# Evaluation of the Effectiveness of Tutorials in a Post-Registration Nursing Degree Programme in Hong Kong

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## A b s t r a c t

We evaluated the effectiveness of tutorials in a post-registration nursing degree course in Hong Kong. We utilised multiple research methods within an overall action research paradigm: a pre/post experimental design, non-participant observation of tutorials, journal keeping by tutors and student interviews. The aim of the study was to evaluate the effect of tutors' teaching styles on students' (n=61) critical thinking processes. The experimental design used Biggs' (1987) Study Process Questionnaire (SPQ) and Entwistle and Ramsden's Approaches to Study Inventory (ASI) as dependent variables. Two experimental groups showed a significant change in pre/post test scores. The qualitative data indicated differences in the way in which these two groups operated. These data also indicated that students largely used achieving approaches (being competitive, well organised and concerned with doing well) to their studying. Students' satisfaction with tutorials was related to the tutorials' relevance to the preceding lecture as well as to their perceived contribution to course assessment. We conclude that the efficiency of the tutorials could be increased by reducing the number of course assignments, designing a set of specific tutorial activities which combine both didactic and self-directed teaching methods  and having explicit instructions when forming tutorial groups.

## Background

This study originated from staff and students' evaluation of several courses in a Bachelor of Nursing (BN) Programme. These evaluations showed that attendance at tutorials was declining because students found them unsatisfactory. On the BN, the tutorial refers to small group learning activities that were mostly teacher led. The tutorials consolidated the knowledge transmitted in the preceding lecture. Feedback from staff and students suggested that very little meaningful learning was going on as the tutorials seemed to be a mini lecture. Thus the teaching team decided to change the nature of the tutorials to encourage students to play an active part in their learning, and to evaluate the effect of this change on staff and student outcomes.

The objective of the study being reported was to evaluate the effect of changing the tutorial approach. In pursuing this objective the research team reviewed some recent research on student learning approaches in Hong Kong.

## Conceptual Framework

### Student Learning Approaches

From a wealth of comparative research conducted in Hong Kong, Biggs (1992) identifies three approaches to learning. The *surface* approach is characterised by extrinsic motivation, the driving factor being the probability of some sort of long-term reward or punishment. A common strategy is rote learning, typified by a pragmatic approach, whereby only material important in terms of external rewards or punishments is selected for attention e.g., 'examination' related material. Using this approach the student focuses on reproducing the material or skill when it is required. Students using the *deep* approach are motivated by a curiosity and need to understand the presented material. Biggs states that deep processing 'involves processes of a higher cognitive level than rote learning, searching for analogies, relating to previous knowledge, theorising about what is learned, and deriving extensions and exceptions' (Biggs, 1992). In the *achieving* approach students focus on the outcomes of learning, e.g., honours classification, high marks or winning scholarships, and use anything likely to result in these outcomes. In this approach the student spends much time trying to ascertain the preferences and foibles of particular teachers and which teacher will mark assignments. According to Biggs, students using the achieving strategy concentrate on cost effective uses of time and effort.

Biggs reports that Chinese students in tertiary institutions in Hong Kong demonstrate a low surface/high deep-achieving profile. Medical students, however, were much higher on the surface approach, and lower on the deep and achieving approaches than Australian medical students. No data are available for nursing students. They may be similar to medical students given that they are educated in a similar environment.

Biggs and Watkins (1993) argued that student learning approaches are a response to teaching methods. Therefore, the research team questioned whether teachers were encouraging the students to use deep approaches to learning.

## The Multi Method Research Process

The research team used a 'between methods triangulation' (Denzin, 1989; Kimchi, Polivka and Stevenson, 1991) to answer the following research questions:

- Will a change from 'theory' based tutorials to 'learning process' based tutorials produce any change in the learning approach of students?

- How far does the students learning approach influence their satisfaction with tutorials?

- What aspects of the tutorials affect students' satisfaction?

The quantitative element of the triangulation was an experimental trial; in the qualitative element we used observation, personal journals and interviews. The following data collection procedures were used:

- Pre-Post Test, i.e., Study Process Questionnaire (Biggs, 1992) and Approaches to Study Inventory (see Gibbs et al., 1989)

- Journal keeping by tutorial group facilitators

- Participant observation of tutorial sessions

- Semi-structured interviews on student opinion of tutorial learning.

Because of the research methods adopted the methodology and results for each of the four data collection processes will be described separately and the summary findings of the four processes will be discussed at the end along with the overall discussion and conclusions.

## The Experimental Process

### Method

The experimental design: students attending day classes were randomly allocated to one of five different tutorial groups. The evening class students formed another group. In total, six groups were formed as follows:

Group 1: Experimental day class with tutorials (N=11)

Group 2: Experimental day class with tutorials (N=11)

Group 3: Experimental day class with tutorials (N=9)

Group 4: Experimental day class with tutorials (N=9)

Group 5: Control. Day class with tutorials (N=8)

Group 6: Control. Evening Class without tutorials (N=13).

Groups one to five were facilitated by a member of the teaching team on a continuous basis. Group six, which was an evening class, was facilitated by whomever gave the lecture. The tutors in groups one to five rotated on an even basis to teach the evening class group. The evening class group was self selected and consisted largely of part-time students. Tutors in experimental groups one to four discussed the proposed change in their approach to tutorials. It was decided that each should use their personal style to facilitate the process of learning and study skills of the student and to minimise discussion of the previous lecture. It was, however, felt acceptable to discuss the lecture content if students showed the initiative and asked for discussion. This was felt to be an element of the students' active learning which could be rewarded.

### The Sample

The sample was students taking a Behavioural Sciences course as part of the Bachelor of Nursing programme and who consented to take part in the study. This represented 61 students who were allocated to each group as described above. Twenty-six students declined to participate or did not attend the lecture before which the pretest data were collected. Attendance at lectures was not compulsory.

## The Measuring Instruments

### Study Process Questionnaire (SPQ)

Designed by Biggs (1987) the SPQ contains 42 items measuring students' general attitudes towards studying. In particular the SPQ measures three factors: the students' (1) motivation for studying; (2) strategies used for studying; and (3) approaches to studying. Each item is scored either A = this item is never or only rarely true of me; B = this item is sometimes true of me; C = this item is true of me about half the time; D= this item is frequently true of me; or E = this item is always or almost

always true of me. A total score for each factor is derived from applying values of either one to five for each response indicated and adding the subject's scores from each item.

## Approaches to Studying Inventory (ASI)

The research team used the short version of the ASI. Designed by Entwistle and Ramsden (1983, see Gibbs et al., 1989) the ASI is an 18 item measure of three factors: (1) achieving orientation, the extent to which students are competitive, well organised and concerned to do well; (2) reproducing orientation, the extent to which students are attempting to memorise subject matter; and (3) meaning orientation, the extent to which students are attempting to make sense of subject matter. Each item is scored either A = definitely disagree; B = disagree with reservations; C = the item does not apply or it is impossible to give an answer; D = agree with reservations; or E = definitely agree. A score of one to five is applied to each indicated response. The total score for each factor is derived from adding the scores for each item.

## Data Collection Procedure

One of the researchers conducted a seminar with the students explaining the nature, purpose, procedure and expected benefits of the study. A detailed consent form was given to students (Polit and Hungler, 1995) after giving them a week to consider whether they wanted to participate in the study. The seminar, handout and consent form clearly stated that students were under no obligation to participate and that their participation or non participation would have no consequences for their progression on the programme.

The following week (week 2 of the semester) the SPQ and ASI were administered to those who had consented to participate (N=61, 70%). The questionnaires took approximately 25 minutes to complete.

## Results

An analysis of the pre-test data indicated that group six, the evening class group, reported significantly more deep learning strategy in their study processes than any other group (F=2.921, p<0.02). Group one also showed significantly more deep approaches to learning in their study processes than any other group at the pre-test stage. A comparison of the pre- and post-test data indicated that one group (group two) showed less reproducing orientation at post test (F=4.894, p<0.03) and one group (group three) indicated a significant improvement in scores for deep learning strategy (F=8.896, p<0.007). There were no significant differences in SPQ or ASI scores for groups one, four , five and six between the pre- and post-test. A one-way ANOVA was conducted for all analyses. From this analysis the only conclusion is that groups two and three changed in their learning approaches. This is seen as important given the short period of exposure to change experienced by the two groups, i.e., 10 weeks. It is notable that no change occurred in groups one and four and that both control groups indicated no change. There is further evidence that a predisposition to the deep learning strategy may not in itself maintain improvement in deep learning given that control group six experienced no change even though this group was one of the highest in deep learning strategy. In order to obtain some clue as to why groups two and three may have experienced some change, qualitative data was used to ascertain the possible reasons for these findings. The first of these approaches described is the non-participant observation of tutorials.

# The Observation of Tutorials

## Method

A research assistant was assigned to each of the tutorial groups to act as a non-participant observer for one tutorial session. The research assistant was an experienced teacher but was not a member of the Behavioral Science teaching team. The observations took an ethnographic approach pertinent to exploring the characteristics of a group culture. The observations were undertaken as unobtrusively as possible in order not to interrupt the dynamics of the tutorial session.

## The Subjects

The time for each of the group observations was selected randomly with neither the group nor tutor having prior knowledge that they were to be observed.

The following are the results determined from an analysis of the observation notes.

### Group 1 Tutor A

This tutorial focused on a review and clarification of concepts from the lecture. Students spoke mainly to the tutor and not with each other. English was the medium of communication throughout the session. Students were not spontaneously talkative, so Tutor A did most of the talking, asking questions to elicit responses from the students.

### Group 2 Tutor B

This tutorial commenced with an exercise to be undertaken in pairs which then needed to be shared with the group. Tutor B needed to provide substantial  encouragement for the students to participate. When this did not work students were then  given another exercise to encourage communication. This however also failed to increase spontaneous communication. Tutor B went on to tell the students that there are no right or wrong answers, but they were still silent. Tutor B made an attempt at humor by trying to bribe a student, who responded back in a humorous manner that the bribe was too small. The  nature of the exercises meant that the students are asked to change their seats, so they could speak to different partner throughout the tutorial. Tutor B's tutorial appeared to focus on socialisation in education and intellectual thinking.

### Group 3 Tutor C

Tutor C gave students a choice of a group activity, a process activity (e.g., writing skills) or another of their choice. Students went on to choose the group activity. Tutor C then explained the activity, which posed considerable difficulties in student understanding. When undertaking the activity which involved practicing communication skills, students spoke in Cantonese. In the debriefing session after the activity, students were reluctant to speak to one another. Instead what was more apparent was that they would take cues from their tutor. Students would however respond to the questions when asked, but  needed considerable prompting. In this group it was more apparent that students were keen to talk among themselves in Cantonese.

### Group 4 Tutor D

Tutor D began by stating that one student requested more structure in the tutorial. Tutor D gave students the tutorial assignment given in the lecture, which looked at communication in social settings. Students discussed this in pairs, in Cantonese. Tutor D introduced two other assignments (role play and paired work), in which the students communicated with each other, but were reluctant to speak in front of the larger group. When choosing roles for the role play, Tutor D asked

for volunteers. After a protracted negotiation and some silence, two students volunteered. Another activity involving paired work had a discussion afterwards, in which the students began to volunteer their responses. It was only at the end of the session that the students began to speak out more.

## Analysis of Journals

### Method

On completion of the tutorial teachers were asked to make reflective notes. They were encouraged to write whatever they thought had been relevant to the tutorial process. These reflections represented a hermeneutic phenomenological orientation to the study (Walter, 1995).

### Subjects

The subjects were the four experimental group tutors (see above).

### Results

Entries in the journals ranged from one line entries to several pages of a standard note book. A structural analysis approach was used to elicit nine issues. The following is a summary of these issues.

## Tutors Process Evaluation

This issue was the most frequently commented upon. All tutors commented at considerable length that they were constantly self evaluating the tutorial as it progressed. Sessions were frequently summarised as being better if they had high levels of laughter, involvement and interaction. A poor response from students would mean that the approach would change. Tutors exhibited high levels of self awareness, with three commenting that while in the middle of tutorials they suddenly felt that they were talking too much. One tutor reported that despite having tried not to pursue lecture related material when it was introduced, the tutor felt more at home and students responded more favorably.

### Tutors Personal Feelings

This section constituted the second most frequent of the responses. This issue ranged from reflecting on interpersonal approaches to students, to struggling with inner feelings, feeling acceptably comfortable and sometimes cynical. All tutors mentioned that students were habitually not attending. This they felt reflected a lack of interest or value in tutorials, or assignments pending. Tutors reported cynically and disappointedly that attendance at certain sessions may was due to a need to get specific information for assignments and the reverse for other sessions.

### Punctuality

All tutors mentioned the delay in the beginning of the sessions. This was seen to be due to a variety of reasons. Most students frequently arrived late or failed to show up altogether.

### Planning

Only one tutor reported any teaching preparation prior to the tutorial. In this tutor's case each entry was precluded by either finding a background text and or photocopy as well as a summary of what had worked well last time and what may work at present. In one particular session this same tutor reported his awareness of his lack of preparation.

### Tutors' Perception of Students' Emotional Level

Tutors frequently mentioned that students appeared bored during the tutorials. All tutors commented at some point that overall students appeared more relaxed and happy.

### Attempts to Actively Involve the Students in the Tutorial Process

Three tutors reported asking the students what they wanted to do and one tutor prefaced this choice with three options to give the students some framework in which to move without being too directional. Another mentioned trying to get the students involved but not getting a response. When questioning students about this, the reply was that they wanted more direction. Another tutor began by asking students what they wanted to discuss. On hearing this the student involved voluntarily voiced dissatisfaction that the previous lecture had not met their assignment needs.

## Preliminary Student Interviews

### Method

At the beginning of the study, student interviews were undertaken within a hermeneutic phenomenological paradigm to try to ascertain some baseline perceptions which would help detect any change in opinions as a consequence of the attempted change in tutorials. These questions elicited the lived experience of the students and enabled them to focus on their perceptions and expectations of tutorials. In this set of interviews subjects were asked a series of pre selected closed answer questions by an English speaking research assistant, who was not a member of the teaching team. This was conducted in English, which was felt satisfactory given that all students had to demonstrate proficiency in English before being selected for the course.

### Subjects

Eight students were randomly selected from each experimental tutorial group. The students were all Chinese and aged 23 to 40 years old. All were registered nurses with a varying number of years of experience.

### Results

Two members of the research team separately undertook a content analysis of the data and collated their findings. The major findings from this analysis are summarised in the following discussion.

The students believed that the purpose of tutorials was to elaborate, clarify, revise and follow up lectures. Tutorials were seen to be less formal and provided more understanding and application to everyday life. Tutorials were seen as reflective, allowing time to think as well as filing in any gaps from the lectures. The students felt they could participate more in tutorials and were free to express themselves. They also had increased communication with fellow students. The main learning reported was that from interacting with other students, in the form of sharing opinions, seeing other peoples' point of view and the chance to explore one's own thoughts. A few students

mentioned that tutorials were better when there was a Chinese tutor or when they could use Chinese language. Tutorials were seen to be better if there was activity however students acknowledged that they were reluctant to participate. Strongly suggested was the inappropriateness of having a tutorial just after a lecture. This was felt to be inhibitory if the content was not related to the lecture. Student expectation of the role of the tutor was to encourage participation, thinking, discussion through questioning and ideas.

While some students said that tutorials were good, an equal number said they were often a waste of time. This is in contrast to lectures which were seen as important whereas the diminished importance of tutorials was seen in the poor attendance particularly around the time of the due date for assignments.

# Post Experimental Student Interviews

## Method

The post experimental interviews were conducted after the students had completed the newly structured tutorials.

Because, through the process of undertaking reflective journals, we were becoming increasingly aware that interviews conducted in English may be inhibiting feedback, the post interviews were conducted in Cantonese, the local Hong Kong dialect. A native Cantonese speaker was recruited to conduct, transcribe and translate the interviews. The aim of the post-interviews was to ascertain what was uppermost in the students' minds when reflecting on their recent experience of tutorials.

The interviewer was asked to begin all interviews with the same open-ended question: 'You have been involved in the Behavioural Sciences II tutorials for one term. What are your experiences and opinions about the tutorials? Can you talk about anything?' The interviewer was instructed to use follow up questions which would take account of the subjects previous response.

These questions were: 'What are your feelings about tutorials?' 'What are your opinions about tutorials?' From that point the interviewer then proceeded with minimal encouragers, reflecting and paraphrasing to promote discussion. Each  interview took approximately 30 minutes.

## Subjects

Six students were interviewed, one volunteer came from each of the six tutorial groups. Volunteers were used with the understanding that the best informants were more appropriate in keeping with the assumptions of phenomenology. The best informants being those most willing and able to talk about the tutorial process.

## The Results

The translated transcripts were analysed by content analysis and the key categories were identified as shown and described below.

## Purposes and Aims

The majority of respondents indicated that they were largely dissatisfied with tutorials because they could not understand the purpose or aim of a particular session. The most pervasive concern was that the students generally did not know what and why they were learning.

## Lecture Link

The majority of students indicated that the tutorials should be related to the course materials in particular the preceding lecture.

## Active Learning

Students, in general were most satisfied with tutorials when learning activities were offered rather than listening to the tutor or being involved in group discussion. A minority, however, found some activities, such as 'games', to be somewhat childish.

## Participation

This category is largely concerned with the issue of asking questions in class and speaking in public. It was obvious that many of the students found this difficult. Some students found tutorials useful because it was easier to ask questions and voice opinions in a small group than in the lecture theatre.

## Group Work

One of the most positive aspects expressed about tutorials was the opportunity they provided for working and undertaking activities in a group, getting to know other students and getting feedback from them.

## Teachers Personality/Style

Students' satisfaction with tutorials were largely related to the perceived skills, abilities, personality and the communication ability of the tutor. Clearly mentorship was seen as a part of the tutorial process.

## Assignments

The majority of students made a direct link between the quality of the tutorial and its facility in helping them to complete assignments or other course assessments. If tutorials gave information related to the knowledge base of the assignment or how the assignment should be structured then students found this useful. In this context tutorials were seen as time saved rather than time wasted. The motivating power of assignments is further demonstrated by comments that non-attendance was often increased at times of assignment deadlines. This also concurs with entries in the tutors' journals.

## Attendance

The majority of students commented that they were less inclined to attend when the groups were too small to make group work or sharing viable. What was implied was a snowball effect for non-attendance. One student suggested that attendance be made compulsory because of the limitations it imposed on those students who wanted to benefit from tutorials.

## Not Helpful

The majority of students indicated that the tutorials were of no use or were seen as a waste of time. Tutorials were seen as useless if they were of no practical help. While one student commented positively on this point and enjoyed tutorials said that 'tutorials cannot do everything for you', this person was the exception rather than the rule.

### Helps Us to Think

Four respondents commented that good tutorials did actually promote their thinking. This is ironic in the sense that many of these same students said that tutorials were not helpful. What was apparent was an ambiguity which was dependent on the timing of the tutorial and the personality of the tutor.

### Teacher Lead

Four students said that they were disappointed if the teacher did not take the lead in class, both in deciding what should be done and in providing the guidance or impetus to get it done.

### Language

Finally a majority of the students indicated that they felt that using English posed a language barrier. They commented that their own English performance inhibited them and that at times the teachers inability to communicate in their language (Cantonese) gave the students the impression that misunderstandings were frequent from both parties.

## Findings

The experimental data indicated that two of the four experimental groups showed a significant change in their learning approaches and two experimental groups along with the control groups showed no change. The groups exhibiting change were groups two and three. Groups one and four did not change and the observations of these two groups indicated that they each appeared to have more theoretical structure to their tutorials, as this may have been due to the fact that they adopted activities which related to the previous lecture content. In groups two and three, students spoke in Cantonese in their small groups, as well as in English for feedback to the tutor. In summary it would appear that observed changes in groups two and three which were facilitated by Tutors B and C respectively may be due to three differences from groups one and four these being: the content was not as closely related to the lecture material as the other experimental groups; the class room arrangements changed according to activities (maybe more movement and activity); and the students communicated more with each other especially in those in which they were able to use their native dialect. In summary the incorporation of a greater learning process development by tutors was apparent in groups two and three.

The analysis of tutors' journals indicates that the tutors in experimental groups one and four did not change their approach significantly and used little self reflection. Where the tutorial content did not match the previous lecture material, students seem to have responded by showing reluctance to participate in some form or other. This appears to be the means by which students displayed their keenness for the tutor to change from process back to theory oriented approaches. This was reported by the students to be more helpful, and stimulate successful learning and positively reinforces the tutors' adoption of theory related material. The tutors were always conscious of the main reason for student apathy and absence, that is the pressure of impending assignment submission dates. This seems to have increased the pressure on the tutors to make tutorials not just theory specific but almost entirely assignment specific. In the preliminary interviews students indicated a strong expectation that the tutorial should be related to the previous lecture and that this would encourage more thinking about the content of the lectures. This was related to passing assignments. The post-experimental interviews served to confirm that these students' expectations, indicated in the pre-experimental interviews, had largely not changed. The one exception being that the post-interviews showed more reports of tutorials being a waste of time and that students had not understood the purpose or significance of the tutorials.

## Discussion

It is apparent that the greatest difficulty in the development of learning process tutorials in this situation is the predominance of achieving learning approaches from the students' perceptions. There is some ambiguity here in that some evidence exists that indicates that changes to reproducing strategy and deep approaches to learning have occurred in those groups which more often dealt with learning processes rather than lecture content. The major effect of this change, however, seems to be that students demonstrate frustration when the tutorial did not meet their immediate needs. This in turn exerts pressure on the tutor to change to a theory driven orientation in the tutorial. Thus the short term and instrumental learning objectives of the students works against the development of deep approaches to learning. A simple explanation for this is that deep-approaches to learning and student self direction are not valued by the educational institution because the covert curriculum requires passive dependent behaviour and achievement orientated approaches to learning for the students to survive. The influence of assignments on the learning processes of the students concerned indicates that continuous formative assessment contributes to the adoption of achievement learning strategies only short term measures can be adopted to continue to make tutorials more attractive to students. To solve the problem of the lack of advanced preparation of tutorial activities by tutors, the course team, not individual lecturers, should draw up a set sequence of tutorial 'activities' relevant to the course. Student self-direction could be encouraged by allowing them to select which activity they preferred. The structure of tutorials could go on to adapt a briefing approach commonly associated with experiential learning (Kolb, 1984; French, 1994). These activities could also attempt to integrate both theory and learning processes. In order to enhance contribution and deeper learning it seems worthwhile to look at the effects of making attendance at tutorials compulsory or to adopt an opposite extreme by forming tutorial groups only on the basis of demand (i.e., make it explicit that tutorials are to develop learning skills, provide sessions for groups of up to 12 students, increasing or decreasing the number of groups as demand changes).

## Conclusion

The dilemma we have highlighted is that changes in approaches to learning and self-directed learning are intricately associated with long term personal development goals. It is therefore not easy to demonstrate the benefit of this type of learning strategy to students who are constantly experiencing the rigid institutional demands of short term goals (examinations and assignments) which are not appropriate to personal or professional long term development.

We conclude that the efficiency of the tutorials could be increased by reducing the number of course assignments, designing a set of specific tutorial activities which combine both didactic and self-directed teaching methods and having explicit instructions when forming tutorial groups.

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