Vocational education is likely to change dramatically as society as a whole continues to change in the future. Research conducted by vocational education specialists will likely result in a new scope and sequence of vocational instruction. New theories of vocational education will be developed, as will new instructional methods based on these theories. As vocational education becomes an increasing integral part of society, its objectives will reflect the needs of society's work force and learning activities will become more varied than ever before. Better means of diagnosing student learning difficulties and improved procedures for appraising vocational education students' progress will be in evidence. Instructors will likely complete master's degrees requirements in order to teach vocational education. In regard to inservice teacher education, the following are needed: instructor-conducted research, particularly on ways of improving course content; independent study projects for instructors; videotape training materials for teachers; regional planning meetings; and ample opportunities for discussions with others in their professions, including team planning sessions; paid sabbaticals; and libraries geared specifically to the needs of vocational education teachers. (MN)
FUTURISM IN VOCATIONAL EDUCATION

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Visions of the future are necessary in vocational education. Objectives and goals need to be studied continuously in the curriculum. Trends need to be analyzed and generalizations made pertaining to the present state of education. Based on these generalizations, projections need to be made pertaining to the future of vocational education. Creativity is involved in the making of projections. What might be the future of vocational education in making projections?

Vocational Education and the Future

Effort must be put forth to develop a quality vocational education curriculum. Tradition and complacency will not suffice. A new vocational education curriculum must be in the offing. Trends in society change. Stability in society is not in evidence. Rather change as a concept is continually in evidence in the societal arena. With change in society, a changeless vocational education will not suffice. Rather, innovation, modification, and originality are key concepts to emphasize in vocational education. Thus vocational education must change as the societal arena changes. Which curriculum of the future might then be in the offing?

1. Research conducted by specialists in vocational education will result in a new scope and sequence. Scope emphasizes what will be taught. Sequence stresses the order of learnings acquired by students. Adequate research needs to be carried out by qualified researchers.
Experimental and control groups need to be randomly selected. Careful attention must be given to internal validity when developing the study. Proficient external validity in these studies makes application of the research results a good possibility. Applied research has then been conducted. An improved vocational education curriculum should be an end result for students in class as well as at the work place. An improved scope and sequence replaces that which has been emphasized in the past.

2. New theories in vocational education will be developed. Adequate theoretical research pertaining to vocational education must be stressed. Independent, dependent, and control variables in a research study need careful identification. A more significant item is the intervening variable from which new theories are developed and constructed. Pure theory, rather than application of results, are emphasized in theoretical research. However, the sequence in research may move from the direction of the theoretical to the practical in vocational education.

3. Instructional methods and procedures must be based on theory. Thus, theory provides direction in developing standards of quality in vocational education. Research results pertaining to the practical modifies theoretical constructs. Now theories of vocational education need to be developed. These theories of learning need implementation in the instructional arena. Adequately developed theories assist in supporting vocational education as a profession.

4. Objectives in vocational education will reflect that which is needed in the work force in society. Vocational education then will not be separated from society. Rather what is stressed as objectives of
instruction in vocational education will be useful to implement in the societal arena. Vocational education becomes integrated and an integral part of society.

5. Objectives in vocational education will reflect understandings (knowledge, facts, concepts, and generalizations), skills (techniques, approaches, procedures, and methods), as well as attitudes (positive feelings toward the school curriculum and the world of work). Developing quality attitudes within students assist in achieving at a more optimal level in understanding and skills.

6. Learning activities to achieve objectives will be more varied than ever before. New experiences and opportunities will be available to students to achieve vocational education objectives more effectively. Teaching materials increasingly so will be field tested to indicate their effects on students. A greater variety of learning activities will provide for individual differences among learners. Students in vocational education differ from each other in learning styles. More opportunities in field experiences and hands-on approaches in learning will be in the offing. Learners through varied activities and experiences will attain objectives more effectively in vocational education course work.

7. Better means of diagnosing student difficulties in learning will be in evidence. Diverse procedures will be available to determine where specifically sequence in learning is lacking. Learning needs to be sequential and in an appropriate order. If quality sequence is lacking, students fail to achieve at particular places in goal attainment. After diagnosis has been in evidence, intervention strategies will increases
in proficiency. With adequate and valid diagnosis, a teaching strategy can be implemented which takes care of identified deficiencies. With worthwhile diagnosis/remediation strategies in the offering, student attainment will be more optimal due to effective sequence in vocational education.

8. Improved procedures of appraising vocational education students progress will be in evidence. A variety of techniques will be utilized. Increased validity and reliability will be inherent in approaches in appraising learner progress in vocational education. Results from the appraisal procedures will provide input in improving the vocational education curriculum. Students will also be involved in appraising their own performance.

9. Instructors will complete master's degrees requirements from an accredited college/university in order to teach vocational education courses. A demanding set of courses will need to be completed containing an appropriate grade point average. Preservice course work, internships, and student teaching will assist in serving as screens in terms of who should/should not teach classes in vocational education. Vocational education will have the same status in society as does an academic track for students. Teaching vocational education will indeed be a recognized profession.

10. An ample number of inservice programs for instructors will be available to update content taught, methodology utilized in teaching, as well as assessment procedures stressed in the vocational education curriculum.
Instructors and Inservice Education

To update the vocational education curriculum, inservice programs must be available to instructors. Instructors should have ample opportunities to attend professional meetings and conventions in their area of expertise. At these meetings/conventions, instructors may attain needed information and skills to offer the best curriculum possible for students. Students need to possess knowledge, skills and attitudes needed to secure quality jobs which stress adequate renumeration for services performed. These jobs emphasize chances for promotion and are not perceived as dead end kinds of work.

As a second inservice education means, instructors need to have opportunities to study, on their own, ways of improving course content in vocational education. Professional textbooks, audio-visual materials, as well as visitations to innovative work places may provide content to instructors which aid in improving the curriculum. New procedures and products need to be observed to modify in a positive manner vocational education classes and course work.

Thirdly, research may be conducted by instructors. With random sampling for experimental and control groups, the instructor must stress strong internal validity within both groups. Measurement instruments utilized in the research study should be appropriate in terms of validity and reliability. Quality external validity of the study makes the results useful to other schools in vocational education. From the carefully designed research study, instructors acquire new content and processes in vocational education.
Fourthly, vocational education instructors may complete an independent study with or without college/university credit. Readings and projects completed in the independent study should relate directly to courses taught by the vocational education instructor. The major objective for the independent study is to provide opportunities to learn within the confines of inservice education.

Fifthly, videotapes emphasizing desired criteria in vocational education may be viewed by instructors with the intent of improving the curriculum. A series of videotapes may well assist instructors in inservice education. Predetermined objectives for instructors to achieve from viewing the videotape are important. After viewing one or more sequential presentations, the instructor make take related tests to notice achievement and progress.

Sixthly, a regional planned series of meetings of vocational education instructors might be highly beneficial in teaching students. Prior to the discussions, instructors need to identify possible problems to solve. Reference materials and consultant assistance should be available to solve problems. Quality physical facilities and appropriate materials need to be available to participants.

Seventhly, vocational education instructors must have ample opportunities to discuss with others in the profession, locally or in other areas, means of improving the curriculum. Individually, an instructor in a one-to-one or small group relationship might discuss ways of better meeting the needs and purposes of students in vocational classes. Mutual concerns may also provide new objectives to emphasize in teaching-learning situations.
Eighthly, team teaching might be emphasized as a means of inservice education. Two or more instructors on a team plan together the objectives, learning activities, and evaluation procedures of instruction. Cooperative endeavors in developing these three parts of the curriculum must be in evidence for team teaching to occur. The strengths of each instructor are utilized as needed in actual teaching situations. Thus, the instructor possessing the highest capabilities in a given area would teach the large group as this is needed. Each instructor observes others as the instruction proceeds in the large groups. Committee endeavors and individual study by students follows with all instructors on the team assisting learners.

Team members in planning sessions review the strengths and weaknesses of cooperative endeavors with plans to improve sequential periods of time devoted to teaching students. Learning from each other as members of a team may stress inservice education for the vocational education faculty.

Ninthly, paid sabbaticals for vocational education instructors may well emphasize the concept of inservice education. Working toward an advanced degree on a college/university campus may bring new objectives, activities and experiences, as well as appraisal procedures to the vocational education curriculum. An updated set of courses for students needs to be in the offing. Students need to experience a curriculum which prepares them for satisfaction in the world of work.

Tenthly, a library pertaining to college/university textbooks, professional journals, state and district wide curriculum guides, as well as diverse kinds of audio-visual materials, must be available for
instructors of vocational education classes. These library materials need to be utilized by vocational education instructors to develop the best curriculum possible for each student. Ideas gained from reading and audio-visual materials in the vocational education library should assist instructors to develop a curriculum of excellence for each student.

In Closing

A curriculum of futurism in vocational education must be given ample consideration. A clear vision of the future is necessary. What might be in a vocational education curriculum stressing the concept of futurism? The writer suggests the following:

1. much emphasis being placed upon research results.
2. new theories of instruction.
3. theory providing a basis for instructor decision-making.
4. objectives in school harmonizing with goals of a quality workplace.
5. balance among understandings, skills, and attitudinal objectives within teaching-learning situations.
6. varied learning opportunities to provide for individual differences.
7. effective diagnostic and remediation procedures.
8. improved evaluation procedures to evaluate learner progress.
9. higher levels of training and education required of instructors in vocational education.
10. quality programs of inservice education for instructors.

Present day inservice education programs for vocational education instructors should be diverse and varied. These include:
1. attendance at professional meetings and conventions.
2. attempts at improving the curriculum through personal methods and approaches.
3. completion of research projects.
4. enrollment in independent studies offered by a college or university.
5. video-tape models for inservice education.
6. planned series of meetings with other instructors to improve the curriculum.
7. opportunities to interact and discuss problems with other vocational education instructors.
8. inservice education through team teaching.
9. paid sabbaticals to further study vocational education on college/university campuses.
10. utilization of materials at a local professional library emphasizing vocational education.

Futurism in vocational education will stress a quality curriculum to assist each student to attain optimally.
Selected References


