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ATTACKING THE ARTICULATION PROBLEM IN TEACHER EDUCATION

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ABSTRACT

A continuing challenge for preservice teacher education is the articulation between initial training and subsequent practice. This study investigated the effect of a fully elaborated training model on the transfer of complex teaching strategies into the practice of first year graduates. A cohort of 30 graduates was followed through their first year of full-time teaching to determine the frequency and appropriateness of their use of two complex teaching strategies, Concept Attainment and Inductive Thinking (Joyce and Weil, 1996). Although only some 10% of inservice teachers transfer new learning into their active teaching repertoires without workplace support for their new behaviours (Joyce and Showers, 1995), the first year teachers in this cohort achieved transfer rates of 40% and 27% respectively for each of the strategies. Students attributed their success in transferring complex teaching models into their beginning repertoires to the intensive training program completed at university. Discussion of results includes analysis of program design as well as planned program changes to facilitate yet higher rates of transfer of key teaching skills.

INTRODUCTION

A perennial problem of preservice teacher education is the articulation between initial training and subsequent practice. Typically, the

training provided during preservice programs in teaching skills and strategies has not proved to be durable in work settings where those skills frequently are not modelled and reinforced.

One attempt to address the articulation problem has been the creation of professional development schools, an organisational device intended to bridge the gap between theory and practice, school and work. Professional development schools partially address the articulation problem at the preservice level by developing collaboration between universities and schools in the preparation of teacher candidates (Mills, 1996). However, unless preservice and inservice teachers share learning experiences and teacher candidates are subsequently hired by their professional development schools, that collaboration cannot solve the problem of transfer of training in new knowledge and skills into the working repertoires of beginning teachers.

Many school districts have developed "induction" programs to support first-year teachers as they begin their professional careers. These programs generally focus on easing the transition from school to work as teachers begin their first assignments, including the assigning of mentors to assist and generally support new teachers. In some cases,

induction programs provide training in classroom management and other skills the district considers basic for all its teachers. Rarely, however, do they provide followup training and support for the teaching skills and strategies that candidates learned in their teacher preparation programs.

Over the last 15 years a fully elaborated training technology has been developed to assist practising teachers in the mastery of innovations in curriculum and instruction and the implementation of those innovations in classrooms (Showers and Joyce, 1996). This better designed training, as well as the reorganisation of the workplace for the collaborative support of implementation efforts (in the form of peer coaching study teams), have yielded superior rates of implementation of new learning for inservice teachers (Joyce and Showers, 1995). Typically, however, when inservice teachers engage in training that is not accompanied by peer coaching in the workplace, approximately only 10% transfer the content of training into their active teaching repertoires (Showers, Joyce and Bennett, 1987).

As we studied the research on transfer of training for possible parallels between inservice training and university based teacher education programs, we confronted once again the problem of continuing to support our graduates as they begin to put into practice what they have learned. Further exacerbating the problem is the practice of placing new

graduates in rural, sparsely settled communities. Many beginning teachers in Australia are expected to serve at least two years in rural areas before gaining a city teaching assignment. Thus, the time during which our graduates most need continuing support from the university and peers is when they are most likely to be scattered around the countryside. However, given the variables that teacher education programs can influence, we determined that the university teacher preparation course could be redesigned to bring it into line with the theory-demonstration-practice-feedback-coaching paradigm (Joyce and Showers, 1995) that has proved so successful in the implementation of change for practising teachers.

STUDYING THE ARTICULATION PROBLEM

Our study of staff development research led us to investigate the effect of a fully elaborated training model on the transfer of complex teaching strategies into the practice of first year graduates. Specifically, did the beginning teachers practise the strategies frequently enough to develop skill in and understanding of the strategies? Did they display theoretical understanding of the models as evidenced by the appropriate use of models in the context of curriculum objectives and adaptations in the design and delivery of lessons? To what elements of program design did beginning teachers attribute their ability (or inability), to transfer their skills with models of teaching into their teaching practice?

DESIGN OF THE STUDY

For one semester (15 weeks), students attended a weekly 90 minute lecture and demonstration session on teaching skills and strategies (primarily Models of Teaching) followed by a two-hour microteaching and tutorial session. The 90-minute session included lectures on the theories underlying several models of teaching (Joyce, Weil and Showers, 1992) and either live or videotaped demonstrations of the teaching models. During the microteaching/tutorial sessions, each student performed at least ten micro-lessons for peer groups and observed approximately 50 lessons taught by peers. Candidates were organised into groups of six for peer teaching and received peer feedback and suggestions for all lessons taught. In addition, micro-lessons were videotaped for subsequent viewing by candidates to facilitate their self evaluation, revision and reflection on lessons they taught to peers. Practice in schools, closely linked with university training in teaching skills and strategies, provided students with additional opportunities to consolidate their understanding of the models of teaching.

Graduates were widely dispersed over a large geographical area in their first year teaching assignments. Thus, all interviews were conducted by telephone with interviewers using a semi-structured interview guide. Graduates were asked to report how often they used the two models of teaching (Concept Attainment and Inductive Thinking) and to provide concrete examples of lessons they had

developed within their subject area, including the instructional objectives for which they employed the lessons. Graduates also were asked to reflect on their university course and identify any elements of their training that they believed to be instrumental in their current use (or lack of use) of the instructional strategies. A cohort of 30 graduates of the Diploma of Education secondary program was interviewed after the graduates had been teaching for nine months (one year after the completion of their teacher training course). The majority of graduates were female and teaching full time in their major subject area.

RESULTS

Transfer rate scores for the Concept Attainment and the Inductive Thinking Models were derived from a combination of frequency of use of the models, appropriateness of use, and beginning teacher comfort levels with the models.

The Concept Attainment Model was the more frequently used of the two models. Two-thirds (20) of the beginning teachers reported they had used the model during their first year of teaching and half (15) reported using it frequently. Fourteen of the 20 teachers who used Concept Attainment for some of their instruction rated their mastery of the model as high, and six who reported some anxiety with their mastery of the model reported that their students were overwhelmingly enthusiastic when they chose to use Concept Attainment. When measures of appropriateness of use were factored into the transfer score, 12 of the 30

teachers in the cohort (40%) achieved high scores on the transfer scale and were judged to have transferred Concept Attainment into their active teaching repertoires.

The Inductive Thinking Model was used frequently by almost one-third (9) of the 30 beginning teachers during their first year of teaching. All nine of these teachers, however, were using the Inductive Thinking Model appropriately in their instruction, and most reported high comfort levels with their use of the model. Eight users of Inductive Thinking were also using the model frequently enough to achieve high transfer scores, that is, 27% of the total cohort.

When asked to comment on the relationship between elements of their training program and their subsequent ability to transfer complex models of teaching into their first-year instructional repertoire, beginning teachers attributed success in transfer to both the theory-demonstration and microteaching (practice-feedback) components of their teacher education program. There was almost unanimous support from the beginning teachers for the peer microteaching component of the program. When responding to an open ended question about the course format, nearly half the respondents mentioned the peerteaching practice in the microteaching sessions: *"Putting it (the theory) into practice in front of you rpeers was of great value" "the 'tutes' (workshops) were good practice"* Most of the respondents emphasised the importance

of, and need for, followup evaluation by the trainers, peers and themselves:

"Peer evaluation was helpful and self evaluation is absolutely vital"; "seeing others' lessons was great for ideas"; "observing others was good for pointers, both positive and negative"; "encouragement from peers was good" and "comforting".

One-third of the beginning teachers specifically endorsed the video-taping of presentations stating that they benefited from:

"accurately evaluating our teaching via the video"; "seeing ourselves in action"; "developing improved public speaking skills; "gaining in confidence".

The value of the 90 minute lectures in clearly presenting the theory and demonstrating each model either live or by video (as a clear example of the theory in practice) was also stressed by the respondents:

"The lectures clearly explain the theory while the 'tutes' (workshops) give you practice which reinforces the theory"; "...then doing an assignment (peer teaching, self evaluation/reflection exercise) reinforces all of it".

The format of the course received unsolicited general comments such as:

"the structure of the units was excellent"; "a valuable format of theory in lectures followed up by practice in the tutes and then doing an assignment (field experience application and portfolio) reinforces all of it "; "lectures would

lead to discussions with other students as to how they would do this (the theory-model) in their subject areas which gave you more ideas"; "it's most useful in developing teaching techniques and the most valuable in the whole course "; "very applicable and the most beneficial part of the whole Graduate Diploma ".

DISCUSSION

Returning to our initial concern for the articulation of initial training with the actual practice of first-year teachers, we have concluded that the investment in training design has paid off. A fully elaborated skills training course, which gave emphasis to the transfer problem in professional preparation programs, resulted in transfer rates of 40% and 27%, respectively, for two complex models of teaching. These rates are considerably higher than the 10% figure reported by Joyce and Showers (1983) for inservice teachers participating in training without peer coaching support in the workplace. Because of the amount of time devoted to peer practice with and discussion of the models during training, beginning teachers may have better understood the nature of the transfer problem and provided for themselves the behaviours that are typical of teachers in peer coaching arrangements (e.g., continuing of practice through early, difficult stages; instructing students in how to respond to the models; perseverance in the development of more complex lessons). Representative comments expressed by our

beginning teachers, as reported above, appear to support this finding.

The implementation of complex models of teaching is difficult even for experienced teachers, and beginning teachers are often susceptible to the influences of colleagues who may not be familiar with nor have mastered the content beginning teachers are attempting to practise. The temptation to drop complex models of teaching from a beginning instructional program is great when the experienced colleagues of new teachers advise them to "stick with the basics". During the course of this current study, we discovered that some of our graduates had indeed attempted to recreate for themselves the collaborative enquiry and support of their training experience. Some of the graduates kept in touch with their cohort members via telephone and email and a few even initiated collaborative planning and sharing sessions with their colleagues (in some cases, there were only one or two other teachers in a school). This discovery, combined with the success of our initial training program in articulating the transfer of skills from university to work, has led to planned revisions in our teacher education program. First, we will reduce the number of models of teaching covered per semester, thus increasing the amount of practice students can experience with any given model. Second, we will employ a cooperative team format for lesson planning and development. These changes should reduce the discomfort some candidates

eventually felt during their first year of teaching and provide them with a "bank" of potential lessons to use in their first teaching assignment.

To support our graduates during their first year of teaching, we plan to develop a computer network for sharing lesson plan development among graduates so they begin their first year of teaching with a resource data base from which they can sustain initial practice with models of teaching. We will also continue the peer support concept during the first year of teaching by establishing an email network to facilitate the discussion of problems and solutions as well as newly developed lessons. The substantial transfer of training results achieved by our graduates during their first year of teaching supports an intensive, fully elaborated training design for teacher education programs.

The initial success of this program has led to additional changes in our training and the development of a support program for our graduates as they begin their teaching careers. Research on these changes should enable us to determine if a preservice teacher preparation program can, in fact, simulate the workplace support of a peer coaching program. University programs that produce teachers who can implement the content of their training will contribute much more than well qualified teachers for the nation's schools; such programs will be educating and training

teachers who can participate fully in the work of self-renewing schools.

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