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PROJECT REPORT

Meeting Learning Needs of Dip. Ed. Teacher Trainees

Hairon Salleh and Lachlan Crawford

Introduction

There is a growing agreement that fundamental changes need to take place in the education of our learners so as to prepare them with the knowledge, skills and values befitting our future society. No longer are learners expected simply to absorb information and regurgitate it in order to make the grades, but they are to be engaged in myriad forms of learning activities that enable them to construct and re-construct knowledge. It is therefore vital that we continually assess the needs of our learners and the kinds of appropriate support that might best be given. This paper examines key issues pertaining to the learning needs of 61 Year 2 Dip. Ed. (Diploma in Education) student teachers, enrolled in the NED211 module (2002) at the National Institute of Education, Singapore. The findings presented here, based on results from primary (questionnaire and document analysis) and secondary (interviews and observation) data, are outcomes of reflection-in-action and reflection-on-action processes (Schon, 1983), and use an action research cycle of “Do–Review–Learn–Apply” (Dennison and Kirk, 1990).

Background

The trainees in this study were enrolled in four tutorial groups led by the first author of this report. Prior to the tutorials, the tutor adopted a “narrow–wide–narrow” approach to learning. In this approach, learners start their learning with personal readings, followed by a topic introduction given by the tutor, small group discussions, class discussion and personal reflection (see Fig. 1). This theoretical learning model had been found to be effective when used with six tutorial groups

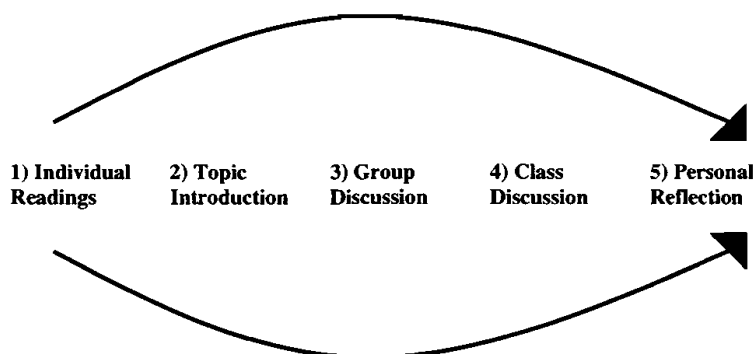


Fig. 1. "Narrow-wide-narrow" approach to learning.

of PGDE (Post-Graduate Diploma of Education) student teachers (PED504/514 module, 2001) also tutored by the first author.

Theoretically, engagement in the reading materials at the individual level provides learners with the specific context and issues pertaining to the topic. The topic introduction presented by the tutor expands on the reading materials. The group discussion then provides the platform for the divergence of knowledge through social interactions and expression of different viewpoints. Here, learning is said to be a socially and culturally constructed activity (Vygotsky, 1962).

From the same platform, knowledge also tends to converge, as social actors begin to form patterns of similarities and differences in response to the problem-solving nature of the tutorial question/s. As groups begin to share the summary of their discussions to the whole class, this convergence heightens. The last phase involves the individual learners reflecting on the learning that has taken place and personalizing it in relation to their own knowledge and context.

Methodology

At the onset of the module, the tutor had decided to use action research as an alternative mode of evaluating student teachers' learning as it allows opportunities to address learning problems along the way rather than leaving them to after the end of the module. Moreover, it allowed for greater repetition in the induction and deduction cycles (see Fig. 2).

In total, eight action research cycles were carried out in the eight tutorial sessions. After each tutorial session, the tutor spent 30 minutes reflecting on, and documenting in note form, the tutorial session. This process involved recalling critical incidents, identifying gaps between planned targets and actual outcomes, and exploring explanations for these gaps through tutorial observations and

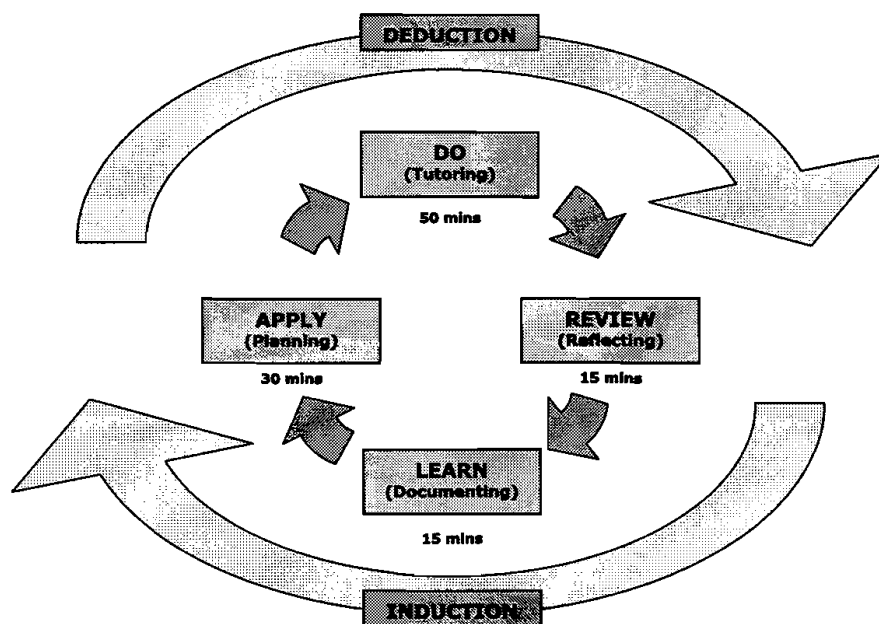


Fig. 2. Action research cycle: theoretical and practical framework.

anecdotal interviews during and after tutorial sessions. Hypotheses were then generated and integrated in the planning of the subsequent lesson — thus, completing the induction phase of the action research cycle. Hypotheses generated were “put to the test” during tutorial sessions. This completed the deduction phase of the action research cycle.

At the end of the eight action research cycles, all student teachers were invited to give their evaluation of the module through a questionnaire. In total, 61 student teachers (76.3%) responded to the questionnaire, which comprised three main sections. The first section explored the *hindrances* to effective learning using the “narrow–wide–narrow” approach of learning. The second section explored student teachers’ *learning needs*. The third section explored the *support* given by the tutor. In addition to the questionnaire, an analysis of the reading materials was also conducted. It is worth noting that the eight cycles of action research had provided both the impetus and content for instrument building of the questionnaire and analysis of reading materials.

Results

Three main hindrances to learning during tutorial sessions were identified. They were: (i) over-demanding reading materials; (ii) student teachers’ weak reading skills; and (iii) the shortage of tutorial time. These are discussed more fully below.

The “narrow–wide–narrow” learning approach did not take off as well as expected. Student teachers came for tutorials without having read their reading materials. Initial attempts to elicit reasons for this did not provide substantial feedback. Student teachers seemed to be extremely shy at voicing out their opinions, for the following possible reasons:

1. The failure to complete the readings brought about a sense of guilt.
2. Voicing out personal opinion and feelings openly to the class could undermine their self-esteem, especially if it suggests that they were unable to complete the readings. It could suggest either laziness or incompetence, or both on their part.

Unthreatening relationships were only accomplished at the seventh tutorial when more open feedback from student teachers revealed the reasons behind their inability to complete their readings. These are elaborated below.

(i) The reading texts were overly time-demanding

Analysis of the questionnaire indicated that student teachers’ poor prior reading was a result of text characteristics (73.7%), time demands (14.7%) and personal discipline (11.6%) (see Fig. 3). Long reading texts, coupled with the requirement to be able to understand and interpret academic theoretical and non-local texts, placed unrealistic time demands on the student teachers, who were concurrently dealing with the demands from seven other modules.

Interviews with trainee teachers revealed that they might have required about a week to complete one reading material because of their lack of basic

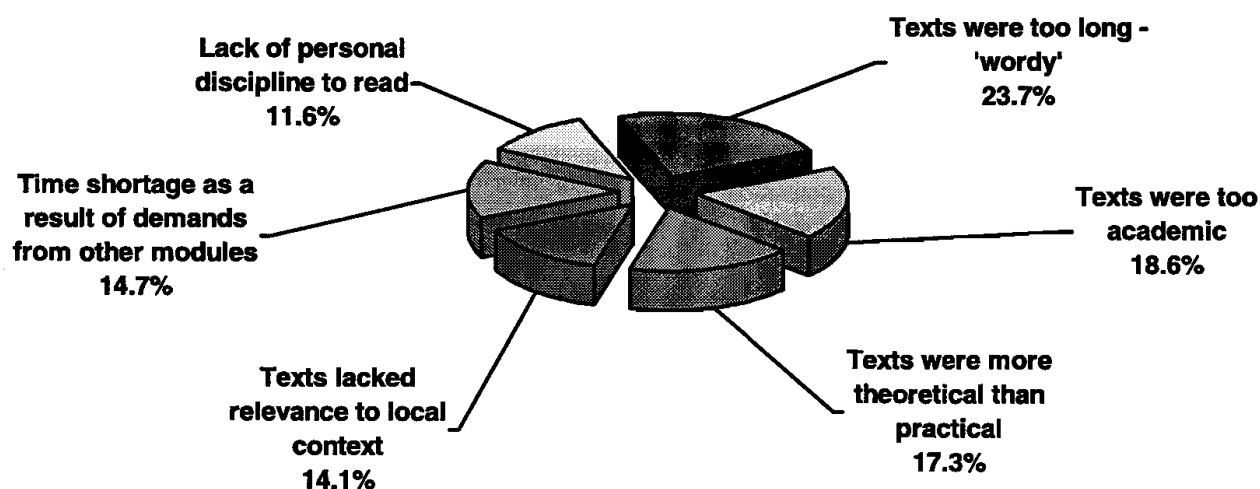


Fig. 3. Reasons for insubstantial readings ($n = 61$).

understanding of the specialized concepts and terminology pertaining to social, policy and philosophical studies, and the linguistic difficulty of the readings. Furthermore, they needed time to connect what they had read with their own experiences and local contexts.

The table below describes the required reading materials, page lengths and estimated word counts for each topic.

Topic	No. of readings	No. of pages	Est. Word count	Writing type
1. The relationship between schools and society/national education	2	7 14	6426 7280	Policy History
2. Efficiency to ability driven education	1	20	6882	Policy
3. Student-centred (progressive) education	1	12	4800	Sociology
4. Teaching and the new professionalism	2	4 3	1950 1440	Sociology Sociology
5. Classroom management	1	55	30,030	Sociology
6. Aims of education and the curriculum	1	24	11,250	Philosophy
7. Authority and discipline	1	24	14,040	Philosophy
8. Teaching and learning	1	13	6591	Philosophy
Total	10	176	90,689	—

(ii) The reading texts lacked relevance to student teachers' immediate practical school realities

The style of writing was more suited to academics than practitioners; the content of the readings was more theoretical than practical, and the contexts are more foreign than local (Fig. 3). When asked how time could be maximized during tutorial sessions the questionnaire indicated that student teachers had a strong need for relevance between theory and practice (Fig. 4).

Besides being academic in nature, some reading texts are written to suit policy-makers' style of 'top-down' policy implementation. This may de-motivate student teachers from engaging in any form of critique. In addition, the lack of deep understanding of 'policy-practice' connections further undermined student teachers' motivation to read matters pertaining to policies.

(iii) Student teachers lacked the necessary reading skills

The questionnaire indicated that student teachers found the 15 minute explanation of the reading materials given by the tutor to be useful with regard to topic

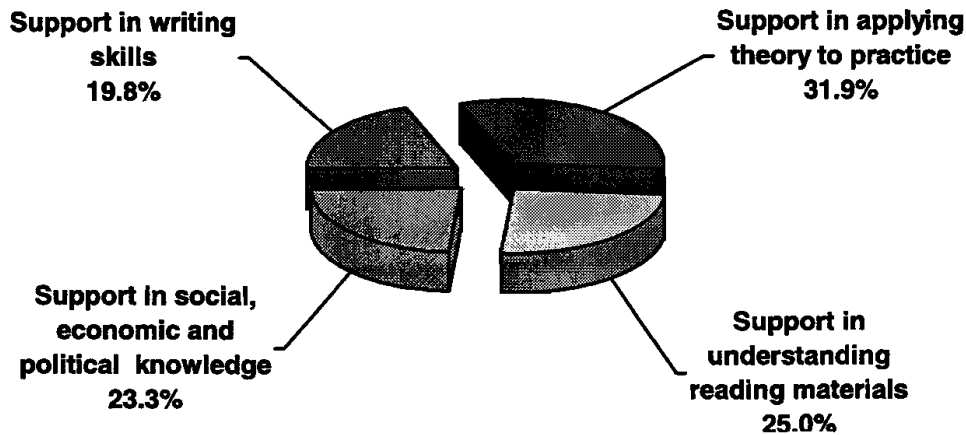


Fig. 4. Student teachers' support preference during tutorials ($n = 61$).

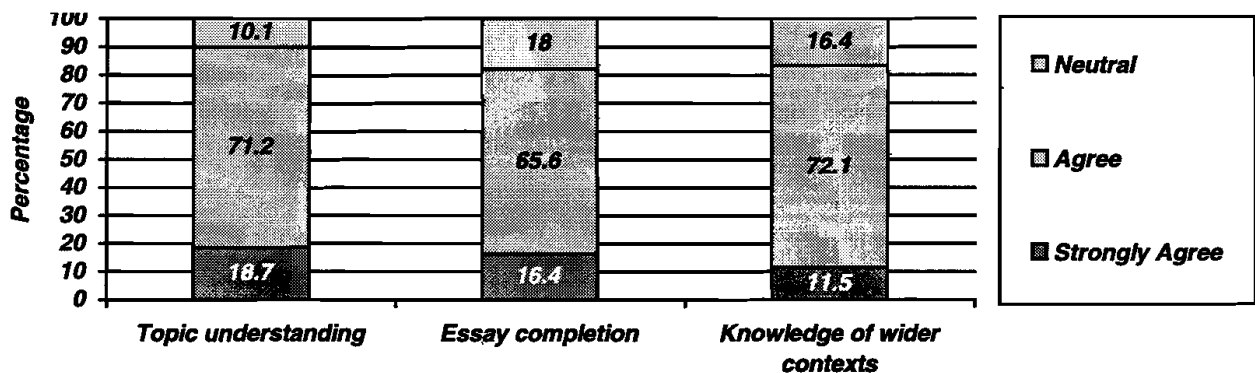


Fig. 5. Usefulness of tutor's explanation to reading materials ($n = 61$).

understanding, essay completion and knowledge of wider contexts (see Fig. 5). Tutor support comprised the following strategy:

- (a) summarize the given readings;
- (b) pin-point relevant and succinct information;
- (c) demonstrate how readings could be used to support arguments in essay writing;
- (d) explain acceptable referencing conventions.

(iv) Tutorial session time was too short to meet learning needs

The first two reasons suggested that a 50 minute tutorial session might not be ideal for the "narrow-wide-narrow" approach to learning to take place. The needs expressed by student teachers — clarification of reading materials (reading skills), theoretical content (social, economic and political knowledge), application of theory to practice, and assistance with writing skills (see Fig. 4) — would all require more class time.

(v) Student teachers' survival strategies

Interviews from student teachers, especially from the last two tutorials, revealed that as a result of time shortage they focused only on reading materials which they planned to write their essays on. This was confirmed by student teachers' reluctance to choose 'Teaching and the New Professionalism' as an essay topic because of their difficulty in dealing with an unfamiliar subject area in the limited time available. Student teachers were mainly concerned with obtaining a pass mark for the module and this took precedence over the cognitive processes of understanding the content.

On reflection, it seems the following factors could explain student teachers' reluctance to read the texts:

1. shallow grasp of the knowledge and issues for each topic;
2. poor participation in tutorial discussions;
3. lack of mastery in the knowledge base of the module;
4. low motivation to read subsequent readings;
5. a propensity towards mediocrity — aspiring 'to scrape through' the assessment;
6. low self-esteem for the module.

Applying a system thinking approach of learning, the diagram below summarizes possible processes that had been discussed so far (see Fig. 6).

Recommended Solutions

At the end of the action research cycle, a few recommendations as a response to the learning needs were made, all of which underpin the importance of support in the learning process.

1. *Provide bite size reading materials.* Tutors or course co-ordinators could provide markers in the reading materials to indicate degree of importance to selected texts. For example, indicating asterisks against paragraphs or stating certain pages as a 'must read'. This would motivate student teachers to read the primary texts in chewable size, and eventually the secondary texts when time allows. Another way is to provide a summary or abstract in point form for each reading material.
2. *Create connections between theory and practice.* Tutors or course co-ordinators could provide a glossary of taken-for-granted words in the fields of sociology, policy and philosophy at the onset of the module, and perhaps to provide

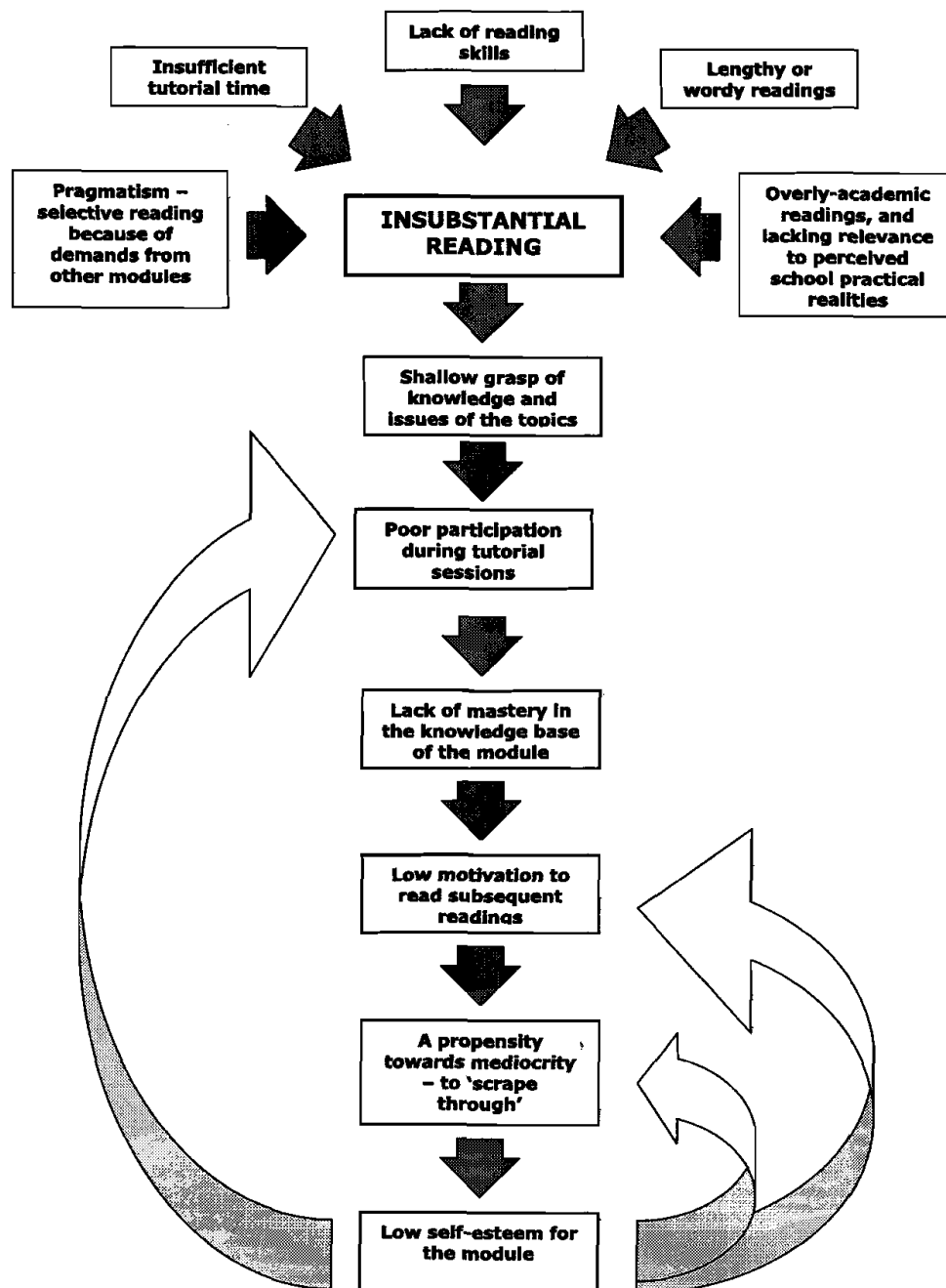


Fig. 6. Causes and effects of insubstantial readings.

time for student teachers to clarify them during the introductory tutorial. In terms of course design, case study, role-plays and simulations could be used to bring in school practical situations into the classroom. Materials used in schools could also be brought in for the same purpose. For example, record books, minutes of meetings, disciplinary report forms, parental permission forms, textbooks, workbooks and exercise books.

3. *Lengthen the time of the tutorial session to one and a half hours.* For the first three proposals to be successful, time per tutorial session needs to be expanded from 50 minutes to 1 hour and 30 minutes.

4. *Provide resource structures to sharpen reading skills.* Provide 10 minutes for each tutorial to dialogue on ideas and issues raised in the reading materials. Another means of support could be to provide student teachers with a written guide to effective reading where they could read at their leisure. This guide could also be uploaded to a website for easy and extensive accessibility.
5. *Provide incentives that reward the processes of learning.* In terms of assessment, more weight ought to be placed on application of theory to practice than on academic, written forms of assessment. For example, 60% on portfolios and 40% on individual essays. Portfolios are collections of learning resources that could be used for future professional work and development. Through portfolios, the tutor could require student teachers to engage in, and therefore be assessed on, the following:
 - (a) A compilation of reading materials pertaining to the topics within the module; this is to provide the theoretical base to guide professional practice.
 - (b) Reflection-on-action on previous teaching experience during contract teaching, school experience and teaching practicum; this is to promote reflective practice.
 - (c) Collections of learning points gained from interactions in small group and class discussions; this is to promote collaborative practice.

In terms of individual writing, essays could favour the application of theory to practice. The following criteria, along with their respective weights, could be utilized:

(a) Demonstration of theoretical knowledge	20%
(b) Demonstration of practical knowledge	20%
(c) Demonstration of application of theory to practical knowledge	50%
(d) Organization of argument	10%
	<u>100%</u>

Conclusion

The obstacles to learning and the recommended solutions presented in this paper underscore the importance of support in the learning process, in particular the course design and materials. A corollary to this is the importance of *relevance* — being able to make connections to the outside world. Donovan, Bransford and Pellegrino (2000) proposed that “learning is influenced in fundamental ways by

the context in which it takes place" (p. 22). Support ought thus to be given to student teachers so that they can acquire the required knowledge, skills and attitudes and translate these to school and classroom teaching experiences. In the authors' view, this is the acid test to measure the effectiveness of an educational course.

Implications

1. Provide sufficient tutorial time to allow maximum learning to take place.
2. Provide support structures to help student teachers cope with the reading materials.
3. Create learning opportunities to make connections between theory and practice.
4. Provide support structures to sharpen student teachers' reading skills
5. Give equal importance to the process of learning as well as the product of learning.

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