chart on the wall listed work tasks: bookkeeping, ordering supplies, mail, newsletter, library notices, report writing, proposals, duplication, filing, workshop schedules, housekeeping. Over time, expectations about who should do what have been sufficiently formalized so that certain tasks automatically go to certain individuals. Joan generally handles the books; Sandy takes care of reports and proposal writing; Barry coordinates Teacher Corps activities.

Similarly, individuals assume leadership in educational areas according to their talents and interests. For example, Barry's strength is math; Joan likes to brainstorm interdisciplinary units and advise on classroom organization; Hannah gives workshops in language arts, while Carol leads art-related activities. All staff members create materials for the Center's collection. The staff prefers to collaborate on workshops in order to learn from each other. Sometimes they initiate a workshop on an entirely unfamiliar topic in order to expand their collective repertoire.

The three co-directors are generally capable of crossing disciplines to work in areas outside their expertise. They prefer to work as generalists not specialists, which is characteristic of most of the primary and elementary school teachers whom they serve.

6

Program Highlights

The programs and activities of the Center can be classified by type and location. The main 'in-house' activities consist of 1) daily consultation during open hours; 2) a special, non-credit class; 3) Saturday workshops. The main outreach activities include 1) individual inservice workshops in public and alternative schools; 2) series of inservice workshops at the district level; 3) supervision of Teacher Corps interns.

Rather than describe all these activities, this study will highlight one major activity in the Center and one multi-faceted effort outside the Center. A list of topics for Saturday workshops at the Center and inservice workshops in the schools can be found in Appendix D.

Open Hours: Patterns of Usage

The Center is open every day after school, one evening a week, and all day Saturday. This is the time when the Center functions most like an open classroom for adults. Visitors come voluntarily, select their own activities, and work at their own pace. Staff serve as guides and resource people. The main 'instruction' consists of unprogrammed encounters between staff and teachers, teachers and teachers, teachers and materials. This informal method of teaching is a subtle blending of self-motivated learning on the part of teachers, setting of expectations by staff through 'style' and environment, and peer and staff reinforcement. We were especially interested in studying the Center under these conditions.

Since the Center regularly asks visitors to sign a daily log, the researchers and staff decided to elaborate on this procedure in order to find out why people came and what they did. A notice posted by the reception desk informed visitors that a study of the Center was in progress and requested that they use the special sign in/out forms so that tabulations of center usage could be kept. Staff members shared the responsibility for monitoring this procedure; they even retained a modified version of it after the study was completed.

The usual operating procedures of the Center--open access and freedom from 'timekeeping'--dictated against a more rigorous screening of the population of visitors. In order to keep our research as unobtrusive as possible, we tried not to interfere with normal Center life beyond what was absolutely necessary. The norm of signing in and out

was maintained throughout. A few visitors did not sign in, but those who did constitute a sample of the people who visited the Center during the period of observation. We are relying here on self-reported reasons for attendance. On-site observations of teachers' talk and behavior described in the following section complement the sign-in data.

*See Appendix I. for copy.

Basically the sign-in form* asked people, as they entered the Center, to state their reason(s) for coming, and upon leaving, to indicate whether they accomplished what they came to do and whether they did anything else of interest. If they answered 'yes' to the second question, they were asked to tell what they did and how they got interested.

The open-ended nature of the sign-in form resulted in a variety of reasons being given. These reasons were tentatively grouped into 15 categories, indicated in Table 3. For the sake of more simplified description and analysis, they were further consolidated into the six categories indicated in the left margin of Table 3:

Table 3: Stated Reasons for Visiting the Center

		Frequency	% of Total
Making Materials	Construct Instructional Aids	141	31.4
Use of Special Equipment	Laminate (use of machine)	62	13.8
	Reproduce materials	22	4.9
	Use primary typewriter	2	.4
	Construct furniture	14	3.1
Getting Ideas	Use Center resources for Developing Units & Projects	41	9.1
	Daily lesson preparation and planning	13	2.9
	Discuss Ideas with Others	7	1.6
	Consult Center personnel	11	2.4
Browsing	Look over Facilities and Materials	67	14.9
Showing Center	Show Center to others	6	1.3
Meet others	Meet others	7	1.6
Check out Books-	Check out books	7	1.6
	Return books	10	2.2
Purchase Materials	Purchase materials	39	8.7

Table 4: Frequency of Individual Visits

No. of Visits	No. of Visitors	% of Total Visitors
1	150	65.23
2	35	15.21
3	14	6.10
4	9	3.91
5	6	2.61
6	2	.86
7	5	2.17
8	1	.43
9	1	.43
11	3	1.50
13	3	1.30
18	1	.43
Total:	230	

Table 6: Stated Reasons Across Days of Week
(Percentages in parentheses refer to stated reasons for specific day)

	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.	Sun.
Making Materials	11 (21.6)	18 (23.4)	21 (33.9)	16 (29.6)	19 (31.7)	53 (39.0)	3 (42.9)
Using Special Equipment	15 (29.4)	22 (28.6)	14 (22.6)	14 (25.9)	17 (28.3)	17 (12.5)	1 (14.3)
Getting Ideas	11 (21.6)	17 (22.1)	12 (19.4)	5 (9.3)	7 (11.7)	19 (14.0)	1 (14.3)
Browsing	5 (9.8)	5 (6.5)	10 (16.1)	13 (24.1)	8 (13.3)	24 (17.6)	1 (14.3)
Sewing Center	0	4 (5.2)	-	1 (1.9)	-	7 (5.1)	1 (14.3)
Look for books/ Purchase Materials	9 (17.6)	11 (14.3)	5 (8.1)	5 (9.3)	9 (15.0)	16 (11.8)	-

Two hundred and thirty people made 449 visits to the Center between January 10 and February 28: 150 (65 percent) came only once, while 31 (13.5 percent) made four or more visits. Data on repeat visits (Table 4) suggests that the Center serves a drop-in clientele, as well as a corps of regular users. These figures do not include people who came to attend Wednesday classes, Saturday workshops, and other special programs. Since only 23 teachers noted on the background forms that they first visited the Center during the period of observation, it is not likely that most of the people who came once were first-time visitors.

We assume that what happens at the Center largely results from the interaction between individual teachers' needs and interests and the available resources and opportunities offered by the environment. The distribution of stated reasons for coming to the Center suggests that it serves multiple functions and responds to a range of purposes (Table 3): "Making instructional materials" accounted for 31.4 percent of the stated reasons for coming; other main reasons were "browsing" (14.9 percent) and "laminating" (13.8 percent), an indication of the importance of special tools in the Center's workshop role.

When we examined the distribution of reasons for coming to the Center over days of the week (Table 5), "making instructional materials" was most frequently noted on all days but Monday and Tuesday, and it accounted for 38 percent of the Saturday visitors, when the Center is open long enough to permit extended projects. For weekdays, though, "making materials" was roughly balanced by "using special equipment" (reproducing materials, laminating, building furniture), "getting ideas" (consulting with staff and others) and, particularly on Wednesday through Saturday, "browsing." Visits to "check out or return books" or to "purchase materials" accounted for an equivalent percentage of the slips.

The Center is a place, then, where a range of activities takes place, not bound to particular days of the week. The accessibility of human and material resources makes the open pattern of usage possible. This differs from some 'teaching' centers that concentrate on specific, focused group activities with the explicit purpose of direct teaching. While the Center offers more structured workshops on Saturdays, it focuses its major energies on aiding teacher-initiated explorations and projects. In this way, the Center not only gives direct help to teachers, it models a process by which they in turn can work with their students.

In order to examine the extent to which the environment shaped and extended teachers' activities, we asked them what additional activities they engaged in after being in the Center. A substantial number of visitors were drawn into other activities beyond those they reportedly came for. With 428 of the 449 responding to the question, "Did you do anything else of interest?",

201 (47 percent) answered "yes" and 156 of them reported how they got involved. Some 38 percent found something else to work on by "browsing through the Center's resources;" 23.7 percent did so by "discussing ideas with others;" 14.7 percent were "guided by the Center's staff." Another 22.4 percent listed their own interests as the stimulation for additional activities. Curiously, only slightly more than 1 percent reported that they became interested in something else by watching others at work. (The Center is not a place for passive spectators.) These results suggest that people not only come to the Center with a purpose in mind; they also find new directions by being there.

The secondary activities reveal a different pattern from the original reasons for coming. Table 6 shows the relationship between reasons for coming and second activity engaged in. Although "using Center resources," "discussing ideas with others," and "consulting with staff," accounted for only 13.5 percent of the reasons for coming, together they constitute 36.2 percent of the second activities. Perhaps the fullest use of the Center's resources requires a familiarity which comes from active involvement.

Table 6: Relationship Between Second Act Engaged in and Original Reason for Coming

	Original Reason					
	Making Materials	*Using Special Equipment*	*Getting Ideas*	*Browsing*	*Showing Center*	*Check-out Books/Pur. Materials*
Making Materials	16 (30.2)	9 (25.0)	6 (24.0)	9 (23.1)	1 (14.3)	4 (16.0)
Using Special Equipment	-	4 (11.1)	2 (8.0)	-	-	-
Getting Ideas	23 (43.4)	12 (33.3)	7 (28.0)	15 (38.5)	1 (14.3)	9 (36.0)
Browsing	11 (20.8)	6 (16.7)	5 (20.0)	8 (20.5)	4 (57.1)	7 (28.0)
Showing Center	1 (1.9)	4 (11.1)	3 (12.0)	5 (12.8)	-	4 (16.0)
Check out Books/Pur. Materials	2 (3.8)	1 (2.8)	2 (8.0)	2 (5.1)	1 (14.3)	1 (4.0)

Table 7 gives an indication of how the Center is used by visitors as they have more experience with the Center's resources and make repeat visits. There is a clear trend towards increased making of materials and use of special equipment as teachers return to the Center. This trend supports the stated objective of the Center: to increase the self-sufficiency of users. In contrast, first-time visitors show the most 'browsing' behavior, with the general inspection of facilities and materials decreasing sharply as the number of visits increases.

The Center seems to be a place which enables people to pursue their goals without interference and to experience some sense of accomplishment. This productive orientation gains further support from data on how much time people spend in the Center. Excluding Saturdays and Mondays, the average length of visit was 2 1/2 hours. The mean length of visit on Mondays was 92 minutes, while Saturdays averaged 3 hours and 20 minutes. Although the Center is officially closed on Sunday, some teachers not only used the facilities but also signed in and out! The average length of visit on Sunday was just under three hours.

The data on how much time is spent in the Center strikes us as a very important statistic. Few professionals would voluntarily give up their Saturdays or their after-work hours to pursue work-related activities for neither credit nor pay. Obviously something important and

Table 7: Stated Reasons for Repeat Visits to the Center (Percentages Refer to Columns)

	Number of Visits		
	1	*2-3*	*4 or more*
Making Materials	36 (24%)	21 (30.4%)	84 (36.5%)
Using Special Equipment	21 (14%)	15 (21.7%)	64 (27.8%)
Getting Ideas	24 (16%)	8 (11.6%)	40 (17.4%)
Browsing	46 (30.7%)	12 (17.4%)	9 (3.9%)
Showing Center/ Meeting Others	9 (6.0%)	-	4 (1.7%)
Check out Books/ Purchase Materials	14 (9.3%)	13 (18.8%)	29 (12.6)

useful is happening at the Center to merit this kind of commitment. It also suggests that teachers are motivated to enhance their professional competence when they have access to support and resources which they value. A norm of productivity seems to prevail in the Center. People come to work and they accomplish a great deal. In addition, time spent at the Center has spin-offs outside the Center: reading, experimenting in the classroom, collaborating with other teachers. The Center emerges as a highly stimulating and attractive vehicle for professional growth and development.

Teacher Training: Teacher Corps Program

In August 1973, the Center contracted indirectly with the University of Illinois to coordinate and supervise teams of interns in the Teacher Corps Bilingual-Bicultural Program at the Chicago campus.

As is the case with all the outreach programs, this opportunity developed from personal contacts. In 1972, Barry Hammond met the director of the Bilingual Program in a course which both were taking at the University of Chicago. Barry had given a demonstration in the use of manipulatives for teaching mathematics which resulted in an invitation to teach the math methods course in the Bilingual Program on a trial basis. His approach, which involved active participation, use of manipulatives, and the design and construction of materials that students could use in their classrooms, generated interest in concrete and informal teaching methods.

When the program came under the auspices of Teacher Corps the following year, students requested that Barry be retained to teach the math class. He used the Teacher Center as a resource and soon the interns began to use the Center on their own. When the position of Program Development Specialist became vacant, students urged Barry, as representative of the Center, to apply for the job. The University could not contract with the Center, a nonprofit organization, so the formal contractual arrangement was made between Barry and the University, with the Center included as a consulting resource. In reality, however, Barry, Sandy and Joan jointly assumed the Program Development Specialist role.

The decision to accept this contract, which terminated in May 1974, was partly based on financial considerations. It was not only a source of additional income, but a way for the Center to diversify its funding base, a prerequisite for nonprofit status. In addition, the staff saw their involvement as a means of gaining legitimate access to several public elementary schools. Because the schools were located in a Mexican-American community, the work would not only broaden the staff's experience, but also encourage a more heterogeneous clientele for the Center.

Involvement of the Center staff as a group began with program planning for the 1973-74 school year. As Program Development Specialists, the staff worked with seven team

leaders who were responsible for supervising 40 interns in their practice teaching. This required regular meetings with the teams and classroom observation of the interns, a commitment of approximately two days a week for each staff member.

A growing, informal relationship developed between the faculty of the two schools and the Center staff. Joan and Sandy took Spanish lessons with some of the teachers. Teachers other than those involved in the program consulted with the Center staff. A records day was used to produce tri-wall furniture and team leaders, interns, and cooperating teachers have taken substitute days to work at the Center. The Center staff briefly ran a modified open corridor program at Jungman School twice a week as a demonstration for Program interns and regular faculty, and as an opportunity to work directly with children.

Although the Center staff is no longer involved in this program, interns continue to use the Center.

7

Teacher Behavior in Center

In order to get a better picture of what teachers actually do in the Center, we decided to conduct systematic observations during open hours. An observation schedule was developed after spending considerable time in the Center compiling narrative records and analyzing them for frequent types of physical and verbal behavior. The final form, an on-the-spot category system, contains seven categories of physical behavior and eight categories of talk. The categories were defined as follows:

Physical Behaviors

1. Note-taking. Writing down ideas, sketching materials, listing references--usually as a counterpart to browsing or listening.

2. Browsing. General exploration of center resources; i.e. scanning shelves, taking materials and/or objects off shelf for superficial examination, flipping through books, activity cards.

3. Manipulating. Playing with a game, following the directions on activity cards, working with manipulative or set of materials as intended.

4. Construction 1. Replicating or copying materials in the Center; i.e. attribute game, geoboard, balance table. Making something which exists in the Center.

5. Construction 2. Creating or originating a new set of materials using the general supplies, raw materials and/or special equipment. This includes a completely new game as well as a modification of something on display. It allows for construction projects which require some input from the teacher.

6. Watching. Focused attention on someone else's activity.

7. Other. Transitional behavior; i.e. making coffee, hanging up coat, paying for materials, coming and going.

Each physical behavior was coded in terms of its social setting: "alone" (A) if the teacher worked by herself;

"parallel" (P) if the teacher worked with an awareness of others in his immediate vicinity but with no direct interaction; "cooperative" (C) if she directly collaborated with someone else.

Verbal Behavior

1. Social. Exchanging personal information, greetings, anecdotes, general chit-chat unrelated to school.

2. Technical. Statements and questions about how equipment works, how something is made, what materials to use, "how to" talk related to construction, tools, location of raw materials.

3. Center talk (administrative). Statements and questions about Center procedures, programs. Includes checking out books and paying for materials.

4. School talk--general. Non-instructional talk about school, relating anecdotes and experiences outside classroom, non-curricular in focus.

5. Classroom--specific. Anecdotes about classroom experiences, not necessarily related to materials. References to particular children, activities, problems.

6. Resources (Materials, Methods). Questions and statements about materials and/or methods for teaching something; specific references to materials, activities, classroom organization, scheduling, record keeping. Curricular in broad sense.

7. Conceptual. Statements about concepts 'built into' materials, generalizing from teacher's experience as learner to child's experience; talk about how to extend learnings from various materials, talk about values, rationale of open education. More theoretical.

8. Other.

In coding verbal behavior, the interacter was noted: "S" if the teacher talked with a staff member, "T" if he/she talked with another teacher.

After some experimentation with time-sampling techniques, we decided to survey the Center every ten minutes, observing each individual present for approximately one minute. Even at crowded times the Center could be surveyed without missing too much between observations of the same individual.

Data were gathered by three observers after a one-hour interrater field reliability check. The results of that check were as follows:

	1&2	1&3	2&3
Phy. Act.	85.4	88.8	86
Soc. group	84.6	93.8	92.3
Verb. act.	100	96	96.4
Interactor	100	95	06.1

Only one observer covered the Center at a time. Because of the limited size of the rooms, it was possible to view most activity in the Center from the small reading area, which was rarely occupied. The study design called for two visits to the Center during each time period when the Center had open hours (M-F 3 to 5, T 7 to 9, Sat. 10 to 5). At the beginning of each sweep, the time was noted as well as the physical location of each teacher. Brief explanatory notes, usually about the kinds of materials under construction, were also kept.

DATA BASE

A total of 167 sweeps or 27.8 hours of observation were coded. Twenty-six percent of these observations consisted of a combination of talking and working, while 37 percent were coded as verbal interaction and 6.2 percent as physical activity. Thus 678 observations yielded 987 instances of observed behavior. The data were provided by 192 individual teachers with the number of teachers per sweep ranging from one on fourteen occasions to fourteen once on Saturday. While some teachers appear more than once in the observational records, no attempt was made to control for this since the purpose of the study was to observe general, not individual, patterns of behavior.

The average number of teachers per sweep was 4.08 across a six-day week, or 3.01 excluding the data for Saturday, clearly the busiest day. Although Saturday workshops are not held in the Center proper, observations were discontinued for approximately half an hour each Saturday to minimize recording the entry behavior of workshop attendees. Table 8 gives a complete breakdown of observations for each day of the week, including the average number of teachers per week.

RESULTS

Basically we were interested in teachers' on-going behavior, what they did and talked about at the Center. General patterns of physical activity, verbal activity, and combinations of the two are reported below.

PHYSICAL ACTIVITIES

Table 9 summarizes the relative frequency with which the different categories of physical activities were observed.

Table 8: Observed Frequencies of Teachers in the Center across Days of the Week

Day	# Teachers (observations)	# Sweeps	Avg. # Teachers/ Sweep
Monday	34	14	2.43
Tuesday	40	13	3.07
Tuesday eve.	53	23	2.30
Wednesday	88	26	3.48
Thursday	31	8	3.87
Friday	71	21	3.38
Saturday	361	61	5.91
	678	166	

Table 9: Observed Frequences of Physical Activities in the Center

Physical Activity	# observed	% of total	%A	%P	%C
Notetaking	20	3.2	70	30	-
Browsing	129	20.8	64.3	15.5	20.2
Manipulating	40	6.4	30	12.5	57.5
Construction 1	204	32.9	61.3	25.9	12.8
Construction 2	154	24.8	50	39.6	10.4
Watching	19	3.1	-	-	-
Other	55	8.8	-	-	-

Figures for %A, %P, %C refer to breakdowns within the activity categories for Alone, Parallel, Cooperative.

Making materials was clearly the dominant activity, constituting 57.7 percent of all the physical behaviors. We were interested in how much construction involved replicating materials on display (Construction 1) and how much consisted of creating 'new' materials, using the general resources of the Center (Construction 2).

Constructing activities were fairly evenly divided between duplication (32.9 percent) of the total activity, and creation (24.8 percent). Obviously the degree of creativity involved in the second kind of construction varied greatly. Rarely did a teacher come to the Center with a completely original idea. One teacher brought a small plastic box with drawers and proceeded to label each drawer according to different parts of speech and to fill the drawer with sample words. The object of this game, which is now on display, is to compose sentences by choosing words from the various drawers. In most cases, teachers prepared a ditto for their class, laminated pictures that they brought to the Center, developed a version of a game already there. What distinguished the former kind of 'construction' was the requirement of some kind of teacher input beyond simply duplicating what was on display. Interestingly enough, more duplication took place on Saturday than during the week. Seventy-four percent of all constructing activity on Saturday was coded as Construction 1 in contrast to 33 percent during the week. Teachers tended to use Saturday to reproduce a quantity of materials or to replicate a more elaborate piece of equipment displayed at the Center; i.e. a tri-wall bookcase. Weekdays were often used to prepare materials for immediate classroom use. For example, teachers would mount a set of pictures or type samples of student writing for a homemade book. These kinds of activities were coded as Construction 2.

Browsing through the Center's resources was the second most frequently observed behavior (20.8 percent). Although sequential data were not collected, the observers noted that browsing often preceded making materials. The more passive categories of "watching" and "note-taking" represent only 6.7 percent of all physical activities, while the more active categories (constructing, browsing, manipulating) comprise 84.9 percent.

About half (56.9 percent) of all physical activities were coded alone, a quarter (26.5 percent) coded parallel and the rest (16.6 percent) cooperative. Individual-oriented activities predominated. While much of the construction (approximately 55 percent) was carried out alone, manipulating materials proved to be a cooperative activity involving discussion 93 percent of the time.

VERBAL INTERACTIONS

Table 10 summarizes the relative frequencies for the various categories of verbal behavior, along with staff-teacher and teacher-teacher breakdowns within each

category.

Most of the talk in the Center that occurred without an accompanying physical activity was technical or administrative: 33.7 percent about materials and equipment, and 15 percent about Center programs and policies. Since teachers seem to spend most of their time at the Center making materials, the dominance of technical talk is not surprising. It is likely that much of the administrative talk occurred with newcomers who would understandably require some orientation to the Center. Socializing and conceptualizing were equally infrequent (11.4 percent). We were less surprised about the infrequency of conceptual talk than about the small amount of observed socializing. While the general informality of the place and friendliness of the staff create a relaxed, semi-social feeling, a norm of productivity seems to operate. Only a small percentage of the observed interactions involved references to curricular materials and methods (9.8 percent). There was also very little discussion of particular classroom problems and experiences (8 percent).

Table 10: Observed Frequencies of Verbal Interaction in the Center

Verbal Interaction	*#observed*	*% of total*	*%S*	*%T*
Social	43	11.4	46.5	53.5
Technical	127	33.7	66.9	33.1
Center	58	15.4	81	19.
School General	38	10.0	26.3	73.7
Classroom Experience	30	8.0	46.7	53.3
Curricular Resources	37	9.8	64.9	35.1
Theoretical	43	11.4	67.4	32.6
Other	1	.3	-	-

Figures for %S and %T refer to breakdown within the verbal interaction categories for staff interaction vs. teacher interaction.

Another interesting aspect of the data on verbal behavior unaccompanied by some physical activity relates to the question of who talks to whom about what. Technical and theoretical talk were the two smallest categories of talk between teachers, except for Center talk, which under-

standably occurred with a staff member. Teachers tended to socialize and share school experiences with each other. The high incidence of technical and conceptual talk with staff suggests that staff are viewed as the main source of both practical and theoretical knowledge. The preponderance of 'how-to' talk implies that the staff take the role of technical advisers or facilitators.

The overall impression from the data on verbal interaction is that talk at the Center reinforces the dominant activity.

COMBINATION OF PHYSICAL AND VERBAL BEHAVIOR

The data on the combination of physical and verbal activity provide some additional insights about the culture of the Center and the occasions for articulated learning, which the various activities potentially present. We can ask the question in two ways: when teachers are making materials at the Center and talking, what are they talking about? Or, when teachers are socializing at the Center while engaged in some other activity, what else are they doing? The difference between these two vantage points is illustrated by the following: While only 16 percent of the observed duplication of materials was accompanied by socializing, 43 percent of the socializing that occurred while teachers were working took place during this activity.

Table 11 summarizes the kinds of talk that accompanied the various physical activities. Browsing seemed to occasion talk about Center procedures (29 percent) and resources (22 percent). As such, it serves as an introductory activity, helping teachers become acquainted with the material and programmatic possibilities at the Center. It also stimulated some technical talk (21 percent), usually questions about how some material or manipulative that the teacher noticed while exploring the environment could be made. This supports our observation that browsing frequently led to some kind of construction activity.

Playing with the manipulatives on display stimulated a fairly high percentage of technical talk (54 percent), thus drawing teachers into materials-making. It was also accompanied by the most conceptualizing (16 percent). In other words, playing an attributes game, working with the balance beam, experimenting with the objects in a science box did stimulate some talk about the learning process, the place of particular materials in a curricular sequence, the relationship between the materials and child development. While manipulating seems to hold the potential for encouraging teachers to make a variety of conceptual connections, the tendency to articulate these connections was not very prevalent.

Construction was accompanied by more talking, in general, than any other physical activity. It is not surprising that most of this talk was technical, slightly more while duplicating (55 percent) than creating (45 percent).

there was only a moderate amount of socializing while teachers constructed materials, although this category represents the second most frequent kind of talk that accompanied construction.

Kind of Talk Accompanying Kind of Physical Activity (Percentages refer to Columns)

	Note.	Socio.	Manip.	Con. 1	Con. 2	Watch
	-	3 4%	4 10%	12 16%	8 11%	1 11%
	1 25%	16 21%	20 54%	40 55%	33 45%	2 22%
	1 25%	22 29%	2 5%	5 6%	4 5%	2 22%
	-	5 6%		7 9%	10 13%	
	-	5 6%	1 3%	2 2%	8 11%	2 22%
	2 50%	17 22%	3 8%	2 2%	5 6%	1 11%
	-	6 8%	6 16%	4 5%	4 5%	1 11%
	4	74	37	72	72	9

Table 12 shows the percentages of physical activities that accompanied the various categories of talk. While the strong relationship between technical talk and making materials still dominates, some interesting differences between the kinds of conversations that accompanied the two kinds of construction emerge from this data. Teachers tended to socialize more while replicating materials (13 percent) than they did while developing new materials (2) percent). In addition, the more original construction activities occasioned more statements about how these materials could be used in the classroom. Forty-four percent of the classroom-specific talk that accompanied some physical activity occurred while teachers were making their own materials in contrast to 11 percent that accompanied the duplication of something at the Center. When a teacher uses the Center's general resources to embody her own idea in a concrete form, she probably has in mind a particular purpose for the materials; i.e. to teach a con-

cept, to help an individual child. Duplicating materials already in existence may stimulate less thinking by the teacher about their use. We do not know what goes on in the teacher's head while reproducing something found on display. It may be, however, that providing a lot of homemade models not only gives teachers concrete suggestions but also inadvertently encourages stockpiling of materials.

DISCUSSION

While the data do not permit a direct assessment of the Center's effects, they do disclose the nature and quality of opportunity available and the ways teachers generally take advantage of those opportunities. Since each teacher selects her own activities at the Center, it is not possible to describe uniform treatment and outcomes. Indeed, such an expectation would contradict the basic *modus operandi* of the Center, which depends on individual choice and initiative and relies on a self-selected population.

Table 13: Kind of Physical Activity Accompanying Kinds of Talk (% refer to rows)

	Note.	*Brows.*	*Manip.*	*Con. 1*	*Con. 2*	*Watch*	*N*
Social	-	3 11%	4 14%	12 43%	8 29%	1 4%	28
Technical	1 1%	16 14%	20 18%	40 36%	33 29%	2 2%	112
Center	1 3%	22 61%	2 6%	5 14%	4 11%	2 6%	36
School	-	5 28%	-	7 32%	10 45%	-	22
Class		5 28%	1 5%	2 11%	8 44%	2 6%	18
Curricular	2 7%	17 57%	13 10%	2 7%	5 17%	1 .7%	30
Conceptual	-	6 27%	7 32%	4 18%	4 18%	1 5%	22

The Center seems to function most prominently as a curriculum workshop and resource, with a greater emphasis on the making of materials than their use. While materials

made at the Center imply new teaching practices, the Center does not focus directly on the teacher's interactive classroom behavior. It is likely that teachers carry from the Center into the classroom specific ideas about activities, methods, and materials. For us, a major question concerns the extent to which teachers not only add specific instructional methods and materials to their repertoire, but also gain the kind of broader understanding that results in new ways of teaching.

This will be the focus of subsequent research. Through teacher interviews and observations in the classroom, we intend to followup this study by investigating the effects of Center experiences on the understanding and classroom behavior of individual Center users.

8

Major Themes

We have examined the Teacher Curriculum Work Center from a variety of vantage points. In order to capture a sense of the whole, it is appropriate to reflect back on this study and identify some recurring themes.

Up until now, the Center has been largely an extension of the founders, who are currently responsible for its maintenance and growth. Small groups are often described in terms of their interpersonal, group, and work structure, each of which supports a different function. It is exciting when a group develops a way of life that can sustain its members as individuals, maintain group cohesion, and mobilize collective resources to get a job done. The group that founded the Center fits this description. From the start, there was a strong meshing of personal and professional goals. Their voluntary collaboration attests not only to strong interpersonal liking but also to the professional worth of their joint activities.

Voluntarism is a major theme in the Center's way of life. Both visits to the Center and formal membership are voluntary. The Center is accountable only to its clients and its work gains integrity because individuals choose to participate for their own benefit. The two part-time staff members initially volunteered their services and a photographer for the local newspaper has become a self-appointed scout for new additions to the library.

Both autonomy and community find expression at the Center. People come primarily as individuals with their own agendas. The diversity of resources enables the Center to meet a wide range of individual needs. The Center encourages and promotes self-directed learning--for adults as well as children. Essentially each teacher develops his/her own personal curriculum. Furthermore, the staff assumes that the individual teacher is the most important agent of educational change.

This concern for individual autonomy is echoed in the Center's status as an independent organization. Initially, at least, the founders decided not to affiliate with a school, university, or any other parent institution, in order to 'do their own thing'. One of the major trade-offs is the necessity to continually seek outside funding. The Center has sacrificed some degree of permanency and financial security in order not to risk con-

trol by an outside institution. While the staff is distrustful of institutional affiliations that would dictate modifications in their operation, they recognize the problems of insuring their independent survival.

Closely associated with this focus on individuals and independence is a respect for diversity. Teachers from very different school settings all come to the Center. Individuals are valued as resources. Just as the Center capitalizes on the particular talents of its staff, so it encourages individual teachers to share their interests and skills through workshops.

The Center seems to be a place where people experience a congruence of individual needs and group goals. The collective lifestyle is unified by a commitment to sharing and a sense of common purpose. The staff makes no pretensions to special expertise and visitors are treated as colleagues. This summer, for example, the Center offered to send teachers to special workshops and institutes in exchange for their conducting a workshop in the fall to share what they had learned.

The Center provides a supportive community for teachers attempting innovations in curriculum and classroom organization. Names are quickly learned and the informality and intimacy of the setting help people feel at home. While new ideas and their associated risks are encouraged, people seem to feel equally comfortable replicating what they find in the Center, as well as creating new materials. The sharing of ideas, feelings, and classroom experiences lend support for experimentation. There is an implicit assumption that teachers, no matter what kind of school they teach in, face common problems.

The sharing also creates a feeling of responsibility for the Center's well-being. People treat the environment with a respect that comes from a sense of joint ownership. Materials do not disappear and there are few problems with maintenance and clean-up.

From the start, making curricular materials was the central concern. Not only did the founders enjoy this activity, they were also increasing their own classroom resources. In essence, the Center was created to enable teachers to do what the original group found so satisfying.

The Center makes it easy for teachers to create games, manipulatives, activity cards, etc. by stocking both raw materials and tools, and homemade and commercial models. The homemade nature of the Center and the active example of the staff reflect an attitude of self-reliance and a delight in improvisation. Developing one's own ideas and giving them concrete embodiment is valued.

We do not fully understand the role of manipulating and constructing materials in the teacher's personal and professional development and the ways these experiences differ from and parallel the experiences of children. David Hawkins suggests that "messing about" produces "early and indispensible autonomy and diversity" (Rathbone, p. 66). Materials-focused activities (browsing,

manipulating, constructing) are the Center's greatest drawing cards and they seem to provide a starting point for teachers to move in various directions, depending on the frame of reference they bring. Potentially such activities serve as a vehicle for discussing questions central to the teachers' work: Where does a particular piece of equipment and its attendant concepts fit into a larger curricular context? How can a teacher introduce these materials to the children and extend the possible learnings? What modifications in classroom organization are required? Hawkins acknowledges the indispensible role of discussion for leading children to conscious, abstract throughts. In other words, "messing about" is necessary but not sufficient. It seems equally important that the 'concrete' activities at the Center be a part of a continuing dialogue.

The Center has developed as an incremental response to needs and opportunities. Neither large-scale projects nor long-range plans are consonant with the Center's style of operation. Similarly, the staff views open education as a gradual process of increasing learning options for children. While they support alternative schools, they also believe that changes can be effected gradually in public schools through the education and re-education of teachers. The Center will not hurry teachers along, but rather will support their self-paced development. It is to be hoped that the Center will move towards greater effectiveness and permanence in its own organic way.

Because the Center is a fluid and somewhat idiosyncratic organization, it is difficult to conceptualize a model from our descriptive findings. Furthermore, the Center seems to be entering a transitional period. Time will tell whether this independent organization will become sufficiently institutionalized to insure its survival despite changes in leadership. Future documentation of the Center's development could shed light on the natural history of teacher centers, in particular, and of alternative educational institutions; in general.

Appendices

Appendix A

BACKGROUND INFORMATION ON PEOPLE WHO COME TO CENTER

1. Name _____

2. Home Address _____

3. Date of Birth _____ 4. Sex ____M ____F

TEACHERS: PLEASE FILL IN 5-12 AND CONTINUE WITH 18-20

5. School _____

6. Number of years at this school _____

7. Current grade level _____

8. Total years of teaching experience (exclusing present year) _____

9. Type of certificate: Reg. _____ F.T.B. _____ Sub. _____
Not cert. _____ Other (what?) ___

10. Type of degree: B.A. _____ M.A. _____ Other _____

11. Additional professional training _____

_____

12. Other relevant training or experience _____

_____

OVER

STUDENT TEACHERS: PLEASE FILL IN 13-15 AND CONTINUE WITH 18-20

13. Type of Program _____

14. Institution _____

15. School where you are (were or will be) student teaching

_____

OTHERS (PARENTS, DAY CARE, VISITORS, ETC.): PLEASE FILL IN 16-20

16. Current position _____

17. Relevant training, experience, etc. _____

_____

FOR EVERYONE

18. When did you first start coming to the Center?

(approximate month and year) _____

19. How did you find out about the Center? _____

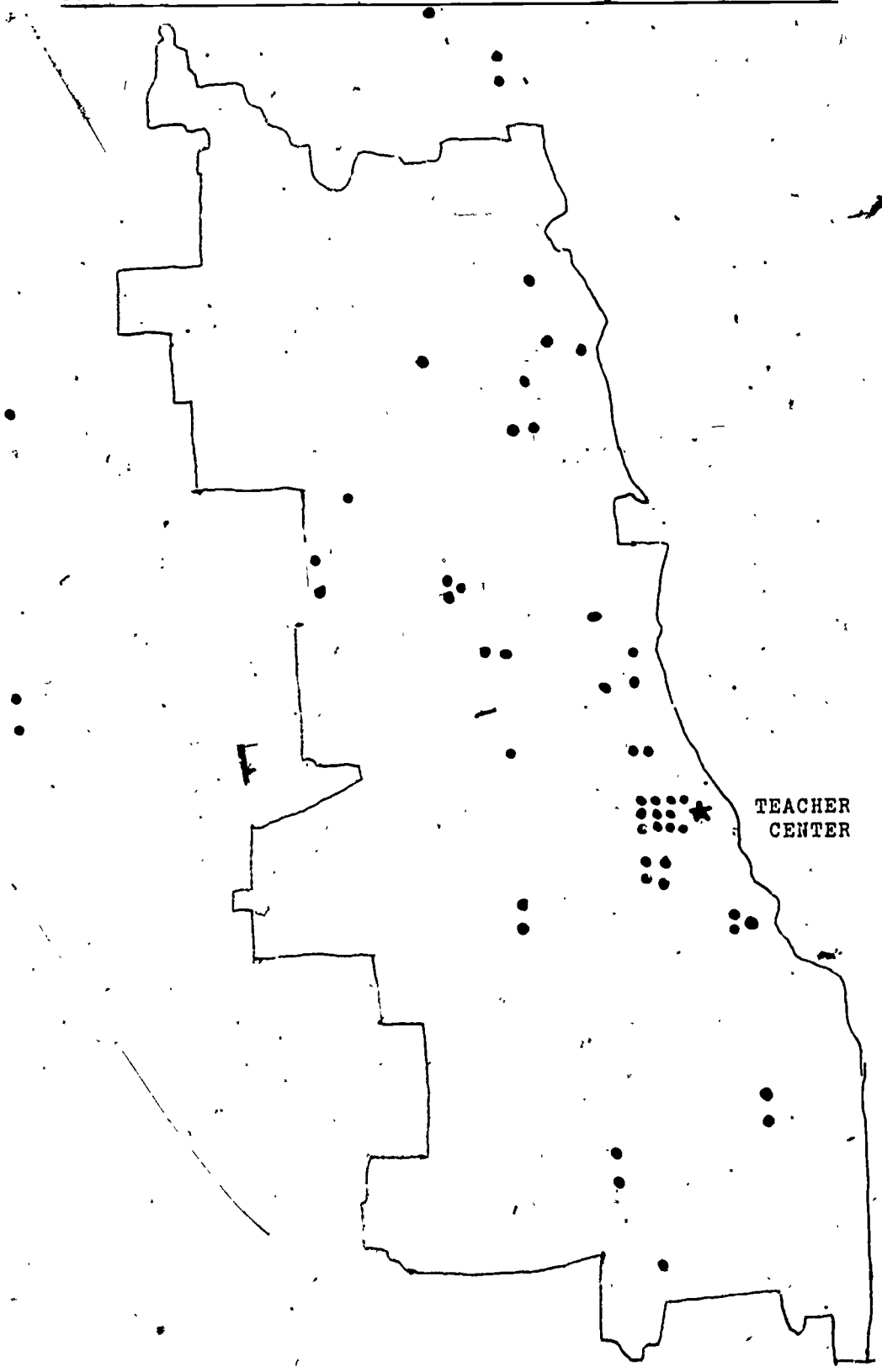
_____

20. What do you value most about the Center? _____

_____

Appendix B

Location of Schools Where Teachers Using the Center Work



Appendix C

NEWS FROM THE TEACHER CENTER
1400 E. 53rd Street
Chicago, Illinois
312 - 955 - 1329

HAPPY NEW YEAR TO ALL OF YOU !

We are looking forward to beginning this year with enough money to keep us going in reasonable style through August, thanks to a $ 25,000 grant from the New World Foundation. All of you who have suffered and worried through the fall with us know what a delight and relief this is to us. We really hope to have collectively alot more creative energy available for the real business of the Center. In fact plans are already shaping up....

We have arranged with Mary Mathias to join the staff 3 afternoons a week to help "hold down the desk". We hope this will free the rest of the staff to spend more time 1) working with teachers who come in 2) developing curriculum materials 3) writing proposals, articles, letters without interruption.

We will also be trying a new staff arrangement which we think will add support to the informal program of the Center. We will begin having special staff available on specific days of the week to talk and work with anyone around - to serve as Center-style resource people. There will be three of us beginning this: Joan will be available on Mondays, Barry on Wednesdays, and Carole Harmon on Thursdays. Joan likes to play around with classroom organization and arrangements and also brainstorming units of almost any kind . Barry is especially good on math. related problems, and also building and constructing anything. Carole teaches 3-5 year olds at Ancona school, has given workshops at the Center on early language materials and pre-school math., and also enjoys talking and working around classroom organization and just about anything else related to schools and education.

ODDS AND ENDS

RESEARCH: In our last newletter we mentioned we had received a grant from S.C.U.E.E.T. to conduct a small study about the Center. The research will be done January - April. The study is being designed to describe "scientifically" what goes on in the Center. There are several components to the study, but there are 3 you will run into now and again when you are in the Center: (1) There will be an information form that everyone will fill out once (where you teach, how long you have taught, etc.) (2) There will be a sign - in and sign- out card (a slight elaboration on the present sign-in procedure) to find out as best we can what people are coming for and what they are doing once they come. (3) There will occassionally be observers in trying to keep track of what's going on throughout the Center at that time.

We all hope that the new procedures and forms won't be too combersome. We all think there is lots to be learned through the research, and will appreciate your co-operation and input as well.

Sharon Feiman, U. of C. MST program co-ordinator, will be directing the research with a part time staff of three or so, and Joan will be the staff person working with it.

MEMBERSHIP: Membership in the Center is rising steadily - we now have 125 members, contributing a total of $ 1,411 to the Center's income. Believe it or not, we are in the process of printing up membership cards - late but beautiful, of course.

(cont.)

NEWS FROM THE TEACHER CENTER, con't.

more odds and ends

STAFF MEETINGS: The Center staff meetings are on Tuesday afternoons from 1:30 - 5:30 almost every week. Our meetings are open to anyone who would like to join us - it is a good time to feed in ideas about things the Center might be doing or just catch up on some of our "outside" activities (workshops, Teacher Corps, USMES, etc.) It is a bad time to find the staff free to do much else, so keep that in mind if you need help with a special project or want to do some extensive talking or working through some problem.

THINKING AHEAD TO ....SUMMER. We are presently considering summer program possibilities. We are playing with the notion of a 2 week intensive workshop in August. We would love your thoughts and ideas about this - what would be useful topics? Would you be interested? what if part of it was in the country? Should it be specifically focused or directed toward general classroom preparation? How much material making - if any? ? ?

PROGRAM

CLASS: The Wednesday class will resume on January 23 at 4:00. The schedule is not set (which classes we will visit and when) so call or come by for details. New people are welcome to join the class - just check with Joan before the 23rd.

WORKSHOPS: It is interesting that while Center attendance overall has increased this fall, course and workshop attendance have dropped. At our last staff meeting before the holidays we talked alot about workshops - partly trying to figure out why attendance has dropped, and also what might be done - finding other times, different topics, better ways of publicizing the workshops or even cutting them back. We also talked about how important the workshops are to us as a staff. When we give them, they give us impetus to work seriously on curriculum in a specific area, and when others give them, we learn something new. So we are far from ready to give them up. We could, however, use any suggestions or help in the publicity area.

We have also slightly altered the overall workshop format. We will begin running series of workshops that "hang together". In January and February we are starting 4 series which will probably continue into April, one in math. (geometry -symmetry one in physical sciences, one in music, and one in language. There will be (roughly) one workshop in each series each month. The workshops scheduled for January and February are;

January 12 - Teaching reading and writing through gross motor activity led by Mary Beth Guinan .
January 19 - The Mathematics of string designs and weaving led by Barry Hammond and Center staff.
January 26 - Using Music in the Elementary Classroom led by Sharon Counts (elem. teacher at Ancona)
February 2 - playing with pendulums (simple experiments, constructing pendulum stands, salt pendulums, pend. as time keepers) led by Center staff
February 9 - Gattegno's "words in color" method of teaching reading led by Chris Johnson, Penny Bernstein (teachers at the Parents School)
February 16 - Symetry (working from simple pictures into turning triangles (which is technically called transformational geometry) led by Pam Ames
February 23 -rhythm and music in the classroom, and also some home-made instruments led by Metta Davis (kindergarten teacher, Luella) and Center staff
March 2 - simple machines - experiments with pulleys, gears, levers, etc. led by Barry Hammond and Center staff

teacher center calendar
january - february 1974

the Teacher Center is at 1400 E. 53rd St., Chicago, Il. 60615. phone 955-1329

M	T	W	Th	F	Sat.
Jan 7	8	9	10	11	12 1:00 workshop -teaching reading and writing through gross motor activity - Mary Beth Guinan
14 Joan in	15 staff mtg open in evening	16 Barry in	17 Carole in	18	19 1:00 workshop - the math. of string designs and weaving Center staff
21 Joan in	22 staff mtg open in evening	23 Barry in 4:00 class resumes	24 Carole in	25	26 1:00 workshop on using music in the classroom - Sharon Counts
28 Joan in	29 staff mtg. open in evening	30 Barry in 4:00 class	31 Carole in	Feb. 1	2 1:00 workshop on pendulums Center staff
4 Joan in	5 staff mtg. open in evening	6 Barry in 4;00 class	7 Carole in	8	9 1:00 workshop - reading: Gattegno's words in color Chris Johnson and Penny Bernstein
11 Joan in	12 staff mtg. open in evening	13 Barry in 4:00 class	14 Carole in	15	16 1:00 workshop on symmetry and geometry Pam Ames
18 Joan in	19 staff mtg. open in evening	20 Barry in 4:00 class	21 Carole in	22	23 1:00 workshop - rhythm and music; making instruments -- Metta Davis and Center staff
25 Joan in	26 staff mtg. open in evening	27 Barry in 4:00 class	28 Carole in	Mar 1	2 1:00 workshop - simple machines Barry Hammond and Center staff

Regular hours: weekdays 2:30 - 5:30, Saturdays 10:00 - 3:00, Tues. eve. 7:00 - 9:00

Appendix D

WORKSHOP TOPICS

General and Miscellaneous: (* indicates making and/or using materials)

1. Three models of open education (3 sessions)
   a. Montessori
   b. British infant schools
   c. Coop School #3 (alternative)
2. Some virtues and characteristics of good home-made manipulative materials.
3. Space: Easy things to build, arrangements, qualities of space.
4. Building with tri-wall*
5. Methods of recording children's progress in an open classroom.
6. The Unit approach: How one idea can go everywhere in your classroom and hopefully, beyond. Brainstorming an interdisciplinary unit: the city, bread, dreams, Medieval Europe, imaginary islands, Indians, time.....
7. Two simple teaching machines (can be used in any area) - the electric board and the sandwich board*
8. Cooking in the classroom.
9. Curriculum in boxes via activity cards.

Math

10. Number balance beams*
11. Geoboards*
12. Slide rules (addition, multiplication, directed numbers, number bases)*
13. Mini-computers*
14. The Papy computer*
15. Crazy clocks (mod 5, mod 6 or whatever)*
16. Tangrams*
17. Sorting problems*
18. Geometry - domes*
19. Geometry - symmetry*
20. Logic and sets*
21. Logic and sets*
22. Electricity and circuits*
23. Home-made attribute games and problems*

(cont.)

Math continued

24. Attribute games and problems (commercial)*
25. Using Cuisenaire rods (from building towers to division of fractions)*
26. Mira - its uses*
27. Using Dienes blocks*
28. The Exchange Game*
29. Materials for teaching number bases and place value (Dienes blocks, exchange game, abacus, bean sticks, binary computer, number cards)*
30. Measurement activities for pre-school through 4th grade - area, volume, lenth, time, weight, scale (each could be a separate workshop)*
31. Theory and materials series - the Nuffield maths (5 sessions on conservation of number, graphing, simple measurement, etc.)*
32. Theory and materials series - 11 basic concepts underlying math (3 sessions minimum)*
33. Mapping*

Science

34. General - science in boxes*
35. Planting*
36. Terrariums and aquariums
37. Batteries and bulbs*
38. Magnets*
39. Kitchen physics*
40. Colored solutions and mystery powders*
41. Sink and float*
42. Time*
43. Sand and water*
44. Sampling an environment*
45. Astronomy *
46. Science from toys*
47. Pendulums*
48. Animals *
49. Simple minded science (melting snow, leaf lotto, planting)*
50. Sidewalk science and backyard safari

(cont.)

Social Science

51. The city and the neighborhood*
52. Anthropology in the elementary school
53. Mapping*
54. Units (Indians, Ancient Greece, islands)
55. Use of role play

Art

56. Mobiles*
57. Weaving*
58. Printing and rubbings*
59. Making paper*
60. Collage and sculpture: the infinite glue jar*
61. Constructions that "work"*
62. Art with junk*
63. Photography and blueprints*

Music

64. Home-made instruments*
65. Rhythm games*

Drama

66. Puppets*

Dance

67. Creative movement

Language

68. Reading in the open classroom
69. Learning to read from books they write
70. Manipulative materials
71. Pre-reading materials (rhyming cards, sequence cards, form match)*
72. Whole word materials (electric board, sandwich board, word-picture match cards, object box, key vocabulary, rhymes and poems, conversation books, etc.)*

(cont.)

Language continued

73. Phonics materials for initial consonants, vowels, blends (vowel boxes, electric boards, sandwich boards, twist-a-word, flip books, the e-e-e books, word wheels, word family box, etc.)*
74. Integration of language into the classroom
75. Writing
76. Preparation for writing
77. Poetry and creative writing*
78. Language development from a unit approach
79. A few humane approaches to spelling and grammar
80. Drama as language development

Appendix E

Sample of Sign-in/out Form

Sign-in/out procedure: Please fill in one form each time you come to the Center. Thanks.

Name _____

Time in _____

Reason for coming today (please specify) _____

_____

****

Time out (to be filled in on way out) _____

Did you do what you came for? _____yes _____no

Did you do anything else of interest?

_____yes _____no

If yes, what? _____

...and how did you get interested in it? _____

_____

APPENDIX F: EXAMPLE OF OBSERVATION FORM

Date: —
Observer: TD
2 Staff

a - alone
p - parallel
c - cooperatively
L = laminating

S - w/ staff
T - w/ teacher

Teachers Name	Time	Place	Nate	Prog.	Manip.	Const.	Conv.	Watch	Other	Soc	Tech	Cent	Sch	Clrm	Res.	Theor	Other	
		1	2	3	4	5	6	7		1	2	3	4	5	6	7	8	
Teacher 1	3:30	2					a											
Teacher 2		1				c					S							works with staff on math game.
Teacher 3		1		P				✓					)	T				Reading, Relate, Explr. with game to T 2.

Example of a hypothetical coded "sweep:" The sweep begins at 3:30 and includes three teachers. Teacher one works alone on a project she brought with her to the Center. Teacher two works cooperatively with a staff member to replicate a manipulative game from the Center, asking questions about how it is constructed, etc. Teacher three is browsing through a book and watching teacher two and the staff person. He describes to teacher two an experience the children in his class have he with the game two is maki

Appendix G

Category Definitions

Teacher Physical Behaviors

1. Note-taking

   writing down ideas, sketching materials, listing references usually as a counterpart to browsing or listening

2. Browsing/Leafing (exploring)

   examining manipulatives on display shelves, looking at written curricular materials on shelves, taking materials and/or objects off shelf for superficial examining, flipping through booklets, cards, etc., scanning raw materials shelves; general exploration of resources; focused attention (see note below)

3. Manipulating

   playing with game, following directions on activity card, working with manipulatives or set of materials as intended

4. Constructing 1 (replicating, copying)

   making piece of furniture, game, set of cards, manipulative; includes replicating piece of material in Center or creating own piece of material or equipment.

5. Constructing 2 (creating; originating)

   Using general supplies (magic markers, scissors, rulers, dittoes, primary typewriter) and special equipment to make own materials. Source of idea from outside the Center. No actual model in Center.

6. Watching

   Observing activity of another teacher or staff.

7. Other

Teacher Talk

1. Social

   exchanging personal information, greetings, anecdotes, general chit chat unrelated to school.

2. Technical

   Statements and questions about how equipment works, how something is made, what materials to use, "how to" talk related to construction tools, location of raw materials.

3. Center talk (administrative)

   statements and questions about Center procedures, programs, includes checking out books and paying for materials

4. School talk - general (non-curricular, non-classroom focused)

   Non-curricular talk about school, relating anecdotes and experiences outside classroom

5. Classroom experiences with equipment and/or material

   Concrete statements about how materials were used or could be used in classroom; not theorizing about effects on children beyond their liking or disliking; not extending or generalizing from experience; anecdotal

6. Resources (curricular, books)

   questions and statements about specific materials and manipulatives for teaching something; concrete and specific references to printed curricula or objects in Center.

7. Conceptualizing about teaching/learning

   statements about cognitive processes built into materials; generalizing from teachers' experience as learners to kids' experience; setting material in curricular frame of reference; talking about how to introduce materials to children and /or work with them; talk about intervention including grouping and classroom organization.

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Also available as part of the North Dakota Study Group on Evaluation series:

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