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A Programme of Professional Self-Development for Teachers in New Zealand Technical Institutes

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be given to artefacts, such as school development plans, rather than the process of school development. A 'black market' of sophisticated formats for school development documents, could attract the attention of principals who have not had opportunities for professional developments.

It is evident that Better Schools represent a watershed in Western Australian education. The document contains recommendations for a new management style which is clearly part of the ideology which is being transmitted throughout the public sector. There is a determination by the government to implement Better Schools. It now becomes important during the current period of review to take the point of view of an educator when assessing the impact of the document. It is essential that the final recommendations have potential to improve the quality of learning for all categories of students. The implementation committee must now find a way to give school level staff the responsibility, knowledge and power to undertake effective school management in a way that does not compromise good education. School staff cannot become managers by decree. The provision of significant, but carefully chosen support is necessary to help school level staff meet this challenge. Failure to do this will put the credibility of the state sponsored education system and its key personnel at risk.

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A PROGRAMME OF PROFESSIONAL SELF-DEVELOPMENT FOR TEACHERS IN NEW ZEALAND TECHNICAL INSTITUTES

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Since 1973, a Tutor Training Unit (TTU) has provided professional education for teachers newly appointed to full-time teaching positions within the New Zealand Technical Institute system (the equivalent of Australian TAFE colleges). In a twelve-week course, organized into four discrete blocks, nurses and plumbers, accountants and secretaries, artists and technicians, community developers and computer programmers are together given basic instruction in educational thinking, teaching techniques, teaching aids and evaluation procedures. In an attempt to systematically assess the current and future requirements of Technical Institute teachers, a research programme was designed to identify professional skills which, when mastered, would enable them to teach competently in ever-changing circumstances.

The intention of the research was two-fold: to obtain data that would shape pre-service and in-service courses for technical teachers and also to enable them to assess their own personal professional requirements.

The research was accordingly designed as an analysis of teaching tasks in which technical teachers engage. This type of curriculum design is variously labelled 'systematic', 'performance-based' and 'objective' and is particularly influenced by Tyler (1951), Taba (1962) and Bloom (1956).

Background to the Research

The professional development programme was shaped by four assumptions. Firstly, it was assumed that most training given to Technical Institute Teachers could be seen as a means towards an identifiable end in terms of competencies that had to be mastered. Secondly, it was assumed that such training should be planned systematically along lines suggested by Taba (1963). Accordingly,

the first step, was the construction of a task analysis which enabled teachers to develop a self-analysis of their requirements. Thirdly, it was assumed that curriculum research was a team pursuit from which a range of expertise could address issues. Finally, it was assumed that Technical Institute teaching in the future will not necessarily be conducted in the same way that it is at present, so the task analysis would have to be capable of being adapted to new situations.

The task analysis was completed in three steps. The first involved making a preliminary test of competencies from current manuals of technical teacher course objectives. The objectives were modified and re-ordered by a panel of two researchers and three advisory teachers, who were asked to rate the importance of each competency in the light of their current teaching and also their expectations for the immediate future.

The second step involved setting up a task analysis panel. Initially, 48 people were approached and 40 agreed to participate in the study, but only 27 took part in all the stages. In this group 12 were primarily engaged in classroom teaching, six were involved in technical teacher education, seven were administrators and two were involved in research. The distribution of panel members and the Institutes that they represented are outlined in Table 1:

Table 1

Distribution of Panel Members

Community college	5
Large city institute	10
Provincial institute	4
Technical teachers in secondary schools	2
N.Z. Department of Education	2
Research establishments	2
Other	2
<hr/>	
	N = 27
<hr/>	

The third was the working phase, in which a variation of the Delphi Panel technique developed by Helmer and Rescher (1959) was used. Panel members were sent the provisional working list of competencies and were asked to use this to compile their own version of necessary skills to be mastered by competent Technical Institute teachers. It was emphasized that they were expected to think in an anticipatory way by considering a number of futuristic ideas included in the working list. Members of the panel were also informed that

the aim of the study was to develop a consensus list of competencies and that their individual responses would be analysed for disagreements. For each disagreement, the principal researchers suggested a consensus response by circulating a revised list of competencies to panels member so that their earlier responses could be re-evaluated. The process of submission of lists, consensus-making and re-circulation was repeated until a panel consensus on most items had been reached. The working list was circulated three times and in every round was analysed in four stages. In the first stage, general comments about the direction of the study were made; in the second stage, papers considering structural and conceptual alterations were examined. From suggestions in such papers the structure was revised: in the first round, fourteen panelists wanted to revise the structure in some way; in the second round, this was reduced to seven; and only one minor alteration was suggested in the third round.

In the third stage, changes to individual competencies were analysed and responses were averaged; and in the fourth stage, competencies were redistributed within the revised structure.

Categories of Teaching Competencies

The research revealed nine major categories of teaching competencies that were considered necessary to teach effectively in a New Zealand Technical Institute. The technical teacher must be able to:

1. Design courses
2. Plan for learning and teaching
3. Manage a learning station
4. Use a variety of teaching/learning situations
5. Use appropriate teaching/learning materials
6. Evaluate learning
7. Develop professional attitudes
8. Help other teachers to grow professionally
9. Work effectively in his/her institution

In the first category, three major competencies were identified. It was found that the technical teacher must be able, firstly, to survey and analyse community interests as a prerequisite to the design of courses; secondly, be able to identify the level of skill expected of students in any course; and, thirdly, know how to develop instructional goals in a study/teaching/learning programme.

In the second category, four competencies were identified. The Technical Institute teacher, to teach successfully, must identify the personal requirements of students and then devise appropriate strategies for teaching and learning. He or she must be able to select effective ways of presenting teaching material and, finally, be able to use a variety of teaching aids.

In the third category, four competencies were also identified. The technical teacher must be able to initiate and then guide student learning by using effec-

tive interactive skills; control the learning situation through effective classroom organization; and conduct on-going evaluation of students.

In the fourth category, a variety of competencies was determined by the survey. The teacher must be able to teach both large and small groups, devise small research projects and assignments for students and develop self-paced learning programmes. The ability to organize and supervise practical work was, of course, considered to be of particular importance.

The fifth category emphasized the need for successful technical teachers to be resourceful. They should be able to reproduce print teaching materials for their own use, develop audio-visual materials for their classes and provide students with vocational experiences (e.g. field trips). They should also be well informed about a variety of sources of information (for example, libraries and computers).

In the sixth category, a range of competencies related to evaluation was identified. The competent Technical Institute teacher must be able to evaluate students and use a variety of assessment methods. In addition, he or she must be able to evaluate test effectiveness and the overall impact of a course that has been taught.

The final three categories related to attitudes of technical teachers. The seventh category emphasized the importance of the development of the attitudes and behaviour of the 'professional teacher'; and the eighth noted that such a person would help colleagues in their professional development and students with their educational and vocational opportunities; and the ninth that the teacher should be able to identify and use the structures and resources within his or her own institute and, in so doing, assist with the development of institute-community relationships.

At present, a similar — but less structured programme — with technical teachers at the Tutor Training Unit is being developed. Teachers have been asked to identify their current self-development needs by using this competency list to guide and stimulate their choices. So far, the list has proved comprehensive enough to enable them to identify a wide range of personal professional needs.

Four Methods of Identifying Personal Professional Needs

To enable Technical Institute teachers to identify their personal professional needs in a systematic way (Zepke, 1983), the following techniques have been developed:

Frequency rating

Teachers are asked to identify those skills needed most frequently in their daily working lives by using a simple rating system. Skills on the list are categorized according to whether they are used.

- (1) Almost daily.
- (2) At least once a week.

- (3) A few times a term.
- (4) A few times a year.
- (5) Hardly at all.

The appropriate numerals are entered next to every skill on the list. Those marked (1) form the basis of the initial self-help development programme.

Competency Rating

Skills on the list are rated according to how effective teachers think they are at performing them; viz.

- (1) Very competently
- (2) Reasonably competently
- (3) With some competency, but with considerable need for improvement
- (4) With little competence
- (5) Incompetently

Teachers are advised to examine first those skills marked (3) as they already have a foundation upon which to build improvements. After succeeding with the (3) skills, those marked (4) or (5) are developed

Career Rating

Teachers are advised to consider the future rather than the present in considering their professional development needs. The question 'what skills will be most important to me in the next two, five or ten years?' is accordingly considered in terms of those that are:

- (1) Vital for the future
- (2) Important for the future
- (3) Neither important nor unimportant
- (4) Unimportant for the future
- (5) Useless for the future

Skills marked (1) are clearly those to which the most attention should be given. Only skills rated (1) by frequency rating, (1) by career rating and (3) by competency rating are chosen for personal professional development.

Identify Blind Spots

Many professional needs, while recognized by colleagues, are unknown to teachers themselves. A technique for determining professional needs is, therefore, to consult others (particularly colleagues and students), to identify one's 'blind spots'.

Technical teachers are asked to consider the possibility of identifying their professional 'blind spots' by using the Johari Window.

Figure 1: The Johari Window

	Things I know about myself	Things I don't know about myself
Things people know about me.	Arena	Blind Spot
Things other people don't know about me	Secret	Unknown

A personally-prepared skills list can be used instead of the rating system that has been outlined. Teachers are advised to construct their own lists of approximately thirty skills they would most like to develop and then to turn them into questionnaires.

They are asked to rate themselves on each skill, using a five-point scale, then put the skills into their rank order from highest to lowest. They may then ask either students or colleagues to rate each skill on a five-point scale according to how important it is for them to have a teacher (colleague) who commands these skills. By averaging the rating of each skill, it is possible to rank them from those valued most to those valued least. When seen as a total list, the ranked skills picture a kind of ideal teacher (colleague).

Another method is for teachers to ask students or colleagues to rate how well they actually perform on each of the skills, again using a five-point scale. Once averaged, it is possible to rate the skills from those at which the tutor performs best to those at which he or she performs least effectively. The result is a personal performance profile.

Finally, teachers may compare their own rankings of the skills to the ideal or the personal performance profile. Skills rated highly by them but much lower by students or colleagues on either the ideal or personal performance ratings are 'blind spots'. These become skills marked for further development.

CONCLUSION

The on-going development of professional competencies by Technical Institute teachers will influence the ways in which they respond to technological changes in their classrooms in the uncertain political and economic context of New Zealand society. The list of competencies provides an initial framework to guide technical teacher educators in the skills that are expected in such a context and a framework within which Technical Institute teachers can develop professionally. The list was developed as a means of guiding the responses of both teacher educators and technical teachers to technological changes and must be considered as a context rather than a blue-print for the organization of pro-

fessional programmes. Although this list has been constructed for the technical teaching profession of New Zealand, it may be modified and redeveloped in technological institutions in other societies faced with similar social, economic and technological changes.

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