



reporter

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CURA Adds Survey Research Center

by William J. Craig



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Survey research is an increasingly valuable tool for research and policy development and CURA has recently added a survey research center. The Minnesota Center for Social Research—now the Minnesota Center for Survey Research—was transferred to CURA from the Sociology Department of the University of Minnesota on July 1 of this year. MCSR has had an excellent history of serving a wide variety of clients and the transfer to CURA is being made so that these services will be even more widely available to those who need them both within the University and in the larger Minnesota community.

Recognizing the need for a survey research center within academia is not unique to Minnesota. More than sixty universities

across the country have developed such research centers. Survey research centers are to the social and behavioral scientists what laboratories are to scholars in the natural sciences. They provide the facilities and capabilities for collecting and analyzing the data used increasingly in basic social and behavioral research and in applied studies in economics, marketing, communications, and public policy analysis. Such university centers serve the research needs of their faculty and graduate students, they educate and train students in survey research methodologies, and they help link the University with community and government agencies and organizations dealing with public policy issues.

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age, veteran status, or sexual orientation.

The Value of Survey Research

Survey research is a critical part of basic research where human attitudes and behavior are being analyzed. It is also an important tool in public policy research, where it is essential to know how people think about and will react to particular policy proposals or issues. For example, CURA helped support a study by engineers interested in measuring the energy efficiency of private homes. But the research ultimately demonstrated that the behavior of people in their use of energy in their homes was a more important consideration in overall energy efficiency than how their homes were constructed. The human factor is often the most important part of a research study or of developing a public policy, and survey research is an essential tool for the analysis of this human factor.

One common use of survey research is "needs assessment." People are surveyed individually and asked to define what their needs are. When looked at collectively, these statements of need provide a way of setting priorities for the community that was surveyed.

Another use of survey research is for measuring demographic variables. Often it is useful to know things like the number of people in a community who are over age 65 or the size of their annual income. This is the kind of data supplied by the U.S. Census, but unfortunately, the census is taken only once per decade and the results are not available until two to three years later. A survey research census provides more current data about a community and can be tailored to the specific needs of the researchers or community or government agencies requesting it. Questions about housing quality or personal disabilities, for example, can be asked.

Measuring perceptual variables is a third use of survey research. Often information about attitudes or perceptions of current public issues is as important as demographic information in understanding a community or a particular activity. Asking if the local community is satisfied with its school's performance, for example, may be as significant as asking how good that local school is.

A specially designed census can have even more value when it is conducted periodically and thus provides data in a time series, giving a sense of trends in the community. Changes in public awareness can be documented along with changes in the size and distribution of the population.

Survey Research at the University

Survey research is a growing part of many research projects and an important element in public relations and program evaluation, as well. Over the past decade it has grown in importance at the University of Minnesota. MCSR, before the transfer to CURA, had been part of the Sociology Department for more than a decade. Most recently it had

been called the Minnesota Center for Social Research. Under the direction of Professor Ronald Anderson, MCSR came to specialize in using telephone interviewing to focus on questions of public policy. Two quite different types of surveys were conducted: omnibus surveys and special projects.

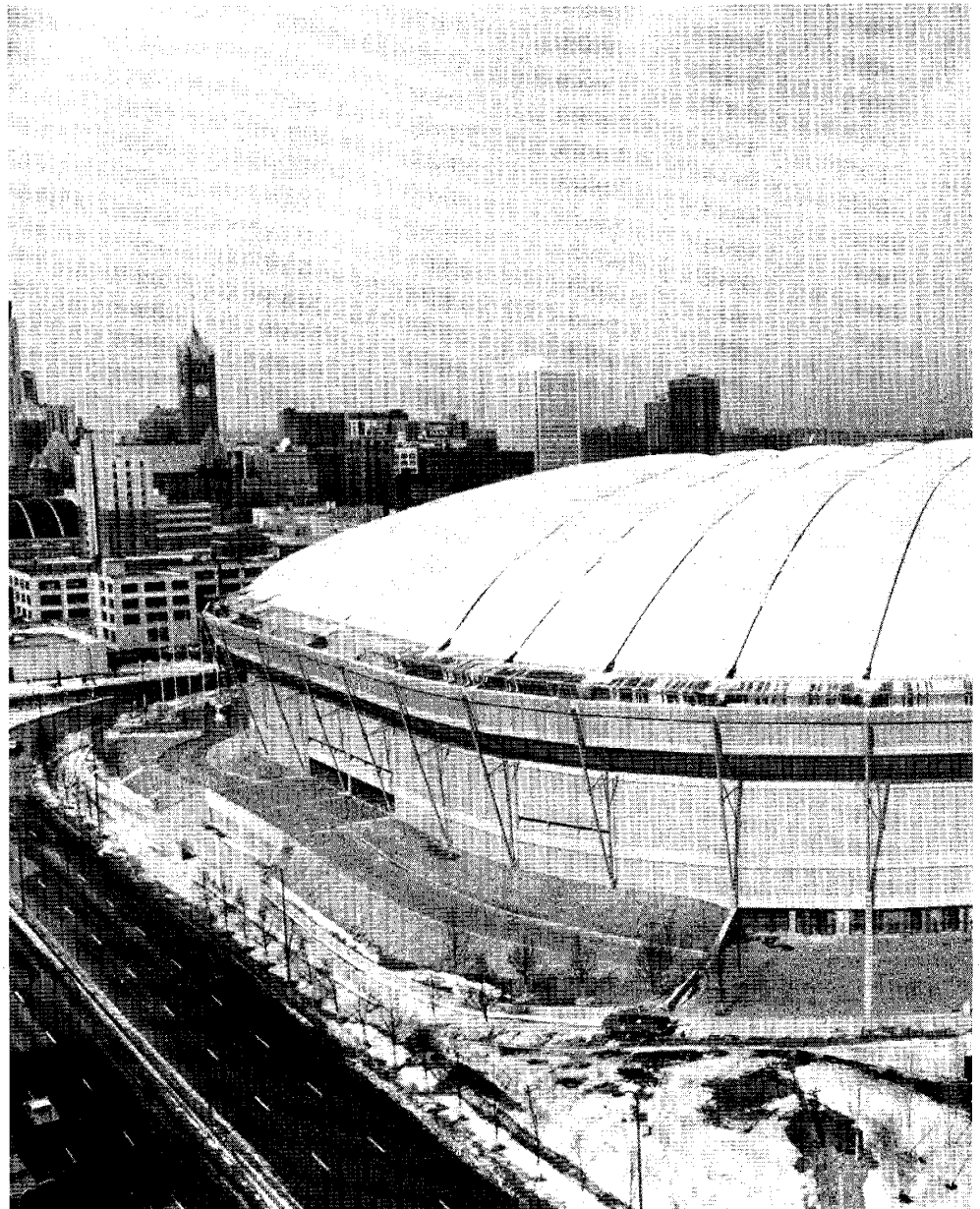
Omnibus Surveys

Beginning in 1982, MCSR has conducted surveys in which a number of clients each purchased their own section of a longer questionnaire and shared the results of a series of standard demographic questions.

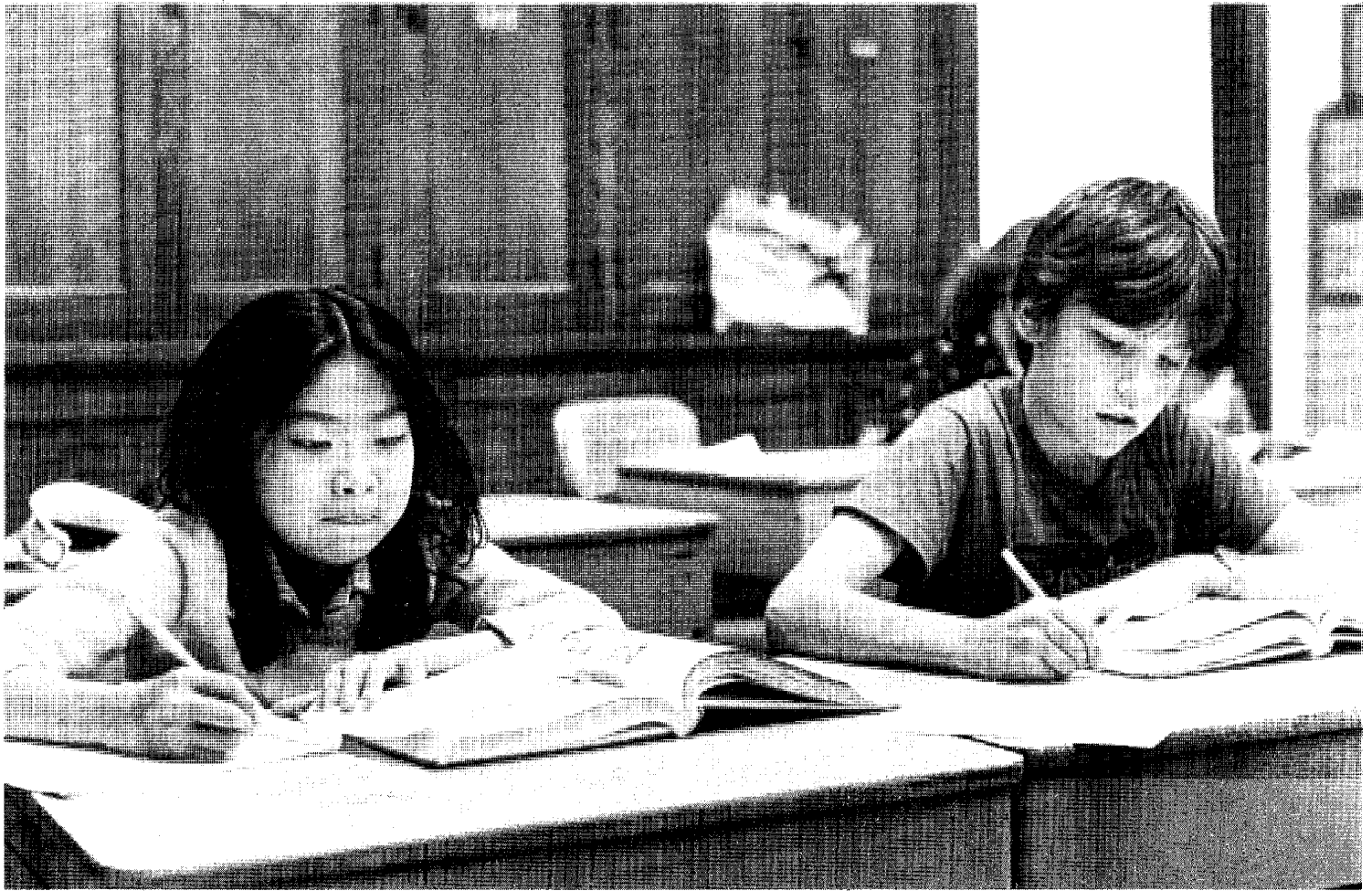
MCSR began these omnibus surveys with a Twin Cities Area Survey that it has conducted each year since 1982. One thousand adults are surveyed in the seven-county metropolitan area. Questions come

from a variety of Twin Cities area agencies and organizations. The first survey, for example, asked about energy conservation. It included questions on how people had learned about wasted energy and how their households could act to conserve energy and save money. The questions were funded by the Minnesota Department of Energy and Economic Development, which was in the process of developing a market strategy for making Minnesotans wise consumers of energy.

As with all omnibus surveys at MCSR, the 1982 survey included many demographic questions. It asked those who were surveyed about their age, income, and geographic location. It asked about their household composition and whether they rented their home or owned it. Data from these questions allowed the Department of En-



A survey by MCSR of Gopher football season ticket holders showed that most preferred watching games in the Metrodome.



Questions about public education were included in the Minnesota State Survey in both 1984 and 1985.

ergy and Economic Development to assess which kinds of households were already the most active in energy conservation and which needed the most help. With this information, the department could not only define good marketing strategies, but also begin to create policy strategies for public subsidies in areas where it appeared that energy savings would be substantial, but that people would have difficulty affording the initial investments.

Subsequent Twin Cities Area Surveys have provided similar information to other groups. The 1983 survey asked about the use of computers for Control Data Corporation and about police responsiveness for the Minneapolis Police Department. The 1984 survey asked about recycling for a coalition of government units—the Metropolitan Council, Hennepin and Ramsey counties, and the cities of Minneapolis and St. Paul. The 1985 survey asked about library patronage for the Metropolitan Library Service Association, about various aspects of health for the Hennepin County Community Health Department and Hennepin County Medical Center, and about tax compliance for the American Bar Foundation.

Following the success of the Twin Cities Area Survey, a Minnesota State Survey was initiated in 1984. This, too, is an annual

omnibus survey with separate components sponsored by individual departments and agencies. For the state survey 2,000 people are contacted each year.

The 1984 and 1985 Minnesota State Surveys each included questions for CURA about public elementary and secondary education. The results were published in separate reports and summarized in the **CURA Reporter**.^{*} Minnesotans, it was discovered, were satisfied with their current educational system, though they were willing to take conservative steps to improve its quality, including giving the system more money. Most of the CURA questions asked for public opinion about the many proposals for education reform that were being brought before the state legislature.

The 1984 survey also included questions for the Minnesota Department of Transportation. Their questions dealt with both highway operations and transit alternatives. They discovered, for example, that only 9 percent of Minnesotans would be willing to drive on icier roads in exchange for having less salt, which corrodes cars, used on the highways in winter.

The 1985 survey asked questions about the use of directory assistance for North-

western Bell, about child abuse for the Wilder Foundation, about citizen involvement and waste disposal for CURA, about a number of public policy issues for Channel 11 (now KARE), about compulsive gambling for the Minnesota Department of Human Services, and about snowmobiling for the Minnesota Department of Natural Resources.

Special Projects

In addition to the omnibus surveys, MCSR has prepared and completed a large number of special project surveys for a variety of different organizations, both in the University and in the community.

A brief look at some of these projects will again illustrate how important survey research can be for many different groups. Several dozen such surveys have been done by MCSR in the past two years. (Many clients have also used MCSR as a consultant on parts of other survey research projects.)

Both academic and administrative units within the University have commissioned special project surveys for policy analysis work. The Office of Student Affairs used MCSR to interview season football fans as to their preference for watching games in the Metrodome or in an on-campus loca-

^{*}See "Citizen Opinion on Education," by William J. Craig, **CURA Reporter**, March 1986.

tion. A professor of Family Social Science had MCSR conduct a mail survey of new parents in which they were asked about their attitudes during the first few months with a new baby. Faculty members from the Humphrey Institute and the Department of History commissioned a telephone survey of state employees in which they asked for reactions to the state's new law on comparable worth pay scales for men and women. And the Division of Health Services Research and Policy (part of the School of Public Health), in conjunction with the Metropolitan Health Board, is currently working with MCSR on a longitudinal survey of a panel of Twin Cities residents about their health costs.

Many government agencies have used MCSR special project surveys, as well. These agencies represent all levels of government: local, county, regional, and state. Two different local government surveys were aimed at program evaluation. "Project Self Sufficiency" in Minneapolis, a program providing housing and job support services to single parents, hired MCSR to survey their clients about their experiences before and after acceptance into the program. Hennepin County asked MCSR to contact a random sample of people to determine if they had looked at the county's annual report, distributed with the **Minneapolis Star and Tribune**. In another joint University/public agency project, the College of Education and the Higher Education Coordinating Board interviewed recent high school graduates to determine the impact of Minnesota's new higher education funding formula on rates of attendance in colleges and vo-tech schools and on which schools were selected for higher education.* A major project, now in progress, is surveying over 5,000 Minnesota residents for the Minnesota Department of Natural Resources. This special project is examining the use of recreation facilities in Minnesota—what kind of facilities are used, where, how often, and how much money is spent on various recreation activities. Results will be used to determine the amount and location of public expenditures for recreation development in coming years.

The Role of Students

Students have benefited from the presence of MCSR at the University and should continue to do so. A large number of students are trained and used as interviewers each year. As many as seventy-five may be on the payroll at any one time. Their experience at MCSR helps them understand the technique of survey research and its strengths and weaknesses. At times, students in research methods classes are used as interviewers, after intensive training and with strict supervision, giving them a valuable "hands-on" experience to comple-

ment their classroom work. More advanced students are trained and used as supervisors. This type of experience is invaluable in the marketplace when they leave the University.

Using students as workers is expensive, both because of the relatively high student wages (well above the minimum wage) and because of the high turnover as students graduate. But the return on this expenditure is high quality survey work and valuable training for students attending the University of Minnesota. Another benefit to the students, of course, is their pay, which helps them fund their University education.

Benefits have accrued to graduate students who are not employed by MCSR, as well. Some students have been able to insert questions into omnibus surveys, thereby obtaining data for use in research papers and theses. All the data collected in

past MCSR surveys are open to use and students have extracted data for their own projects. Finally, MCSR knows a great deal about survey work and is willing to provide a limited amount of technical support to graduate students embarking on independent survey projects.

MCSR's Future With CURA

MCSR has built a reputation for high quality service oriented toward public policy issues. The major technique has been telephone interviews. Under CURA these emphases will continue and be strengthened.

CURA's intent in taking on the activities of MCSR is to increase the connections within the University and between the University and the community. The types of



A special survey for the Minnesota Department of Natural Resources is currently asking 5,000 Minnesotans about the recreation facilities they use around the state.

*See "Financing Education Beyond High School: Is the Minnesota Experiment Working?" by James C. Hearn, *CURA Reporter*, June 1986.

surveys conducted by MCSR over the years have been valuable, but accessibility to MCSR has been limited. Under CURA, access to MCSR will be possible for any unit in the University. With CURA's mission of making University resources available and responsive to the needs of the Minnesota community, the range of organizations that can effectively use the services of MCSR should greatly increase.

Specific recommendations for the future of MCSR include:

- Increase MCSR's exposure inside and outside the University.
- Strengthen MCSR's role as a significant research, educational, and training resource for the many units within the University where survey research is becoming increasingly important. MCSR's capacity to facilitate survey research and to assist in research and training will be extended to faculty and graduate students across the University.
- Expand MCSR's longer-term relationships with major public agency survey users.
- Continue to provide high quality survey research for public agencies on a fee for service basis.
- Continue to focus on telephone surveys, but enlarge services to include more mail surveys and consultation on all aspects of survey research and on subsequent analysis and use of the results of surveys.
- Promote the availability of existing data files. In MCSR, as within CURA, data will be made public after the needs of the primary user have been met. Most surveys have less than one-quarter of their potential information extracted. Other academic and public investigators will find useful information in past surveys.
- Establish an advisory committee comprised of people within the University community who are interested and knowledgeable in survey research as well as people who are survey research users in public organizations outside the University.
- Continue to hire and train University students to interview people and manage the survey research activities. This approach may increase costs, but the costs are more than compensated for by the high quality of the surveys and the impact on the students involved.

In Conclusion

MCSR has an excellent history of conducting high quality surveys at a reasonable cost. It has built a solid reputation with a growing number of clients, both inside and outside the University. Moving MCSR to CURA has given it a more secure base for expanding its accessibility from all parts of the University and from many public policy organizations across the state.

One of the aspects of MCSR that distinguishes it from private survey or market research firms is its academic base. Survey research has become an important part of scientific research in most parts of the University and most top universities have a center like MCSR. MCSR can play a central role in providing research and training about this technique for disciplines across the University. For other departments and individuals, MCSR can provide advice or services on specific survey research projects.

Another aspect that distinguishes MCSR from private firms is its emphasis on public policy research. It is the mission of the University of Minnesota, as a land grant university, to be of service to the citizens of the state. Survey research can be very useful to organizations in determining their need for policy changes and in evaluating their existing policies.

Through MCSR, and its new home at CURA, we hope to make this valuable tool available to an ever-increasing number of public and private organizations in Minnesota who are concerned with public policy as well as to an increasing number of faculty and graduate students in their research.

Will Craig is the assistant director of CURA and director of the Minnesota Center for Social Research in its new home with CURA. Craig is also serving this year as president of URISA (Urban and Regional Information Systems Association), an international organization of professionals interested in innovative use of information systems technology in the public sector.

Teacher Supply and Demand: A Problem for Minnesota?

by Lawrence C. Wells

A major concern of the current national debate about elementary and secondary education is whether the expected supply of teachers will be sufficient to meet the anticipated demand in the late 1980s and the 1990s. Reports indicate there will be a significant shortage of teachers nationally. Will there be a shortage in Minnesota as well? This article summarizes available statistical material on current and projected supply and demand trends for teachers both nationally and in Minnesota and points to how the Minnesota situation differs from the national situation.

It should be noted that no two sets of statistics are alike and that projections into the future are revised from year to year. Developing estimates of teacher supply and demand is complicated by the number of factors that contribute to the whole picture. These factors include birth rates, fiscal constraints on public school expenditures, new school program requirements (such as those associated with special education and bilingual education), new curriculum requirements (such as greater emphasis on math and science), teacher retirement trends, and the size of the existing cadre of licensed teachers not now working in the field. Despite the problems of generating a precise estimate of what the future will bring, significant findings have been issued which can be of use to policy makers.

THE NATIONAL PICTURE

Two studies published by the National Center for Education Statistics, **Projections of Education Statistics to 1990-91** and **The Condition of Education: A Statistical Report—1984 Edition**, provided the basis for looking at teacher supply and demand at the national level.

School Enrollment Trends

While elementary and secondary education experienced growth in enrollment in the 1950s and 1960s, they met with unprecedented declines in the 1970s. From 1971 to 1985 total enrollment steadily decreased, reflecting the decline in school-age population over that period. It is projected that after 1985 total enrollment will begin to increase slowly as the school-age population begins to grow and that by 1992 it will be 4 percent higher than in 1982 (from 44.8 million in 1982 to 46.4 million in 1992).

Enrollments are expected to increase in the lower grades while they continue falling in the upper grades. In the elementary grades (K-8), enrollment decreased 16 percent between 1970 and 1982 (from 36.6 million to 30.8 million). It was projected to decrease to 30.2 million by 1985 and then begin increasing this year, in 1986. An 11 percent increase is projected from 1982 to 1992 (from 30.8 million to 39.1 million). In

the secondary grades (9-12), enrollment decreased 5 percent between 1970 and 1982 (from 14.6 million to 13.9 million). It is projected to decrease by another 12 percent through 1992 when it will reach 12.3 million.

Teacher Demand Trends

Initial enrollment declines in the 1970s were not immediately followed by declines in the number of teachers employed. It was not until the late 1970s that the number of classroom teachers began to decline in the public schools. It should be noted, however, that increased staffing needs in special and bilingual education programs in the public schools partially offset the reduced demand for teachers. The number of public school teachers began to decline after 1977 due to severe budgetary constraints.

After reaching a low of 2.4 million in 1982, the number of teachers is expected to begin climbing in the latter half of the 1980s as elementary school enrollments increase. An all-time high demand—for 2.62 million teachers—is projected by 1992. Since enrollment increases are not expected to reach the secondary level until after 1990, the number of secondary level teachers will continue to decline through 1990. But, in the 1990s, demand for secondary teachers will parallel the rising demand for elementary teachers in the mid 1980s.

The demand for additional teachers fell from 875,000 (during the years 1973-77) to 647,000 (during the years 1978-82) (see Figure 1). During the years 1983-87, when enrollment is expected to bottom out, the demand for additional teachers is expected to increase slightly to 777,000. During the late 1980s and early 1990s enrollment is projected to increase steadily. Thus, the demand for additional teachers is projected to increase to 924,000 between 1988 and 1992—so that while an average 129,000 additional teachers will be needed each year between 1978 and 1982, the need for additional teachers will rise to an average of 185,000 each year for the period 1988 to 1992. These projections are based on the assumption that total enrollment will rise, teacher-pupil ratios will improve only slightly, and the turnover of teachers will remain constant at an estimated 6 percent.

Attempting to project the supply of additional teachers is even less certain than estimating the demand for them. The supply consists both of new teacher graduates and a reserve pool of former teacher graduates and former teachers. From 1970 to 1982, the yearly supply of newly qualified teacher graduates decreased from 284,000 to an estimated 143,000. As a percentage of bachelor's degree recipients, new teacher graduates dropped from 34 percent to 15 percent over this period. If the smaller percentage should remain stable over the next ten years, the supply of new teacher graduates will also remain fairly stable at about 140,000 per year. At this level, the supply of new teacher graduates could equal approximately 93 percent of the projected demand for additional teachers between 1983 and 1987. However, in the next five-year period, the supply of new teacher graduates would equal only about 75 percent of the demand for additional teachers. Therefore, large numbers of teachers would presumably have to be hired from the reserve pool.

The projected shortage in the late 1980s and early 1990s may not occur if college students increase their enrollment in teacher preparation programs. It is projected that a gradual increase from the current 15 percent of bachelor's degree recipients in 1982 to about 21 percent in 1992 would be sufficient to offset a general shortage. However, if the percentage of bachelor's degrees in teacher preparatory programs falls gradually to about 11 percent in 1992, then the supply of new teacher graduates could equal less than 60 percent of the projected demand for additional teachers between 1988 and 1992.

One particular concern frequently mentioned is a coming national shortage of math and science teachers. One estimate suggests that 300,000 new math and science teachers will be needed by 1995. This number is more than the total number of math and science teachers currently teaching.

The current state of opinion among educators is pessimistic about the future teacher supply particularly in view of estimates that a large number of teachers will retire in the near future and that low enrollment in teacher preparation programs will continue. It should be noted, however, that geography and the corresponding demo-

graphic shifts of population from some areas of the country to others will play a large role in localizing much of the projected teacher shortfall.

THE MINNESOTA PICTURE

Several studies have looked at the teacher supply and demand problem as it specifically applies to Minnesota. The Education Statistics division of the Minnesota Department of Education has published **Minnesota Public School Enrollment Projections** (1984 and 1986 editions). The Higher Education Coordinating Board (HECB) included some relevant supply-demand information as part of its study on **State Policies on Teacher Education: Analysis and Alternatives** (November 1984). Finally, "Demand and Supply of Public School Teachers in Minnesota" was written by Kevin Dooley (August 1984) as a working paper for Berman, Weiler Associates as part of their study of public education in Minnesota for the Minnesota Business Partnership.

School Enrollment Trends

According to **Minnesota Public School Enrollment Projections**, Minnesota's total average daily membership (ADM) of students was projected to continue to decline slightly through 1985-86, stabilize for a few years, and then begin to rise in the 1990-91 school year. Early in the 1990s the ADM should begin a rebound to levels like those in the early 1980s.

These enrollment changes are dramatic when examined on a district-by-district basis. Slightly better than one-third of the state's districts are expected to grow between 1982-83 and 1987-88. Very few of the districts projected to experience the largest percentage of growth are in the Twin Cities metropolitan area, and in fact a significant portion of the districts projected to experience the largest percentage decline are inner-ring Twin Cities metro area districts.

Teacher Demand Trends

Very little has been done to attempt to project the future demand for teachers in Minnesota. The Higher Education Coordinating Board arrived at some tentative conclusions in its 1984 report (see Figure 2).

Figure 1. TRENDS IN THE NATIONAL SUPPLY AND DEMAND FOR TEACHERS (numbers in thousands)

	Total Estimated Teacher Demand	Estimated Demand for Additional Teachers					Estimated Supply of New Teacher Graduates	Supply as Percent of Demand
		Total	Public	Private	Elementary	Secondary		
1973-77	12,172	875	753	122	478	397	1,246	142.4%
1978-82	12,180	647	553	94	396	251	772	119.3%
				Projections				
1983-87	12,108	777	677	100	483	294	724	93.2%
1988-92	12,681	924	803	121	641	283	692	74.9%

Source: U.S. Department of Education, National Center for Education Statistics, **The Condition of Education, 1984 Edition** (Washington, D.C.: Government Printing Office), p. 36.

Figure 2. PROJECTED NEED FOR PUBLIC SCHOOL TEACHERS IN MINNESOTA THROUGH 1993

	Statewide ADM Enrollments	Pupil/ Teacher Ratios 1982-83	Teaching Positions Needed to Maintain 1982-83 Ratios (Col. 1 - Col. 2)	Change in Numbers of Teaching Positions Due to Change in Enrollment (Col. 3 Projected - Col. 3 Actual)	Open Positions Due to Attrition of 1982-83 Teachers ^a	Cumulative Total Need for New and Replacement Teachers (Col. 4 + Col. 5)
Actual 1982-83			<u>Actual</u>			
Grades 1-6	297,265	21.0:1	14,167.9 ^b			
Grades 7-12	359,677	19.3:1	18,637.0 ^b			
Projected 1987-88			<u>Projected</u>			
Grades 1-6	314,340		14,968.6	800.7	1,532.7	2,334.0
Grades 7-12	314,725		16,307.0	(2,330.0)	1,940.8	(389.2)
Projected 1992-93						
Grades 1-6	341,297		16,252.2	2,084.3	3,065.4	5,149.7
Grades 7-12	311,180		16,123.2	(2,513.7)	3,881.5	1,367.8

Source: Minnesota Higher Education Coordinating Board, **State Policies on Teacher Education: Analysis and Alternatives** (St. Paul: Minnesota Higher Education Coordinating Board, 1984), p. 105.

^aAssumed annual attrition rates were 10 percent of teachers over age 54 and 1 percent of teachers age 54 and younger in 1982-83.

^bActual positions.

According to that report, for the remainder of the 1980s there will be a growing need for elementary teachers, while the need for secondary teachers will decline. Over 5,000 additional elementary teachers would be needed between 1982-83 and 1992-93. This means hiring over 500 new or returning teachers per year. During the early 1990s the need for elementary teachers will be stable while the need for secondary teachers will grow. Over 1,300 additional secondary teachers would be needed between 1982-83 and 1992-93. This increase, however, will develop following the late 1980s when a surplus of several hundred secondary teachers could exist. During the late 1990s the need for elementary teachers will decline while the need for secondary teachers will be stable.

These estimates assume that the 1982-83 ratios of pupils to teachers will be maintained. The HECB report notes that the data are statewide and do not reflect circumstances in every district and do not take into account demand for teachers according to subject area.

In attempting to focus on the supply of teachers in Minnesota, we arrive at the crux of the issue: we can project approximately what the student enrollment will be in any given year (although this data is subject to change) and, given a constant student/teacher ratio, what the likely demand will be for additional teachers. The question then is "Where are these teachers going to come from?" Perhaps the only way to shed light on this problem is to look at evidence from the recent past.

In the Berman, Weiler study, data show that approximately 55-75 percent of teacher openings are filled by new teacher graduates. Teachers returning to the profession fill approximately 10-25 percent, and the remainder are filled by teachers

transferring to Minnesota from other states. The study concludes that, since new teacher graduates fill most of the teacher openings, they are an important measure of the supply of teachers to the public schools. In addition, since the demand for teachers in Minnesota is largely determined by policy decisions about an appropriate ratio of students to teachers, the demand for new teachers may be assumed to be very inelastic and only subject to annual shifts due to changing enrollments. This suggests that the supply of new teacher graduates is primarily determined by the demand for teachers, and that the quantity of teacher graduates that are available does not significantly affect how many are hired.

The author of the Berman, Weiler report, through a linear regression analysis, suggests that long-term shortages of teachers are unlikely. Historically, the supply of teachers has closely followed the demand for teachers. However, it is important to note that the data on which the analysis is based do not provide any inferences about how the average quality of teacher graduates may vary with the growth or decline in the demand for teachers. Since the analysis is only applied to statewide data as a whole, it also assumes that new teachers can and will move anywhere in the state or will move among teaching specialties, in order to fill a position. This may not, in fact, happen. And chronic shortages may occur in some localities and in some teaching specialties, a factor not reflected in the compiled data.

Equally sanguine about the lack of a Minnesota supply-demand problem is the HECB report, which concludes that in elementary education large numbers of inactive but licensed teachers exist and that it is too early to know if there will be a need to increase the numbers of new Minnesota teacher graduates. In addition, because

shortages in most fields will occur in geographically isolated areas rather than statewide, increasing the number of teacher graduates may not address the distribution problems.

One factor that is difficult to calculate is the effect of teacher retirement trends in the near and intermediate future. Such trends are difficult to estimate because the rate is not strictly tied to age—it is also tied to the "Rule of 85"^{**} and to employment opportunities elsewhere. What does seem likely, however, is that within the next ten years there will be a large number of teachers retiring, particularly in the Twin Cities where, generally, the staffs are older. The Minnesota Alliance for Science anticipates accelerated rates of retirement for math and science teachers between 1989 and 1995 because few young teachers have been hired in these subjects during the recent years of decline. They expect that almost all of the current cadre of math and science teachers will retire by the year 2000.^{**}

Conclusions

The existing analyses of teacher supply and demand indicate that teacher shortages will not be as great a concern for Minnesota as they will be for the nation as a whole. In fact, it does not look as if the overall numbers of teachers in Minnesota will be changing very much in the foreseeable future (especially in the Twin Cities metropolitan area). A slight increase in Minnesota student enroll-

^{*}The "Rule of 85" is a plan in which employees whose age and years of experience total 85 are eligible, for a limited time, to retire early with full benefits.

^{**}Minnesota Alliance for Science, **Action for Excellence: A Comprehensive Plan to Improve Learning in Mathematics and Science**. Minneapolis: Minnesota Alliance for Science, University of Minnesota, 318 Walter Library, 1984.

ments is expected—less than 6 percent from 1984-85 to 1994-95. Given current student/teacher ratios and given the present supply of new teacher graduates, it appears that there will be a sufficient number of teachers to meet staffing needs. However, retirement rates and shortages of math and science teachers may create some shortages in the future. In addition, the distribution of teachers across the state may not be uniform, so that some districts may experience shortages while others do not.

Larry Wells is a doctoral student in the University's School of Education. His special area of study is in the Social and Philosophical Foundations of Education. Wells was part of the staff for the CURA/College of Education Project on The Future of K-12 Public Education in Minnesota and author of *Minnesota K-12 Education: A Catalogue of Reform Proposals* and co-author of *Minnesota K-12 Education: The Current Debate, The Present Condition*, both CURA publications that resulted from that project.

Training Refugee Women for Employment in Minnesota

by Sarah R. Mason

Between 1975 and 1985, a broad network of programs was established to serve the Southeast Asian refugees who had resettled in cities and towns throughout the United States. These programs included English language classes, employment training, and cross-cultural orientation; their purpose was to assist the refugees in the process of integrating into the mainstream of American society, including entering the labor force. Most of the programs were funded at least partially by federal educational assistance for refugees, initially authorized by Congress for Cuban refugees in the early 1960s.

Refugee employment training programs were for the most part designed and administered by social agencies, educational institutions, or refugee mutual assistance associations in keeping with their own social and educational goals. However, federal guidelines based on resettlement policy also played an important part in determining the scope and content of the training, and in designating training priorities.

This article focuses on employment training for Southeast Asian refugee women in Minnesota, where the refugee population of some 30,000 ranks seventh in size among the fifty states. Most of the data presented here are drawn from a larger study by the author supported by the Rockefeller Foundation, the University's Southeast Asian Refugee Studies Project (SARS), and CURA. **Training Southeast Asian Refugee Women for Employment: Public Policies and Community Programs, 1975-1985**, the results of that study, has recently been published by CURA. The larger study is concerned with the impact of federal resettlement policy on refugee employment training programs throughout the United States, particularly those serving women. Its underlying assumption is that refugee programs should provide equitable training opportunities for women and men, in terms of funding, accessibility, quality of instruction, and choice of occupational fields.

The Refugees from Southeast Asia

Since the withdrawal of American forces from Southeast Asia in 1975, approximately 800,000 refugees from Vietnam, Laos, and Cambodia have arrived in the United States (about 448,000 men, and 352,000 women). Fifty-four percent of the refugees are adults between the ages of 18

and 44, the principal years of employment among refugees (241,920 men and 190,080 women).

The refugees came in two waves. The first wave, 1975 through 1978, brought largely urban Vietnamese, including professionals, civil servants, military officers, businessmen and businesswomen, and their families. These early arrivals generally had a high level of education and most were able to find stable employment within three years. While some were able to retain their professional or managerial status through retraining, a larger number became skilled blue collar workers by taking advantage of vocational training provided by the federal resettlement program.

The second wave of refugees, arriving in 1978, came from both the rural and urban areas of Vietnam, Cambodia, and Laos. This group included soldiers, farmers, fishermen, shopkeepers, and their families, all of them having far less education and fewer transferable skills than their predecessors. They also had less access to employment training after their arrival in the United States than did the first wave of refugees. They have had considerably more difficulty in entering the work force. By late 1982, when the total number of refugees reached 619,834, this group represented the majority of the refugee population.

The Minnesota Picture

In Minnesota an estimated 4,500 Southeast Asian refugees—largely Vietnamese—arrived in the summer and fall of 1975. Most were professionals, military personnel, or civil servants. In the two years that followed, many moved to California, Texas, or Washington, D.C. to join other family members, to seek employment, or to live in a warmer climate. In 1976 small numbers of Hmong, Cambodian, and Lao refugees also began to arrive in Minnesota. They also represented the elite in terms of education and exposure to western culture.

By late 1978, however, St. Paul became a clustering area for Hmong refugees, and by 1979 many were settling in south Minneapolis as well. While the Hmong population numbered only about 350 in mid-1978, by the end of that year it had grown to 1,000, and by 1980 it reached approximately 10,000, making the Twin Cities the largest urban concentration of Hmong in the country. The population peaked at nearly 12,000 in 1982 when several thousand left the state



Mai Vang, center, works with two women in the bilingual apparel arts program at St. Paul TVI. Vang was hired as a bilingual assistant to help with instruction and communication problems that might arise.

for Fresno, California after losing jobs during the recession of that year.

The Hmong refugees from the highlands of Laos now number about 10,000 in Minnesota and constitute the largest refugee group in the state. The majority had very limited education in their homeland, and have had considerable difficulty in entering the work force. Other large groups in the state include the Vietnamese (about 7,600) and the Cambodians (about 6,100). Both groups include many refugees who arrived after 1978. They have limited education and few work skills that are transferable to American society.

Public Policy and Refugee Training

No statement of broad policy goals has been developed in more than a decade of Southeast Asian refugee resettlement, but specific objectives (enunciated in congressional hearings preceding the enactment of the Refugee Act of 1980) and directives issued by the Office of Refugee Resettlement (ORR) since its establishment in 1980 indicate that refugee assistance policy has been harnessed to the foreign and domes-

tic policies of the United States government.

During the 1979 Senate Judiciary Committee hearings, Ambassador Dick Clark, first coordinator of Refugee Affairs, addressed the foreign policy issues when he pointed out that by accepting refugees for resettlement, the United States was assisting friendly governments in Southeast Asia that were under political and economic strain from the large numbers of refugees arriving in their respective countries. By providing this assistance and offering help to those fleeing Communism, the United States reinforced its image as a "nation of leadership and humanitarian concern." Clark also pointed out that aid from the United States offered a "beacon of hope to people fleeing persecution and repression in Eastern Europe, and figures in our relations with the Soviet Union."

Domestic policy goals, on the other hand, as expressed by several Senate Judiciary Committee members, included the control of resettlement costs, the prevention of long-term welfare dependency among the refugees, and the maintenance

of social and economic stability in local areas of resettlement.

Reflecting these concerns, the central aim of federal refugee employment training policy from the earliest years of resettlement has been to train refugees in short-term programs for low-skilled, low-paid jobs as a means of reducing the number of refugee families on public assistance.

The Dual Labor Market Theory

The perspective of the dual labor market theory,* an outgrowth of economists' studies of urban labor markets during the 1960s and 1970s, was used throughout this study as an analytical tool in evaluating the effect of federal policy on refugee training programs. This theory suggests that a dichotomization of the American labor market due to technological changes and increased competition in certain industries has resulted in two separate economic sectors: a "primary" market and a "secondary" market. Jobs in the primary market tend to be

*For a more detailed explanation of the dual market theory see David M. Gordon, *Theories of Poverty and Underemployment* (Lexington, Mass.: D.C. Heath and Co., 1972), 43-52.

high-skilled, high-paid, and stable, with well-established channels for advancement. Jobs in the secondary market tend to be low-skilled, low-paid, and intermittent, seasonal, or part-time, with little potential for advancement regardless of a worker's diligence. Secondary market jobs are generally found in highly competitive, labor-intensive industries that maximize their profits by cutting labor costs. These jobs are usually held by minorities, women, and teenagers.

Employment Training for Refugee Women

In all, sixty-nine refugee women's training programs (past and present) were studied in ten sites across the country from 1984 into 1986. Fourteen were preemployment programs, designed primarily for women with very limited education. In addition to English language instruction, basic arithmetic, and cross-cultural training, most of these preemployment programs included field trips to clinics, schools, and grocery stores, as well as open-ended discussions of women's health issues, child-rearing, changing family roles, rape and sexual harassment, and employment. Above all, these programs attempted to provide a supportive atmosphere that enabled refugee women to gain the self-esteem and assertiveness necessary to function in American society and to enter the labor force.

The remaining fifty-five programs were employment training programs designed specifically for refugee women or mainstream programs that enrolled significant numbers of refugee women, with or without bilingual assistants in the classroom. Reflecting the fields of training available to refugee women across the country, these were limited to a narrow range of six occupations—electronics assembly, industrial sewing, cleaning, child care, small business management, and health care—occupations that were mostly in sex-segregated fields of work. The three most frequent occupations among refugee women are, in fact, electronics assembly (19.9 percent), industrial sewing (15.9 percent) and cleaning (11.9 percent in either kitchen work or as maids).*

Two case histories of refugee women's employment training programs in St. Paul and Minneapolis illustrate the differing outcomes of training for jobs in the primary and secondary labor markets, and the impact of federal policy on local programs. The first is an industrial sewing program at St. Paul Technical Vocational Institute. The second is a refugee health training program sponsored by the University of Minnesota and the American Refugee Committee. Both programs have included women with very

limited education, as well as some with elementary and secondary schooling.

The Industrial Sewing Program in St. Paul

The St. Paul Technical Vocational Institute offers a full-fledged bilingual vocational training program for Southeast Asian refugees—a program established within the larger framework of the Minnesota Bilingual Vocational Training Program. The program, begun in 1975, provides bilingual assistants in the classroom as needed and offers a few courses in Southeast Asian languages. Support services include bilingual counseling and tutoring, and preparatory classes in English as a Second Language (ESL), reading, and mathematics.

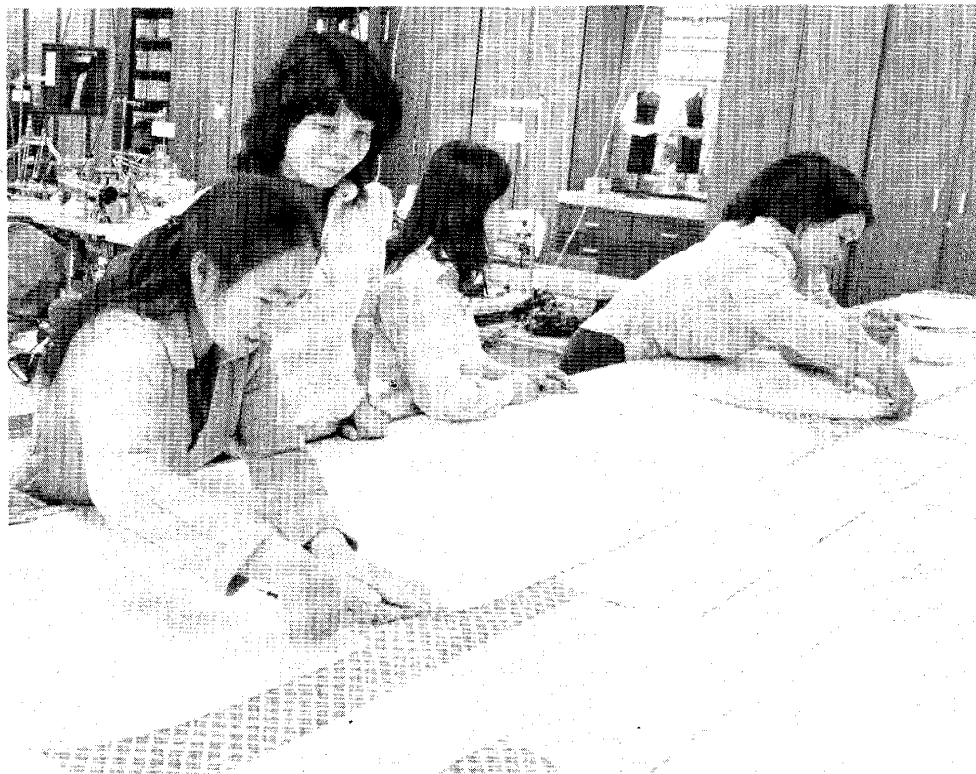
Although bilingual classes for Southeast Asian refugees have been offered at St. Paul TVI since the late 1970s, most of the early federally funded courses were male oriented—due to federal guidelines targeting heads of households. It was not until 1983, two years after the director of the bilingual program decided against the use of federal refugee funds, that a refugee-specific program in industrial sewing was available for women. In December 1982 a Hmong woman graduated from St. Paul TVI's mainstream apparel arts program, a year-long diploma program. Subsequently this woman was employed as a bilingual assistant for a special class in industrial sewing for Hmong women. The purpose of the class was to provide vocational training for women with very limited education. The Hmong power sewing class required no En-

glish and no education. Tuition assistance was obtained through Job Training Partnership Act (JTPA) grants, Pell grants, and funds from the state Refugee Program Office.

Eighteen Hmong women took part in the Hmong power sewing class for three months in 1983. During this period the bilingual assistant translated all instructions given by the teacher and assisted the women with problems that arose. Although some of the women lacked self-assurance at the beginning of the quarter, most of the women already knew each other, and ample group support was provided for those who needed it. The class met for four hours each weekday, from 2:30 to 6:30 p.m., beginning with one hour of English instruction, followed by three hours of instruction in power sewing. Most of the students were middle-aged women with large families, but the class also included some young women in their late teens and early twenties, a few of whom were not married. In general the women's spirits were very high during the program and absenteeism was minimal.

Of the eighteen women in the program, six got jobs in sewing factories, three went on to more advanced classes, two moved to other states, some got jobs unrelated to the training, and several postponed looking for jobs in order to stay at home with newborn infants.

During the 1985-86 school year, St. Paul TVI initiated a four-quarter bilingual apparel arts program that attracted eight Southeast Asian refugees (two Cambodians, four Vietnamese, and two Hmong) into



Southeast Asian women are learning industrial sewing skills in the bilingual apparel arts program at St. Paul TVI.

*Data for October 1985 from a telephone interview (July 1986) with Robert L. Bach, author of *Labor Force Participation and Employment of Southeast Asian Refugees in the United States* (Washington, D.C.: Office of Refugee Resettlement, 1984).

Related Publications on South-East Asian Refugees

The **Hmong Resettlement Study** produced a number of reports published by the U.S. Government Printing Office in 1984 and 1985:

Volume 1: Final Report

Volume 2: Economic Development

Volume 3: Exemplary Projects

and site reports for these communities:

Orange County, California

Fresno, California

Portland, Oregon

Minneapolis-St. Paul, Minnesota

Dallas-Fort Worth, Texas

Fort Smith, Arkansas

Providence, Rhode Island

Copies may be ordered from: Dr. Allan Gall; Office of Refugee Resettlement; 330 C Street SW; Switzer Building, Room 1229; Washington, D.C. 20201 or Mr. Bud Tomy; Refugee Materials Center; U.S. Department of Education; 324 E 11th Street, 9th Floor; Kansas City, MO 64104.

Southeast Asian Self-Sufficiency Study: Final Report, Caplan, Nathan, John K. Whitmore, and Quang L. Bui. Washington, D.C.: Office of Refugee Resettlement, U.S. Department of Health and Human Services, January 1985.

The Hmong in Transition, Hendricks, Glenn L., Bruce T. Downing, and Amos S. Deinard, editors. New York: Center for Migration Studies, Inc. and Southeast Asian Refugee Studies Program, University of Minnesota, 1986. This volume contains the papers presented at the second Hmong Research Conference held at the University of Minnesota in November 1983. Copies may be ordered from the Center for Migration Studies; 209 Flagg Place; Staten Island, NY 10304 or phone (718)351-8800. \$17.50 hard bound, \$12.95 paperback.

a class of eighteen that also included other Asian immigrants and mainstream students. In order to enroll in the class, students were required to score at the 200 level or higher on the Structured Tests in English Language (STEL). Although the English skills of those admitted to this program were considerably higher than those of the women in the Hmong power sewing class, the bilingual assistant was again employed to help with instruction and the resolution of any communication problems that might arise. The curriculum included instruction in power sewing, the use of cutters, clothing construction, and alterations. Most of the students received tuition assistance from JPTA or Pell grants.

At the time of this writing it was too early to assess the placement rate for the bilingual apparel arts program, as it was not yet completed. The instructor reported that most mainstream graduates from the apparel arts class obtained jobs in alteration shops rather than sewing factories, and that the decline in the garment industry had not affected these jobs. Wages in alteration shops were generally better than in factories, and she had already received requests for graduates to fill positions in which they might earn between \$4 and \$5 an hour in starting wages, although one "notorious" employer was still offering \$3.50 an hour. However, the instructor was somewhat concerned about whether refugee women would get alterations jobs because employers might fear that the women would not be able to communicate adequately with customers.

The prior work experience of the woman who became the bilingual assistant for these programs illustrates the limited economic prospects for refugees who train for a place in the garment industry—particularly in terms of advancement. It also illustrates the fact that it is not only women with limited education who have been channeled into this field of training. In an interview in St. Paul in late 1985, the Hmong bilingual assistant said that she had graduated from high school and attended a vocational school for six months in Laos. She had also worked as a secretary in a government office for two years in Vientiane before she and her family fled Laos in 1975. She had studied French in school but did not know any English when she arrived in St. Paul in 1980.

After her arrival in St. Paul this woman and her husband studied for six months in an English language training program for refugees. When her husband, who had learned English in Laos while working for the Americans, transferred to a vocational institute in an eastern suburb of St. Paul, she entered a prevocational program at the same school. There she continued her English language study for five months and then was "sent" to a mainstream vocational program in power sewing.

When her husband transferred to St. Paul TVI, she transferred to the school's mainstream apparel arts program, which included power sewing but also included more advanced commercial sewing skills. After she graduated from the program in December 1982 she went to a refugee em-

ployment agency in St. Paul for help in seeking a job. After two months the agency placed her in a job in a Minneapolis sewing factory where she started work at \$3.75 per hour. All workers were paid at hourly rates only. If workers wanted to buy medical insurance through the company they were charged \$120 a month, an amount few could afford to pay.

Because this woman was bilingual and had been trained in the operation of all the machines used in the company's production process, she was asked to serve as the supervisor's assistant soon after she started work. Numerous refugee women who could not speak English and had no training in sewing were also employed by the company, and she was asked to teach them how to operate the various machines. She was also asked to translate when the supervisor gave them instructions. However, she was never officially assigned to this job nor was she paid more for it. Instead she was asked each night to perform these tasks. After the first month her pay was raised to \$4.25, and after seven months it was raised again to \$4.45. It was not until she had worked at the company for two years that her pay reached \$5.05, the maximum paid by the company for production workers.

When she was offered a part-time job as bilingual assistant for the Hmong power sewing class at St. Paul TVI in 1983, she was very pleased. She liked teaching, and the pay of \$8 an hour was far better than what she earned in the factory. But because it was a part-time job (six hours), she had to continue her ten-hour nightly shift at the factory in order to support her family while her husband completed his vocational training. Moreover, while her teaching job raised the family income considerably, it did not resolve the problem of medical benefits for herself or her family. As a part-time worker she was not eligible for medical benefits at St. Paul TVI, and she could not afford the prohibitive cost of the medical coverage offered at the factory. Therefore, when her third child was born in St. Paul she had to pay \$1,145 in cash for the thirteen hours she was in the hospital.

Concerning her work in the sewing factory, this woman expressed the notion, commonly held among Hmong women, that she was not worthy of a better position for her first job. She said that she knew American women do not want sewing jobs because the pay is too low, but many Hmong women believe they should accept a low-paid job first and look for a better job later when they know more English. This viewpoint may stem partly from the low status of women in traditional Hmong culture but also reflects the often repeated admonition to refugees by resettlement workers in Thailand and in the United States to "start at the bottom and work your way up," in the American way. Unfortunately, this advice leads refugee women to take low-wage jobs that actually have little potential for advance-

ment either within the industry or in another field. It also makes them more vulnerable to exploitation in competitive industries that depend on low-cost labor to increase their profits.

On the other hand, the experience of a Khmer woman of forty-four years, interviewed in the 1985-86 bilingual apparel arts program at St. Paul TVI, illustrates the fact that benefits are often obtained from training per se, regardless of the type of skills learned. This woman had five years of elementary education in Kampuchea but knew no English when she arrived in St. Paul in 1982. Married to a policeman in Battambang, Kampuchea she had no work experience outside her home. When her husband was executed by Pol Pot's soldiers, she fled the country with three of her four children. At the time of the interview she and her children lived in public housing in St. Paul, and the family was supported by public assistance.

This woman was literate in her own language, and after one and a half years of English language training in St. Paul, she had achieved adequate English language skills to meet the requirements for the bilingual apparel arts program at St. Paul TVI. She had heard about the program from a friend and enrolled because she wanted to get a job.

This woman, like many others, had no idea what kind of wages she could expect to receive in the garment industry or whether medical benefits would be provided. Moreover, because she could not always understand the teacher's instructions in class without help from the assistant, she was worried about understanding instructions on the job. She was also troubled by severe headaches that doctors in St. Paul had not been able to relieve.

While it is unlikely that this woman will be able to provide more than partial support for herself and her family on wages from a garment industry job, the training itself has apparently provided a positive experience that has helped her adapt to her new life in St. Paul while still grieving over the loss of her husband and eldest son (who remained in Kampuchea).

This woman made it clear that she looked forward to the class every day. She found that the teacher and assistant were supportive and helpful, and the other women in the program were friendly. She also liked learning to operate industrial sewing machines.

Ironically, while jobs in the garment industry in St. Paul and Minneapolis are among the lowest-paid and most unstable jobs in the metropolitan area, and better jobs in alterations and tailoring are not readily available to refugee women, the training programs in this field continue to be very popular among the Southeast Asian refugees. For many, like the Khmer woman interviewed in the apparel arts class, these programs provide a supportive group experience that plays an important part in their

adaptation to their new environment. Sewing programs at St. Paul TVI have lent themselves to this purpose particularly well, as the women have worked together on various tasks, moved about freely in the classroom, and interacted with teachers, assistants, and other students.

St. Paul TVI did not provide child care assistance for refugee women in employment training programs. However, child care was available to public assistance recipients attending training sessions.

The Refugee Health Training Program in Minneapolis and St. Paul

Bilingual health interpreters were available to hospitals and clinics in Minneapolis and St. Paul beginning in 1980, but by 1983 physicians and hospital administrators were calling for bilingual health practitioners as a more practical long-term solution to the continuing communication problems with Southeast Asian patients and the need to provide culturally sensitive health care for Southeast Asian patients. In September 1983, the University of Minnesota and the American Refugee Committee, a Minnesota-based non-profit organization, submitted a joint proposal to the federal Office of Refugee Resettlement for a training grant under the Refugee Health Professional/Paraprofessional Retraining Program. The proposed project, one of five that was funded, received a total of \$91,000 for the training of thirty-five refugees as nurses, nurse-midwives, and physicians' assistants over a period of one year. Additional federal funds and a grant from a private foundation were made available to the project later, when more time was needed for students to complete requirements.

One-hundred-five Southeast Asian refugees initially expressed interest in the Refugee Health Training program. All were interviewed and given an opportunity to discuss the difficulties in obtaining licensure, their past experience in health care, and their educational background. Sixty-five who were still interested in enrolling in the program after the interviews, were given the Minnesota Battery English language tests. Forty-eight were enrolled in the program and began a one-month preparatory course in January 1984.

A special Licensed Practical Nursing (LPN) program was designed by the Minneapolis Technical Institute. In April 1984 thirty-two students, half women, began the program, taking one hour of English and three hours of technical coursework per evening, four nights a week. Clinical work started midway through the first quarter and was held on weekends. The curriculum was the same as that used in mainstream LPN classes, but the lectures were simplified and medical terms were written on the blackboard.

At the end of the first quarter it became apparent that those students with better En-

glish skills were progressing more rapidly than the others. A few in the slower group were told they could not continue, but could transfer to a three-week home health care aide training program. The staff also recognized that the heavy schedule of classes every evening and clinical work on weekends was causing stress and fatigue among the students, most of whom were working full-time and also had families to care for. The schedule was modified to include clinical work on Thursday evenings and alternating Friday evenings or Saturday. This change meant that the program would extend over a period of at least one and half years, rather than the one year initially planned.

Sixteen students graduated from the LPN program (ten women and six men). Eleven graduated in October 1985 and took the National Council of State Boards of Nursing Examination a week after graduation, without any special preparation. Only two passed, both women. In April 1986, three more passed the examination, all men. While waiting to repeat the examination, most worked as nursing assistants, a position for which all had earned certification.

The remaining five students graduated in April 1986 and took the examination soon after they graduated. None of this group passed, but all worked as nursing assistants or in other jobs while waiting to try again. The nursing examinations are particularly difficult for Southeast Asian students because of language problems and because the tests are timed.

Another LPN program in the same project was initiated in February 1985, at St. Paul TVI. Thirty-eight students started the class, about half women. At the time of this writing, sixteen remain in the class, ten women and six men, all of whom are expected to graduate in September 1986. While these figures represent an attrition rate of 58 percent, program staff point out that the dropout rate for mainstream LPN classes is also high, averaging about 40 percent, and those mainstream students rarely work full-time while attending school full-time, as most of the refugees do.

It is too early to assess the employment outcomes of the refugee health training program, although similar programs in Oakland, California and Providence, Rhode Island have placed virtually all their graduates. The three male students who passed their examinations in April 1986 have only recently received their test results and begun to look for jobs. One of the two women who passed the examinations in October 1985 obtained a position as an LPN and interpreter for the Social Services and Nursing Services departments of the University of Minnesota Hospitals. Her starting wage was \$9 an hour, or almost \$19,000 a year. The other woman was forced to postpone employment due to pregnancy complications.

The first student in the program to obtain



Phoua Thao, a graduate of the Refugee Health Training Program, now works as a nurse and interpreter at the University of Minnesota Hospitals.

an LPN position was a young Hmong woman who attended six years of elementary school in Laos during the war years before she fled with her family to Thailand in 1976. Following resettlement in Moultrie, Georgia, she attended a vocational school for five months before taking a job and continued English language training in the evenings after she started working. When she moved to Minneapolis with her family in 1980, a friend told her about an opening for an interpreter at the Minneapolis Health Department. She obtained the job the day after her arrival, and later heard about the training program from Health Department staff members.

Conclusions

Since the earliest years of Southeast Asian refugee resettlement in the United States, as data from the larger study indicate, a major consequence of federal refugee training policy has been the training of refugees in short-term programs for low-skilled, low-paid jobs in the secondary labor market. The secondary labor market is a sector of the economy comprised of highly competi-

tive, declining industries offering jobs that tend to be intermittent, seasonal, or part-time, with little opportunity for advancement. Consequently, refugees have been caught in a continuous cycle of moving from public assistance to unstable jobs and back again to public assistance. During a sixteen-month period in 1983 and 1984, for example, 807 Minnesota refugees were placed in 2,376 jobs.

In early 1986 the federal Office of Refugee Resettlement proposed to Congress that drastic cuts be made in its own budget by eliminating Targeted Assistance Program (TAP)—the largest federal funding program for refugee employment training—sharply reducing social services funding (part of which has supported training programs), and imposing even more restrictive regulations on refugee training opportunities. These proposals appear to reflect a culmination of ORR efforts to achieve its overriding policy goal of reducing resettlement costs by withdrawing supportive services such as employment training programs.

While federal policy has seriously af-

ected both refugee men and women, women have been far more adversely affected, both in terms of the number trained and type of training provided. Because federal AFDC regulations mandated training or employment for the "primary wage earner" of families on public assistance—generally male in refugee families—in order to reduce the number on welfare, federally funded refugee training programs have been designed largely to serve men. Consequently, a relatively small percentage of women have been trained. Even after the ORR-commissioned **Southeast Asian Refugee Self-Sufficiency Study** indicated that refugee families with more than one wage earner were most likely to achieve self-sufficiency, ORR made only a limited effort to provide more equitable training opportunities for women.

While federal training policy has resulted in the channeling of both men and women refugees into the secondary labor market, within the secondary market itself sex-segregated occupations such as industrial sewing, housekeeping, and electronics assembly (which has only recently drawn male workers), have been among the lowest-paid, least stable occupations, and have afforded virtually no potential for advancement. Federally funded programs have trained women predominantly for these occupations, thus reinforcing the inequities of the labor market.

Two types of training programs were exceptional in that they provided equitable training for women, affording them the possibility of work in the primary sector. First were the preemployment training programs that provided English language training, basic instruction in mathematics, and cultural skills development in a supportive setting. The fourteen preemployment programs included in the larger study enabled women with limited education—the most underserved group in the refugee community—to qualify for more advanced English language programs, employment training, or the job market.

Second were the health care training programs. Originally initiated in response to requests from hospitals and clinics serving refugee patients, these programs became almost unique among federally funded training projects in providing training for refugee women to enter the primary labor market. It remains to be seen whether the experience gained in these pioneering programs will be used in developing similar training projects in the future.

Finally, while this study of employment training has focused on the achievement of stable employment and economic advancement, it has been evident from the data collected that training programs benefited refugee women in other ways. Many programs provided a supportive atmosphere that enabled refugee women to cope with difficult adjustment problems that accompanied their resettlement in the United States. Training programs also pro-

vided contacts with Americans and a setting conducive to developing the self-confidence necessary for survival in American society and entry into the work force.

Subsidized Housing Data Base Available for Minneapolis and St. Paul

As part of a collaborative research program, CURA and the Minneapolis-St. Paul Family Housing Fund have now developed a computerized data base on housing developments that have received some type of federal subsidy since the early 1960s.

The project file lists over 100 developments. For each there are data covering the development's location, management contact, number and type of units, source of subsidy, amount and source of mortgage financing, terms of contract and date of contract expiration, target population (family,

elderly, handicapped) and tenure (rental or ownership). Cross-tabulations can be retrieved for any mix of any items.

It is anticipated that the data base will be useful for a number of different policy questions focused on maintaining the supply of affordable housing for low and moderate income households.

Access to the information can be provided to public agencies and neighborhood based organizations through CURA. Contact: Barbara Lukermann or Meera Ananth at 625-4542.

Sarah Mason holds a doctoral degree in American and Asian history from Northern Illinois University at DeKalb. She was employed by the Minnesota Historical Society from 1978-81 writing chapters on the Asians in Minnesota for their volume *They Chose Minnesota: A Survey of the State's Ethnic Groups* (1981). She has served as an advisor for the Women's Association of Hmong and Lao since 1981, working particularly with their Elderly Hmong Women's Project. Mason has recently returned to China (she lived in Canton until the age of eighteen) where she will be teaching American history and comparative cultures at Zhongshan University for the 1986-87 academic year.

Mason first became involved with CURA when she joined the Southeast Asian Refugee Studies Project team that was working on the Hmong Resettlement Study in 1982-83. She also conducted a preliminary study of employment training programs for Hmong women in St. Paul and Minneapolis in 1983 and presented her findings in a paper delivered at the second Hmong Research Conference at the University of Minnesota in November 1983, later published in *The Hmong in Transition*.

This article presents a few highlights from Mason's full study of training programs for Southeast Asian refugee women (*Training Southeast Asian Women for Employment: Public Policies and Community Programs, 1975-85*). Her complete study was made possible by a grant from the Rockefeller Foundation, supplemented by support from the Southeast Asian Refugee Studies Project (SARS) and CURA.

CURA-Related Publications

It is commonly believed that Minnesota is very rich in water resources, yet "those who depend on water resources know too well that the signs of abundance can be misleading." Water availability, water use, and a variety of water problems are briefly surveyed in **Minnesota Water: A Geographical Perspective**. This new report from the Water Resources Research Center at the University of Minnesota was prepared by three people in the Geography Department—Carol Gershmehl, Janet Drake, and Dwight Brown—and supported by a grant from CURA. The thirty-two page report presents the geographic and historical variations in water availability, examines geographic patterns and trends in water use in Minnesota, and briefly describes a few major water problems that Minnesota faces as a way of illustrating the interconnections between resources, uses, and problems. Copies of the report are available free of charge from Water Resources Research Center, The Graduate School, Uni-

versity of Minnesota, St. Paul, MN 55108 or phone 612/624-9282.

Thomas Peek, an administrative assistant with CURA has written a paper about his CURA experience with policy analysis. Peek has participated in three major policy analysis projects at CURA: the CURA Peat Policy Project (1979-81), the CURA Project on Fiscal Constraints in Minnesota (1981-84), and the CURA/College of Education Project on the Future of K-12 Public Education in Minnesota (1983-86). His paper, **Overcoming Fragmentary Analysis: An Integrative Approach to Policy Analysis** was published as Occasional Paper Number 10 in the Occasional Papers in Planning series of the Department of Town and Country Planning, The Queen's University of Belfast, Ireland. Copies may be ordered from the Department of Town and Country Planning for £2 each. A shortened version of Peek's analysis will be published in **Regional Studies** (the journal of the Regional Studies Association, London) in 1987.

New CURA Publications

Courses on Aging, University of Minnesota, 1986-87. All University Council on Aging. 1986. 19 pp. Free.

The University of Minnesota offers many courses related to aging. This is a listing of those courses in which aging is a primary focus. Courses are listed by campus (Twin Cities and coordinate campuses) and by department.

Training Southeast Asian Refugee Women for Employment: Public Policies and Community Programs, 1975-85. Sarah R. Mason. Southeast Asian Refugee Studies Project. Occasional Papers, Number Four. 1986. CURA 86-6. 142 pp. \$5.00.

Sixty-nine community programs for training Southeast Asian refugee women were surveyed. The report includes background on the development of public policy

in regard to refugee training as well as case studies of the training programs that were surveyed across the country from Santa Ana, California to Providence, Rhode Island. Highlights from this work are presented in this **CURA Reporter**.

White Hmong Dialogues. David Strecker and Lopao Vang. Southeast Asian Refugee Studies Project. Occasional Papers, Number Three. 1986. CURA 86-5. 20 pp. \$2.00.

Twenty dialogues in White Hmong are presented in Hmong and English as a teaching aid for students learning to speak Hmong. These dialogues were originally developed for an intensive beginning Hmong class taught by the authors. Vocabulary, grammar notes, and pattern drills are included with the dialogues.

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- Courses on Aging, University of Minnesota, 1986-87.** All University Council on Aging. 1986. 19pp. Free.
- Down to the Bone: Community-Based Facilities in a Time of Retrenchment.** Esther Wattenberg. 1986. CURA 86-4. 92 pp. Free.
- Training Southeast Asian Refugee Women for Employment: Public Policies and Community Programs, 1975-85.** Sarah R. Mason. Southeast Asian Refugee Studies Project. Occasional Papers, Number Four. 1986. CURA 86-6. 142 pp. \$5.00.
- White Hmong Dialogues.** David Strecker and Lopao Vang. Southeast Asian Refugee Studies Project. Occasional Papers, Number Three. 1986. CURA 86-5. 20 pp. \$2.00.

Hmong Publications

- A Bibliography of Hmong (Miao) 2nd Edition.** Douglas P. Olney. Southeast Asian Refugee Studies Project. Occasional Papers, Number One. 1983. CURA 83-7. 78 pp. \$3.00.
- The Hmong in the West: Observations and Reports.** Bruce T. Downing and Douglas P. Olney, eds. Southeast Asian Refugee Studies Project. 1982. CURA 82-1. 410 pp. \$8.25.
- White Hmong Language Lessons.** Doris Whitelock. Southeast Asian Refugee Studies Project. Occasional Papers, Number Two. CURA 82-6. 131 pp. \$6.25.
- White Hmong Language Lessons Cassette Tapes.** Three tapes to accompany **White Hmong Language Lessons**. Southeast Asian Refugee Studies Project. \$10.00.

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reporter

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The Center for Urban and Regional Affairs was established to help make the University of Minnesota more responsive to the needs of the larger community and to increase the constructive interaction between faculty and students, on the one hand, and those dealing directly with major public problems, on the other hand.

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CURA

University of Minnesota
330 Hubert H. Humphrey Center
301 19th Avenue South
Minneapolis, MN 55455

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