

The Visitor

Devoted to the Interests of Agricultural Education in Minnesota Schools

Vol. LXIII

January, 1976

No. 1

REVOLUTION AND VOCATIONAL EDUCATION IN PORTUGAL*

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*This article is based on the author's experience during a three month Senior Fulbright Hayes Researchship with the Ministry of Education in Portugal during the past summer. The Researchship focused on planning and evaluating vocational education programs.

Political posters several layers deep on ancient statues and buildings, industry at a virtual standstill, politicians in constant meetings with little consensus and a people frustrated with the slow pace of a stagnating revolution — these were impressions of present day Portugal to an outsider on a short visit. Portugal is a country not much larger than Minnesota and located on the Iberian Peninsula. From its ports, early ships sailed to discover routes to India and South America — at that time, feats equivalent to the United States putting a man on the moon in the 1960's. Portugal was very rich then in marked contrast to its present state, the latter resulting from lost wars, and natural disasters, and poor financial management.

Since the late 1920's, Portugal was ruled by a dictator. During that time the country recovered from economic bankruptcy, but later, through very conservative public investment, fell behind in the development of its industry, transportation, communications and education. In April 1974, the armed forces, with the support of the people, overthrew the dictatorship and declared the country a free republic. Since then, there has been constant turmoil in the government as the many political parties work out the way the country is to be ruled. It appears that the people, used to little involvement in governance under the dictatorship, had to now learn how to cope with the responsibility of their new won freedom. This educational process has been frustrating and expensive. The country is at once an exciting place — revolution is in process, major changes are an everyday occurrence, the people are in spirited debate — and at the same time

there is displeasure with instability and chaos in government and lack of real change in the living conditions of the people. Discussions seem to be changing focus from what "could be" to planning "how to get started."

The revolutionary spirit of the politics in the country is having impact on its vocational education programs. Major priorities for change are: (1) move from separate "academic" and "vocational" educational institutions to "comprehensive" schools; (2) expansion of post-secondary vocational education opportunities, and (3) building a system of research and development to improve and expand vocational education. The move to "comprehensive" schools is seen as a means to reduce the class structure propagated by the separate institutional structure. Operationally this will mean less vocational education in elementary and secondary schools, although there is an emphasis on making the whole curriculum relevant to life experiences, including work.

Pilot post-secondary vocational education programs are being coordinated by the Ministry of Education in horticulture (particularly grape culture), veterinary assistant, and metal work. Emphasis is on securing cooperation between several of the ministries (i.e. Education, Labor, Agriculture) and employers. At present much of the post-secondary vocational education is operated by each of the separate ministries or private institutions with little coordination or agreed quality standards — none on a scope sufficient for the country's needed economic development. The metal work program had an active advisory committee, structured curriculum, systematic evaluation, and supervised occupational experience programs. These were developed by individuals with little "professional education" training — but a keen interest in what was being done. The pilot post-secondary programs were showing that school based programs, although high in quality, were too expensive. New efforts were being made to work with industry groups to develop a more formalized apprenticeship program so that students could be productive while they learned.

High priority in vocational education has been given to building a research and development center because of the need to pool the limited financial and technical resources of several ministries for development of curriculum and instructional programs to train workers for planned large scale changes in industry. Focus was on working directly with industry sectors to develop programs and materials for immediate use.

Portugal is a stimulating place to experience at present. A revolution which started with many promises is now trying to prove itself worthy of the effort. Leaders are being challenged to define goals and how to reach them quickly with many financial, technological, and human resource constraints as well as large differences in philosophical base among political parties. Of course, there is the other side of Portugal which has changed little over time — the cool, clear ocean, fresh fish markets, bustling streets of Lisbon, large cork tree orchards, ancient palaces and friendly people.

THE INTER-RELATION BETWEEN CLASS LEARNING EXERCISES AND HOME PROJECTS IN VOCATIONAL AGRICULTURE

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Background of the Problem — Two methods of approach to the problem of training boys for the vocation of farming have been used side by side during the development stage of public-supported education in the vocations. The class learning-exercise method was borrowed from the traditional high school while the home project was instituted as an application of the apprentice system carried through our industrial era from the old guild-system of medieval Europe. Both these learning methods had to be reshaped in order to function in their new applications.

Early in the twentieth century the sociologists gained public attention by the cry that our educational system in effect was serving to draw worthwhile youth from the rural districts to the urban districts. In spite of the unreckoned economic factors at work the cause of this drain of the "backbone" of the nation from the farm to the city was laid at the door of our educational system.

Our departments of public instruction, being in the growth stage of youthful vigor

and ready to accept new challenges, began to develop public school subject-matter designed to educate rural boys for the farm. This first step involved only a change in subject-matter. The conscientious attempt on the part of educators to solve the problem opened the door to suggestions. The slogan, "We learn to do by doing," seemed to carry with it the solution of the problem. Out of that slogan grew the home-project in vocational agriculture.

The project in agricultural training was first used, perhaps, as an interest-securing device. The text-material available lacked qualities that fitted it to adolescent pupils. The project served as a go-between and as an illustrative device by which the instructor could interpret involved principles to the learner. Next the project took the form of the application-step in the learning process. As the project-program in vocational agriculture grew, however, new subject-matter developed from it and the project in effect became a distinct and separate unit. The project requirements set up in many of the state programs tend to emphasize the project as a separate unit. A few of our less conservative leaders in the field of agricultural education would build the entire program of vocational instruction upon managerial and manipulative problems that issue from the home project.

After a process of cutting and fitting, of readjusting and redefining, we have come to the problem of judging and selecting material and method which will solve a much more complex problem than was evident when the challenge was made.

The Problem

What relationship should be maintained between subject-matter presented in the form of class exercises and that which comes through supervised farm practice? Should supervised farm practice develop from subject-matter presented in class; or should class subject-matter develop from supervised farm practice? At first thought the problem may seem as foolish as the proverbial controversy of priority between the hen and the egg. As we put more thought on the subject, however, we discover first, that the problem is of fundamental importance in the development of our vocational program in education, and second, that the problem is affected by a large group of contributing factors.

We may ask first, "Is the purpose of the instruction purely vocational or is it designed to serve also as prevocational or avocational training?" Certainly the rela-

tionship to be established between class activity and supervised practice must take into account this fundamental factor. In Pennsylvania this is one of the most important contributing factors of the problem. Only in so far as true vocational training is separated from pre-vocational and avocational training can a satisfactory relationship between class-activity and supervised practice be set up. A relationship that fits the needs of the one certainly cannot fit the need of the other. Only when this factor has been reduced to its components are we ready to proceed with the solution. Next let us inquire into pupil interest. What is the native ability of the pupil — how nearly mature is he — and what are his chief vocational interests? As soon as we bring the pupil into the situation the problem becomes individualized, for one purpose is to fit training to the pupil — not to fit pupils into a system of training. Our problem grows in complexity as we bring in new considerations. The variety of pupil home-environment cannot be ignored. If we are to fit education to the pupil our system must not shut out an interested pupil because he lacks farming background or even because he does not now live on a farm. Then too, home facilities for supervised practice present the greatest variability. And finally the possibility of covering all the needs of the pupil with supervised practice as a basis from which all class activities are to be derived seems to be a limiting factor which is bound to be operative even under the most perfect combination of all the other factors. Of the minimum 360 periods of school time allotted to vocational agriculture, at best less than one-fourth can be utilized outside the school building. Thus 270 periods remain for school class-activity in the school building. Furthermore, the amount of supervised practice which can possibly be assigned to each boy is rather narrowly limited.

Definition of Terms—In order that we may think together in terms which have the same meaning for all, let us proceed to the definition of a few key terms to be used in this discussion. First, let us give to the term "project" a composite definition which will include the emphasis stressed by several of our outstanding educators. We may then define the **project** as whole-hearted, problematic, purposeful, self-directed, consciously-planned activity carried to completion in a natural setting. When the project is thus set up with an educative purpose we call it the project

method. In vocational agriculture we further define the **home project** as a pupil-owned farm-enterprise which shall have all the other qualities mentioned above. A **class-learning exercise** may be defined as any directed activity entered into by a group of learners for the purpose of acquiring new responses or of modifying old ones. The class activity may be built around the project method without necessarily including the home project. **Supplementary farm-practice** shall be understood to include learning activities in farm enterprises entered into by the pupil to gain manipulative ability without consideration of enterprise analysis, ownership, or completion. **Supervised farm-practice** shall be understood to include all home-project work and supplementary farm-practice which is entered into by pupils under the supervision of an agricultural instructor.

The Principle Developed — Vocational education implies a prognosis of the future activities of the learner. Pupil development in the other six **cardinal aims** of education can be conceived as progressing satisfactorily simply through the process of meeting today's problems each day. A successful reaction today is the best preparation for a successful response tomorrow. Our entire public-school program has been in the process of redefinition into terms of present pupil interests. During the past 15 years textbooks in every elementary subject have been reorganized upon the basis of pupil-interest and normal pupil-activity. Vocational education, however, must be patterned after adult activity. The adult enterprise must be taken as the stimulus to secure the desired response. Thus in order to satisfy the psychological learning, laws of readiness, effect and exercise we find it necessary to fit the learner into the nearest possible approach to the adult activity in which responses are to be gained. This fundamental feature of vocational education is perhaps the strongest reason set forth by some of our foremost educators for carrying vocational education over into the adult period of the learner's progress.

Then, too, we find a fundamental difference in vocational education between industrial trades and agriculture. Among the industrial trades manipulative skill can easily be made the center of all development. In agriculture we find managerial problems of much greater importance. The related scientific principles, furthermore, play such a fundamental role in the vocation of agriculture that there can be no

real comparison between the training processes for industrial trades and for agriculture.

Again we find a wide difference between the two types of vocation when we consider the scales of proficiency by which individuals engaged in the respective vocations measure themselves. As soon as the industrial tradesman passes from the manipulative stage to the managerial or technical research stage he ceases to be a tradesman and is now classed as an engineer. In agriculture there is no such separation. The two types of activity are so intermixed that no such division is feasible. The farmer is his own manager, cost accountant, repairman, or ditch-digger as occasion demands. The more technical activities in the agricultural field are less closely associated with manipulative skills than those in the industrial field. The problem of organizing training activities in agriculture, therefore, is by far the more complex.

The Corrected Plan — An effective plan of vocational education in agriculture must set up first, a procedure which will separate prevocational instruction from that which is truly vocational. Without such a separation objectives are ill-defined and achievement standards are impossible. Vocational instruction can be effective only with pupils whose interests are definitely centered upon the vocation. However important prevocational and avocational instruction may be, they most certainly must be separated from the vocational for the best development of all three.

Our next step requires a correlated **class-exercise — home-project** organization which will make use of our modern developments in individualized instruction in the light of careful diagnosis of individual pupil interest, pupil home environment, pupil practice facilities and pupil vocational needs. Specific objectives and achievement standards have become recognized as essential factors in any educational program and especially essential in education for the vocations. Individual instruction methods make possible more specific attention to pupil individuality and reduce wasted effort expended upon pupils that fail to respond in group activities. The following diagrammatic figure is designed to illustrate a logical relationship that should obtain between the various correlated elements of the vocational program for agriculture.

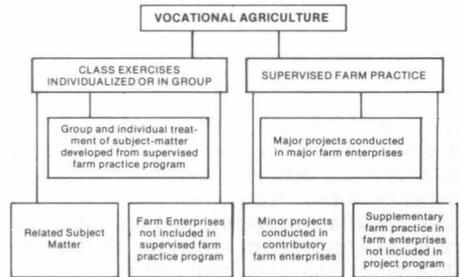


Fig. 1— Diagrammatic balance in relationship among instruction elements in a program for vocational agriculture.

The preceding paper was recently discovered in some old files at the University of Minnesota. Efforts to ascertain the exact date it was written have failed but it probably was written in the 1930's. While there have been changes in the agricultural programs and the people they serve, there is so much truth and direct application of the suggested inter-relation between classroom and supervised occupational experience in the paper that it deserves reprinting. The changes resulting from the Vocational Act of 1963 would only change terms from the direct reference to farm-practice and projects in this paper to a broader term of supervised occupational experience. The author does, however, describe the place of those experiences which are pre-vocational or avocational.

Are the relationships among the instruction elements in a program for vocational agriculture different today than when this paper was written?

VOL. LXIII THE VISITOR No. 1

Published quarterly during the calendar year in January, April, July and October by the Division of Agricultural Education University of Minnesota, St. Paul, Minn. 55108

Second class postage paid at St. Paul, Mn.

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