INTRODUCTION

After the data analysis the investigator has to give the findings and interpretations as they are the most important steps in the research process. The usefulness of research findings lies in proper interpretations, recommendations are needed to resolve the problem. The research should also include suggestions for replicating the study for future researchers. In this chapter the investigator gives a brief summary of his findings, interpretations, recommendations and suggestions.

FINDINGS

1. Metacognition of B.Ed Trainees

1. 27.2% of the B.Ed trainees have low level, 50.1% of them have moderate level and 22.7% of them have high level of knowledge of cognition. 26.9% of the B.Ed trainees have low level, 51% of them have moderate level and 22.1% of them have high level of regulation of cognition. 25.6% of the B.Ed trainees have low level, 51.7% of them have moderate level and 22.7% of them have high level of metacognition.

2(a) 28.3% of male B.Ed trainees have low level, 45.0% of them have moderate level and 26.7% of them have high level of knowledge of cognition. Among the female B.Ed trainees 26.8% of male B.Ed trainees have low level, 51.9% of them have moderate level and 21.3% of them have high level of knowledge of cognition.

(b) Among male B.Ed trainees 27.9% of them have low level, 45.4% of them have moderate level and 26.7% of them have high level of regulation of cognition. Among female B.Ed trainees 26.5% of male B.Ed trainees have low level, 53.0% of them have moderate level and 20.4% of them have high level of regulation of cognition.

(c) Among male B.Ed trainees 27.5% of them have low level, 45.8% of them have moderate level and 26.7% of them have high level of metacognition. Among female B.Ed trainees 24.9% of them have low level, 53.8% of them have moderate level and 21.3% of them have high level of metacognition.

3. There is no significant difference between male and female B.Ed trainees in their metacognition and its dimensions.
4. There is no significant difference between married and unmarried B.Ed trainees in their metacognition and its dimensions.

5. There is no significant difference between rural and urban college B.Ed trainees in their metacognition and its dimensions.

6. There is no significant difference between computer literate and computer illiterate B.Ed trainees in their metacognition and its dimensions.

7. There is no significant difference between UG and PG qualification B.Ed trainees in their metacognition and its dimensions.

8. There is no significant difference between aided and unaided college B.Ed trainees in their metacognition and its dimensions.

9. There is no significant difference between autonomous and non-autonomous college B.Ed trainees in their knowledge of cognition. But there is significant difference between autonomous and non-autonomous college B.Ed trainees in their regulation of cognition.

   While comparing the mean scores of autonomous college (mean=49.11) and non-autonomous college (mean=46.86) B.Ed trainees in their regulation of cognition. The autonomous college B.Ed trainees are better than non-autonomous college B.Ed trainees in their regulation of cognition.

   While comparing the mean scores of autonomous college (mean=90.33) and non-autonomous college (mean=87.36) B.Ed trainees in their metacognition. The autonomous college B.Ed trainees are better than non-autonomous college B.Ed trainees in their metacognition.

10. There is no significant difference among Tirunelveli, Thoothukudi and Kanyakumari district B.Ed trainees in their metacognition and its dimensions.

11. There is no significant difference among men, women and co-education college B.Ed trainees in their metacognition and its dimensions.

12. There is no significant difference among hindu, christian and muslim B.Ed trainees in their metacognition and its dimensions.

13. There is significant difference among arts, science and language major B.Ed trainees in their metacognition and its dimensions.

   While comparing the mean scores of language (mean=39.58) arts (mean=40.57) science (mean=41.21) B.Ed trainees. The science B.Ed trainees are better in their knowledge of cognition.
While comparing the mean scores of arts (mean=46.08) language (mean=46.21) and science (mean=48.56), B.Ed trainees, the science B.Ed trainees are better in their regulation of cognition.

While comparing the mean scores of language (mean=85.79) arts (mean=86.65) and science (mean=89.76), B.Ed trainees, the science B.Ed trainees are better in their metacognition.

14. There is no significant association between fathers’ education B.Ed trainees in knowledge of cognition and metacognition. But there is significant association between fathers’ education B.Ed trainees and their regulation of cognition.

15. There is no significant association between mothers’ education B.Ed trainees and knowledge of cognition. But there is significant association between mothers’ education B.Ed trainees and their regulation of cognition and metacognition.

16. There is no significant association between fathers’ occupation of B.Ed trainees in knowledge of cognition and regulation of cognition. But there is significant association between fathers’ occupation of B.Ed trainees and their metacognition.

17. There is no significant association between mothers’ occupation of B.Ed trainees in their metacognition and its dimensions.

18. There is no significant association between family monthly income of B.Ed trainees in knowledge of cognition and regulation of cognition. But there is significant association between family monthly income of B.Ed trainees and their metacognition.

II. Learning Styles of B.Ed Trainees

1. 31.3% of the B.Ed trainees have low level, 46.2% of them have moderate level and 22.5% of them have high level of visual learning style. 30.2% of the B.Ed trainees have low level, 45.6% of them have moderate level and 24.3% of them have high level of auditory learning style. 34.6% of the B.Ed trainees have low level, 47% of them have moderate level and 18.4% of them have high level of kinesthetic learning style. 53.2% of the B.Ed trainees have low level, 24.6% of them have moderate level and 22.2% of them have high level of learning styles.

2 (a) 27.9% of the male B.Ed trainees have low level, 47.1% of them have moderate level and 25% of them have high level of visual learning style. Among the female B.Ed trainees, 32.4% of them have low level, 45.9% of them have moderate level and 21.6% of them have high level of visual learning style.
(b) Among male B.Ed trainees, 34.2% of them have low level, 47.5% of them have moderate level and 18.3% of them have high level of auditory learning style. Among female B.Ed trainees, 28.7% of them have low level, 44.9% of them have moderate level and 26.4% of them have high level of auditory learning style.

(c) Among male B.Ed trainees, 35.8% of them have low level, 44.6% of them have moderate level and 19.6% of them have high level of kinesthetic learning style. Among female B.Ed trainees, 34.2% of them have low level, 47.9% of them have moderate level and 17.9% of them have high level of kinesthetic learning style.

(d) Among male B.Ed trainees, 56.7% of them have low level, 21.3% of them have moderate level and 22.1% of them have high level of learning style. Among female B.Ed trainees, 52.0% of them have low level, 25.8% of them have moderate level and 22.2% of them have high level of learning styles.

3. There is no significant difference between male and female B.Ed trainees in their visual learning style, kinesthetic learning style and learning styles. But there is significant difference between male and female B.Ed trainees in their auditory learning style.

While comparing the mean scores of male (mean=17.50) B.Ed trainees and female (mean=18.34) B.Ed trainees in their auditory learning style, the female B.Ed trainees are better than the male B.Ed trainees in their auditory learning style.

4. There is no significant difference between married and unmarried B.Ed trainees in their learning styles and its dimensions.

5. There is no significant difference between rural and urban college B.Ed trainees in their visual learning style, kinesthetic learning style and learning styles.

While comparing the mean scores of rural college (mean=16.88) and urban college (mean=19.32) B.Ed trainees in their auditory learning style, the urban college B.Ed trainees are better than the rural college B.Ed trainees in their auditory learning style.

6. There is no significant difference between computer literate and computer illiterate B.Ed trainees in their learning styles and its dimensions.

7. There is no significant difference between UG and PG qualification B.Ed trainees in their visual learning style, kinesthetic learning style and learning styles. But there is significant difference between UG and PG qualification B.Ed trainees in their auditory learning style.
While comparing the mean scores of UG (mean=17.86) and PG (mean=19.03) B.Ed trainees in their auditory learning style, the PG qualified B.Ed trainees are better than the UG qualified B.Ed trainees in their auditory learning style.

8. There is no significant difference between aided and unaided college B.Ed trainees in their visual learning style and kinesthetic learning style. But there is significant difference between aided and unaided college B.Ed trainees in their auditory learning style and learning styles.

While comparing the mean scores of aided college (mean=16.99) and unaided college (mean=20.43) B.Ed trainees in their auditory learning style, the unaided college B.Ed trainees are better than the aided college B.Ed trainees in their auditory learning style.

While comparing the mean scores of aided college (mean=56.28) and unaided college (mean=59.54) B.Ed trainees in their learning styles, the unaided college B.Ed trainees are better than the aided college B.Ed trainees in their learning styles.

9. There is no significant difference between autonomous and non-autonomous college B.Ed trainees in their visual learning style, kinesthetic learning style and learning styles. But there is significant difference between autonomous and non-autonomous college B.Ed trainees in their auditory learning style.

While comparing the mean scores of autonomous college (mean=17.33) and non-autonomous college (mean=18.22) B.Ed trainees in their auditory learning styles, the non-autonomous college students are better than the autonomous college B.Ed trainees in their auditory learning styles.

10. There is no significant difference among Tirunelveli, Thoothukudi and Kanyakumari district B.Ed trainees in their visual learning style and kinesthetic learning style. But there is significant difference among Tirunelveli, Thoothukudi and Kanyakumari district B.Ed trainees in their auditory learning style and learning styles.

While comparing the mean scores of Thoothukudi district (mean=16.89) Tirunelveli district (mean=16.90), and Kanyakumari district (mean=20.57) B.Ed trainees in their auditory learning style, the Kanyakumari district B.Ed trainees are better in their auditory learning style.

While comparing the mean scores of Thoothukudi district (mean=56.13) Tirunelveli district (mean=56.31), and Kanyakumari district (mean=59.59) B.Ed
trainees in their learning styles, the Kanyakumari district B.Ed trainees are better in their learning styles.

11. There is no significant difference among difference among men, women and co-education college B.Ed trainees in their visual learning style, auditory learning style and learning styles. But there is significant difference among difference among men, women and co-education college B.Ed trainees in their kinesthetic learning style.

While comparing the mean scores of men college (mean=12.54) women college (mean=12.86), and co-education college (mean=13.74) B.Ed trainees in their kinesthetic learning style, the co-education college B.Ed trainees are better in their kinesthetic learning style.

12. There is no significant difference among difference among hindu, christian and muslim B.Ed trainees in their learning styles and its dimensions.

13. There is significant difference among difference among arts, science and language major B.Ed trainees in their learning styles and its dimensions.

While comparing the mean scores of arts (mean=25.84) science (mean=26.71), and language (mean=26.85) B.Ed trainees in their visual learning style, the language B.Ed trainees are better in their visual learning style.

While comparing the mean scores of arts (mean=18.27) science (mean=17.57), and language (mean=18.79) B.Ed trainees in their auditory learning style, the language B.Ed trainees are better in their auditory learning style.

While comparing the mean scores of arts (mean=12.46) science (mean=12.94), and language (mean=13.30) B.Ed trainees in their kinesthetic learning style, the language B.Ed trainees are better in their kinesthetic learning style.

While comparing the mean scores of arts (mean=55.86) science (mean=57.92), and language (mean=58.94) B.Ed trainees in their learning styles, the language B.Ed trainees are better in their learning styles.

14. There is no significant association between fathers’ education of B.Ed trainees and their learning styles and its dimensions.

15. There is no significant association between mothers’ education of B.Ed trainees and their visual learning style, kinesthetic learning style and learning styles. But there is significant association between mothers’ education of B.Ed trainees and their auditory learning style.
16. There is no significant association between fathers’ occupation of B.Ed trainees and their auditory learning style. But there is significant association between fathers’ occupation of B.Ed trainees and their visual learning style, kinesthetic learning style and learning styles.

17. There is no significant association between mothers’ occupation of B.Ed trainees and their visual learning style and learning styles. But there is significant association between mothers’ occupation of B.Ed trainees and their auditory learning style and kinesthetic learning style.

18. There is no significant association between family monthly income of B.Ed trainees and their visual learning style, auditory learning style and learning styles. But there is significant association between family monthly income of B.Ed trainees and their kinesthetic learning style.

### III. Problem Solving Skill of B.Ed Trainees

1. 28.9% of the B.Ed trainees have low level, 51.5% of them have moderate level and 19.7% of them have high level of sensing. 29.4% of the B.Ed trainees have low level, 49.9% of them have moderate level and 20.7% of them have high level of intuitive. 36.1% of the B.Ed trainees have low level, 46.1% of them have moderate level and 17.8% of them have high level of feeling. 26.3% of the B.Ed trainees have low level, 56.4% of them have moderate level and 17.3% of them have high level of thinking. 26.2% of the B.Ed trainees have low level, 52.2% of them have moderate level and 21.5% of them have high level of problem solving skill.

2(a) 30% of male B.Ed trainees have low level, 47.9% of them have moderate level and 22.1% of them have high level of sensing. Among female B.Ed trainees 28.4% of them have low level, 52.7% of them have moderate level and 18.8% of them have high level of sensing.

(b) Among male B.Ed trainees, 33.3% of them have low level, 46.7% of them have moderate level and 20% of them have high level of intuitive. Among female B.Ed trainees 28% of them have low level, 51.1% of them have moderate level and 20.9% of them have high level of intuitive.

(c) Among male B.Ed trainees, 37.9% of them have low level, 47.5% of them have moderate level and 14.6% of them have high level of feeling. Among female B.Ed trainees, 35.4% of them have low level, 45.6% of them have moderate level and 19% of them have high level of feeling.
(d) Among male B.Ed trainees, 35% of them have low level, 43.3% of them have moderate level and 21.7% of them have high level of thinking. Among female B.Ed trainees, 23.3% of them have low level, 61% of them have moderate level and 15.7% of them have high level of thinking.

(e) Among male B.Ed trainees, 34.2% of them have low level, 45.8% of them have moderate level and 20% of them have high level of problem solving style. Among female B.Ed trainees, 23.4% of them have low level, 54.5% of them have moderate level and 22.1% of them have high level of problem solving skill.

3. There is no significant difference between male and female B.Ed trainees in their problem solving skill and its dimensions.

4. There is no significant difference between married and unmarried B.Ed trainees in their intuitive, feeling, thinking and problem solving skill. But there is significant difference between married and unmarried B.Ed trainees in their sensing. While comparing the mean scores of married (mean=12.10) and unmarried (mean=12.68) B.Ed trainees in their sensing, the unmarried B.Ed trainees are better than the married B.Ed trainees in their sensing.

5. There is no significant difference between rural and urban college B.Ed trainees in their problem solving skill and its dimension.

6. There is no significant difference between computer literate and computer illiterate in their intuitive, feeling, thinking and problem solving skill. But there is significant difference between computer literate and computer illiterate B.Ed trainees in their sensing. While comparing the mean scores of computer literate (mean=12.79) and computer illiterate (mean=12.32) B.Ed trainees in their sensing, the computer literate B.Ed trainees are better than the computer illiterate B.Ed trainees in their sensing.

7. There is no significant difference between UG and PG qualification B.Ed trainees in their problem solving skill and its dimensions.

8. There is no significant difference between aided and unaided college B.Ed trainees in their problem solving skill and dimensions.

9. There is no significant difference between autonomous and non-autonomous college B.Ed trainees in their problem solving skill and its dimensions.
10. There is no significant difference among Tirunelveli, Thoothukudi and Kanyakumari district B.Ed trainees in their sensing, feeling. But there is significant difference among Tirunelveli, Thoothukudi and Kanyakumari district B.Ed trainees in their intuitive, thinking and problem solving skill. 

While comparing the mean scores of Thoothukudi district (mean=10.93) Tirunelveli district (mean=11.06), and Kanyakumari district (mean=11.63) B.Ed trainees in their intuitive, the Kanyakumari district B.Ed trainees are better in their intuitive.

While comparing the mean scores of Thoothukudi district (mean=11.99) Tirunelveli district (mean=12.52), and Kanyakumari district (mean=13.00) B.Ed trainees in their thinking, the Kanyakumari district B.Ed trainees are better in their thinking.

While comparing the mean scores of Thoothukudi district (mean=47.77) Tirunelveli district (mean=48.88), and Kanyakumari district (mean=50.37) B.Ed trainees in their problem solving skill, the Kanyakumari district B.Ed trainees are better in their problem solving skill.

11. There is no significant difference among men, women and co-education college B.Ed trainees in their problem solving skill and its dimensions.

12. There is no significant difference among hindu, christian and muslim B.Ed trainees in their problem solving skill and its dimensions.

13. There is significant difference among arts, science and language major B.Ed trainees in problem solving skill and its dimensions.

14. There is no significant association between fathers’ education of B.Ed trainees and their problem solving skill and its dimensions.

15. There is no significant association between mothers’ education of B.Ed trainees and their feeling, thinking and problem solving skill. But there is significant association between mothers’ education of B.Ed trainees and their sensing and intuitive.

16. There is no significant association between fathers’ occupation of B.Ed trainees and intuitive, thinking and problem solving skill. But there is significant association between fathers’ occupation of B.Ed trainees and their sensing and feeling.

17. There is no significant association between mothers’ occupation of B.Ed trainees and their sensing and thinking. But there is significant association between
mothers’ occupation of B.Ed trainees and their intuitive, feeling and problem solving skill.

18. There is no significant association between family monthly income of B.Ed trainees and their problem solving skill and its dimensions.

IV. Relationship Between Metacognition and Learning Styles of B.Ed Trainees

1. There is no significant relationship between metacognition and learning styles of B.Ed trainees in their auditory learning style. But there is significant relationship between metacognition and learning styles of B.Ed trainees in their visual, kinesthetic and learning styles.

2. There is no significant relationship between metacognition and learning styles of male B.Ed trainees in their auditory learning style. But there is significant relationship between metacognition and learning styles of male B.Ed trainees in their visual, kinesthetic and learning styles.

3. There is no significant relationship between metacognition and learning styles of female B.Ed trainees in their auditory learning style. But there is significant relationship between metacognition and learning styles of female B.Ed trainees in their visual, kinesthetic and learning styles.

V. Relationship Between Metacognition and Problem Solving Skill of B.Ed Trainees

1. There is no significant relationship between metacognition and problem solving skill of B.Ed trainees in their feeling and thinking. But there is significant relationship between metacognition, sensing, intuitive and problem solving skill of B.Ed trainees.

2. There is no significant relationship between metacognition and problem solving skill of male B.Ed trainees in their feeling. But there is significant relationship between metacognition and problem solving skill of male B.Ed trainees in their sensing, intuitive, thinking and problem solving skill.

3. There is no significant relationship between metacognition and problem solving skill of female B.Ed trainees.

VI. Relationship Between Learning Styles and Problem Solving Skill of B.Ed Trainees

1. There is significant relationship between learning styles and problem solving skill of B.Ed trainees in their sensing, intuitive, feeling, thinking and problem solving skill.
2. There is significant relationship between learning styles and problem solving skill of male B.Ed trainees in their sensing, intuitive, feeling, thinking and problem solving skill.

3. There is significant relationship between learning styles and problem solving skill of female B.Ed trainees in their sensing, intuitive, feeling, thinking and problem solving skill.

VII. Influence of Metacognition and Learning Styles on Problem Solving Skill of B.Ed Trainees

1. There is significant influence of metacognition and learning styles on problem solving skill of B.Ed trainees.

VIII. Factor Analysis of Metacognition, Learning Styles and Problem Solving Skill of B.Ed Trainees

1. There is significant factor with positive loading of the variables namely knowledge of cognition, regulation of cognition, metacognition, visual learning style, auditory learning style, kinesthetic learning style, learning styles, sensing, intuitive, feeling, thinking and problem solving skill of B.Ed trainees.

INTERPRETATIONS

I. Metacognition of B.Ed Trainees

1. According to t-test result reveals that, the autonomous college B.Ed trainees are better than the non-autonomous college B.Ed trainees in their regulation of cognition and metacognition. This may be due to, autonomous colleges may have more number of curricular, co-curricular and extra-curricular activities rather than the non-autonomous colleges. It may give more opportunities for their students to think, plan and involve themselves in all these activities. This may help the teacher trainees to apply and execute their cognitive strategies in proper way. The material and non-material resources available in the autonomous colleges may help the students to regulate their thinking process. So, they may have better metacognition than the students of non-autonomous colleges.

2. The F-test result reveals that, the science major B.Ed trainees are better than arts and language major trainees in their knowledge of cognition, regulation of cognition and metacognition. This may be due to the fact that, science major students have practical knowledge about their content. They solve puzzles, Sudoku etc., because of their problem solving ability. This lead them to think better than arts and language major students.
3. The chi-square test result reveals that, the fathers’ education had influence on regulation of cognition of B.Ed trainees. This may be due to the fact that, the educated fathers may force their children to acquire more knowledge and provide more opportunities for their children. This may help them to gain more knowledge of cognition. Since the fathers are educated it may be easy for them to give individual freedom to their children which in turn may help them to have a better regulation of cognition. For the educated fathers, it may be easy to provide ample opportunities for their children not only by attending college, but also by using internet and other resources. This may help the students to improve their regulation of cognition.

4. The chi-square test reveals that, significant association is found between mothers’ education and regulation of cognition and metacognition of B.Ed trainees. This may be due to the fact that, educated mothers may have their own style of living and they are artistic in nature. They encourage, support and create the opportunities to their children to be aware of metacognition and to regulate their cognition in a successful way.

5. The chi-square test reveals that, significant association between fathers’ occupation and metacognition of B.Ed trainees. The employed fathers may be more dedicated, committed and sincere in their occupation. So, the children may be highly motivated directly or indirectly to do any work logically and systematically. The fathers’ occupation may motivate the students to plan and execute their studies and day-to-day activities. This may help the students to develop their metacognition.

6. The chi-square test result reveals that, significant association found between family monthly income and metacognition of B.Ed trainees. This may be due to the fact that the income of a family may provide security and help the students to access supportive learning strategies freely. The family income may give more opportunities for the students to learn and utilize the available resources at an optimum level, which may help them to improve their metacognition. The provision for accessing knowledge through information and communication technologies and other supportive measures may make the students to develop their metacognition.
II. Learning Styles of B.Ed Trainees

1. The t-test result reveals that, female B.Ed trainees are better than male trainees in their auditory learning style. This may be due to, the female trainees have the genuine interest of reading books and utilizing library resources. They may have the enthusiasm to comprehend the concepts. This may be due to the female trainees keen in listening to the classroom while lecture.

2. The t-test result reveals that, urban B.Ed trainees are better than rural B.Ed trainees in their auditory learning style. This may be due to the fact that, urban colleges may have well-equipped libraries and laboratories and competent teacher educators. The exposure from the above mentioned resources may help the students to improve their learning. It is also found that urban colleges are providing better opportunities and encouragements for the students to participate in various programmes like quizzes, debates, seminars and symposia.

3. The t-test result reveals that, aided college B.Ed trainees are better than the unaided college B.Ed trainees in their auditory and learning styles. This may be due to the fact that, aided college B.Ed trainees have the genuine interest of reading books and utilizing library resources. They may have the enthusiasm to comprehend the concepts. The aided colleges use the audio-visual packages in the teaching.

4. The t-test result reveals that, non-autonomous college B.Ed trainees are better than autonomous college B.Ed trainees in their auditory learning style. This may be due to the fact that, non-autonomous college B.Ed trainees learn new strategies, techniques and packages in their learning which helps them to teach effectively in their teaching.

5. The F-test result reveals that, Kanyakumari district B.Ed trainees are better than Tirunelveli and Thoothukudi B.Ed trainees in their auditory and learning styles. This may be due to the fact that, Kanyakumari district is a literate one when compared to other districts. It has various religious educational institutions imparting and insisting on self-discipline. Kanyakumari B.Ed trainees have the awareness of education from their parents. Parents guide the children in the right path of education. Kanyakumari B.Ed trainees utilize their opportunities of technological resources for learning.

6. The F-test result reveals that, co-education colleges B.Ed trainees are better than the men and women college B.Ed trainees. This may be due to the fact that,
co-education colleges provide the circumstances for healthy relationship between male and female students. This leads to better understanding for both. In addition these lead to better understanding in kinesthetic while comparing men and women B.Ed colleges.

7. The F-test result reveals that, language B.Ed trainees are better than science and arts major B.Ed trainees in their visual, auditory, kinesthetic and learning style. This may be due to the fact that, they are free from practical oriented classes and field trips. They have the background knowledge about the literature and they may get the exposure to improve their writing skill and comprehension ability. Language B.Ed trainees, learn their subjects in a lively classroom atmosphere. It influences them and they teach lively and in a humorous way in the classroom teaching.

8. The chi-square test result reveals that, significant association found between mothers’ education and auditory of B.Ed trainees. This may be due to the fact that, mother is the first teacher of every child and the child learns a lot from the mother. Educated mothers guide their children in their learning process.

9. The chi-square test reveals that, significant association found between fathers’ occupation in their visual, kinesthetic and learning styles of B.Ed trainees. This may be due to the fact that, business and government employed fathers, provide financial support and technology opportunities to their children to learn effectively. Unemployed and coolie fathers’ children have the eagerness to learn the innovative things and try to understand the whole concepts in their learning. Every father encourages his children in all their ups and downs, which may reflect their kinesthetic in their learning styles.

10. The chi-square test reveals that, significant association found between mothers’ occupation in their auditory and kinesthetic of B.Ed trainees. This may be due to the fact that, mothers’ occupation is able to guide their children with learning successfully and to realize their capabilities. They have a desire to enrich their learning skills in this aspect. So the B.Ed trainees learn the positive ideas and thoughts from their mothers’ occupation.

11. The chi-square test reveals that, significant association found between family income and kinesthetic of B.Ed trainees. This may be due to the fact that, the family income provides more opportunities to learn and to participate actively in their classrooms. So, the B.Ed trainees are motivated and inspired by their family
income. B.Ed trainees participated to the field trip instead of classroom learning. This is because of their financial background.

III. Problem Solving Skill of B.Ed Trainees

1. The ‘t’-test result reveals that, unmarried B.Ed trainees are better than married B.Ed trainees in their sensing. This may be due to the fact that, unmarried B.Ed trainees exposed a wider arena of relationship. They move freely and go for a picnic or tour and actively participate in the social functions like marriage, national days celebration and college days function. But the married students have a restricted movement owing to the social and cultural bindings and practices. Married B.Ed trainees have the family troubles and they have to be within their family circle. They are not able to spend more time on learning. Unmarried are free from domestic work. They have no obstacles. They can spend more time on their education. They can get support from their family. This leads unmarried B.Ed trainees are better than the married B.Ed trainees.

2. The ‘t’- test result reveals that, computer literate B.Ed trainees are better than the computer non-illiterate B.Ed trainees in their sensing. This may be due to the fact that, computer literate B.Ed trainees have the knowledge about the computer and internet. They learn and utilize through online learning, online tests etc. They know the previous problems in educational background through online world wide resources. This helps the computer literate B.Ed trainees to learn and to analyse the recent trends in education.

3. The ‘F’- test result reveals that, Kanyakumari B.Ed trainees are better than the Thoothukudi B.Ed trainees and Tirunelveli B.Ed trainees in their intuitive, thinking and problems solving skill. This may be due to the fact that, Kanyakumari B.Ed trainees have pertinent features of the value of time and need to learn and analyse about the concept and find a solution.

4. The chi-square test result reveals that, significant association between mothers’ education in their sensing, intuitive of B.Ed trainees. This may be due to the fact that, mothers in general play a crucial role in the educational development of children, better the education of mothers’ will lead the education of their children. The mothers’ may be good in managing their families. Their flexibility, positive attitude and critical evaluation may help their children to be aware of their problems. It can also help them to develop self-confidence and it may create a character of self-assessment.
5. The chi-square test result reveals that, there is significant association between fathers’ occupation and their sensing and feeling of B.Ed trainees. This may be due to the fact that, fathers’ occupation is influencing the social awareness of B.Ed. trainees. Fathers may maintain a strong relationship with their co-workers. They motivate their children to follow a discipline in their studies as well as in the family affairs.

6. The chi-square test result reveals that, there is significant association between mothers’ occupation and their intuitive, feeling and problem solving skill of B.Ed trainees. This may be due to fact that the co-operation and encouragement extended by their mothers and teacher educators for intuitive-feeling and problem solving skill. They have greater exposure to problem solving skill and have confidence to solve the problems and decide on their own. The mothers’ occupation have ample exposition and extravagant leading to improve their problem solving skill. Besides their mothers’ working environment provides satisfactory support to do better in their problem solving skill.

IV. Relationship Between Metacognition and learning styles of B.Ed trainees

1. The correlation analysis reveals that, there is significant relationship between metacognition and learning styles in their visual, kinesthetic and learning styles. This may be due to the fact that the mentors to facilitate the method of learning, learning styles to excel socially outgoing and makes them cheerful. They grow and reveal the competitive spirit against learning. The metacognitive person can make better learning environment for themselves. The B.Ed trainees with visual, kinesthetic learning styles and metacognition can promote and adopt innovative and modern strategies of learning and teaching during their training period.

2. The correlation analysis result shows that, there is significant relationship between metacognition and learning styles of female B.Ed trainees in their visual, kinesthetic and learning styles. This may be due to the fact that, the female B.Ed trainees equip themselves with the cognitive of learning which causes significant to their pre-service training. They have to develop higher perception about cognitive thinking and organized way of learning because they involve in more practical oriented learning. They have a curiosity, willingness and enthusiasm, learning about the visual, kinesthetic and learning styles. It helps to acquire the skills of observation, experimentation, and generalize the concept to improve their metacognitive learning.
V. Relationship Between Metacognition and Problem Solving Skill of B.Ed trainees

1. The correlation analysis result reveals that, there is significant relationship between metacognition and problem solving skill of B.Ed trainees in their sensing, intuitive and problem solving skill. This may be due to the fact that, metacognition may help them in better development of their communication skills wider range of social perceptives and social traits such as sharing, cooperation and appreciation by others. This way metacognition influenced problem solving skill. The B.Ed trainees think and react in tune with the clear ideas about their problems. They depend on their own thought process, retention skill and generalize regarding the current situation which they have observed, gathered and analysed. They are able to draw their own decisions and conclusions.

2. The multiple correlation analysis reveals that, there is significant relationship between metacognition and problem solving skill of male B.Ed trainees in their sensing, intuitive, thinking and problem solving skill. This may due to the fact that problem solving skill involves evaluating alternatives and making choices among them. Female B.Ed trainees are more responsible, independent, purposeful and develop autonomy of their own. Female B.Ed trainees have high sensing, intuitive, thinking, linguistic, spatial and kinesthetic thinking that make them involve in solving their problems and they use them in a proper way for improvement in their life.

VI. Relationship Between Learning Styles and Problem Solving Skill of B.Ed Trainees

1. The multiple correlation analysis reveals that, there is significant relationship between learning styles and problem solving skill in their sensing, intuitive, feeling thinking and problem solving skill of B.Ed trainees. This may due to, male B.Ed trainees is influenced by intrapersonal, linguistic, spatial, naturalist and kinesthetic learning. Majority of male B.Ed trainees learn with interest and understand which helps to apply them in the practical context with their own creative potentials. Male B.Ed trainees enjoyed freedom and this reduces their tensions, argument and they are emotionally balanced. They focus their attention on their problems. This will help them in bringing up their inner abilities which helps them to solve their problems. They spend more time on thinking about their problems and so they have holistic and social resistance. This primary focus is so
to solve problems. This approach in solving problems brings insights into challenges. Through instinctiveness they conclude their problem.

2. The correlation analysis result reveals that, there is significant relationship between learning styles and problem solving skill of female B.Ed trainees in their sensing, intuitive, feeling, thinking and problem solving skill. This may be due to the fact that, the female B.Ed trainees possess systematic way of learning, sequential process of approaching the problems and solving them with respect to intuitive skill. Female trainees apply their quick problem solving skill pattern and find a solution in coping with the subject. Their sensing might have been brought up from their elders via regulating the rules, co-operation, tolerance and brotherhood in their using environment. Intuitive involves quick problem solving skill and heuristic approach to take the problems for a better solution. Their feelings may suit their own pace and lead to develop their own problem solving skill. The systematic learning gives a proper way to the right path and give accurate solution to their problems faced in their learning period.

VII. Influence of Metacognition and Learning Styles on Problem Solving Skill of B.Ed Trainees

1. The correlation analysis result reveals that there is significant influence of metacognition and learning styles on problem solving skill of B.Ed trainees. This may be due to the fact that metacognitive learning are not yet curtailed to a narrow sense. They have broad sense of cognitive thinking, incorporate with sensing, intuitive, feeling, thinking and problem solving skill. They have a logical reasoning and learning which may help sharpen their objectivity and tune themselves to rule their problem solving skill. Hence they are able to challenge their learning process, thinking and learning styles of what they learnt towards problem solving skill.

VIII. Factor Analysis of Metacognition, Learning Styles and Problem Solving Skill of B.Ed Trainees

1. There is significant factor with positive loading of the variables namely knowledge of cognition, regulation of cognition, metacognition, visual learning style, auditory learning style, kinesthetic learning style, learning styles, sensing, intuitive, feeling, thinking and problem solving skill of B.Ed trainees.
RECOMMENDATIONS

On the basis of findings, the investigator has given the following recommendations to the educational administrators.

1. Create metacognitive environment in schools as well as in colleges. In creating a metacognitive environment, teachers should monitor and apply their knowledge deliberately, in modelling cognitive behaviours to assist students to become aware of their own thinking.

2. Metacognitive teaching strategies must be included in the teacher education programme.

3. Problem based and Project based methods must be given importance in teacher education programme.

4. Content based pedagogy must be given importance in teacher education programme.

5. Competition must be conducted in the classrooms to stimulate cognitive and non-cognitive abilities among the B.Ed trainees.

6. The test of reasoning and comprehension can be conducted in classrooms to analyse the learners’ cognitive processes.

7. Teachers should organize creative activities that will improve memory, attention, problem-solving skills, comprehension and language development of the B.Ed trainees.

8. Problem solving skill should be included as an important component in the teacher education curriculum.

9. The recruiting authorities may consider problem solving skill as an important criterion for selecting teachers at all levels of education.

10. Participatory processes and experimental learning can be introduced by replacing lecture mode and content based training.

11. Workshops and seminars may be conducted to improve the communicative skills, leadership skills, decision making skills, problems solving skills and conflict management skills of the B.Ed trainees.

12. Training on meta-thinking and lateral thinking can be provided for the B.Ed trainees.
13. Aptitude Interaction Teaching Technique can be used in teacher education institutions.

14. Two year programme of B.Ed must be conducted, it will help the student’s metacognitive strategy, different learning styles, multiple task of problem solving skill and techniques inculcated during the course of time in a successful manner.

SUGGESTIONS FOR FURTHER RESEARCH

1. A study on learning styles of college students in relation to their reasoning ability may be conducted.

2. Impact of metacognition and creative instructional strategy on academic achievement of higher secondary students may be conducted.

3. Influence of emotional intelligence and metacognition on techno-pedagogy of teacher trainees may be studied.

4. Relationship between metacognition and achievement in computer science of secondary teacher education students may be studied.

5. Influence of organizational climate and problem solving skill of primary school teachers may be studied.

6. A study on learning styles and learners’ academic achievement of higher secondary students may be conducted.

7. A study on metacognition and self-efficacy of the engineering college students may be conducted.

8. Relationship between metacognition and learning styles of higher secondary students.

9. A study may be conducted on problem solving skill of female school heads and their attitude towards teaching profession.

10. A study may be conducted on metacognition and creative thinking abilities of college students.

11. A study on problem solving skill of student teachers with special reference to classroom problems may be conducted.