

TEACHING AGRICULTURE AND NATURAL RESOURCES
AT THE ELEMENTARY LEVEL: THE CHALLENGE IS THERE:

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The teaching of agriculture has traditionally taken place at the high school and post-high school levels with little, if any, emphasis on the early years of students. There is a growing indication that agricultural educators are perceiving a need for an early exposure for all children. This early exposure includes a wide variety of learning activities representing all facets of an expanded definition of agricultural and natural resources education. Peterson¹ states that:

Certainly, we in agriculture education have a responsibility of highest priority to bring an understanding and appreciation of the role of agriculture in our lives. At the least, there should be a real effort to give elementary and junior high students a chance to understand something of the source of their daily bread--to say nothing of their latest sweater fad.

Snowden and Shoemaker² further pointed out:

To make the elementary child aware of agriculture and the many things of the natural environment is to teach him the care of things; to show him in some measure that there are many things that affect his life; and to make him aware that practically everything he enjoys comes from work by someone. There is no sounder way of making elementary school children aware of nature than that provided by objective agriculture instruction.

A study recently completed at Michigan State University was designed to assess the exposure elementary pupils (K-6) were receiving in subject matter pertaining to the broad definition of agricultural and natural resources education.³ The major charge of the study was to determine whether Michigan elementary-level teachers integrate principles and practices of agriculture and natural resources into the on-going curricula, and if so, how it is being done.

Objectives

The major objectives of this study were to:

1. Determine elementary teacher awareness of educational services offered by selected agriculture and natural resources groups and associations relative to the elementary curricula.
2. Determine elementary teacher utilization of educational services offered by selected agriculture and natural resources groups and associations relative to the elementary curricula.
3. Determine what relevant instructional materials teachers have received from the selected groups and associations, i.e., audiovisuals, field trips/visiting resource personnel, games/simulation, pre-prepared lesson plans, sample products, and technical descriptive materials.
4. Determine within what subject areas teachers assimilate the materials into the on-going elementary school curricula, i.e., art, mathematics, music, physical education, reading, science, health, and/or social studies.

Procedure

The study involved all certified public school elementary teachers within a geographic radius of approximately 60 miles of Michigan State University, which is located at East Lansing, Michigan. All school districts in Michigan have been categorized into five community types--Rural, Town, City, Urban Fringe, and Metropolitan Core.⁴ These five community types served as a basis for population stratification. There were 128 school districts and 604 elementary schools within the designated geographic area. Respondent schools from each stratum (community type) were selected with probabilities proportional to size. The sampling fraction was $f = 1/20$. A random sample of schools was independently selected from each stratum. At a regularly scheduled faculty meeting, certified elementary teachers, excluding principals, student teachers, and substitute teachers, were asked to participate.

During this period of time, formal and informal data were collected from a total of 350 teachers. The formal data were obtained on an instrument developed to answer questions posed by the major objectives of the study. For instrumentation purposes,

these agriculture and natural resources associations and groups were classified into the following groups:

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| 1) Dairy | 6) Flower and Plant |
| 2) Environmental | 7) Seed and Grain |
| 3) Fruit | 8) Pest |
| 4) Vegetable | 9) Other |
| 5) Animal | |

Verbal comments were hand recorded and comprised the informal data. These data were collected as respondents were receiving the instrument, as they were responding to the instrument, and as they returned the instrument to the project personnel.

Findings

1. With the exception of the Dairy Council of Michigan and Consumers Power Company, there is evidence that the majority of the elementary teachers in the sample were not aware of the educational services available from selected Michigan agricultural and natural resources groups and associations.
2. With the exception of the Dairy Council of Michigan, Consumers Power Company, and Local Dairy Companies, a low percentage (less than 15%) of the responding teachers indicated any type of utilization of the educational services from selected Michigan agriculture and natural resources groups and associations.
3. There appeared to be no consistency as to elementary teachers in any one stratum being more "aware" of "utilizing" more of the educational services of top ranked (highest number of positive responses to the "awareness" variable) agriculture and natural resources groups and associations.
4. Audiovisuals were received most frequently from the selected agriculture and natural resources groups and associations by elementary teachers in the sample. Sample products were received by these teachers with least frequency.
5. Elementary teachers integrated the educational services received from the top ranking agriculture and natural resources groups and associations most frequently into their on-going science/health curriculum. Physical education was the elementary curriculum least supplemented by these educational services.
6. With the exception of the Dairy Council of Michigan and the County Extension Agents, there was no relationship between the years of elementary teaching experience and the level of awareness of the educational services available from

top ranked agriculture and natural resources groups and associations.

7. With the exception of the Dairy Council of Michigan, there was no relationship between the years of elementary teaching experience and the level of utilization of educational services from the top ranked agriculture and the natural resources groups and associations.
8. Of the respondents, the teachers teaching in grades 4, 5, and 6 tended to be more aware of educational services than those in early elementary grades.
9. Elementary teachers in grades 4, 5, and 6 used educational services from the County Extension Agents more than other elementary teachers.
10. The majority of the elementary teachers in the sample would like to gain additional agriculture and natural resources information from available "local school workshops."
11. The majority of the elementary teachers in the sample had not attempted to gain additional agriculture and natural resources information from local educational personnel or from Michigan State University.
12. Informal discussion with the elementary teachers revealed that in general they were positive toward integrating principles and practices of agriculture and natural resources into their on-going curricula, but they felt a distinct lack of technical knowledge needed to do so.

Implications

The findings of this study have implications for teacher educators in agricultural education in working with both present and prospective teachers of agriculture. The findings should be especially helpful in training vocational agriculture teachers at the local level to serve as resource personnel to the elementary teachers. Elementary teachers who are adequately informed as to agriculture and natural resources and how to infuse them into their on-going curricula will hopefully have students who are more adequately aware of the role of agriculture and natural resources.

References

1. Peterson, Milo J., "The Outlook for Agricultural Education," *The Agricultural Education Magazine*, July 1969, p. 10.

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