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DISSEMINATION BY DEVELOPMENT

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Dissemination by Development

The production and application of new knowledge has become a major factor in th : economic growth of the United States over the past half century (Bell, 1973; Drucker, 1969; Machlup, 1962). In fact, at present more than 200 federal statutes and regulations assign dissemination responsibilities to a variety of agencies ranging from federal executive offices to institutions of higher education to volunteer organizations (National Institute of Education, 1976a). In spite of these efforts, the actual use of new learnings has not kept pace with knowledge production. The discrepancy between production and utilization is probably due in part to inadequate or inappropriate dissemination procedures.

Most dissemination strategies resemble to some extent the process whereby an innovation is communicated through various channels over a period of time among members of a social system (Rogers & Shoemaker, 1971). A number of disciplines (e.g., anthropology, sociology, medicine, psychology, economics) have used some variant of this process with the largest number of studies having been conducted in education (17%), agriculture (13%), and communication (13%) (Havelock, 1969). While a variety of dissemination models presently exist, most can be assigned to one of four categories: (1) research, development and diffusion (RD & D), (2) social interaction (SI), (3) problem solving (PS), and (4) linkage (for a discussion of these models see Coulson, 1978).

Dissemination activities have various purposes and outcomes ranging from discovery of knowledge for its own sake to improving professional practice. The primary purpose of dissemination activities in education has been the latter. Accordingly, the term "dissemination" has been used to

connote several related but distinct processes: (1) spread or one-way casting out of knowledge; (2) two-way or multiway exchange of information; (3) consideration and selection of relevant innovations by potential users; and (4) adoption, adaptation, and implementation of the innovation. In the following discussion, "dissemination" refers to the implementation process unless otherwise stated. Hence, an a priori decision is made that a need exists on the part of potential users or that a change in user behavior is necessary.

For the most part, the major models discussed in the dissemination literature do not emphasize the concomitant change in attitudes a user must exhibit if an innovation is to become institutionalized; i.e., implemented and used over a period of time. For example, the adoption of a new method of teaching reading does require an attitude change toward previous methods on the part of the reading teacher vis-a-vis th ew approach; i.e., the "old" way seemed to be satisfactory but the "new" way is superior! Innovative practices which require fundamental changes in users' attitudes in order to be successfully implemented present a more substantial problem than the attitude changes necessary merely to accept a novel idea. Consider affirmative action employment criteria. While these criteria have been legally mandated for several years, recent data indicate that little change has been evidenced in the number of minority and women administrators in higher education (Howard, 1978). This phenomenon can be partially explained by the fact that the attitudes and values of many administrators are not always consistent with the intended result of affirmative action programs.

The remainder of this paper proposes a strategy for national dissemination efforts which to be successful requires substantial concomitant attitude changes on the part of potential adopters. Many of the strategy's elements evolved out of the developmental activities of a two-year federally-funded project. After the project is briefly described, the Dissemination By Development Model is presented.

UCEA Women's Educational Equity Project

The project, "Training Modules for Preparing Educational Leaders to Enhance Educational Equity for Women," was conceptualized originally from a RD & D dissemination perspective by the University Council for Educational Administration (UCEA). During the two years of Women's Education Equity Act funding, UCEA supported the development of five modules to train leaders from five groups considered influential in advancing women's equity. The target audiences were: (1) women preparing for educational leadership roles, (2) decisionmakers in public school systems, (3) trainees in educational administration, (4) professors of educational administration, and (5) decisionmakers in postsecondary institutions. A sixth module synthesizing content from the first five modules was also developed. Teams in six different UCEA-affiliated universities were responsible for designing the modules: Boston University, Georgia State University, University of Iowa, Indiana University, The Ohio State University, and University of Tulsa. Each development team included at least two professors and two graduate students.

Dissemination Activities

During the first year of the project, all development teams hosted a forum to validate materials. During the second year, additional validation conferences (n = 21) were held in various regions of the country to disseminate as well as validate project materials. Pre- and post-tests were administered to all conference participants in order to determine the cognitive and affective changes associated with conference attendance. In addition, participants completed opinionnaires regarding the quality and potential uses of the materials.

The validation conferences were considered extremely useful for several reasons. First, the conference participants provided feedback on drafts of the materials so that subsequent revisions could be made. Second, team members became more familiar with various uses of the materials as a direct result of participating in several conferences. Consequently, suggestions for trainers were incorporated in training manuals developed for each module. Third, team members became committed to future use of the materials resulting in part from serving as trainers at the conferences. For example, the teams from Indiana University and Georgia State University have scheduled university courses based on the equity modules. Fourth, useful data about the efficacy of the validation conference as a dissemination vehicle was obtained. It was found that the majority of participants were sympathetic with the goals of women's equity prior to attending the validation conferences. Apparently, the conferences did not attract and therefore did not have an opportunity to influence the attitudes of those opposed to or ignorant about women's equity.

In addition to the validation conferences, the materials were also presented at five national meetings of organizations serving the target groups as well as one international and numerous state-level meetings. Once again, participant attendance was voluntary (there were no "captive audience" sessions where all members of an organization were introduced to the materials). These presentations were nonetheless considered useful and have been continued even though the official funding period has terminated.

The project also made use of the UCEA network of member institutions for both formal and informal publicity regarding the project activities. This network is comprised of 47 institutions of higher education and 30 partnership public school districts. The status of the equity project was reported at each meeting of UCEA's governing board which includes at least one representative from each member institution. Also, the UCEA Review, a quarterly publication sent to 3,000 professors, students, and practicing administrators included regular project reports and summaries of the validation conferences.

Another technique employed by the teams was to solicit field test sites for the materials at other universities in the UCEA network. Twenty-two institutions agreed to field test one component of the modules in a class or workshop setting. However, only seven institutions returned any data pertaining to the utility of the materials. Subsequently it was learned that the materials actually had not been tested in most of the remaining institutions. A variety of reasons were given for the failure to present the materials such as scheduling problems, insufficient understanding of the materials, or lack of interest. This "field test" technique was considered unsuccessful largely because the institutional representatives asked

to conduct the field tests did not have the necessary commitment either to the UCEA project or to advancing equity for women to motivate them to expend the required time and energy. Thus, team members concluded that for secondary dissemination to be successful, there must be a responsibility link that includes a mechanism to ensure accountability for producing a product.

In comparing members of the development teams with the secondary field testers, several differences were readily apparent. First, the development team members had made a commitment to deliver a product whereas the field testers had not. Although development team members may not have had a commitment to advancing equity for women at the beginning of the project, this type of commitment seemed to be nurtured by responsibility for and involvement in producing the materials. Also, the development teams had a reference group--teams from other institutions involved in the project--for support and peer pressure to produce and validate high quality materials. The teams met regularly, shared ideas and materials, and critiqued the products produced. This strong and continual support group was believed to be an important factor in determining the success of the developmental teams' activities.

A number of serendipitous changes occurred in UCEA, development team members, and their respective institutions as a result of involvement with the project. For example, the UCEA central staff has evidenced a growing commitment to advancing equity for women. Not only have equity goals been incorporated into the organization's five-year plan, but also a training session using the six modules has been included in a regular meeting of UCEA's governing board. Furthermore, UCEA has sought additional federal funds for other research and development activities in the area of equity for women.

Individual team members had varying levels of knowledge about and commitment to women's equity at the beginning of the project. During the two years, however, team members not only became knowledgeable in the area, but also became committed to fostering changes in their respective institutions. Entire departments became sensitized to subtle discriminatory practices, new courses pertaining to equity for women were initiated, and some existing courses were modified to reflect equity concerns. Graduate students associated with the project also exhibited similar changes in their commitments to and behavior concerning the advancement of equity.

A Proposed National Dissemination Strategy

The strategy presented here is a theoretical model in that is has not been field-tested. However, a number of the model's elements were suggested by strategies considered efficacious in the UCEA equity project. The model's purpose is to facilitate adoption and implementation of innovations with an affective focus in education; however, the strategies could easily be adapted to other disciplines.

Fundamental Premise

Traditional dissemination models may prove useful when the innovation to be implemented is relatively easy to grasp conceptually and is perceived as having immediate utility for the user/adopter. For example, a new classroom technique such as Flanders' Interaction Analysis may be successfully diffused through professional meetings, workshops, or even in printed form. However, existing dissemination strategies may be unsuccessful if the innovation consists of or requires an idea or attitude change that is in conflict with the beliefs of a substantial portion of the target audience. For example, if the substance of printed materials and training sessions conflicts with a

potential adopter's attitude toward the respective innovation (e.g., the advancement of equity for women), the materials and/or sessions may very well be perceived as threatening and may elicit avoidance behavior on the part of the potential adopter. It is likely, therefore, that an individual must manifest a desire to modify currently held attitudes before participating in workshops or using available materials related to the innovation. If this type of motivation is not exhibited by the target audience, the dissemination model must include a strategy which fosters a receptivity to change on the part of the target groups.

The critical element in the attitude change associated with the equity project appeared to be the responsibility for developing the training materials. Project team members were required to become knowledgeable in the area of equity for women in order to produce the products. As a result, the team members became more sensitive to the existence of subtle discriminatory practices and their debilitating results. Furthermore, team members became committed to serving as change agents, not necessarily because of a previously recognized need, but through involvement with the project activities. There was a pivotal point during the project when external stimula (e.g., accountability to a federal agency) were no longer needed to motivate team members' project activities. This was characterized by individuals initiating changes in their respective environments consistent with but beyond project commitments. Attitude changes became disseminated through development activities.

The Network Approach: Dissemination By Development

Dissemination based on overlapping individual commitments to engage in developmental activities is thought to have particular utility when the goal or targeted need is an issue with an affective focus (e.g., reducing racism

or nurturing sensitivity to bilingual issues). After the goal has been consensually validated, an agency must be selected to coordinate the project activities. This agency might be an institution of higher education considered to be a major research and development center (Clark & Guba, 1977), a regional education lab, or a national education organization. The coordinating agency would be responsible for selecting teams from five postsecondary institutions (R & D centers) representing five regions of the country. These five teams would comprise the primary change agents for the project. Criteria for selection of team members (two or three per institution) would include substantive interest in the project goal, national reputation, and demonstrated local influence. It is essential that all designated team members make a commitment to remain involved in project activities for at least two years and to produce the designated products.

The initial charge to the five teams for the first year would be to develop training materials for a specified portion of the target population to advance the goal of the project (See Figure 1). Each of the five cooperating universities would focus on one segment of the total target audience (e.g., public school personnel or college professors). The five teams would meet several times throughout the year with the coordinating agency staff to share progress reports and to critique each others' products. In addition, each team would demonstrate its own materials at regional validation conferences that would also serve as secondary dissemination activities.

During the first year, the coordinating agency would perform a crucial function. This agency would be responsible for monitoring the progress of the five teams, coordinating activities, arranging meetings, and serving as a clearinghouse for information. If any teams or team members were not fulfilling their agreements, the coordinating agency would have the authority to make appropriate substitutions in team or institutional participation in

the project. Moreover, this agency would be ultimately accountable to the funding source.

During the second year, each of the five original teams would form a consortium with five other teams from organizations within their respective regions. These secondary change agent teams might represent state departments of education, institutions of higher education, large school districts, or regional education labs. The team members for the 25 secondary teams would be selected in a manner similar to selection of participants for the original teams. Initially, the five regional consortia would be responsible for reviewing the materials and suggesting subsequent developmental/revision tasks as their primary responsibility for Phase 2. Each primary change agent (university) team would then function to coordinate activities, provide technical assistance, and edit materials for its regional group of five teams. The coordinating agency would continue to monitor overall project progress during Phase 2, but the responsibility for monitoring the developmental activities of the secondary teams would shift to the five primary change agent teams. The regional groups would meet several times throughout the second year to deliver progress reports and critique materials. The materials refined and developed during the second year also would be demonstrated and validated at conferences. At the conclusion of Phase 2 representatives from all 30 teams would meet with the coordinating agency to evaluate the success of the second year of the project.

During the third year, each team of secondary change agents would form a consortium with five additional organizations within the state or within the immediate geographic region. The third level teams (n = 125) might be drawn from school districts or institutions of higher education with a regional focus. These teams would be responsible for adapting the materials for use in their respective environments. Again, consortia would be formed which

would take part in regular meetings and validation activities. During Phase 3, the original coordinating agency would continue to monitor overall project progress; primary change agent teams would provide technical assistance for their regional consortia; and secondary change agent teams would assume the responsibility for monitoring the developmental activities of and providing resources for the third level teams.

At the conclusion of Phase 3, representatives from the 31 teams in each geographic region would conduct a regional meeting to evaluate the project and discuss future informal dissemination configurations. At the end of the final year of federal funding, a cadre of developers (change agents) should be available in 155 organizations including institutions of higher education, school districts, regional education labs, and state education departments in possibly 25 states. It is assumed that these individuals would exhibit different attitudes and behaviors as a result of their involvement in the developmental activities and therefore would continue informal spread and exchange activities in their respective roles. At this point, these behaviors on the part of developers should become self-perpetuating, eliminating the need for an additional influx of federal funds. It is expected that changes in the respective cooperating agencies would occur in addition to changes in the individual team members. Also, the validation conferences and other secondary dissemination activities (e.g., publicity regarding the project) should effect some changes similar to the phenomena observed during the UCEA equity project.

The most apparent limitation of the proposed design is its cost. There is no question that a considerable amount of money (approximately $1.9

million) would be required to support developmental activities in ultimately 155 institutions over a three-year period (See Figure 2). The potential outcomes, however, of actually effecting changes in attitudes necessary for the achievement of various national priorities would be quite significant. At present, it is estimated that about $25 million per year is being used to support educational development/dissemination activities designed to change attitudes, values, and behaviors. In 1976, the National Institute of Education (1976b) alone expended $9 million on dissemination. During the first year of funding under the Women's Educational Equity Act, approximately $6.3 million was awarded specifically to alleviate some of the existing discrimination against women in all levels of education (Department of Health, Education, and Welfare, 1976). Perhaps the rate of return on the national dissemination investment would be increased if a portion of these funds were used to support a network of interlocking teams which would be monitored at various stages of their activities. It is the contention here that greater degrees of change are more likely to be effected if funds are used to foster individual commitments among a large number of influential persons across a variety of agencies and institutions as opposed to distributing monies with little assurance that the disparate efforts will bring about the desired results. Under the network team approach, the base amount of money expended per year is likely to be substantially less than the amount currently earmarked for dissemination activities. However, the distribution configuration would be substantially different.

Summary

At present, the production of knowledge has increased at a rapid rate, but the impact on educational practice--the utilization of this new knowledge--has not kept pace with its production. Experience has verified that it is erroneous to assume that knowledge will be used once it is made available. Moreover, current dissemination strategies do not emphasize the crucial affective dimension of the innovation adoption process.

Although the implementation of new ideas and subsequently new behaviors is the ultimate goal of the process presented here, the strategy used to achieve that goal includes considerable developmental activity. Since the development and dissemination components of the model are inextricably intertwined, the basic thrust of this strategy can be summarized as "dissemination by development."

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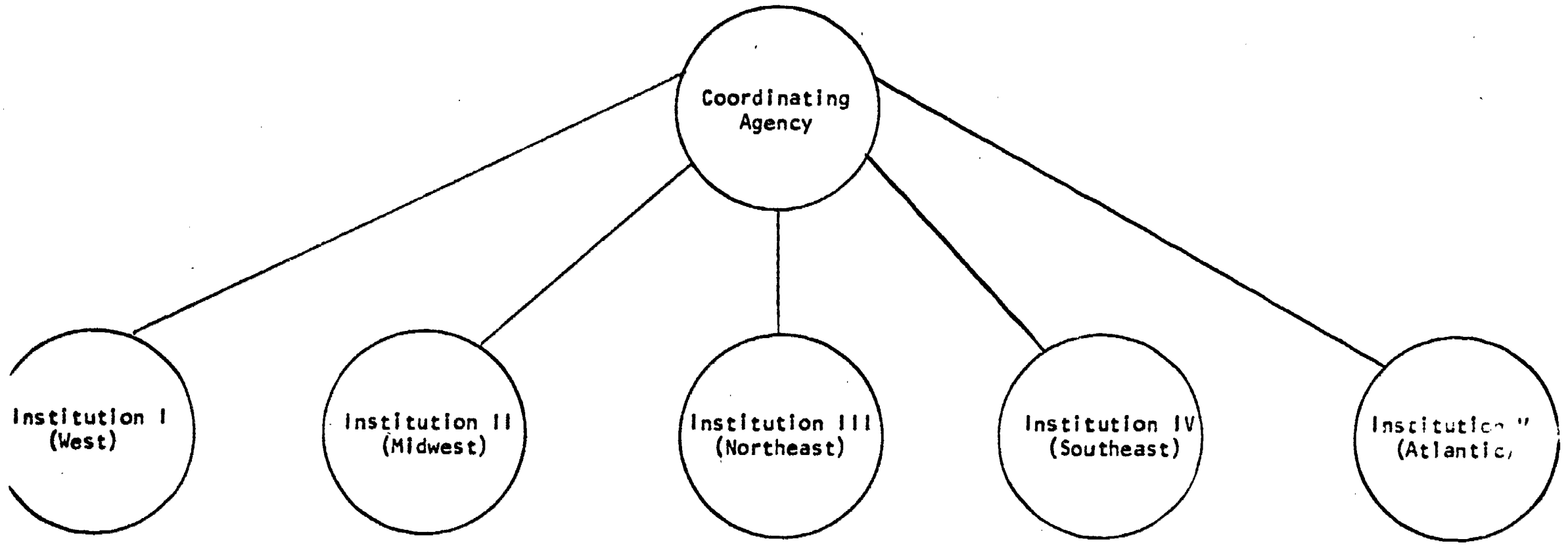
FIGURE I

Dissemination by Development - Phase I



Development of Training Materials for Segments of Total Target Group

g., case studies, mulations, review research for licymakers in blic schools (K-12)	e.g., lab exercises, case studies, self instructional manual for students in relevant training programs	e.g., resource manual, simulation games, monograph for practictioners in roles related to respective issue	e.g., departmental self-study kit, case studies, policy manual for professors of relevant training programs	e.g., review of literature, manual on training resources, lab exercises for relevant policymakers in higher ecucation

FIGURE 2

Proposed 3-Year Budget

Year I		
Coordinating Agency	$ 20,000[a]	
5 Primary Change Agent Institutional Teams ($15,000 per team)	75,000[b]	
	$ 95,000	subtotal
Year II		
Coordinating Agency	$ 5,000	
5 Primary Change Agent Institutional Teams ($10,000 per team)	50,000	
25 Secondary Change Agent Institutional Teams ($10,000 per team)	250,000[c]	
	$ 305,000	subtotal
Year III		
Coordinating Agency and 5 Primary Teams ($5,000 per team)	$ 30,000	
25 Secondary Institutional Teams ($10,000 per team)	250,000	
125 Third-level Institutional Teams ($10,000 per team)	1,250,000	
	$1,530,000	subtotal
Total for 3 years	$1,930,000	

[a] Includes portion of salary for two professionals plus travel expenses.
[b] Includes support for two graduate assistants (or portion of professional salary), travel expenses, and material production costs.
[c] It is assumed that team travel needs will not be as great during the second and third years of the project as they are during the first year. Actual dollar amounts, however will fluctuate according to the location of the teams involved in the project.