

Year 1 Annual Report for the Gansu Poverty and Education Project

Submitted by Emily Hannum, 7/16/00

I. Project Summary

A. Research Agenda

The Gansu Poverty and Education Project is a mixed-method, multi-level study designed to analyze the following issues:

- boys' and girls' development and schooling experiences (broadly defined) in a poor rural setting
- attitudes of children, families, and teachers about parenting and schooling
- the mechanisms (home, community, school) linking poverty and girls' and boys' education and development
- rural children's schooling experiences and social mobility

Larger goals of the Project are to inform the design of policies and interventions that will improve the quality of life for rural children and to attract the attention of a broader scholarly community to rural educational issues in China.

B. Research Site

The site for the Project is an interior province of China characterized by high rates of illiteracy and prevalent poverty. Gansu is an appropriate research site for studying poverty-education linkages in rural settings because it is characterized both by high rates of poverty and by varying poverty conditions in flat, hilly and remote mountainous sites. Further, the barriers to schooling faced by families in Gansu are common to provinces and autonomous regions located in China's less-developed interior.

C. Sample Design and Instrumentation

Design of the Gansu Project was a collaborative effort involving researchers from Harvard University, University of Michigan, Northwest Normal University, the China and Gansu Education Ministries, the Chinese Academy of Sciences Institute of Psychology, and the Statistics Bureau. The final design for the Project involved consideration of substantive, technical, logistical, and political issues.

The sample design for the Gansu Project consisted of the following elements:

- a primary sample of 2000 children in 20 rural counties aged 9-12 in June 2000
- five linkable secondary samples of children's mothers, household heads, home-room teachers, school principals, and village leaders
- a census of primary school teachers and school principals in sampled villages
- a qualitative interview subsample of children, mothers, and teachers

The instrumentation for the Gansu Project included detailed measurement of material resources and the human, social and cultural capital available to children, families, communities and schools. In addition, parent and teacher practices, attitudes and decision-making processes related to the education of children were directly measured. Measures of children's schooling experiences included external measures such as enrollment, attainment, grades, and tests of general skills and academic achievement. Subjective measures of educational experiences included mother's, child's and teacher's

assessments of well-being, motivation, engagement, achievement, and behavioral problems.

D. Personnel Added in the Past Year

In the first year of the Project, we were able to draw in several new research team members from a variety of disciplines:

Albert Park, Assistant Professor of Economics at the University of Michigan, was a consultant on the original proposal. He has taken on the role of a co-investigator. He supervised the development of measures of economic concepts and helped with coordination of data collection.

Tiemin Tang, Deputy Director, Gansu Urban Survey Team, Statistics Bureau, Lanzhou, China, joined the Project last year as Survey Director.

Jianxin Zhang, Director of Child Psychology, Institute of Psychology, Chinese Academy of Sciences, joined the Project last year as a consultant to supervise the development and pretesting of a general skills test for sampled children.

Min Jing, Deputy Director, Gansu Provincial Institute of Educational Research, joined the Project last year as a consultant to develop mathematics and Chinese tests for sampled children.

Jianxin Zhang, Director, China Educational Development Research Center, Ministry of Education, joined the Project last year as a consultant to advise on incorporating policy-relevant issues into the Project.

Sangui Wang, Associate Professor, Institute of Agricultural Economics, Chinese Academy of Agricultural Science, and Director, China Poverty Research Association, joined the Project last year as a consultant to design data entry software and supervise data entry.

Xiaodong Liu, Doctoral Candidate in Human Development and Psychology, Harvard Graduate School of Education, joined the Project last year as a research assistant to work on the mother and child questionnaires, the general skills test, and survey management.

Jihong Liu, Doctoral Candidate in Population and International Health, Harvard School of Public Health, joined the Project last year as a research assistant to work on the household and village questionnaires and assist with survey planning and management.

Phil Brown, Doctoral Candidate in Economics, University of Michigan, joined the Project last year as a research assistant to help with field testing the survey instruments, supervising interviews, and coordinating data entry.

II. Progress Report

We note that refining our instruments for baseline data collection necessitated more trips than initially planned. The schedule for baseline data collection was thus delayed from the beginning of the first year to the end of the first year of the Project. We completed baseline data collection in early July. The Statistics Bureau is entering data and we anticipate data transfer by late August. In this section, we summarize the past year's activities.

A. July-December 1999

In the summer of 1999, work was devoted to revisions of questionnaires pretested during spring of 1999. In August, investigators Yanhong Zhang and Emily Hannum and

research assistants Jennifer Adams and Xiaodong Liu visited Gansu to continue with pretesting the questionnaire and preparing for fieldwork. During the August trip, one primary goal was testing and refining the questionnaires to make sure that they covered key concepts and that appropriate language was used for the local area. The following activities were undertaken:

- Review of questionnaire language and content by Statistics Bureau personnel, local teachers, and Northwest Normal University faculty and graduate students. (Many faculty and graduate students come from or conduct research in the local area.)
- Formal pretest of the child questionnaire with 60 children. (The questionnaire was administered by Xiaodong Liu and Northwest Normal University graduate students under conditions approximating those that would prevail in the actual survey. The purpose of the formal test was to collect data that could be analyzed to provide information on redundant and inappropriate items in the child questionnaire.)
- Review of methods for measuring children's well-being and development by child psychologists at Beijing Normal University and the Chinese Academy of Sciences Institute of Psychology.

We became aware during meetings on this trip that standard achievement tests across the province had been phased out. We thus sought to develop our own set of tests. We solicited agreement from Dr. Jing Min to develop achievement tests in Chinese and math. We also solicited agreement an agreement from Dr. Jianxin Zhang to develop a general skills test for the study.

A second goal of the August trip was to shoot an interviewer training video illustrating appropriate and inappropriate survey techniques. Our intention in creating the video was to translate abstract concepts about survey research principles into concrete, realistic dilemmas that the interviewers might confront in the field. The substance of the video was based on general principles of survey research and on observations of fieldwork in the March 1999 pilot (funded by the Spencer Small Grant entitled 'Education in Rural China: A Pilot Study of Children and Families in Gansu', described in the final report submitted 5/8/99). We developed vignettes illustrating basic survey principles and violations of those principles. These principles were also discussed in the interviewer training manual. Xiaodong Liu, Jennifer Adams, and Northwest Normal University graduate students Bohua Chen, Guoguang Liu, Yun Bai, and Jinlong Chen shot and acted in the videos. (The videos were used in the April 2000 pretest and again in the June 2000 baseline survey to stimulate discussion and criticism during the training sessions.)

In the fall, we continued to work on implementing revisions to the questionnaire. We focused particularly on refining the measurement of rural income and wealth in the household questionnaire. We also analyzed child questionnaire pretest data and reduced the total number of items in the child questionnaire. Finally, we successfully applied to the Harvard Graduate School of Education Faculty Research Innovation Fund for funding to support the design and implementation of the general skills and achievement tests.

B. January-March 2000

In January, Albert Park, Yanhong Zhang, and Phil Brown made a trip to Gansu for the purposes of planning and further refinement of the questionnaires. Dr. Jianxin Zhang joined them to pretest the general skills test. Activities related to questionnaire development included the following:

- Meetings with faculty and students from Northwest Normal University and policy advisors in the Gansu Education Commission to explore additional pressing educational issues for possible inclusion in the questionnaire.
- Informal field tests of all instruments in three villages by Albert Park, Yanhong Zhang, Phil Brown, Jianxin Zhang, and teams from Northwest Normal University and the Statistics Bureau. (Each day, the entire team focused on one questionnaire. They spent time in the field followed by a meeting each evening to discuss revisions needed for that day's questionnaire.)

An additional focus of this trip was planning for the June survey. Meetings were convened with Director Tang and other personnel from the Statistics Bureau. Discussions covered procedures for sampling, staffing and staff training, interviewer incentives, monitoring and rechecking of interviews, and data entry procedures. Concerns about the political sensitivity of duplicating items in official Statistics Bureau surveys (specifically the economic and health questions) were alluded to by the Statistics Bureau personnel.

Time from January to March was devoted to revising questionnaires based on suggestions from the field test. Negotiations and agreements were also drafted. Finally, training materials for the April 2000 pretest were drafted.

C. April-May 2000

In early April, Emily Hannum, Jihong Liu and Xiaodong Liu traveled to Gansu. They were joined and assisted by Seth Hauser, a Sociology graduate student at the University of Michigan, who was interested in obtaining fieldwork experience. The purposes of the trip were to conduct final budget and planning negotiations with the Statistics Bureau and to conduct a formal field test (approximating baseline survey conditions) in three villages with Statistics Bureau personnel.

Activities related to planning and negotiations included several meetings convened in Lanzhou and several evenings in the field with the Statistics Bureau team members. Primary topics of discussion included sampling, implementation, and the timeline. Two problematic issues arose: the budget and political sensitivity.

It became apparent during this trip that our cost estimates for the data collection portion of the Project were outdated. These estimates had been provided to us two years earlier at the time of application to Spencer by a different office in the Statistics Bureau with whom we had worked on our pilot project.¹ Given rising prices over time, the change in collaborators, and our assessment that the new line-item budget requests were reasonable, we expanded the Statistics Bureau budget. We expect to cover this expansion by moving funding within the total amount of the grant.

It also became apparent that the political sensitivity issue mentioned in January was more serious than we had thought. Strangely, the Gansu provincial government had recently experienced several scandals related to foreign religious and political activists posing as survey researchers or using survey data to criticize the government. These scandals made the process of gaining official approval for international projects more difficult than usual. We also discovered that the scandals had resulted in an official ban

¹ While the office that we worked with during the data collection for our Spencer Small Grant Project was competent, the long experience of Director Tang's office with large-scale household surveys made them a more appealing partner for the larger project.

on collecting data that would allow foreigners to replicate results of Chinese government surveys, for example, on poverty, finance, or health. This created a dilemma for us, as we had followed what would be considered a technically good practice of modeling the relevant sections of our questionnaires on surveys that the Statistics Bureau is accustomed to fielding. The child, mother, and school-related questionnaires were largely unaffected, but substantial portions of the household and village questionnaires were modeled on Statistics Bureau surveys. Many hours were spent discussing with our Statistics Bureau team members how to deal with this issue. With considerable effort, we were able to proceed item-by-item through the household and village questionnaires and slightly modify question wording or response categories so that the data we collected would not allow exact replication of Statistics Bureau surveys. For political reasons, we were unable to retain a small number of non-central items.

Because of the political sensitivity issue, the Statistics Bureau suggested that Northwest Normal University could sign the international contract with Harvard, and that they (the Statistics Bureau) would sign a domestic contract with Northwest Normal University. After clearing this procedure with Harvard's Office of Sponsored Research, we agreed. Wang Jiayi requested that the Northwest Normal University portion of the subcontract be converted to a consultancy to avoid incurring overhead costs. We agreed to this request as well.

The formal field test of the full set of questionnaires was successful. The intentions of this pretest were to pilot training protocols and to solicit final feedback on questionnaire wording. We found the training videos to be a very effective teaching tool for interviewers. We were pleased that the Statistics Bureau interviewers were very serious about the training, and about their responsibilities as interviewers. We identified a few concerns related to sampling and interviewing techniques that we were able to redress in subsequent discussions with the Statistics Bureau and in our baseline survey training protocols.

Upon returning to Cambridge, work focused on finalizing the questionnaires and training materials and renewing IRB approval. The questionnaire revisions for the household and village questionnaires were substantial due to the political issues that had arisen in the field; for other questionnaires, the revisions were minor.

We also finalized the sampling procedures during this time period. It was determined that a slightly younger sample than initially planned, a sample more likely to still be in school, would be useful given changes in the nature of our outcome measures. (Since we collected our own achievement data and general skills tests, we were interested in observing scores for a large proportion of the sample.) We agreed on a sample of children born between July 1 of 1987 and June 31 of 1991.

We made the decision to delay qualitative data collection until preliminary results from the survey were obtained, rather than to simultaneously collect the quantitative and qualitative data. With ideas about our quantitative results in hand, we would be better able to focus our qualitative interviews on collecting transcript data that could be effectively integrated into our research reports.

D. June-July 2000

In June, Yanhong Zhang, Emily Hannum, Albert Park, Xiaodong Liu, Jihong Liu, and Phil Brown traveled to Gansu to prepare for and implement the baseline survey data collection. Yanhong Zhang arrived at the beginning of the month to supervise printing of the questionnaires. A mild earthquake briefly interrupted the process, but the printing of

the questionnaires was completed. Others arrived on June 10 to begin training on June 12.

Training was conducted for five full days. Team members from North America were assisted in conducting the training by 10 faculty and graduate students from Northwest Normal University and 10 provincial Statistics Bureau personnel. Training was attended by 120 county Statistics Bureau interviewers and supervisors. The first day covered general principles and incorporated the training videos; subsequent days covered specific questionnaires. Interactive training methods were employed, including practice interviewing, critiques of videos and live mock interviews, and exercises in which interviewers recorded complex scenarios into questionnaires. A quiz was administered at the end of training to encourage studying and examine interviewers' capabilities. Based on interviews observed, the principles emphasized in the training were successfully conveyed.

Fieldwork started between June 19 and June 26, depending on whether or not sampled villages were in the midst of harvesting. County Statistics Bureau personnel were primary interviewers and supervisors for the Project. North American or Northwest Normal University team members visited each of the 120 villages in which interviews were being conducted. Provincial Statistics Bureau personnel also randomly rechecked county performance. Initially, the plan was to complete interviewing in two weeks. However, flooding slowed the data collection progress in some counties.

Data entry by the Statistics Bureau began on July 6. Dr. Sangui Wang came to Gansu to coordinate the start of data entry. Phil Brown will remain in Lanzhou through late July to supervise the process. Two Northwest Normal University graduate students, Bohua Chen and Hong Yang, are assisting him. Chen and Yang, who know the Project well, will stay on to supervise the completion of data entry. To date, data entry appears to be running smoothly.

III. Outcomes of the Project

In the first year of the Gansu Project, we have collected data that will allow us to progress toward the research objectives listed in the introduction to this report. We anticipate that research based on the first wave of the Gansu Project will allow us to identify community, family, and individual factors that contribute to the physical, psychosocial, educational, and economic well-being of children. In follow-up waves, we expect to observe the long-term consequences for socio-economic status and social mobility of each of these four dimensions of well-being.

In the first year of this Project, we have also sought to lay the groundwork for our goal of producing research that informs policy and intervention strategies in rural China. We have established a good working relationship with officials in the Ministry of Education at both the national and provincial levels. We have obtained permission for our research results to be circulated as internal documents at both the national and provincial Ministries. We have communicated about the Project with organizations that support development research and projects in impoverished areas in China, including the Asian Development Bank Institute, the Ford Foundation, UNDP, and UNICEF. Finally, an unanticipated benefit of our Project has been the establishment of a relationship between the Statistics Bureau and Northwest Normal University that may support new directions in educational policy research in Gansu. During Project meetings, Director Tang and Professor Wang have discussed the ample household and regional data collected by the Statistics Bureau and their lack of manpower for analyzing these data.

Professor Wang and Director Tang hope to pursue further collaborations in which the Statistics Bureau will provide data access to students and faculty at Northwest Normal University for analysis and report-writing. Reports would be provided to education policy makers in a format useful for research-based policy decision making.

Finally, we have also worked toward the goal of stimulating interest among a broader research community in the educational issues facing rural children in China. We have presented the Gansu Project at the Comparative and International Education Society, the Harvard Graduate School of Education Alumni Weekend, and the Fairbank Center for East Asian Studies at Harvard. In the next year, we have arranged to present results at the China Center at the University of Michigan and, pending support by the Ford Foundation-Beijing, at a Project workshop to be held in Cambridge.

We have seen a few signs of progress toward this final goal in the first year. One sign is the fact that we have received unsolicited inquiries about postdoctoral opportunities from individuals representing the fields of economics, human development, and education. (In future waves of the Project, we hope to be able to accommodate some of these requests.) A more concrete sign is the expanding list of researchers from a broad range of disciplines actively participating in our Project. With the new participants added to the Project this year, our team includes researchers and graduate students representing the areas of public health, sociology, demography, economics, psychology, education policy, and human development. In the coming year, we expect that these participants will begin writing master's theses, doctoral dissertations, book manuscripts and articles using Gansu Project data. In next year's report, we will highlight the results of new multi-disciplinary research on children's schooling and well-being in rural China made possible by Spencer support of the Gansu Poverty and Education Project.