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Hong Kong Preservice Teachers' Achievement Goal Orientations - are they related to their gender and electives?

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Survey study by means of a questionnaire on achievement goal orientations was conducted with four hundred and seventy-three pre-service student teachers of the Hong Kong Institute of Education. Two contrasting goals were identified, namely: learning goals and performance goals. Psychometric properties of the questionnaire gave support to its applicability in the local context. Statistical analyses indicated there was no significant difference in achievement goal orientations with courses and electives but sex. Female students were found to be more performance goal oriented than male students. Explanation of the differences in achievement goal orientations within sex group was sought in terms of socio-cultural factors. Implications were drawn for teacher educators to consider in the future planning and development of teacher education programmes.

INTRODUCTION

Research has indicated that the motivational orientations and affective variables are important factors influencing learning achievement at tertiary level education (Minnaert & Janssen, 1992). Possibly, there is a close relationship between motivation, achievement and the goals set by the students. Based on literature and research findings, it is anticipated that achievement goal orientations would be prominent determinants of students' motivation and achievement behaviour. Basically, there are two contrasting achievement goals, namely: learning goals and performance goals (Ames & Archer, 1988; Archer, 1994; Elliott & Dweck, 1988; Maehr & Braskamp, 1986). Learning goals refer to the goals in which individuals tend to increase one's mastery of new tasks and competence. Hence learning goals are also known as tasks goals or mastery goals. People who hold learning or mastery goals want to develop their competence on a task or increase their understanding of a subject and anticipate this to be achieved by hard work. Performance goals are the goals in which individuals seek to maintain judgment by trying to prove their competence. People holding performance goals are concerned primarily with demonstrating their ability (or concealing a perceived lack of ability) by outperforming others, particularly if success is achieved with little effort. Performance goals are considered ego incentives or ego involved (Dweck, 1986; Dweck & Leggett,1988; Maehr & Braskamp, 1986; Nicholls, Patashnick, & Nolen, 1985). Dweck (1986) and Nicholls (1989) have argued that a learning goal orientation is more

desirable than performance goal orientation, which concentrates on outperforming others.

Achievement goal orientations are expected to relate to motives and strategies of learning. The situation of how the achievement goal orientations were related to students' learning motive and strategies were explored by a number of empirical studies (Ames & Archer, 1988; Elliott & Dweck, 1988; Meece, Blumenfeld, & Hoyle, 1988; Nolen, 1987b). Also, whether one is oriented toward a learning or performance goal has been demonstrated to be a function of individual differences or to be induced by situational constraints (Ames, 1992; Dweck, 1986).

Nolen (1987a) investigated the developmental differences in learning goals, studying strategy beliefs and their inter-relationship among school graders and college students. She administered questionnaires to the students to measure the levels of task orientation (aligned with a mastery orientation), ego orientation (performance orientation), work avoidance, as well as belief in the utility of two types of strategies: those requiring deep processing of information, and those requiring only surface-level processing. Results indicated that of the three goal orientations, only task orientation was significantly positively correlated with belief in the value of deep-processing strategies. This was the case at all three age levels. Moreover, valuing of the two strategy types was positively correlated for younger, but not college students, who appeared to more clearly differentiate the two strategy types on the basis of utility for learning than did the younger groups. Therefore, the hypotheses that students' personal goals for learning influencing which strategies they used in studying were supported.

Greene and Miller (1996) studied the relationships among college students' self-reported goal orientation, perceived ability, cognitive engagement while studying, and course achievement. Results indicated that both perceived ability and learning goal scores were positively correlated with meaningful cognitive engagement which included self-regulation and deep strategy use. In addition, learning goals and perceived ability were positively correlated with each other and performance goals were correlated with shallow cognitive engagement. A causal model in which perceived ability and learning goals influencing meaningful cognitive engagement, which in turn influence midterm achievement was supported. Finally, shallow processing, which was influenced by performance goals, negatively influenced midterm achievement. All these studies have suggested that the more adaptive learning goal orientation is related positively to the more desirable deep approach to learning.

In summary, researchers in achievement motivation have highlighted and regarded achievement goal orientations to be prominent determinants of students' motivation and achievement behaviour. Also the general emphases on learning (mastery) goals and performance (ego) goals that students perceive in schools and the goals they adopt appear to be important factors in students' school behaviour and may have broader implications for adaptive development. While the role of goals has been primarily demonstrated in the realm of learning and achievement, task and ego goals may also influence a wide range of action, thought and affect, including those associated with general well-being – general self-evaluations and patterns of behaviour, coping, and emotion (Kaplan & Maehr, 1999). Given the current concerns about the quality and professional development of preservice teachers, it is worthwhile to examine the achievement goal orientations of our future teachers who would be influential on their pupils' learning. Hence the study of achievement goal orientations of preservice student teachers is expected to generate useful information and implications for the teacher educators in the education of preservice student teachers.

OBJECTIVES

This paper is a report on one of several research studies conducted to investigate the relationship among achievement goal orientations, self-concept and causal attributions, study approach and achievement of teacher education students. The aim of this paper is to explore the achievement goal orientations of preservice teachers in Hong Kong and to examine if achievement goals are related to sex and electives. Two groups of student teachers were chosen for study, one at degree level and the other at sub-degree level. A questionnaire on achievement goal orientations was administered to the two groups of students to complete. The questionnaire was adapted from the measuring instrument developed by Roedel et al. (1994) and comprised 10 items. Psychometric properties such as reliabilities and construct validity of the scale were determined to verify the applicability of the scale to the local context. Statistical analyses were applied to examine if there were any significant differences between the degree and the sub-degree course students in their goal orientations, as well as any differences in gender and elective groups.

Based on the objectives of this study four specific research questions were drawn:

1. What are the achievement goal orientations of preservice teachers in Hong Kong?
2. Are the achievement goal orientations dependent on sex?
3. Are the achievement goal orientations different for electives/discipline groups?
4. Are the achievement goal orientations different for degree and sub-degree course students?

Answers to the specific research questions would generate findings which were expected to provide useful information and implications for teacher educators and researchers in understanding the learning goals of students and hence in planning learning activities so as to assist the students' learning.

SUBJECTS OF STUDY

473 preservice student teachers from the Hong Kong Institute of Education were chosen for study. Excluding the missing cases, the sample consisted of 289 students from the Certificate in Education (Primary) course (abbreviated as C.E. (Pri.) and 170 students from the Bachelor of Education (Primary) course (abbreviated as B.Ed. (Pri.). All were first year students. The former is a two-year full-time sub-degree course and the latter a four-year full-time degree course. Both courses require students to have two “A” level subject passes as entry requirement and consists of more female than male students. Most of the sample students were around 19 to 23. Students were offered different subjects to be taken as their electives and these subject electives were classified into five major categories, based on the subject nature and convenience of statistical analysis. The five major categories included Language Subjects, Social Studies, Science and Mathematics, Cultural subjects, Technology and Computer.

METHODS OF STUDY

Survey study by means of questionnaire on achievement goal orientations was conducted with the preservice student teachers of the Hong Kong Institute of Education. Purposive sampling was adopted with students chosen from degree and sub-degree courses. The questionnaire used was adapted from the measuring instrument developed by Roedel et al. (1994) and comprised of 10 Likert scale items. Psychometric properties such as reliabilities (Cronbach alpha) and construct validity of the scale were determined to verify the applicability of the scale to the local context. Exploratory

factor analysis (maximum likelihood, followed by oblimin rotation) was applied to investigate the factor structure and construct validity of achievement goal orientations existing within the group of preservice student teachers under study. Multivariate analyses by means of MANOVA at .05 level of significance were applied to examine if there were any significant differences between the degree and the sub-degree course students in their goal orientations, as well as any differences in gender and elective groups. Implications were drawn from the results so as to help teacher educators and researchers to understand the achievement goals of preservice student teachers and hence develop appropriate programmes and learning activities to assist students' learning.

RESULTS

Achievement Goal Orientations of preservice student teachers

By means of maximum likelihood and oblimin rotation, two factors (with item factor loading equal or greater than .3) were extracted from 10 items on achievement goal orientations. The two factors accounted for 42.11% of the initial variance. Table 1 shows the extracted factors and the factor loading of respective items.

Table 1: Factor structure of achievement goal orientations of Hong Kong preservice teachers

Pattern Matrix (maximum likelihood and oblimin rotation)

Question Items	Factor	
	1	2
Achievement goal orientation question 3	.736	
Achievement goal orientation question 4	.687	
Achievement goal orientation question 5	.478	
Achievement goal orientation question 7	.377	.239
Achievement goal orientation question 9	.375	
Achievement goal orientation question 10		.633
Achievement goal orientation question 2		.482
Achievement goal orientation question 8		.468
Achievement goal orientation question 6		.401
Achievement goal orientation question 1		.313

Goodness-of-fit test

Chi-square	df	Sig.
103.337	26	.000*

* $p < .05$

Internal consistency/reliability of achievement goal orientation scale (Cronbach alpha) :-

Alpha = .6720 Standardized item alpha =.6752 (10 items)

Achievement Goal Orientations and Sex Groups

The sample consisted of 91 male and 368 female students. Table 2.1 shows the mean scale score, standard deviation and number of male and female students for different achievement goals. Tables 2.2 and 2.3 show the results of MANOVA study of the sex groups effect on achievement goals at .05 level of significance.

Table 2.1 Mean scale score and standard deviation of male and female students' achievement goals

	Sex	Mean	Std. Deviation	N
Learning Goal	Male	16.1648	2.8098	91
	Female	16.6821	2.6982	368
	Total	16.5795	2.7254	459
Performance Goal	Male	17.0000	3.6968	91
	Female	18.5870	2.9965	368
	Total	18.2723	3.2065	459

Table 2.2 Multivariate tests: Sex groups

Effect	Value	F	Hypothesis df	Error df	Sig.
Sex					
Pillai's Trace	.040	9.483	2.000	456.000	.000*
Wilks' Lambda	.960	9.483	2.000	456.000	.000*
Hotelling's Trace	.042	9.483	2.000	456.000	.000*
Roy's Largest Root	.042	9.483	2.000	456.000	.000*

*p <.05

Table 2.3 Tests of between-subjects effects: Sex groups

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Sex	Learning Goal	19.518	1	19.518	2.637	.105
	Performance Goal	183.741	1	183.741	18.556	.000*

* p <.05

Achievement Goal Orientations and Elective/Discipline Groups

Subject electives were categorized into five elective or discipline groups for MANOVA study:

1. Language Subjects
2. Social Studies
3. Science and Mathematics
4. Cultural Subjects
5. Technology and Computer

Table 3.1 shows the mean scale score, standard deviation and number of different achievement goals held by students in the five elective or discipline groups. Results of MANOVA analyses of achievement goal orientations of the electives or discipline groups at .05 level of significance are given in Tables 3.2 and 3.3 respectively.

Table 3.1 Mean scale score and standard deviation of achievement goals for different elective/discipline groups

	Discipline	Mean	Std. Deviation	N
Learning Goal	1	16.6000	2.7544	215
	2	17.3889	2.1731	18
	3	16.1538	2.5115	13
	4	16.4643	2.7769	168
	5	16.7317	2.7297	41
	Total	16.5802	2.7297	455
Performance Goal	1	18.4884	3.1886	215
	2	18.1111	2.1390	18
	3	18.6923	2.4962	13
	4	17.9405	3.4323	168
	5	18.5122	3.0176	41
	Total	18.2791	3.2153	455

Table 3.2 Multivariate tests : Elective/Discipline groups

Effect	Value	F	Hypothesis df	Error df	Sig.
Discipline					
Pillai's Trace	.013	.709	8.000	900.000	.684
Wilks' Lambda	.988	.708	8.000	898.000	.685
Hotelling's Trace	.013	.706	8.000	896.000	.686
Roy's Largest Root	.007	.838	4.000	450.000	.502

P>.05

Table 3.3 Tests of between-subjects effects: Elective/Discipline groups

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Discipline	Learning Goal	17.417	4	4.354	.582	.676
	Performance Goal	33.635	4	8.409	.812	.518

p>.05

Achievement Goal Orientations and Course Groups

Table 4.1 shows the mean scale score, standard deviation and number of learning and performance goals shown by students in the degree and sub-degree courses. Results of MANOVA analyses of achievement goal orientations of the degree, B.Ed.(Pri.) and sub-degree, C.E. (Pri.) course groups at .05 level of significance are given in Tables 4.2 and 4.3 respectively.

Table 4.1 Mean scale score and standard deviation of achievement goals for the degree and sub-degree courses

	Course Attending	Mean	Std. Deviation	N
Learning Goal	CE Student	16.7586	2.6641	290
	BEd Student	16.2824	2.8037	170
	Total	16.5826	2.7232	460
Performance Goal	CE Student	18.2345	3.1359	290
	BEd Student	18.3588	3.3345	170
	Total	18.2804	3.2077	460

Table 4.2 Multivariate tests : Course groups

Effect	Value	F	Hypothesis df	Error df	Sig.
Group					
Pillai's Trace	.009	2.011	2.000	457.000	.135
Wilks' Lambda	.991	2.011	2.000	457.000	.135
Hotelling's Trace	.009	2.011	2.000	457.000	.135
Roy's Largest Root	.009	2.011	2.000	457.000	.135

p>.05

Table 4.3 Tests of between-subjects effects : Course groups

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Group	Learning Goal	24.310	1	24.310	3.295	.070
	Performance Goal	1.657	1	1.657	.161	.689

p>.05

Achievement Goal Orientations and Interaction effect : Sex * Course Groups

The mean scale score and standard deviation of interaction sex * course groups on achievement goal orientations are shown in Table 5.1. Results of MANOVA analyses at .05 level of interaction effect of sex* course groups on achievement goal orientations, if any, are given in Tables 5.2 and 5.3 respectively.

Table 5.1 Mean scale score and standard deviation of different sex * course groups on achievement goal orientations

Sex	Course Attending	Mean	Std. Deviation	N
Learning Goal				
Male	CE Student	16.1429	2.9175	63
	BEd Student	16.2143	2.6014	28
	Total	16.1648	2.8098	91
Female	CE Student	16.9248	2.5749	226
	BEd Student	16.2958	2.8504	142
	Total	16.6821	2.6982	368
Total	CE Student	16.7543	2.6677	289
	BEd Student	16.2824	2.8037	170
	Total	16.5795	2.7254	459
Performance Goal				
Male	CE Student	17.1746	3.6568	63
	BEd Student	16.6071	3.8233	28
	Total	17.0000	3.6968	91
Female	CE Student	18.5133	2.9139	226
	BEd Student	18.7042	3.1302	142
	Total	18.5870	2.9965	368
Total	CE Student	18.2215	3.1335	289
	BEd Student	18.3588	3.3345	170
	Total	18.2723	3.2065	459

Table 5.2 Multivariate tests : Sex* Course groups

Effect	Value	F	Hypothesis df	Error df	Sig.
Sex*Group					
Pillai's Trace	.006	1.279	2.000	454.000	.279
Wilks' Lambda	.994	1.279	2.000	454.000	.279
Hotelling's Trace	.006	1.279	2.000	454.000	.279
Roy's Largest Root	.006	1.279	2.000	454.000	.279

p>.05

Table 5.3 Tests of between-subjects effects : Sex * Course groups

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Sex*Group	Learning Goal	7.781	1	7.781	1.057	.304
	Performance Goal	9.122	1	9.122	.919	.338

p>.05

DISCUSSION OF RESULTS

As shown in Table 1, exploratory factor analysis by means of maximum likelihood and oblimin rotation extracted two factors, each consisted of five items of loading values equal and greater than .3. Chi-square value was significant at both .05 and .01 level, and rejected the null hypothesis. However, chi-square is dependent on sample size such that large sample is very likely to produce a significant result even when there is a reasonably good fit to the data (Bentler & Bonnett, 1980). Separate analyses of the items in two groups (3, 4, 5, 7, 9) and (1, 2, 6, 8, 10) did give support to the two-factor structure generated for the achievement goal orientations of the Hong Kong preservice student teachers under study. On examination of the nature and clustering of items, factor 1 was labeled as performance goal orientation and factor 2 learning goal orientation. The loading of related items on respective factors and the two identified goal orientations matched with previous western findings reported in research literature supporting the replicability of the measuring instrument in non-western cultural context. In short, there are two achievement goal orientations identified within the sample of preservice student teachers in the Hong Kong Institute of Education, namely, the Learning Goals and the Performance Goals. Also, the reliability of the 10-item scale for achievement goal orientation was found satisfactory (Cronbach alpha = .6720). The psychometric properties of the scale e.g. construct validity and reliability indicated that the scale adapted from Roedel et al. (1994) in measuring achievement goal orientations was applicable to the local context.

Students of both C.E. (Pri.) and B.Ed. (Pri.) courses exhibited higher mean scale scores for performance goals than learning goals suggesting the preservice student teachers under study had higher tendency towards performance goals than learning goals. Multivariate analysis such as MANOVA indicated that there was a statistical significant difference of achievement goal orientations within sex group at both .05 and .01 level (Refer table 2.2 :- Pillai's Trace = .040, F(9.483, 2) and Wilks' Lambda = .960, F(9.482, 2)). Further test indicated the significant difference lied in the performance goals of the sex groups, F(18.556, 1), *p <.05 whereas learning goals showed no significant difference across sex groups (refer Table 2.3). Study of the mean scale scores of the sex groups in Table 2.1 indicated that female students had higher mean scale scores and lower standard deviation than male students in both learning and performance goals. This implied that many of the female students had stronger inclination towards learning and

performance goals than male students and the spread within the female students were not as large as the male students. While the male and female students showed little difference in their learning goals, female students were significantly different from male students in their performance goals (male, M = 16.1648, S.D. = 3.6968; female, M = 16.6821, S.D. = 2.9965). In other words, female students under study tended to be more performance goal orientated than male students and male students were more varied in their performance goals than female students. A possible factor which accounted for the higher performance goal orientation of female students might be due to the impact of gender stereotype in the traditional Chinese culture. In the traditional Chinese society, males were usually regarded as dominant figures and capable; females were considered to be dependent on males and were destined to be housekeepers to look after the family and children. Very often females were offered little opportunities of education and advancement. Given limited resources, the son has higher priority to get schooling than the daughter. To get her way through, the daughter had to demonstrate high ability and perform well in studies and achievement. The motive to learn and perform would be much stronger within a female if she wished to get educated and advancement in study and career. The situation in Hong Kong has changed with increasing influence of western culture and philosophy. More and more opportunities including education and career advancement are open to females. Nevertheless, the influences of traditional Chinese culture and gender stereotype still existed and females might try to demonstrate their competencies/abilities or perceived lack of abilities through outperforming their male counterparts in study. Both male and female students knew the importance of understanding and mastery of tasks in the process of learning and there was no significant differences in their learning goals orientation as reflected by the close mean values of the scale scores in learning goals.

As regards the effect of electives or disciplines on achievement goal orientation, there was no statistically significant difference across different elective/discipline groups (see Tables 3.2 and 3.3). Variation of scale scores in achievement goal orientations was small as shown by the values in Table 3.1. That is, there was no significant effect of electives/disciplines on the achievement goal orientations, viz. learning and performance goals of the sample of Hong Kong preservice student teachers under study. Hence, electives or disciplines seemed not to be a determining factor on students' achievement goal orientations. The study of effect of electives/disciplines on achievement goal orientations by multivariate analysis was limited by the small number attached to certain categories of electives/disciplines such as social subjects, science and mathematics, technology and computer. Further research in this area with larger number of each category would confirm the result obtained in this study.

Regardless of degree or sub-degree courses, there seemed to be no course effect on the achievement goal orientations of preservice student teachers as reflected from the MANOVA analyses shown in Tables 4.2 and 4.3. There was no statistically significant differences in goal orientations across courses (CE and B.Ed) at .05 level (e.g. Pillai's Trace = .009, F(2.011, 2), p >.05). That is, students from both the Certificate in Education (Primary) and Bachelor of Education (Primary) courses showed no significant differences in their achievement goal orientations.

Similarly, there was no statistically significant interaction effect of Sex * Group on the achievement goal orientations as indicated in the mean scale scores and MANOVA analyses in Tables 5.1 to 5.3. The results seemed understandable as both courses recruit students with similar entry requirements and in general, there might not be a wide variation in terms of abilities and achievement goal orientations among students of the degree and sub-degree courses.

On comparison of the mean scale scores of learning and performance goals of preservice student teachers, both students of the Certificate in Education (Primary) and Bachelor of Education (Primary) courses had higher scores for performance goals than learning goals. The results implied that the students tended to seek and maintain judgment by trying to prove their competence in learning rather than increase their understanding and mastery of learning tasks and competence. Possibly the students might rely on rote learning and surface approach of study in order to achieve favourable judgment in their performance. This requires further verification in examining their adopted study approach or strategies.

CONCLUSION

In summary, measurement by a 10 Likert scaled item questionnaire instrument (adapted from that of Roedel et al.,1994) showed that the sample of Hong Kong preservice student teachers of both degree and sub-degree courses exhibited two types of achievement goal orientations. These achievement goal orientations included learning goals and performance goals. The result was similar to previous western findings in research literature. The identification of similar factor structure of the achievement goal orientations in this study to that of previous ones in western countries suggested the achievement goal orientations are similar in both western and Hong Kong Chinese students. In turn, the established construct validity of the scale adapted from the instrument developed by Roedel et al. (1994) for measuring achievement goal orientations in western cultures indicated the measuring instrument is also applicable to the Hong Kong context. Psychometric properties include reliabilities (Cronbach alpha) of the scale instrument also gave support to its applicability in other cultural context.

While there was no significant difference in achievement goal orientations within course and elective/discipline groups, there was a significant difference in achievement goal orientations between sex. Female students appeared to be more inclined towards performance goals than male students in the sample under study, while learning goals remain similar between the two sex groups. A possible explanation for the performance goal difference between sex groups might be due to the influence of tradition and gender stereotype within the Hong Kong (Chinese) culture.

IMPLICATIONS

The fact that students of both degree and sub-degree courses showed higher mean scale scores of performance goals than learning goals was not an encouraging sign in terms of the motivation of students' learning. The result suggested that the preservice student teachers tended to demonstrate their performance (to exhibit their abilities or conceal their perceived lack of ability) rather than pursuing understanding and mastery of their learning tasks. Female students showed greater mean scale scores than male students in both learning and performance goals implied that female students were possibly more achievement motivated than male students in their study. In turn, female students might had a stronger desire to learn and to achieve than their male counterparts although females tended to be more performance goals orientated. The phenomenon suggested the need of further investigating the causes of the goal orientations of the students, in particular the females, coupled with analysis of the curriculum/teacher education programme, as well as the teaching/learning approaches adopted. Further research may be done in investigating the relationship or cause-effect of achievement goal orientations of students with their learning approaches and

achievement.

The higher inclination of female students towards performance goals compared with male students implied that there might not be enough provisions for the females, such as the opportunities of education and career advancement in Hong Kong. Males are still better catered for than females, due to the impact of traditional Chinese culture and philosophy, including gender stereotype. Males are in a better position, enjoyed the privilege of having greater chance and choices of education/study. To achieve equal opportunity of education, more have to be done to improve the situation in policy making and structuring of the education system in Hong Kong.

As discussed in the previous section, preservice student teachers in Hong Kong tended to be more performance goal than learning goal oriented. This is understandable in terms of the keen competition in Hong Kong, in search for better educational opportunity in the tertiary sector and career advancement. In addition, it is often perceived that students of higher abilities would consider other courses, such as medicine, engineering, and information technology in universities as their first choice of studies. Students who choose teacher education as their programmes of study are considered of lower abilities and little choice. This could have an influence on the motivation and achievement goal orientations of student teachers. It is well understood that such kind of feelings are unhealthy and may lead to the less desirable qualities (performance goals) developed within preservice student teachers in their learning. The worse cases would result in the tasks avoidance phenomenon, and not willing to spend effort in their study. Quality education looks for increased internal drives and learning goals within students, while learning based on external motives and performance goals may not last for long. It is expected to have some changes or restructuring in the course/curriculum planning and teaching/learning processes in order to enhance the learning goals of preservice student teachers, subsequently to promote a positive attitude of learning within the students. The need to understand and master the learning tasks should be the goals to be developed within the preservice teachers, who in turn would exert similar influences on their pupils when the preservice teachers take up classroom teaching.

In short, the ultimate aim in teacher education is to develop within student teachers a strong desire to learn and master their learning task so as to promote their competence rather than simply to learn for the sake of positive judgment by others. Subsequently, rethinking and analysis of the current curriculum deems necessary, together with careful planning in the future development of the teacher education programmes and implementation of appropriate teaching strategies. This would require further research and collaborative analysis by the teacher educators of the current practices in the teacher education institute.

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