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## ABSTRACT

Case studies have shown that, while only a limited number of research-based products or processes are available for introduction into teacher education programs, involvement of trainers and teachers in originating and developing innovations is necessary if they are to become widespread and influential. Because innovation requires changed behavior of an existing population, two viewpoints are involved. The Research and Development (R and D) people may view the process of change as one replacing methods and products; insiders may view it as replacement of personnel. For an R and D product to be considered as a policy rather than an experiment in a curriculum requires the assent and cooperation of those in power, the tenured faculty. Training conducted by faculty tends to be resistant to the inclusion of R and D products because they are strange concepts. Actual involvement of these professionals in curriculum development with the R and D group is necessary if the products are to become more than ancillary components of training. Acceptance rationale also differs between groups. The R and D approach is that the product is discrete, identifiable (and replicable), predictable in outcome, serves an identifiable need, and is documentable. The teacher educator program tends to have a different criteria--does it fit into existing philosophy, does the faculty want to do it, is the student population interested in or need the product, is a job available for those so trained, and, perhaps most important, is the money available. Since eighty percent of a budget is devoted to salaries, and sixty percent or more faculty are tenured, one returns to this group as the key impact point, the key to survival and growth of an innovatio.. (MB)

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EFFECT OF RESEARCH BASED PROCESSES AND PRODUCTS  
ON TEACHER EDUCATION PROGRAMS

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Effect of Research Based Processes and Products on Teacher Education Programs

Atkin and Raths (2) present an insightful analysis of the energies and approaches impacting teacher education programs in the U.S. in the late 60's and early 70's. They point out that change in teacher education has been energized by education planners, by some individuals, and rarely by product or process based in research. The only instance of force on teacher education from research is categorized as a skill building approach proposed by the mini-courses developed at the Far West Laboratory. Extensive examples are presented of changes in teacher education which focus on changing governance patterns (e.g. collaborative or consortium models) or delivery patterns (e.g. teacher centers or in-service staff development programs). Trumbull (19) describes exemplars of patterns of effective dissemination of innovation. The cases used again indicate the limited number of research based products or processes available for introduction into teacher education programs. Examples are given of structural change approaches (e.g. IGE, North Dakota), content of classroom instruction approaches (e.g. Man: A Course of Study, Toy Lending Library) and training approaches (e.g. Simulation Games, Mini-Courses, North Dakota). The evidence in these case studies is that the involvement of the trainers and teachers in the origins and development of an innovation is crucial to its acceptance and use in a school or college. Self-sufficient "teacher proof" or "trainer proof" approaches do not have high dissemination or impact in classrooms. What is effective is the presentation and articulation of an innovation as a product or process in search of identity in a given place.

If Teacher Corps Projects are demonstrations and the Research Framework Projects are demonstration of research related products and processes, some analytical findings of those who have studied the diffusion of innovations should be considered:

- (a) The effect of money to get people interested in changing is different from the effect of money when one seeks to continue an innovation as part of regular practice.
- (b) Most innovations require changing the existing behavior of target population and those who decide what target population does and is rewarded for.
- (c) Mechanism for solving problems that occur after the change has been made should focus on fixing things in the existing setting, not on energizing and changing.

To examine the effect of Research based processes and products on Teacher Education, one should consider:

- (a) The insertion of an innovation is actually bringing a complete or large thing, a Teacher Corps project, from outside into an existing complete and large thing, an existing teacher education program. If one is not aware of what in the existing large thing (the Teacher Education Program) is being changed, the demonstration effort can easily be diffused to debates on rationale and purpose rather than impact and change. The view of the effect of a change from inside an existing program (process and product) asks questions like: what of what I am doing will I have to do differently and how much as well as how different energy will be required.
- (b) The outside funding or special project status of a demonstration places reallocation of resources and basis for acceptance in a significantly different pattern. The commitment to do something which fits outsider rules and regulations is different from using existing resources and personnel to do something differently even if the notion is exciting,

valid and even documented. The outsiders' view of impact may well be replacement of process and products of a program; the inside view will be replacement of personnel.

The extensive documentation of the Competency Based Teacher Education reform movement makes evident the difference of reaction to the level of change perceived as needed to adopt an innovation: changed decision making pattern (consortia), changed training patterns (mini-courses, micro-teaching), changed effect measures (exit competency or performance listings), changed rationale for acceptance of a program (model training program and school improvement rationale). In the real world of a teacher education program, one discovers significantly different patterns in each of the following areas.

Teacher Education programs have decision making patterns that usually emphasize collegiality of peers who are traditionally the senior tenured faculty of an institution; collegiality of scholars with a coherent vision of knowledge, institutional mission, and societal need. What is good for Man in the largest sense is the context for decision and vision. That is significantly different from an approach which suggests that different constituencies can identify needs and determine the response. And much of the analysis of impact of outside innovation in teacher education has explored this power and governance issue encouraged in great part by the classroom teacher assertion of control over their own destiny. Thus the normal pattern of the teacher education program is to have final decisions about what will be included (changed) in the institution's base program in the hands of those with a longer view of education and man and the institution - the tenured faculty. To have any innovation, particularly a comprehensive approach such as Teacher Corps accepted as an institution's program instead of an institution's experiment, exploration or alternative requires tenured faculty commitment not only

to the idea, the reasoning, the effect, but also the decision to become a part of the project and to sanction the complete demonstration as adapted to the college as the institution program. To date, few exemplars of acceptance of revised research based programs exist; the Teacher Corps projects have the opportunity to provide exemplars not only of changed governance patterns, but also of acceptance by tenured faculty.

Teacher education programs provide training to students primarily in a discussion of theory, examination of practice, supervised induction mode. Many programs continue to focus on in-experienced and less mature learners, to develop learning environments for such learners, and to staff with persons who have experience with the practices in vogue at a given time who also have the ability to communicate with the undergraduate student. Faculties then are made up of persons who know their own existing practice, have limited experience with the systematic controlled installation of research based products and processes into their instruction, and limited experience with adult learners. Research based processes and products such as PBTE programs or R & D or Lab developed packages come from field testing in different settings: the learners are experienced professionals with mature learner habits, the basis for acceptance into a package is some hard information across many individuals and many attempts in practice, and the pattern for development is systematic and even rigid rather than inventive and idiosyncratic.

Teacher training patterns tend to resist inclusion of research based process and products because these innovations are strange to them. Those products such as mini-courses are accepted as minor components of training, an effort to individualization. Actual involvement in curriculum development with the research and development group seems to be the primary approach to assure impact in actual training practice; curriculum development as a clear distinct activity from training. So,

research based products and processes must become integrated into the curriculum development objectives and procedures of the teacher education program itself. An explicit research approach becomes the faculty curriculum committee approach as well as the Teacher Corps project approach.

degree granting criteria normally focus on knowledge, skill, and experience completed. Courses, credits, programs describe bits and pieces of the knowledges, skills, and experiences in some sequence required for institution sanction and certification of an individual as eligible for professional practice and as an educated person. Research based process and products assume different results: performances or competencies. While these are or assume knowledge, skill, and experience, the research approach requires hard, describable, achievement and exit levels. That a process or product has a documented, academically valid effect on a given population requires a translation effort by someone. Who this someone is, possibly the dean, the program or degree approval committee, the registrar, etc. is important to identify since their acceptance of the difference is crucial. What the similarities are in expectations and outcomes between the existing and revised approaches also must be provided. The research approach has effect when the translation in transcript form is accepted or the transcript documents performance gained. The PBTE movement and its acceptance by many State Department Certification Offices supports a research based approach; the rampant danger though is the development of comprehensive listings which assume that all competencies listed are presently attainable through the use of research based processes and products. Only an extremely limited number of validated processes and products exist. Changing all effect measures may be logical but it does raise expectations about the completeness of research and development efforts that are not evident. So research based efforts might require modification of only those parts of degree requirements that can be effected by the process or product selected.

Both NIE and OE discuss their research and development efforts as attempts to provide models for training and patterns for effective school practice. Teacher Educators discuss innovations as a demonstration of more effective teacher education or more effective classroom instruction. Research based process and products usually have limited and defined expected audience for impact. Often these are students or at least student learning. More realistically the effect of PBTE, IGE, North Dakota (New School), IPI, etc. have been the behavior of practitioners in schools. Mini-courses clearly are a revised systematic process that changes the behavior of an individual. The rationale for acceptance of an innovation presented by the R & D approach is that the process or product is discrete, identifiable and so replicable, that the person using the process or product can expect a predictable outcome on the person or group using it, that identifiable needs are served by the process or product, that tests document with whom, where, and how a process works. The rationale for acceptance of a change by a teacher education program tends to be a different set of criteria:

- (a) does the change fit into the existing philosophy or mission of the program
- (b) does an identifiable faculty want to do this
- (c) is an identifiable student population interested in or in need of the process or product proposed
- (d) is an identifiable professional role (job) for those trained available in the real world of schools
- (e) is there money available to finance the effort.

In the real world of teacher education programs and school today, much of the impact of research based process and products now depends on dollars available rather than on logical or theoretical validity, usefulness and applicability, or even efficiency. How much hard dollars is required to maintain the effort in the institution becomes the major concern in an era of reducing budgets. So



since 80% of budget is salaries and more than 60% or more of personnel are on tenure, one comes back to tenured faculty as the key impact point. The involvement from the start of tenured faculty paid for on base budget in the consideration, exploration, demonstration, and installation of a research process and product is crucial to effecting the program. Those who see their roles as Planners, Researchers and Developers, Disseminators, or Process Facilitators with an agenda to install research based innovations in teacher education programs must change the behavior of the key personnel of the program in actually using the process or product in their jobs if the innovation is to gain acceptance. Changing decision procedures, degree requirements, rationale, training patterns is also useful to assure positive acceptance, but impacting the practice of actual faculty with control of the destiny of the basic teacher education program of the institution is key to survival and growth of an innovation.

To reach the Teacher Corps vision of teacher education, their practice would include some or all of the following:

- (a) collaborative decision making
- (b) multi-cultural content
- (c) individualized instruction
- (d) needs based decisions
- (e) use of processes and products which are documented to be valid and reliable for the trainer and student population addressed
- (f) extensive documentation and recording
- (g) high presence and visibility in schools.

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