participants can focus attention on what they are thinking and doing; but at the same time trainers do not relinguish their responsibility for keeping participants on task, directing transitions from one experience to the next, and adroitly handling exchanges of different perceptions and understandings — including the trainer's own.

Summary

All three experiential models employ many of the same types of learning exercises and require trainers to use these activities to help participants evaluate their experiences. Kolb's experiential learning cycle begins with a learning activity, followed by an examination of that experience and then application of learnings. Krebs' problem-solving approach prescribes first an assessment of real world experience and then guided practice using learnings developed from recall and research related to that experience. Steinaker-Bell's experiential taxonomy involves a series of assignments through which participants progressively become more practiced at behaviors the trainer has determined should be learned.

Krebs' model and a variant of Kolb's model have appeared in an international reference manual on agricultural extension and education (Swanson, 1984), and increasing numbers of college teachers of agriculture are becoming familiar with these experiential approaches. As these models are more widely applied, it will be interesting to watch for refinements that teachers and trainers of agriculture introduce and for changes that result in the design and delivery of agricultural training programs.

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Agricultural Teacher Education Programs in China

Chi Zhang and Barbara A. Holt

One of the results of educational reform in China since 1978 has been the rapid development of vocational education. "By the end of 1986, there were 3,187 vocational and agricultural middle schools with 2.5 million students" (Bott, 1988, p. 26). According to **People's Daily** (1987), there were also 3,782 secondary specialized schools with 1,757 students in the same year. The ambitious goal of the government is to produce 1.1 times more graduates from secondary vocational technical schools during the current five years (1986-1990) than the previous ones (the Seventh Five Plan for National Economy and Social Development of the People's Republic of China). In rural areas many secondary schools either have started to offer vocational courses or have been transformed into secondary agricultural-technical schools. These new programs demand a great number of agricultural teachers. However, at present there is an acute shortage of teachers for agricultural education, which was pointed out by research (Zhao, 1984) as well as the Decision on Reform of Educational System of the Central Committee of Communist Party of China (1985). In order to meet this demand, many agricultural teacher education programs have been established in higher education since the early 1980s.

To some extent most agricultural universities or colleges now provide agricultural teacher education programs. Agricultural teacher education programs in China have some unique characteristics as well as the most common features of the conventional teacher education programs. They are very diverse, but they are all below the college degree level at this trial stage. To understand them it is necessary to examine their philosophy, curriculum design, and the performance of graduates. The following is a brief discussion on some aspects of their programs.

Program Rationale

Agricultural teacher education programs in China started in the early and middle 80s in response to the great demand for secondary agricultural teachers. All of them are administered through agricultural universities or colleges, where little was prepared for them at the beginning. It is assumed that agricultural

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teachers can be produced by adding pedagogy and psychology courses into the regular curricula of agricultural colleges. Similar to their counterparts in the United States during the early stage of this profession, the programs in China were designed under the combined efforts of a group of agricultural scientists, professional educators, and psychologists.

All of them are either two years or three years in length, varying among universities or colleges. Graduates of the programs receive a diploma upon graduation, which is equivalent to the associate degree in the United States. It is a general rule in China that a new college major starts as a non-degree program. These programs now lack enough expertise necessary to be qualified as a degree major. Moreover, diploma programs are favored because more graduates can be produced in a shorter period of time.

There are several types of organizational structure to implement these programs. The most common program organized as a major within the technical departments. For example, the agricultural teacher education program in South China Agricultural University is provided at the Department of Agricultural Physics in the College of Agronomy. The students in that program study agronomy as a technical major.

The second type is organized within an independent department. The first department of agricultural education in China was established in Zhejiang Agricultural University (ZAU) in 1984. The Department of Agricultural Education and Extension (DAEE) of ZAU administers the program and provides educational professional courses. Similar to this program is the one offered in Nanjing Agricultural University (NAU) which is organized by its Institute of Research on Higher Education.

Recently, some small agricultural colleges have been transformed into "agricultural teacher colleges" which have the goal of producing agricultural teachers for secondary education. All the students in the colleges are required to take pedagogy and psychology classes.

Programs in all organizational structures are at a trial stage. Their size is generally small and unstable in terms of the number of students. For example, the program in NAU recruited 30 students in 1984, and had no recruitment in 1985.

Based on the experience in the last several years, many Chinese agricultural educators began to rethink the existing programs. There seems to be a trend to stabilize this profession by upgrading the programs to assure the quality of the graduates. A proposal has been submitted by Zhejiang Agricultural University to establish an undergraduate degree program in the next few years.

Curricula

A clear goal of the programs is to educate secondary agriculture teachers. Under this direction, the programs aim at building competencies in both agricultural technology and teaching skills of the students. Like conventional teacher education programs in China, moral education has an equal emphasis in the curricula.

Students enrolled are selected only from those who can pass the tough national unified college entrance examination so that the quality of their academic performance is assured. Most students enter the programs without any working experience. The most common problem among students is the lack of motivation for being teachers because of unfavorable conditions of the teaching profession in general and of vocational agriculture in particular.

The course work of the programs consists of four components: basic courses, agricultural-technical courses, education professional courses, and electives. An internship before graduation also is included. The curricular arrangement can be better understood by using as an example the two-year program in the Department of Agricultural Education and Extension, Zhejiang Agricultural University.

A total of 80 credits is required for students in that program to graduate. The basic courses compose 40% of the curriculum. These include 2 semesters each of political science, chemistry, biology, math, English, physical education; and one semester each of biochemistry, plant phvsiology, Chinese language, and introduction to agriculture.

Another 40% of the curriculum is courses in the agricultural area. Based on their own choices, students are divided into three groups of study in the areas of agronomy, animal husbandry, and agricultural economics. Lab skills are especially emphasized in their studies.

There are only two education professional courses being offered, pedagogy and psychology, which make up only about 6% of the curriculum. Focuses in this part are placed on studying teaching skills and understanding student behavior.

Students' selection of elective courses is based on both individual interests and departmental recommendations. Because of the time limitation, only a few electives are available to them.

An internship which lasts a month before graduation is a crucial part of this program. Students choose to teach and live in one of the designated secondary vocational schools in the province. For most of them it is the only chance to explore the teaching profession in a real situation before taking their positions. It is during the internship that positive attitudes toward teaching are more likely to be formed. The practice of student teachers is supervised by both local teachers and university faculty members.

Students in this program are actively involved in activities of the university. However, there have been no student vocational clubs in the department nor nationwide. The program in ZAU is one of the earliest and most successful among those of this profession in

China and has produced nearly 300 graduates in the last five years.

In the agricultural teacher education profession throughout the country, the quantity and quality of agricultural educators is the most severe problem. Most faculty members are either agricultural scientists or professional educators without advanced study in agricultural education. Their creativity is much confined due to insufficient information on the development and general approach to this profession.

For the last forty years students were assigned a job by the university upon graduation. A student's assignment was determined by a number of factors, including the general performance and special mastery of the student, demand and supply of his/her hometown, and chance. Because of many disadvantages of the assignment system. it will no longer be applicable to all students who have entered college since 1988. No doubt this new policy will have strong impact on agricultural teacher education programs. Its result is yet to be seen. However, experience with former graduates will have definite influence on the present programs.

Performance of Graduates

The product of any education program determines the worth of its offering. This profession is certainly no exception. The largest group of graduates is currently employed in teaching professions at various secondary agricultural programs. The rest of them are employed in the extension system, government bureaus, civil organizations, etc. No specific follow-up data are available at the national level at present. One survey done in 1986 at Zhejiang Agricultural University showed that about 4.9% of its former students were working in the educational system; while the second largest employer was the extension system.

Since most vocational agricultural programs are offered at senior high school level, it brings s sharp question for the profession. One of the requirements for teacher qualification at this level is the college degree, but these students are not trained in an academic track. This contradication results in a negative psychological impact on their career in the teaching profession. Unfortunately, there have been no plans of further training for them in order to improve their academic qualifications.

From such a broad pircture above, we can conclude that agricultural teacher education in China has had a rapid change in recent years. However, it is still in an early stage of development which needs to be matured. The time has come for Chinese agricultural educators to evaluate the past and form a new future direction. Although the success of these programs in the end will be determined by society, the profession itself can greatly contribute to its development by reorganization. A professional association needs to be formed to strengthen cooperation among the colleagues nationwide. Valuable expertise also can be obtained through international exchange programs. Continuing education for in-service teachers is a practical way to improve their professional qualities. There are many things that need to be done for agricultural teacher education in China in both short and long terms.

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Foreign Students' Perception of Home Country Development Role

F. Richard Rohs and Lenita D. Newby

Introduction

Recent famines in developing nations have attracted world attention as the scale of death and media coverage grows. Such crises have reinforced prior experience and knowledge that the transformation for these countries from an agrarian to an industrial society must proceed through the development of the agriculture sector (Mellor and Gavian, 1987).

This development is linked with the need for trained manpower and the lesire to incease technology. The need for trained manpower and increased technology and the lack of adequate educational facilities are major reasons for the current number of students from developing countries studying in the United States (Boyan, 1982, FAO, 1983).

Because the ultimate goal of educating foreign students from developing countries is to provide knowledge, skills, information and new ideas which the students can utilize when they return to their home countries to promote the building of educational institutions and play a role in the country development, it is important for U.S. institutions to ascertain the impact of their programs on students (Jenkins, 1982).

A major concern of educating foreign students in agriculture is whether or not these students perceive themseives as being able to influence changes back home. Whether or not foreign students perceive themselves as playing a role in their home country's development process can influence the degree of

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