

APPLICABILITY OF GENERAL EDUCATION RESEARCH FINDINGS IN CAREER AND TECHNICAL TEACHER EDUCATION: A CASE STUDY

C. Gloria Heberley
Temple University

ABSTRACT

Findings from an earlier study of traditional preservice teacher education were the basis of a research framework developed to examine an alternative inservice teacher education program. The investigation assessed the utility of this framework in a career and technical environment. The qualitative case study design used 5 research questions reflecting the concepts identified in the earlier study. Data derived from documents and observations were confirmed through 27 in-depth interviews. The framework illuminated the intense planning intrinsic to the program and the interventions that mitigate complications. Themes emerged that collectively suggest a possible 6th concept, identified as "generative" leadership. The effectiveness of the research framework as a tool to extract information on particular program aspects was validated. The framework also facilitated the identification of emergent threads, such as those that constitute generative leadership.

"The recent spectacle of deans of education in more than 50 'research universities' advocating massive changes in teacher education programs without citing a shred of research evidence is not reassuring" (Evans, 1988, p. 46). The same year, seemingly in response to Evans' challenge, educational researchers Howey and Zimpher launched a study of six preservice teacher education programs in the Midwest. The programs were deemed to be exemplary based on previous feedback and recognition from objective sources (Howey & Zimpher, 1989). The case studies disclosed a multitude of characteristics, also termed by the authors as elements, orientations, and lenses. Some of these characteristics were observed repeatedly in these outstanding programs, clustering into the following arrays: (a) participants' ability to explain program goals, (b) attitudes of participants and their identification with the program, (c) the program structure, (d) application within the program of accepted knowledge and current research about teaching, and (e) arrangements for students' passage through the program.

Coining the term "conceptual lenses" for the clusters of common elements, the researchers offered them as a means to view teacher education in other environments (Zimpher, 1988). Literature reflects much discussion on teacher education programming (D. Dill, 1990; V. Dill, 1990; Dykman, 1993; Goodlad, 1990a, 1990b; Norton, Harrington, & Gill, 1978; Sutton, 1993). Yet, a clear definition of successful teacher education remains elusive and arguments persist as to specific methods and standards for preparation of teachers (Eisner, 1995; Galluzzo, 1996; Towers, 1994; Walker, Gregson, & Frantz, 1996).

Referring to the clusters of common elements, Zimpher (1988, p. 19) remarked, "The characteristics can serve as lenses with which to assess programs in general and as guidelines for action." Consequently, the characteristics, clusters of common elements, or lenses identified by Howey and Zimpher were revisited for consideration as a possible basis of a model to examine teacher education programming in another domain. It was thought that use of the lenses to view other programs could, at the very least, contribute to the discourse on the process of teacher preparation. The study presented here offers some enlightenment to the discussion.

A non-degree, inservice, field-based, competency-based, alternative career and technical teacher education and certification program operated at a major university was selected as a means to investigate the lenses as grounding for an examination framework. While constantly monitored, the program had not been scrutinized qualitatively. Having operated in the Northeastern United States for over a quarter century, the program provided the vehicle to determine the value of the five clusters of common elements as part of a research design to examine teacher preparation beyond the preservice elementary education area.

The program studied is field-based, meaning it is delivered outside of the traditional university classroom. Its competency-based feature is addressed through the identification of specific teaching strategies, broken down into discrete skills, with criterion-referenced evaluation (Adamsky & Cottrell, 1975; Heberley, 1999; Norton et al., 1978; Towers, 1994).

Study participants were invited to voluntarily share their views. The group comprised past and present students (sometimes referred to as interns), school and university staff (other than senior faculty), and senior faculty members involved with the program over the years. Fifty-five individuals were contacted and 27 expressed their willingness to be part of the research. All Institutional Review Board conditions were met. Rural, suburban, and urban school environments in eastern Pennsylvania were explored.

Students in this program are tradespeople proven competent in their occupational area, but with little or no knowledge of the mechanics, culture, intricacies, and language of pedagogy. They may take three to five semesters to complete the program. Some may enter the certification program holding college degrees. Others may be satisfied with earning the 60 credits currently required for career and technical teacher certification in Pennsylvania. School districts who employ teachers who have achieved certification through this program enjoy a 95% career and technical teacher retention rate.

PURPOSE OF THE STUDY

The purpose of the study was to assess the practicality of using the Howey-Zimpher findings in a model designed for the examination of an alternative career and technical teacher education program. The research was not intended as a formal evaluation. The Howey-Zimpher study suggests that the lenses could be effective in revealing aspects of preservice elementary education programs. Feiman-Nemser (1990, pp. 220-229) explains that Howey and Zimpher "sought conditions and practices worthy of emulation" in their case studies. Richardson (1996, p. 717) states that Howey and Zimpher "provided important descriptive information on programs of teacher education." However, the feasibility of using the lenses in another educational environment had not been explored.

RESEARCH DESIGN

Welty (1999, p. 58) used “looking through lenses” as a metaphor to describe the experiences of one teacher educator. The term “conceptual lens” to describe a category of focus for the study at hand was particularly appropriate since the research was conducted to see if the Howey-Zimpher clusters of common elements could magnify or amplify features of a program. A qualitative case study research design was employed to determine whether or not the orientations could constitute a framework to enlighten the educational community on various aspects of an alternative career and technical teacher education program.

The framework consisted of five research questions derived from Howey and Zimpher’s clusters of common elements. The model was designed to elicit perceptions of the program in written, observed, and oral form from those at different levels of participation. The research provided information that helped assess the feasibility of using the five lenses in a framework to examine views of a teacher education program in a new environment.

RESEARCH QUESTIONS

1. What are the views of past and present students and faculty members concerning the goals, expectations, and outcomes of the teaching program?
2. What are the attitudes of past and present students and faculty members toward, and identification with, the program?
3. How do past and present students and faculty members view the structure and cohesion of the program?
4. What are the references by past and present students and faculty members to accepted knowledge about good teaching and to ongoing research about teaching?
5. How do past and present students and faculty members view the arrangement for students’ passage through the program?

RESEARCH METHODOLOGY

The objective of the research was to determine if the Howey and Zimpher findings (variously referred to by the researchers as characteristics, clusters of common elements, orientations, and conceptual lenses) can provide appropriate categories of focus to obtain descriptive data on alternative career and technical teacher education programming. The case study protocol employed the following research methods to triangulate the research (a) document review, (b) participant observation, and (c) interview.

DOCUMENT REVIEW

Documents for the research were defined as anything on paper except field notes from participant observation and interview transcriptions. The undertaking involved program records from the earliest planning stages in 1967 up to the Fall of 1997. Included in the review were personal handwritten notes, correspondence, funding proposals, reports, analyses, evaluations, survey instruments and responses, quantitative studies, and journal publications. The documents were examined, categorized, and summarized, producing a chronology of the program. The chronology was arranged according to the concepts in the five research questions. Data not specifically related to a particular research question were identified as possible emergent themes

and set aside. This record was the initial categorization of the program aspects and the first step toward the validation of the conceptual lenses as part of an information-gathering medium in a nontraditional environment.

PARTICIPANT OBSERVATION

Appropriate steps were taken to gain access to the university's College of Education activities within the program under study. Field notes had been kept from Fall 1990 until Fall 1997. Program activities were observed in meetings, workshops, conventions, retreats, training sessions, and during shadowing of university staff. Care was taken to mitigate researcher influence at all times. Transcriptions of these observations were combined with the documented chronology and sorted into the five research question areas. Emergent themes that supported those identified in the document review were added to the data already set aside.

INTERVIEW

Past and present program participants were invited to share their thoughts on their experience in the program. All interviews took place in Fall 1997. Participants included students, school administrators, and university staff. The semi-structured interviews were conducted with written guides that had been reviewed by a university jury and piloted with volunteer program participants who were not part of the actual research. In keeping with confidentiality requirements, permission was obtained in advance from all 27 interviewees to audiotape the conversations. All interviews were face-to-face at a time and place selected by the interviewee. Quotes are from transcriptions that have been approved by interviewees. For the most part, the conversations corroborated concepts which were identified in the documents and supported by participant observation. Emergent threads were grouped into the previously identified categories with which they coincided. This triangulation facilitated the substantiation of results.

RESULTS

As the qualitative analysis progressed, it became increasingly apparent that the views of the senior faculty (program originators and their successors) were clear and consistent. At the other end of the spectrum, the responses of students indicated that their views crystallized more slowly, and their understanding and appreciation of the program developed over time. The study suggests that planned interventions by the senior faculty were instrumental in this transition. Selections from documents and participation observation notes, indicated by page numbers, illustrate the disparities revealed through the use of the framework. Representative quotes from interviews add the human touch providing breadth and depth to this qualitative work. Individual verbal responses which epitomize views of several participants are included. Following is a synopsis of the results for each question.

RESEARCH QUESTION ONE

Howey and Zimpher (1989) saw the degree of specificity about outcomes of the teaching program expressed by participants as an important element in program success. This question probed the views of past and present participants as to goals, expectations, and outcomes of the program. While everyone seemed to agree that the program outcome was a competent, certified career and technical teacher, the quotes illustrated the disparity in perceptions as to how this goal was achieved.

All past and present senior faculty members easily expressed their clear impressions of program intent. For example, an interview with a program originator supported a statement from one early handwritten document, “We believe that we must help our learners to accept responsibility for their own learning behavior. They [must] become accountable for their own performance and learn to consider information about their performance valuable in moving toward [teaching] skill mastery.”

Students in the initial stages of the process saw their personal certification as the program goal. Few students at the outset saw teacher competency as a program outcome. Documents and observation revealed that the views of staff members (other than senior faculty) and students of the program progressed from unformulated (indefinite, imprecise) to crystallized (clear, solidified) and varied according to an individual’s experience. This student’s remark illustrates his own view of the transition and reflects comments of eight of his peers:

Initially, I just wanted to get through it. I had no idea of the final outcome. I didn’t really care. At the end I felt myself being drawn into it. As I learned more, I became more interested because I knew what was going on.

While views of the originators and their successors rarely deviated, it was apparent that the perceptions of other program participants were in conflict and needed time to form. Findings indicate this was recognized by the senior faculty, who regularly planned remedial activities in the form of group meetings, workshops, and retreats.

RESEARCH QUESTION TWO

Howey and Zimpher (1989) observed that participants’ attitudes toward, and identification with, the program indicated their degree of ownership and collegiality. They saw this as conducive to program effectiveness. This question explored attitude formation and consequent identification with the program. This question was not asked directly, but information was gleaned from responses to other questions, primarily Research Question One. It was readily apparent that attitudes and identification with the program formulate or vacillate in concert with views of the program expectations and outcomes. It was no surprise that senior faculty expressed positive attitudes and strong identification with the program. The positive attitude of a senior faculty member was observed at a meeting, appeared in an early document, and verified in an interview:

[The field-based nature of the program] makes the job of the senior teacher educator more challenging because the training has to be ongoing. But if your commitment is to your profession, rather than to a single program, there’s no problem because you can certainly justify working a little harder.

The representative student response to Research Question One illustrates the vacillation of students’ attitudes between rejection and acceptance throughout their experience until they approach completion. The research framework disclosed observed and documented efforts on the part of the senior faculty to bolster positive attitudes and foster strong identification with the program. Seven students similarly expressed the benefit of that effort. As one stated, “The thing I found most valuable was the care and concern of the teachers and faculty at [the university]. I liked interacting with different people from [the university] as well as other instructors. I look forward to future activities.”

The study suggests that the senior staff recognized the importance of positive attitudes toward the program, subsequent identification with the program, and the connection to program success. Documents suggest they have worked deliberately to instill positive attitudes in other staff members, who then transmitted that to students. Responding to the concept of attitudes within a program, the program originators recommended action, verified in an interview:

Influence positive attitudes on the part of the field staff. This, in turn, could influence the same in interns. The staff must be sufficiently trained in conducting helping conferences, using [teaching strategies] in the prescribed way, and conducting program evaluations.

RESEARCH QUESTION THREE

Howey and Zimpher (1989) discerned that exemplary programs appear to have an explicit design with an interdisciplinary approach to curriculum. They also referred to “life space” that permits time for reflection and articulation between coursework and school experiences. As with attitudes, which were discussed in the previous question, views of the structure and cohesion of the program were dependent on the views of the program goals. This question sought a sense of the participant’s comprehension of the program’s structure and cohesion. Findings revealed an uneven progression toward a clear understanding of the program structure on the part of students and university personnel working with them in their schools. From its inception, the program design has been clearly delineated in text and graphic formats (Heberley, 1999). In fact, the delivery and requirement aspects have changed very little over the program’s history. A comment from a senior faculty member reinforces the documentation and observation:

The program we put together in the first three years is really no different from what it is right now. Today we’re putting more emphasis on reflection. A large part of what we did was evaluation and a large part of that was wrapped around the [teaching strategies]. Were the [strategies], in fact, meeting people’s needs, the administrator’s needs, the teacher’s needs, etc.? It’s always been an integral part of the planning. The program is based upon nothing other than what has made educational sense [in light of all] the research over all the years. There’s nothing in the program that’s innovative. It’s just putting it all together.

This response from a former chef who came directly from a restaurant into an urban culinary arts classroom indicates some confusion in describing the program structure, “It certainly was not clear from the beginning. I just wanted to get certified. All the changes were frustrating. This lesson plan, that lesson plan, etc. It came together toward the end and was OK” (S-2).

The framework extracted information that indicates the program has survived with unusual consistency and endurance, despite the perceptions of participants. Views of staff other than senior faculty and students vary according to their own experience and do not necessarily reflect program principles. Ongoing communication between the university and the schools served suggests that most students become competent, certified teachers whether or not they recognize the structure and cohesion that were in place to assist them toward those outcomes.

RESEARCH QUESTION FOUR

Howey and Zimpher (1989) consider a knowledge base for teaching, driven by current literature, that is understood by students, and faculty research and development as essential to program

success. This question expanded on this and examined references to both external and internal research. Indications were that appreciation and understanding of the value of research correlated with a participant's involvement in the program. Senior faculty members naturally understood the significance of all types of research. The program mission statement communicates this clearly: "We are conducting research and development to fill voids in existing knowledge and to develop methods for applying knowledge." Sharing of current external research and literature generally originates with the senior faculty. A 1997 office memo states, "The need for restructuring [the program] is being driven by research on school effectiveness and on teaching and learning conducted over the past decade."

Students and staff outside of senior faculty expressed some appreciation of internal research results, but sometimes students found the process cumbersome and bothersome, as declared in this survey comment, later reinforced in an interview, "This evaluation form is just one more thing for [the university] to throw at us." Findings indicate the senior faculty recognized the importance of constant feedback at the outset, and they continued to employ various methods to obtain information essential to the operation of a program of this nature. At the same time, program documentation indicates that current research about teaching is integrated in training and discussions at all levels. While these efforts are many times viewed as onerous to some program participants, it appears that overall appreciation of the process and its results grows as connection with the program strengthens.

RESEARCH QUESTION FIVE

Howey and Zimpher (1989) saw a network of support for students, more accountability, and a strong sense of efficacy for faculty as important to program validity. This question examined views of the arrangements for students. It is obvious from this comment that at least one senior faculty member wrote precise views of arrangements: "Students receive cognitions and affect [sic] through their own efforts and close contact with helpers. The students simulate [lessons] with peers [for] feedback. The students then apply the skills in their classroom and self-evaluate."

Students' views of the passage through the program once again issued from their perception of the goals and objectives of the program. Occurrences were described that indicated some deviation between the structure as they understood the design and the experiences of participants at various levels. Comments such as this compare one view of this alternative program with perceptions of others:

You have to jump through a lot of hoops. I had to do a lot of personal legwork. You have to make the system work. [Other] people complain, 'I had to do this', or [so-and-so] is a pain. My [own] experience was wonderful.

Close affiliation with the program, such as that of the originators and their successors, creates a positive, yet sometimes removed, view of the arrangements for a student's passage through the program. Students, and sometimes university staff in the field see the route as a little more circuitous. The senior faculty is challenged to avoid the pitfalls of remoteness and detachment in a field-based program such as the one studied with this framework. The study suggests the response has been to foster the helping nature of the program, promoting a network of support which most students and other program participants come to appreciate.

DISCUSSION

The research questions and method enabled the examination of aspects of the program which were not addressed in previous quantitative studies of the program. This work expanded upon previous findings, adding rich, although not always complimentary, descriptions. The selected quotations from documents, participant observation field notes, and interviews illustrate some disparate responses to the research questions. The responses many times covered multiple concepts in a few words. The research challenge was the extraction and categorization of the concepts into the areas of the research questions. Yet, this dissimilarity and overlapping of responses facilitated the identification of several themes beyond the concepts addressed in the research questions. The most commonly occurring threads were (a) vision (ability to anticipate outcomes), (b) dedication (full commitment to an ideal), (c) altruism (unselfish concern), (d) challenge (difficulty that is stimulating), (e) change agency (positive intervention), (f) persistence (continuing steadily), and (g) time (sequential relationship of events). In addition, internal aspects of research and evaluation (diligent and systematic inquiry) were revealed.

EMERGENT THEMES

Initially, the emergent themes appeared to be separate characteristics ascribed primarily to senior faculty. As the research progressed, the characteristics were observed in other program participants. Eventually, the themes appeared throughout the hierarchy of the program. A senior faculty member commented at a meeting, "We [senior faculty, field staff, and intern-students] must all be singing out of the same hymnal." Much later, the same person in a formal interview described the commitment to, "Making interns aware that system components include themselves, the [teaching strategies], the equipment, the field, and resident resource people. The intern-student should understand they are the primary component with the other parts in a helping relationship."

There is a multidirectional inclination in the qualities evidenced in the emergent themes. There appears to be a pervasive influence in the characteristics which seem to cluster under a single heading, "generative" leadership. In fact, as the research progressed, generative leadership appeared to be an element apart from the original five conceptual lenses. This quotation from a 1996 university departmental final report indicates the importance of upward direction of dialogue: "Interns are placed in the role of a professional educator and are expected to describe and explain their intentionality." This former student expressed the concept succinctly, "By the time I finished the program, I appreciated the give-and-take and saw the importance of what I contributed. As a mentor, I can explain things to the new people." There are, indeed, strong indications that a sixth lens addressing the concept may have emerged as an addition to this model for program examination.

CONCLUSIONS

A general education framework appears to be effective in the examination of an alternative career and technical teacher education program. This was not an evaluative exercise. The intent was to reveal aspects of the program under study. The research questions that evolved from the clusters of common elements identified by Howey and Zimpher (1989) in exemplary preservice elementary education programs did, in fact, help to illuminate aspects of a field-based, competency-based teacher certification program through a qualitative examination.

As noted, the existence of a sixth conceptual lens is suggested. The themes included in this category could be described as attributes of program participants. Vision, dedication, altruism,

challenge, change agency, allocation of time, persistence, and attention to internal research and evaluation are common in exemplary programs and should reside in all good senior faculty members. The findings suggest that the diffusion of the characteristics throughout all levels of the program can in part be attributed to the originating philosophy and a strong senior faculty to carry it through. This particular program is extraordinarily time consuming and highly dependent upon internal monitoring. Generative leadership tends to pervade the range of participants enabling them to contribute effectively to the program effort. Generative leadership may well provide yet another lens through which to view teacher education programming.

This study complemented previous quantitative work and revealed diverse aspects of the program. Various conceptions of schooling and teaching as embraced by the goals of the program were revealed. It is not surprising that the selected quotations illustrate that crystallized views were typically manifested by senior faculty, while other participants developed definitive views of program intent over time. The lenses illuminated efforts by the senior faculty to formulate vacillating attitudes, and this was confirmed by most participants. Indications are that the program has strong consistency reinforced by structure and cohesion designed by the program developers and maintained by their successors, albeit not recognized by all participants. The lenses evoked expressions of the need for a constant awareness to new thinking in general education. However, the introduction of new ideas and continual internal monitoring drew mixed comments. The framework showed differing views of the journey through the program, yet a network of support to assist students in their move from naive to educated teachers was widely acknowledged.

The purpose of the study was to determine the utility of the Howey-Zimpher conceptual lenses in a model to examine an alternative vocational teacher education program. The framework produced descriptions that yielded information not heretofore easily retrieved. A similar framework can provide a medium for teacher education institutions to gain valuable information for use in the implementation or modification of pedagogical instruction (Heberley, 1999).

The suggestion that sufficient indicators point to a sixth conceptual lens that may have surfaced from this research is important to program developers and administrators. A portrait of generative leadership has clearly emerged from this work (Heberley, 2000). It can be described as inspirational, creative, integrative, self-renewing, energizing, motivating, encouraging, and effective. The strength of generative leadership is its multidirectionality. The power produced by and transmitted through all participants in all directions seems to have been key to effective teacher education in the program scrutinized through the Howey-Zimpher conceptual lenses.

IMPLICATIONS

The applicability of the conceptual lenses identified by Howey and Zimpher (1989) will vary according to the needs of researchers and teacher education programs to be studied. It can be argued that the basic concepts are essential to most successful programs, perhaps even outside the educational arena. Disparate responses may point to areas of difficulty, presenting opportunities for intervention. The effectiveness of the lenses is strengthened by this investigation because the subjects and the activity differed so much from the original work. Howey and Zimpher had a relatively traditional population, while most students in the program studied are competent tradespeople moving into secondary education, prepared over time in diverse environments.

While good leadership is the subject of continual discussion, the promotion of generative leadership concepts at every program level is a prospect not yet thoroughly explored. Transformational and transactional leadership (Kennie, Price, and Middlehurst, 2000) are familiar concepts. Examples of unidirectional (prescriptive) leadership abound in various areas. However, the concept of leadership that is planned from the outset to be multidirectional, transcending a hierarchy in all directions, can offer much to the educational and business communities and to society in general.

Clearly, the framework lends itself to adaptation for examining a diversity of programs. Using just the five original questions and applying appropriate research methods can evoke insights that can provide valuable information for program initiation and revision.

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