

Construction as a Curriculum Organizer for Technology Education

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(ABSTRACT)

This dissertation was the result of an investigation into the relative importance of construction as a curriculum organizer for the field of technology education. In particular, it concentrated on the relationship between construction technology and the principles of general education and technological literacy. The review of literature focused on the historic roles and meanings of this curriculum organizer and these principles as the discipline evolved from the industrial arts into technology education. Operational definitions were synthesized and the linkages between them was clearly identified.

To address technology education's contribution to general education, or the full development of the human personality, the spheres of human/technology interaction model was developed. The model is based on the idea that people interact with technology and evaluate those interactions from three fundamental perspectives. Those perspectives were identified as the civic-life sphere, the personal-life sphere, and the work-life sphere.

One hundred and forty-eight faculty members of technology teacher education programs in colleges and universities throughout the United States were surveyed. A 77% return rate was obtained. The survey included four major sections in addition to requesting limited information about the respondents and their programs. The four major sections asked the respondents to: 1)

Evaluate potential goals for a K-12 technology education program. 2) Determine the relative importance of 10 study areas or curriculum organizers as they related to each of the three spheres of interaction. 3) Determine the percentage of the technology education curriculum that should be allocated to each of the three spheres of human/technology interaction. 4) Provide selected information about the way construction is offered and taught in technology teacher education programs.

Medoid cluster analysis was used to evaluate the data derived from the goals of technology education portion of the survey. Using this information, three clusters were formed and initial respondent membership for each cluster was established. Subsequently, discriminant analysis was used to accomplish three goals: 1) Refine the initial assignment of respondents to the clusters. 2) Identify those variables that offered a significant level of discrimination between clusters. 3) Determine the accuracy of assignment to the clusters or groups. The canonical correlation r^2 , calculated by the discriminant analysis program, indicated that 66.3% of the variance was explained by the variables that were significant at a .05 level. After comparing the mean scores of the discriminating variables across the three clusters, one cluster was identified as favoring technological literacy, one favored industrial technology education, and one was ambivalent.

T-tests were used to determine if any significant difference existed between clusters or groups. It was of particular interest to this research that no significant difference was found related to the relative importance of

construction. All groups concluded that construction should comprise approximately 10% of the technology education curriculum.

Finally, a schedule was established which allocated various percentages of the curriculum to each of the 10 study areas or curriculum organizers as they relate to the three spheres of human/technology interaction. This schedule was based on the relative importance assigned by the technological literacy cluster. The technological literacy cluster offered the most balanced allocation of the technology education curriculum across the three spheres of human/technology interaction.