CHAPTER V

SUMMARY AND FINDINGS

V.1. Introduction

The summary and findings section is the most important part of the research report. Because it reviews all the information which have been presented in the previous chapters. This chapter includes discussion of findings, educational implication of the study, suggestions for further study and conclusion.

V.2. Discussions on Findings

1. The metacognition of prospective mathematics teachers is moderate (72.40%).

2. The metacognition of prospective mathematics teachers in the following dimensions is moderate.
   
   (i) Planning - 77.60%  
   (ii) Memory - 53.40%  
   (iii) Monitoring - 87.00%  
   (iv) Evaluation - 48.80%  
   (v) Achievement - 72.00%

They have average level of ‘planning’, ‘monitoring’ and ‘achievement’. But they are poor in ‘memory’ and ‘evaluation’.

3. a. There is no significant difference in the metacognition of the prospective mathematics teachers in total and in the dimensions ‘planning’, ‘monitoring’ and ‘evaluation’ with respect to gender. But, there is significant difference in the metacognition of prospective mathematics teachers in the dimension memory with respect to gender. The mean scores show that female prospective
mathematics teachers are better than male prospective mathematics teachers in the dimensions ‘memory’ and ‘achievement’. This may be due to the females habit of memorising anything sometimes even without understanding with the academic achievement in mind. This finding contradicts the study by Rahman Fazalur(2005) who found no significant gender differences in the metacognition awareness of teachers.

b. There is no significant difference in the metacognition of the prospective mathematics teachers in total and in the dimensions ‘memory’, ‘evaluation’ and ‘achievement’ with respect to educational qualification. But, there is significant difference in the metacognition of prospective mathematics teachers in the dimensions ‘planning’ and ‘monitoring’ with respect to educational qualification. The mean scores show that PG graduates are better than the UG graduates in the dimension ‘planning’ and UG graduates are better than the PG graduates in the dimension ‘monitoring’. This may be due to the fact that PG students were writing more examination and doing other academic activities. This experience might make them plan better. The exposures available for the youngsters are more now-a-days. They are more independent. These may be the reasons for the better metacognitive skill of UG students in the dimension ‘self monitoring’.

c. There is no significant difference in the metacognition of the prospective mathematics teachers in total and in the dimensions ‘planning’, ‘memory’ and ‘achievement’ with respect to type of management. But, there is significant difference in the metacognition of prospective mathematics teachers in the dimensions ‘monitoring’ and ‘evaluation’ with respect to type of management.
The mean scores show that self financed prospective mathematics teachers are better than government aided prospective mathematics teachers in the dimension ‘monitoring’ and government aided prospective mathematics teachers are better than self financed prospective mathematic
followed by the school. But, there is significant difference in the metacognition of prospective mathematics teachers ‘in total’ and in the dimensions ‘planning’, ‘memory’, ‘evaluation’ and ‘achievement’ with respect to syllabus followed by the school. The mean scores show that prospective mathematics teachers who taught matriculation syllabus performed better than prospective mathematics teachers who taught state board syllabus ‘in total’ and in the dimensions ‘planning’, ‘memory’, ‘evaluation’ and ‘achievement’. This may be because of the nature of the syllabus followed.

f. There is no significant difference in the metacognition of the prospective mathematics teachers in the dimensions ‘planning’, ‘memory’, ‘monitoring’ and ‘achievement’ with respect to locality. But, there is significant difference in the metacognition of prospective mathematics teachers ‘in total’ and in the dimension ‘evaluation’ with respect to locality. The mean scores show that prospective mathematics teachers of urban locality are better than prospective mathematics teachers of rural locality ‘in total’ and in the dimension ‘evaluation’. The training given in urban schools on self-correction of their papers may make the prospective mathematics teachers have better metacognition in the dimension ‘evaluation’.

4. The teaching competency of prospective mathematics teachers is moderate (68.20%).

5. The teaching competency of prospective mathematics teachers in the following dimensions is moderate.
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. Knowledge</td>
<td>68.40%</td>
</tr>
<tr>
<td>ii. Understanding</td>
<td>79.20%</td>
</tr>
<tr>
<td>iii. Application</td>
<td>48.60%</td>
</tr>
<tr>
<td>iv. Sequencing of presented material</td>
<td>73.60%</td>
</tr>
<tr>
<td>v. Skill</td>
<td>75.00%</td>
</tr>
<tr>
<td>vi. Affective</td>
<td>71.60%</td>
</tr>
<tr>
<td>vii. Evaluation</td>
<td>69.00%</td>
</tr>
<tr>
<td>viii. Closure of the lesson</td>
<td>75.00%</td>
</tr>
</tbody>
</table>

They have average level of ‘knowledge’, ‘understanding’, and ‘sequencing of presented material’, ‘skill’, ‘affective’, ‘evaluation’ and ‘closure of the lesson’. But they are poor in ‘application’.

6. a. There is no significant difference in the teaching competency of the prospective mathematics teachers in the dimensions ‘sequencing of presented material’ and ‘closure of the lesson’ with respect to gender. But, there is significant difference in the teaching competency of the prospective mathematics teachers ‘in total’ and in the dimensions ‘knowledge’, ‘understanding’, ‘application’, ‘skill’, ‘affective’ and ‘evaluation’ with respect to gender. The mean scores show that female prospective mathematics teachers are better than male prospective mathematics teachers ‘in total’ and in the dimensions ‘knowledge’, ‘understanding’, ‘application’, ‘skill’, ‘affective’ and ‘evaluation’. This may be due to the involvement shown by the female prospective mathematics teachers in teaching. This finding contradicts the study by Ramesh(2010) which reported that there is no significant difference
between male and female B.Ed. students in their professional information interest in profession, attitude towards children, adaptable and teaching competency. This finding gets confirmation from the investigation by Abdul Rahim Hamdeen, Mohd Hajib Ghafar and Lily Ting Hwali (2010) whose study shows that the overall competency scale by female is higher than male respondents.

b. There is no significant difference in the teaching competency of the prospective mathematics teachers ‘in total’ and in the dimensions ‘knowledge’, ‘understanding’, ‘application’, ‘sequencing of presented material’, ‘skill’, ‘affective’, ‘evaluation’ and ‘closure of the lesson’ with respect to educational qualification. This finding is in contrast with the study of F.L.Antony Gracious (2011) who reported that there is significant difference between UG and PG prospective B.Ed. teachers in their teaching competency.

c. There is no significant difference in the teaching competency of the prospective mathematics teachers in the dimension ‘skill’ with respect to type of management. But, there is significant difference in the teaching competency of the prospective mathematics teachers ‘in total’ and in the dimensions ‘knowledge’, ‘understanding’, ‘application’, ‘sequencing of presented material’, ‘affective’, ‘evaluation’ and ‘closure of the lesson’ with respect to type of management. The mean scores show that self financed prospective mathematics teachers are better than government aided prospective mathematics teachers ‘in total’ and in the dimensions ‘knowledge’, ‘understanding’, ‘application’, ‘sequencing of presented material’, ‘affective’,
‘evaluation’ and ‘closure of the lesson’. This may be due to the regressive training given in the self-finance teacher education institutions. This finding gets confirmation from the investigation by N.V.S.Suryanarayana(2011) which reported that there is significant difference between students from different type of management.

d. There is no significant difference in the teaching competency of the prospective mathematics teachers in the dimensions ‘understanding’, ‘application’, ‘skill’, ‘affective’, ‘evaluation’ and ‘closure of the lesson’ with respect to medium of instruction at school level. But there is significant difference in the teaching competency of the prospective mathematics teachers ‘in total’ and in the dimensions ‘knowledge’ and ‘sequencing of presented material’ with respect to medium of instruction at school level. The mean scores show that prospective mathematics teachers whose medium of instruction was English are better than prospective mathematics teachers whose medium of instruction was Tamil in total and in the dimensions ‘knowledge’ and ‘sequencing of presented material’. The study habits, facilities, home and school environment, etc are rich for the English medium students. This may develop teaching competency in them better than their Tamil medium counterparts.

e. There is no significant difference in the teaching competency of the prospective mathematics teachers ‘in total’ and in the dimensions ‘knowledge’, ‘understanding’, ‘application’, ‘sequencing of presented material’, ‘skill’, ‘affective’ and ‘closure of the lesson’ with respect to syllabus followed by the school. But, there is significant difference in the teaching competency of the prospective mathematics teachers in the dimension ‘evaluation’ with respect to
syllabus followed by the school. The mean scores show that prospective mathematics teachers in state board are better than prospective mathematics teachers in matriculation in the dimension ‘evaluation’. This may be because of the nature of syllabus followed.

f. There is no significant difference in the teaching competency of the prospective mathematics teachers in the dimensions ‘skill’ and ‘closure of the lesson’ with respect to the locality. But, there is significant difference in the teaching competency of the prospective mathematics teachers ‘in total’ and in the dimensions ‘knowledge’, ‘understanding’, ‘application’, ‘sequencing of presented material’, ‘affective’ and ‘evaluation’ with respect to locality. The mean scores show that prospective mathematics teachers of urban locality are better than prospective mathematics teachers of rural locality in total and in the dimensions ‘knowledge’, ‘understanding’, ‘application’, ‘sequencing of presented material’, ‘affective’ and ‘evaluation’. The opportunities and facilities available for urban students may develop teaching competency in them better than their rural counterparts.

7. The attitude of prospective mathematics teachers towards teaching is moderate (70.40%).

8. The attitude towards teaching of prospective mathematics teachers in the following dimensions is moderate.

i. Academic - 70.60%  iv. Co-curricular - 66.80%

ii. Administrative - 74.80% v. Economic - 76.00%

iii. Social and psychological - 66.20%
They have average level of ‘academic’, ‘administrative’ and ‘economic’. But they are poor in ‘psychological and social’ and ‘co-curricular’.

9. a. There is no significant difference in the attitude of prospective mathematics teachers towards teaching profession ‘in total’ and in the dimensions ‘academic’, ‘administrative’, ‘social and psychological’, ‘co-curricular’ and ‘economic’ with respect to gender. This may be due to the reason that all teachers nowadays are having equal attitude towards teaching because of the security, salary, service-orientedness and other facilities available in teaching profession. This finding contradicts the study by Devaraj (2009) that reported that men teachers are having more favourable attitude towards teaching than women teachers. This finding gets confirmation from the investigation by Jasmine Maria Sylvester (2010) who found no significant difference between male and female teachers’ attitude towards teaching profession. This finding contradicts with the study of H.V.Belagali (2009) who found that female teachers have higher attitude towards teaching profession compared to male teachers of secondary schools.

b. There is no significant difference in the attitude of prospective mathematics teachers towards teaching profession ‘in total’ and in the dimensions ‘administrative’, ‘social and psychological’ and ‘co-curricular’ with respect to educational qualification. But, there is significant difference in the attitude of prospective mathematics teachers towards teaching profession in the dimensions ‘academic’ and ‘economic’ with respect to educational qualification. The mean scores show that UG graduates are better than PG graduates in the dimension ‘academic’ and ‘economic’. The prospective
mathematics teachers with B.Sc. degree only have better positive attitude in the dimensions of ‘academic’ and ‘economic’ of teaching profession than their counterparts with M.Sc. degree. This shows how much the prospective teachers with U.G. qualification are attracted with ‘salary’(economic) and how they are curious in their profession(academic). This only probably makes them join B.Ed. course even before completing their master degree. This finding is in proximity with Sahaya Monramd Samuel(2011) who also found no significant difference between student teachers whose qualification is UG and PG in their attitude towards teaching profession.

c. There is no significant difference in the attitude of prospective mathematics teachers towards teaching profession ‘in total’ and in the dimensions ‘administrative’ and ‘social and psychological’ with respect to type of management. But, there is significant difference in the attitude of prospective mathematics teachers towards teaching profession in the dimensions ‘academic’, ‘co-curricular’ and ‘economic’ with respect to type of management. The mean scores show that self financed college prospective mathematics teachers are better than government aided college prospective mathematics teachers in the dimensions ‘academic’ and ‘economic’ and government aided prospective mathematics teachers are better than self financed college prospective mathematics teachers in the dimension ‘co-curricular’. The better attitude of self financed college prospective teachers in the dimension ‘academic’ may be due to the repeated training given for examinations and ‘economic’ may be due to the importance given by affordable people for financial conditions. The better attitude of government
aided college in the dimension ‘co-curricular’ may be due to the importance given by the government-aided institutions on the all-round development of the prospective teachers by conducting events like fine-arts, seminar, workshop, etc. This finding is in confirmation with I.Priscilla(2009) whose study shows that there is significant difference in the attitude of prospective physical science teachers towards teaching in the dimension ‘academic’ aspect of teaching profession with respect to type of management.

d. There is no significant difference in the attitude of prospective mathematics teachers towards teaching profession in the dimensions ‘administrative’ and ‘co-curricular’ with respect to medium of instruction at school level. But, there is significant difference in the attitude of prospective mathematics teachers towards teaching profession in total and in the dimensions ‘academic’, ‘social and psychological’ and ‘economic’ with respect to medium of instruction at school level. The mean scores show that prospective mathematics teachers whose medium of instruction had been English are better than prospective mathematics teachers whose medium of instruction had been Tamil in total and in the dimensions ‘academic’, ‘social’ and ‘psychological’ and ‘economic’. The better attitude of the prospective mathematics teachers, who had studied through English medium at school level, towards teaching profession may be due to the reason that they might have selected teaching profession out of their own interest. The prospective teachers of Tamil medium at school level might select this course out of compulsion or they might have had no other go.

e. There is no significant difference in the attitude of prospective mathematics teachers towards teaching profession in the dimensions ‘academic’,
‘administrative’ and ‘economic’ with respect to syllabus followed by the school. But, there is significant difference in the attitude of prospective mathematics teachers towards teaching profession ‘in total’ and in the dimensions ‘social’ and ‘psychological’ and ‘co-curricular’ with respect to syllabus followed by the school. The mean scores show that prospective mathematics teachers who taught matriculation syllabus are better than prospective mathematics teachers in state board in total and in the dimensions ‘social’ and ‘psychological’ and ‘co-curricular’ of attitude towards teaching profession. The better attitude found among the prospective teachers, who taught matriculation syllabus, ‘in total’ and in the dimensions ‘social’ and ‘psychological’ and ‘co-curricular’ may be due to the reason that orientation and other training programmes organized in the matriculation schools make their mentors create positive attitude in their wards i.e. prospective teachers.

f. There is no significant difference in the attitude of prospective mathematics teachers towards teaching profession in the dimensions ‘administrative’ and ‘co-curricular’ with respect to locality. But, there is significant difference in the attitude of prospective mathematics teachers towards teaching profession ‘in total’ and in the dimensions ‘academic’, ‘social’ and ‘psychological’ and ‘economic’ with respect to locality. The mean scores show that prospective mathematics teachers of rural locality are better than prospective mathematics teachers of urban locality in total and in the dimensions ‘academic’, ‘social’ and ‘psychological’ and ‘economic’. The better attitude among the prospective teachers from rural area may be due to the respect and reverence shown more by the village people to the teachers. This finding contradicts the study by
H.V. Belagali (2009) who reported that urban secondary school teachers have higher attitude towards teaching profession than the rural secondary school teachers. This finding is in confirmation with the investigation by Shaukat Hussain, Riaret Ali, Saced Khan, M, Muhammed Ramzan and Zgham, M (2011) who reported that rural secondary teachers were higher than urban secondary teachers in their attitude towards teaching profession.

10. There is no significant association between age of prospective mathematics teachers and their ‘planning’, ‘monitoring’, ‘evaluation’, ‘achievement’ and metacognition. But there is significant association between age and memory. This may be due to the reason that experience and maturity make the people apply innovative techniques to retain the things in memory.

11. There is no significant association between age of prospective mathematics teachers and their ‘knowledge’, ‘understanding’, ‘application’, ‘skill’, ‘evaluation’, ‘closure of the lesson’ and teaching competency. But there is significant association between age and ‘sequencing of presented material’ and ‘affective’. The experience may make both as student teachers and as a students aged prospective teachers sequence the teaching materials better. Their ability to affect the students may also be because of the same reason.

12. There is no significant association between age of prospective mathematics teachers and their ‘administrative’, ‘social and psychological’, ‘co-curricular’, ‘economic’ ‘attitude’ towards teaching profession. But there is significant association between age and ‘academic’. The prospective teachers with more age joined late in the teacher education institutions. They spent sometimes at
home and in doing some other activities. This longing for teaching profession may be the reason for their better attitude of teaching profession in the dimension ‘academic’

13. There is significant positive correlation between teaching competency and metacognition of prospective mathematics teachers.

14. There is significant positive correlation between metacognition and attitude of prospective mathematics teachers towards teaching profession.

15. There is no significant positive correlation between attitude of prospective mathematics teachers towards teaching profession and teaching competency. This shows that even the person with less attitude towards teaching have better competency in teaching. This is the serious problem to be looked out. This finding contradicts the study by Jeya Jothi(2005) who found the positive correlation between teaching competency and attitude among secondary grade teacher trainees towards teaching.

16. a. There is no significant positive correlation between the dimensions ‘knowledge’ of teaching competency and the dimensions ‘planning’ of metacognition of prospective mathematics teachers. But, there is significant positive correlation between the dimension ‘knowledge’ of teaching competency and the dimensions ‘memory’, ‘monitoring’, ‘evaluation’ and ‘achievement’ of metacognition of prospective mathematics teachers. It shows that ‘knowledge’ of the subject matter enables the prospective mathematics teachers to plan better.
b. There is no significant positive correlation between the dimension ‘understanding’ of teaching competency and the dimensions ‘planning’, ‘memory’, ‘monitoring’, ‘evaluation’ and ‘achievement’ of metacognition of prospective mathematics teachers.

c. There is no significant correlation between the dimension ‘application’ of teaching competency and the dimensions ‘planning’, ‘memory’, ‘monitoring’, ‘evaluation’ and achievement of metacognition of prospective mathematics teachers.

d. There is no significant positive correlation between the dimension ‘sequencing of presented material’ of teaching competency and the dimensions ‘planning’, ‘memory’, ‘monitoring’ and achievement of metacognition of prospective mathematics teachers.

There is significant positive correlation between the dimension ‘sequencing of presented material’ of teaching competency and the dimension ‘evaluation’ of metacognition of prospective mathematics teachers. This shows that the teachers with self-evaluative skills can sequence the materials better.

e. There is no significant positive correlation between the dimension ‘skill’ of teaching competency and the dimensions ‘planning’, ‘memory’, ‘evaluation’ and ‘achievement’ of metacognition.

There is significant positive correlation between the dimension ‘skill’ of teaching competency and the dimension ‘monitoring’ of metacognition of
prospective mathematics teachers. This shows that ‘skill’ and ‘monitoring’ are related to each other.

f. There is no significant positive correlation between the dimension ‘affective’ of teaching competency and the dimensions ‘planning’, ‘memory’, ‘monitoring’ and ‘evaluation’ of metacognition of prospective mathematics teachers.

There is significant positive correlation between the dimension ‘affective’ of teaching competency and the dimension ‘achievement’ of metacognition of prospective mathematics teachers. This shows that the teachers with achievement ability can better affect the students.

g. There is no significant positive correlation between the dimension ‘evaluation’ of teaching competency and the dimensions ‘planning’, ‘memory’, ‘monitoring’, ‘evaluation’ and achievement of metacognition of prospective mathematics teachers.

h. There is no significant positive correlation between the dimension ‘closure of the lesson’ of teaching competency and the dimensions ‘planning’, ‘memory’, ‘monitoring’, ‘evaluation’ and ‘achievement’ of metacognition of prospective mathematics teachers.

17. a. There is no significant positive correlation between the dimension ‘planning’ of metacognition and the dimensions ‘academic’, ‘administrative’, ‘social and psychological’, ‘co-curricular’ and ‘economic’ of attitude of prospective mathematics teachers towards teaching profession.
b. There is no significant positive correlation between the dimension ‘memory’ of metacognition and the dimensions of ‘academic’, ‘administrative’ and ‘economic’ of attitude of prospective mathematics teachers towards teaching profession.

There is significant positive correlation between the dimension ‘memory’ of metacognition and the dimensions of ‘social and psychological’ and ‘co-curricular’ of attitude of prospective mathematics teachers towards teaching profession. This shows that the teachers with better memory like ‘social and psychological’ and ‘co-curricular’ dimensions of teaching profession. There is an indication that ‘social and psychological’ benefits and ‘co-curricular’ activities affect the memory of students.

c. There is no significant positive correlation between the dimension ‘monitoring’ of metacognition and the dimensions of ‘academic’, ‘administrative’ and ‘co-curricular’ of attitude of prospective mathematics teachers towards teaching profession.

There is significant positive correlation between the dimension ‘monitoring’ of metacognition and the dimensions of ‘social and psychological’ and ‘economic’ of attitude of prospective mathematics teachers towards teaching profession. This shows that the people with monitoring give importance for economics.

d. There is no significant positive correlation between the dimension ‘evaluation’ of metacognition and the dimensions of ‘academic’, ‘administrative’, ‘social and psychological’ and ‘economic’ of attitude of prospective mathematics teachers towards teaching profession.
There is significant positive correlation between the dimension ‘evaluation’ of metacognition and the dimension ‘co-curricular’ of attitude of prospective mathematics teachers towards teaching profession. This shows that the teachers with ‘evaluative’ skill like ‘co-curricular’ activities. There is an indication that the co-curricular activities may develop the evaluative skill of the teachers and students.

e. There is no significant positive correlation between the dimension ‘achievement’ of metacognition and the dimensions ‘academic’, ‘administrative’, ‘social and psychological’, ‘co-curricular’ and ‘economic’ of attitude of prospective mathematics teachers towards teaching profession.


But, there is significant positive correlation between the dimension ‘academic’ of attitude towards teaching profession and the dimension ‘knowledge’ of teaching competency of prospective mathematics teachers. This shows that ‘knowledge’ of teachers help them to have ‘academic’ part of teaching competency better.

b. There is no significant positive correlation between the dimension ‘administrative’ of attitude towards teaching profession and the dimensions ‘knowledge’, ‘understanding’, ‘application’, ‘sequencing of presented

But, there is significant positive correlation between the dimension ‘administrative’ of attitude towards teaching profession and the dimension ‘affective’ of teaching competency of prospective mathematics teachers. This shows that the better attitude on ‘administrative’ affects ‘affective’ of teaching competency.

c. There is no significant positive correlation between the dimension ‘social and psychological’ of attitude towards teaching profession and the dimensions ‘understanding’, ‘application’, ‘sequencing of presented material’, ‘skill’, ‘affective’, ‘evaluation’ and ‘closure of the lesson’ of teaching competency of prospective mathematics teachers.

There is significant positive correlation between the dimension ‘social and psychological’ of attitude towards teaching profession and the dimension ‘knowledge’ of teaching competency of prospective mathematics teachers. This shows the positive correlation between these variables.

d. There is no significant positive correlation between the dimension ‘co-curricular’ of attitude towards teaching profession and the dimensions ‘knowledge’, ‘understanding’, ‘application’, ‘sequencing of presented material’, ‘skill’, ‘affective’ and ‘closure of the lesson’ of prospective mathematics teachers.

There is significant positive correlation between the dimension ‘co-curricular’ of attitude towards teaching profession and the dimension ‘evaluation’ of teaching competency of prospective mathematics teachers.
e. There is no significant positive correlation between the dimension ‘economic’ of attitude towards teaching profession and the dimensions ‘understanding’, ‘application’, ‘sequencing of presented material’, ‘skill’, ‘affective’ and ‘closure of the lesson’ of teaching competency prospective mathematics teachers.

There is significant positive correlation between the dimension ‘economic’ of attitude towards teaching profession and the dimensions ‘knowledge’ and ‘evaluation’ of teaching competency of prospective mathematics teachers.

19. There is significant influence of metacognition and attitude towards teaching profession on teaching competency of the prospective mathematics teachers. This finding gets confirmation from the investigation by Emimah(2011) who reported that there is significant influence of metacognition and self esteem on teaching competency of prospective teachers.

V.3. Recommendations and Educational Implications

V.3.a. Recommendation in General

1. It is found out from the study only 9.40% of the prospective mathematics teachers are having high metacognition. Less than 48.80% of the sample is poor in the dimension ‘evaluation’.

(i) It is, therefore, recommended that the metacognition in general and the skill of self evaluation in particular are to be developed among the prospective teachers.

(ii) Practical oriented metacognition strategies should be included in the curriculum.

(iii) Teacher educators are to be trained to train the prospective teachers in metacognition.

(iv) The curriculum transaction at B.Ed. level may be done through seminar, assignment, project, workshop etc.

(v) More funds may be allotted for teacher education institutions for having the activities developing metacognition of prospective teachers.

(vi) The prospective teachers with better metacognition may be identified through continuous and comprehensive evaluation and awarded prizes at the end of the year.

2. (i) It is found from the study that the female prospective mathematics teachers are better in the dimensions ‘memory’ and ‘achievement’ of metacognition. ‘Memory’ is inevitable and part of intelligence.
The steps may, therefore be taken to increase ‘memory’ of the male students. Innovative memory techniques may be developed.

(ii) It is found that the P.G. graduates are better than the U.G. graduates in the dimension ‘planning’. The U.G. graduates are better in ‘monitoring’.

It is, therefore, recommended that planning techniques may be taught to the undergraduate students. Bridge course may be organised for post graduate students to cope-up with graduate students in the techniques of ‘monitoring’.

(iii) It is found that the metacognition of the prospective mathematics teachers who had studied through English medium at school level is better than their Tamil medium counterparts ‘in total’ and in the dimensions ‘memory’, ‘monitoring’ and ‘evaluation’.

It is, therefore, recommended that the special coaching may be arranged for the prospective mathematics teachers who studied through Tamil medium. The trainees are to be made aware of the special techniques meant for Tamil medium students. The separate and special reference and study materials both for the teacher educators and prospective teachers may be developed in Tamil medium.

(iv) The prospective mathematics teachers who taught matriculation syllabus are found to have better metacognition than those who taught state board syllabus.

It is, therefore, recommended that the content of matriculation syllabus may be analysed and the metacognitive part be included in the state board syllabus.

3.(i) Only 14.60% of the prospective mathematics teachers are found to have teaching competency at high level. The competency in the dimension ‘application’ is also below average (48.60%).
It is to be noted here that the people are divide into two groups such as (i) those who liked mathematics like anything and (ii) who hated this like anything. All are because of mathematics teachers. Having this state of affairs in mind, the necessary steps may be taken to make all the perspective teachers have the high level of teaching competency. The application of mathematics in everyday life may be included as one of the concepts to be studied by prospective mathematics teachers during their B.Ed. programme.

ii The teaching competency of the male prospective teachers is found to be less than their female counterpart. The reason for the better competency among the female prospective teachers may be found out and the attempts have to be made to instill the possible characteristics in the male prospective teachers.

iii The prospective mathematics teachers from self financing Teacher Education Institutions are found to have better teaching competency.

It is, therefore, recommended that the survey may be conducted to know the reasons and strategies followed in self financing Teacher Education Institutions for developing better competency. The attempts should be made to follow the same strategies with necessary modifications to improve the teaching competency of the prospective mathematics teachers studying in other institutions.

iv The competency of the prospective teachers who studied through Tamil is found to be less. The reasons for this may be found out and the remedial programmes may be arranged for the prospective teachers studied through Tamil medium at school level to develop their teaching competency in ‘knowledge’ and
‘sequencing of presented materials’. The same programme may be extended to
the prospective teachers who taught matriculation syllabus to develop their
‘evaluation’ skills because these skills are found less among them.

The special course may be planned and implemented for rural prospective
teachers to develop their teaching competency.

4.(i) Only 15.00% of the prospective mathematics teachers are found to have the
positive attitude towards teaching profession at high level.

(ii) The U.G. students, the prospective teachers from self finance college, those
studied in English medium at school level, these taught matriculation syllabus
and rural prospective teachers, are found to have better attitude towards teaching
profession than their respective counterparts.

It is to be brought to the notice of the stakeholders of education that positive
correlation doesn’t exist between the teaching competency and the attitude
towards teaching profession of prospective teachers. It will affect the entire
system of education in due course. It has been proved that sincerity will last long
better than ability. The attitude develops sincerity.

Therefore, the attitude of prospective teachers towards teaching profession
should be developed. Seminar, symposium, workshop like programmes may be
organised in this regard. The government should allocate fund for this task. The
action research should be undertaken to develop positive attitude towards
teaching profession.
5. The correlation between teaching competency and metacognition is found to be positive. It is, therefore, recommended that the metacognition may be taken as important criterion for the admission of B.Ed. course.

V.3.b. A few recommendations for Policy Decision

1. The maths graduates with better metacognition may be given preference in B.Ed. admission because metacognition is positively correlated with mathematics teaching competency.

2. It could be made as mandatory that Teacher Education Institutions should organise the programme to develop the positive attitude towards teaching.

3. The development of positive attitude towards teaching among prospective mathematics teachers in particular and prospective teachers in general should be observed through continuous and comprehensive evaluation and only those securing expected level of attitude may be permitted to get degree.

4. The remedial course on teaching competency may be made compulsory for the continuation of affiliation in the Teacher Education Institutions.

5. The in service programme was organised in the year 2007 (XPEDITE) for the teacher educators by the government in collaboration with Intel. The same type of in-service programme may be organized for teacher educators in developing metacognition, teaching competency, attitude towards teaching profession among the prospective teachers.
V.4. Suggestion for Further Research

1. This study is done with the prospective mathematics teachers at B.Ed. level. The same study may be extended to the prospective teachers of different subjects and at different levels.

2. Metacognition is correlated with teaching competency and attitude towards teaching profession in this study. The correlational studies may be undertaken between metacognition and some other variables like soft skills, mental health, intelligence, metacognitive awareness, problem solving skill, classroom management, etc.,

3. Only the few backgrounds are included in the present study. Some other variables may be included in the new studies.

4. A few action researches may be undertaken in developing metacognition, teaching competency and attitude towards teaching profession by applying different strategies.

5. The prospective teachers are the population for this study. The same type of study may be extended to the practicing teachers.

6. A few reasons for different findings are given in this study. They are speculative and based on the researcher’s perspective. The study may be undertaken to find out the genuineness of these findings scientifically.

V.5. Conclusion

'Majority of children has a sense of fear and failure regarding mathematics' (National Curriculum Framework, 2005, p.38). The current curriculum does not address this problem. It also does not address the other end of the spectrum of children who are talented and enjoy it in this context. It may be due to the reason that
mathematics is highly abstract. When children learn a variety of approaches (over time), their toolkit gets richer and they also learn best. Metacognitive strategies are one such approach. Metacognitive strategies also reflect a change in student’s mind, knowledge and beliefs and about the way the mind operates. In the fast moving information world, the teaching involves lot of challenges. Metacognitive strategies enable prospective teachers to successfully cope with new situations. They also produce the good citizens with necessary skills. Several innovations have been designed for strengthening teacher education programmes by way of improving functional effectiveness of teachers. Teachers with metacognition will contribute more in this regard. Unless teacher is competent and effective in teaching all the efforts taken by the management, society and government will not bear any fruit. Assisting prospective teachers to improve their metacognitive skills is increasingly recognized as a primary goal of education.

Teaching has become more complex and challenging to day than what it was. Now a days, competency based teaching is important. The bearing outcome is effective only if the teaching is more effective so that correlations of metacognitive teaching competency and attitude towards teaching among prospective teachers are possible.

Therefore, the important task of teacher educators is to install these invaluable skills into prospective mathematics teachers and to provide proper guidance to live in several environment so that they will be equipped in this challenging and rapidly changing world.