DOCUMENT RESUME

ED 124 208 IR 003 602

AUTHOR Hynes, Kevin; And Others
TITLE Three-Stage Leadership Development: A Field Test of a Model of Instruction.
SPONS AGENCY Indiana State Board of Vocational Education, Indianapolis.
PUB DATE Jan 76
CONTRACT ISBVTE-28-74-C-15
NOTE 11p.; Paper presented at the First Annual Henry Lester Smith Conference on Educational Research (Bloomington, Indiana, January 1976); For a related document see IR 003 593

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Audiovisual Instruction; Field Studies; *Formative Evaluation; *Instructional Design; *Leadership Training; *Models; Secondary Education; Summative Evaluation; *Vocational Education; Youth Clubs
IDENTIFIERS Indiana

ABSTRACT

A three-stage model was designed to improve leadership training and improve instruction for Indiana vocational youth organizations. The model was field tested using a pretest-posttest, control-group design administered to five classrooms representing each of six vocational youth group organizations. Both formative and summative data were collected. On the basis of the summative evaluation results for stages one, two and three of each unit, it was concluded that the leadership units were effective. Students learned basic knowledge concerning leadership skills, they applied this knowledge in small group simulation projects, and they developed attitudes and a personal relevance for leadership as a result of individual projects. (HAB)

THREE-STAGE LEADERSHIP DEVELOPMENT: A FIELD TEST OF A MODEL OF INSTRUCTION[1]

Kevin Hynes, John F. Feldhusen, & William B. Richardson

Purdue University

Improved leadership training and improved instruction are goals that the State of Indiana has set for its vocational youth organizations. In 1974, and again in 1975, the State Board of Vocational and Technical Education funded a research project as part of efforts designed to achieve these goals. Because leadership training is a form of instruction, it should be based on a model of instruction. This paper describes a research project that used a Three-Stage Model of Instruction (Feldhusen, Ames, & Linden, 1974) to develop 13 units of leadership instruction for high school youth participating in vocational organizations. The field-test results for the first year of the project are reported, and the activities that are in progress during the second year of the project are described.

To begin, the Three-Stage Model will be described. The Three-Stage Model of Instruction is designed to make learning more meaningful for students. It does so by organizing instruction so that it progresses from low level types of learning, such as knowledge and comprehension, to higher types of learning, such as application, analysis, synthesis, and

---

[1]The research reported here was supported by a grant from the Indiana State Board of Vocational and Technical Education, Contract 28-74-C-15 (William B. Richardson, principal investigator).
A paper presented at the First Annual Henry Lester Smith Conference on Educational Research. Bloomington, Indiana, January, 1976.

evaluation. In Stage One of each unit, students achieve a basic understanding of a topic by means of self-paced mastery learning supplemented by occasional factual presentations by the teacher. In Stage Two of each unit, students are involved in small group simulational projects designed to structure the application, analysis, synthesis, and evaluation of the basic knowledge gained from Stage One of the unit. In Stage Three of each unit, students complete individual projects designed to encourage a personal involvement and internalization concerning what they have learned from Stages One and Two of the unit. Thus within each unit, instruction is organized hierarchically and progresses from low level mastery learning to higher level types of learning. Across several units, the three-stage learning hierarchy is repeated for each unit.

For this project, the Three-Stage Model was applied to the content area of leadership. In order to identify the important skills and functions of group leaders and members, the leadership literature was reviewed. The leadership skills and functions that were identified were then categorized into broad topical areas by the project staff and an advisory committee of ten vocational teachers and youth group members. Work by Stogdill (1974) was also helpful in determining these areas. The following 13 broad topical areas resulted:

1. Introduction to leadership
2. Planning and initiating
3. Parliamentary procedure
4. Developing group goals
5. Levels of leadership in a group
6. Skills of a group leader
7. Personal characteristics of a group leader
8. Skills of a group member
9. Developing group cohesiveness
10. Effective committees
11. Communication skills
12. Internal operations of a group
13. Outcomes of leadership.

A separate "three-stage leadership unit" was developed for each of these 13 areas of leader and group member skills. It was hypothesized that studying the three-stage leadership units would result in increased leadership knowledge (due to Stage One), improved leadership performance (due to Stage Two), and increased personal involvement in leadership (due to Stage Three).

Method

Sample

The field-test sample initially consisted of five classrooms representing each of six vocational youth group organizations for a total of 30 classrooms. However, data from only 24 classrooms are reported here--two teachers changed jobs during the field test, three teachers had not yet returned posttests, and one teacher encountered serious vocabulary problems with his freshman class and chose not to complete the field test. Most of the field-test teachers taught junior and senior high school students who did not experience any serious vocabulary problems. The 24 classrooms that completed the field test enrolled a total of 550 students.

Design

The field test consisted of a pretest-posttest, control-group design. The 30 teachers who participated in the field test had been recommended to us by our project monitor. After insuring the cooperation of these teachers, they were randomly assigned to the experimental and control groups. Because of anticipated variation in the amount of previous exposure to leadership training, type of youth organization served as a blocking factor. Thus, within each of the six types of youth groups, three teachers

were randomly assigned to the experimental group and two were randomly assigned to the control group. An additional condition was that each experimental teacher was randomly assigned to teach a block of four units--either units 1, 2, 4, 5, or units 6, 7, 8, 9, or units 10, 11, 12, 13. Unit 3, Parliamentary Procedure, was not field tested because some organizations do not study this topic. The field-test design and procedures were explained to the field-test teachers at a one-day workshop.

Instrumentation

Both formative and summative evaluation instruments were used in the field test. The formative evaluation instrument consisted of a teacher log in which they recorded how they used the units and what they felt were the strengths and weaknesses of the units.

The summative evaluation instruments were designed and selected to assess components of each of the three stages of the units. First, a content mastery test measured how much leadership knowledge was learned at Stage One of the units. Second, teacher ratings of leadership and student self-reported leadership were used to assess the amount of leadership skills developed at Stage Two of the units. Third, the Ideal Leader Behavior Description Questionnaire (Hemphill & Coons, 1957) was used to assess the personal involvement and attitudinal changes resulting from Stage Three of the leadership units.

Statistical Analysis

Two basic types of analyses were performed. The first type treated the classroom as the unit of analysis because, strictly speaking, classrooms, not individual students, had been randomly assigned to the experimental and control groups.

The second type of analysis treated the individual student as the unit of analysis. The reason for doing so was that the influence of a particular classroom teacher is lessened by the fact that the instruction was basically individualized at Stages One and Three of each unit. Although the results of the two types of analyses will generally be the same, using the student as the unit of analysis must be viewed with caution because the randomization was actually "lumpier" than is implied by this type of analysis.

Results

Formative Evaluation

The formative evaluation results consisted of the verbatim statements that the field-test teachers expressed in the logs that they kept while teaching each unit. The comments were quite favorable generally. The shortcomings mentioned by teachers are being corrected in the final revision of the units. Several teachers noted that it was difficult to find "chunks" of classroom time available to teach the units without interruption. It is therefore recommemded that the units be packaged individually so that teachers will not feel obliged to teach the units consecutively.

Summative Evaluation

The summative results for Stages One, Two, and Three are summarized in Table 1. This table actually summarizes the information contained in eleven tables that will not be presented here. However the essential findings will be described.

Stage One. The dependent variable at Stage One was the class mean score (or the individual student score) on the content mastery posttest. The independent variable was the experimental-control group factor, and

the covariate was the content mastery pretest. Table 1 shows that the experimental group mastered significantly more factual leadership information than did the control group. This was true for all of the units that were field tested. Results were essentially the same when the individual student was used as the unit of analysis. It was therefore concluded that the leadership units were effective at Stage One and were successful in accomplishing their goal--the teaching of basic information and knowledge concerning leadership.

Stage Two. The overall instructional goal for Stage Two of each unit was to teach students to apply, analyze, and evaluate the leadership knowledge they had learned in Stage One of each unit. Because students were involved in small group simulations or work projects at Stage Two, the appropriate test of the effectiveness of this type of learning was to obtain ratings of leadership performance. Leadership ratings were therefore obtained from the teachers and from the students themselves in the form of a self-report of leadership performance.

Table 1 shows that students in the experimental group received higher leadership ratings from teachers than students in the control group for items involving persuasiveness, initiating a group activity, and class leader. However, the control group received higher ratings that the experimental group for the item concerned with choosing team members. This item may have lacked some face validity since one teacher indicated that, "we haven't done that." There were no significant differences for the group spokesman rating. There were also no significant differences between the experimental and control groups concerning self-reported leadership performance. Analyses involving the class mean as the unit of analysis have not yet been performed for the Stage Two variables.

On the basis of the teacher ratings of student leadership performance, it was therefore concluded that Stage Two of each unit was successful in achieving its instructional goal--teaching students to apply and integrate their leadership knowledge. Thus the Three-Stage Model was successful in organizing leadership instruction so that it progressed beyond the knowledge acquisition level.

Stage Three. The dependent variables at Stage Three were two scales from the Ideal Leader Behavior Description Questionnaire--consideration and initiating action. Consideration refers to a person-oriented ideal leader, whereas initiating action reflects a task-oriented ideal leader. The independent variable was the experimental-control group factor.

Table 1 indicates that the experimental group scored significantly higher on consideration that the control group, regardless of the unit of analysis. The effect of Stage Three was to make students view a person-oriented or considerate leader as ideal. There were no significant differences concerning initiating action. These findings might be expected, since several of the individual projects in Stage Three of the units dealt with the interpersonal aspects of leadership. The impact of the social interaction occurring in Stage Two of each unit probably also contributed to the significant effect involving consideration. It should be noted that in many instances a leader who initiates action is ideal. Nevertheless, it was concluded that Stage Three of each unit was successful in accomplishing its goal--relating knowledge about leadership to the student's personal reactions or attitudes toward leadership.

Discussion and Conclusions

On the basis of the summative evaluation results for Stages One, Two, and Three of each unit, it was concluded that the leadership units were effective. Students learned basic knowledge concerning leadership skills, they applied this knowledge in small group simulational projects, and they developed attitudes and a personal relevance for leadership as a result of individual projects. The formative evaluation results in the form of verbatim statements from the field-test teachers also documented the effectiveness of the three-stage leadership units and provided suggestions for improving the materials. Several teachers suggested that the units would be more effective if supplemented by audio-visual materials. Developing such audio-visual materials is the objective of the second year of the project.

The results of this project suggest that the Three-Stage Model may be ideally suited to vocational education. Stage Two of the model is especially relevant because so much of vocational education is concerned with the application of knowledge and skills, the goal of Stage Two. It is likely that the Three-Stage Model can be used with success in other areas of vocational education.

The second year of the project, currently in progress, involves the development and field testing of an audio-visual version of the leadership units. For example, each stage of each unit will begin with a lead-off cartoon related to the material taught in that stage of the unit. Slides will accompany the self-paced instructional materials used in Stage One, and transparencies (for use by the instructor) will summarize and emphasize

important material in all three stages of each unit. A handbook designed specifically for youth group officers is also being developed during the second year of the project. After the leadership units from the first year of the project have been revised and edited, they will be distributed by the materials laboratory of Indiana State University and will therefore be available for review.

The Three-Stage Model of Instruction has been used with success in several instructional settings and is not limited to the project described here. Whether the setting involves leadership training, teacher training, engineer training, etc., the Three-Stage Model organizes instruction so that it progresses beyond the knowledge-acquisition stage of learning to the kind of learning concerned with application, analysis, synthesis, and evaluation.

References

Feldhusen, J. F., Ames, R. E., and Linden, K. W. Designing instruction to achieve higher level goals and objectives. Educational Technology, 1974, 14, 21-23.

Hemphill, J. K. & Coons, A. E. Ideal leader behavior description questionnaire. Personnel Research Board: Ohio State University, 1957.

Stogdill, R. M. Handbook of leadership development: A survey of theory and research. New York: Free Press, 1974.

Table 1

Summary of Summative Results

	Class as Unit	Individual as Unit
Stage One		
Units 1, 2, 4, 5	***	***
Units 6, 7, 8, 9	*	***
Units 10, 11, 12, 13	***	***
Stage Two		
Teacher Ratings		
Persuasiveness	--	$\alpha < .10$
Initiating Group Activity	--	***
Class Leader	--	$\alpha < .10$
Choosing Team Members	--	*
Spokesman for Group	--	NS
Student Self Report	--	NS
Stage Three		
Consideration	***	***
Initiating Action	NS	NS

NS Not significant
* Significant at $\alpha = .05$
** Significant at $\alpha = .01$
*** Significant at $\alpha = .001$
-- Not calculated

important material in all three stages of each unit. A handbook designed specifically for youth group officers is also being developed during the second year of the project. After the leadership units from the first year of the project have been revised and edited, they will be distributed by the materials laboratory of Indiana State University and will therefore be available for review.

The Three-Stage Model of Instruction has been used with success in several instructional settings and is not limited to the project described here. Whether the setting involves leadership training, teacher training, engineer training, etc., the Three-Stage Model organizes instruction so that it progresses beyond the knowledge-acquisition stage of learning to the kind of learning concerned with application, analysis, synthesis, and evaluation.

References

Feldhusen, J. F., Ames, R. E., and Linden, K. W. Designing instruction to achieve higher level goals and objectives. Educational Technology, 1974, 14, 21-23.

Hemphill, J. K. & Coons, A. E. Ideal leader behavior description questionnaire. Personnel Research Board: Ohio State University, 1957.

Stogdill, R. M. Handbook of leadership development: A survey of theory and research. New York: Free Press, 1974.

Table 1

Summary of Summative Results

	Class as Unit	Individual as Unit
Stage One		
Units 1, 2, 4, 5	***	***
Units 6, 7, 8, 9	*	***
Units 10, 11, 12, 13	***	***
Stage Two		
Teacher Ratings		
Persuasiveness	--	$\alpha < .10$
Initiating Group Activity	--	***
Class Leader	--	$\alpha < .10$
Choosing Team Members	--	*
Spokesman for Group	--	NS
Student Self Report	--	NS
Stage Three		
Consideration	***	***
Initiating Action	NS	NS

NS Not significant
* Significant at $\alpha = .05$
** Significant at $\alpha = .01$
*** Significant at $\alpha = .001$
-- Not calculated