CHAPTER 5

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CHAPTER–5

CONCLUSION, DISCUSSION & RECOMMENDATIONS

5.1. A BRIEF

This chapter is a fitting finale of the research report and covers findings, discussion, implications of the findings, the tenability of the research hypotheses, the limitations of the study and the scope for further research in this field.

5.2. CONCLUSION, DISCUSSION & IMPLICATIONS

The relationship existed between achievement motivation, learning style and level of parental involvement with academic achievement has been established in the present study. This finding has a support of earlier studies. It has further been concluded that all factors, viz., achievement motivation, learning style, parental involvement along with socio-demographical factors, are equally important in determining academic performance of a student. Except this other findings, conclusions and implications have been drawn and discussed below.

5.2.1. Findings related to levels

The following findings related to different levels of the secondary school students have been evaluated.

(i) **Secondary school students possessed above average level of academic achievement and less normal distribution of academic achievement in the whole sample.**

Rao and Rao (2003) also found an average level of academic achievement in Mathematics. Narasimham (2000) found that the academic achievement of tenth class students
was below average level. The studies of Sidhu (2005) and Sathe (2010) also reported that the tenth class urban students were holding above average level of academic achievement. Thus, results of the present study are very much in line of these studies.

In fact, civil society and Govt. both are equally responsible for getting an average academic achievement. The other probable factors responsible for getting academic achievement of secondary school students and could not be considered arc many and multifarious. Student level (including the students’ own physical health, social and emotional well-being); parental level (such as socio-economic status, the physical and mental health of parents); the family, household, school and class environment including availability of adequate facilities; conducive learning atmosphere; experience and efforts of the teaching community; achievement motivation; learning thinking style; socio-economic status and the locality may have contributed for the average achievement of the high school students.

On the basis of the result, students are suggested to determine their strengths and weaknesses in learning and make efforts to overcome the same. They are further advised to know “how to learn” and rest will come naturally.

(ii) Majority of secondary school students were highly motivated and not distributed normally in the sample.

Narashimah (2000), Rao and Rao (2003), Sidhu (2005) and Singh M. (2011) also found an average level of achievement motivation. Sharma (2011), Saadi et.al (2012) and Singh K. (2011) found the high level of achievement motivation in their studies. The finding of this study also follows the same trend.

The majority of the sample of the study lived in poverty and had to struggle for the basic needs of their daily life. They considered the benefits and value of education in terms of jobs and income needed to escape from hunger and poverty. Therefore, education in their perception is meaningful, relevant and related to their future success. Further, proper parental involvement, engagement, aspirations and attitude towards children’s schooling, encouragement and praise from teachers, role of extracurricular activities, cooperative behavior towards students, proper student-teacher relationship and high expectations are also some of the probable factors which affect the level of motivation of the secondary school students.
In true sense, one cannot be motivated and also nobody can motivate others. It is a self managed process which helps to motivate one from inner side. This is a sort of ‘self motivation’. This self motivation is initiated with will power. Will power develops the self confidence and this self confidence is further strengthened by constant increase in knowledge.

Therefore, students need to be taught the art of self management. Hence, it is recommended that the teachers and parents need to enhance the present status of achievement motivation by affection, curiosity, rewards, punishments, praising, blaming, competition, cooperation, explaining success and failures and providing knowledge of results and progress.

(iii) The orders of preferences, as found in styles of learning of secondary school students were- Verbal and Constructive, the most preferred; Enactive, the less preferred than verbal and constructive learning styles and figural and reproducing the most neglected.

Neira (2005) found that the auditory learning style was the most representative in a group. Gakhar (2008) also found stronger preference for concrete experiences and abstract learning and are less likely to get higher academic marks in the examination. Whereas, weaker preference for verbal, divergent and convergent learning styles, and are not related to increase or decrease in academic achievement of the students. Gakhar (2008) along with Kenth (2009) found imaginative learning style to be a good predictor of academic achievement. Vaishnav (2013) found kinesthetic learning style was more prevalent than visual and auditory learning style among secondary school students. Thus, the findings of the present study are conflicted with studies mentioned above. This might be because of sampling groups were different.

The results of the study indicate that their preference is based on the reflective, accommodative and abstract thinking about the subject matter. There is a less emphasis on imitation and practice. There could be many possible factors causing these inadequate results. Some such reasons may be that subject matter is teacher-centered and evaluation is based on memory of the student.

Study revealed that different students have different learning styles. Observation tests, interviews and questionnaires may be administered to student to assist teachers and to determine their learning style. Therefore, on the basis of these learning styles kind of instructional strategies or most effective method for a given individual and learning task may be chosen. Further, school administrators are suggested to organize seminars, workshop,
conference and symposium to increase students’ interest in learning. Teacher are also be suggested to undergo retraining, a series of workshops, seminars, orientation programmes, symposia etc. for re-orienting so that their level of teaching expertise is increased and they could be able to perform their duties with great ease.

In order to improve learning, Figural learners are recommended to draw a map of events in history or draw scientific process, watch videos, use highlights, circle words, underline, take notes make lists; Verbal learners may also be advised to use word association, record lectures, listen videos, group discussions, taping notes etc and Enactive learners need to study in short blocks, attend lab. classes, take field trips, visit museums etc.

(iv) Secondary school students hold an above average level of parental involvement and normal distribution in the whole sample.

Sahoo (2005) found higher level of parental involvement of secondary school students. Whereas, Rajeswari (2014), Singh M. (2012), Acharya and Joshi (2011), Thind and Jaiswal (2006) also found an average level parental involvement of High school students. The findings of the studies are very much in line with the present study.

In spite of a busy schedule of parents, different priorities, unawareness of involvement, low educational level of parents, carelessness, lack of resources, parents’ feelings of overwhelming, intimidating, embarrassing and unwelcome at school, social and cultural isolation of parents, language barrier, socioeconomic status and parent-teacher and school relationship, a high order of parental involvement has been observed in the present sample.

To enhance the present status, it is suggested that parents, themselves may devise means by which they would be involved in the academic activities of their children. Further, the schools need to organize orientation and training programmes for parents where mothers are specially invited. Such events will open their eyes and minds as to how they can be involved, monitor schoolwork and their progress. Some parents may willingly or unwillingly be ignorant of just how to help or be involved with their children’s studies. Therefore, it is suggested to provide weight age of marks at school level for the parental participation in evaluation of performance of the students. Hence, it may be considered a bounden duty of the parents to take appropriate steps to improve the parental involvement.
5.2.2. Findings related to co relational analysis

(i) There existed no significant relationship between academic achievement and achievement motivation of secondary school students.

Achievement motivation failed to show statistically significant relationship with academic achievement. This finding was in line to the findings of Rao & Rao (2003), Nagarathanamma & Rao (2007) and Zen Zen (2002). They also found insignificant association between these two variables and observed that there was no influence of achievement motivation in predicting academic achievement of students. Studies of Schmidt et. al., (2006) and Sharma (2009) also favored that there was no significant interaction of achievement motivation on the mean performance of academic achievement.

The present finding was contradictory to what was expected and also at variance with the findings of some earlier researchers e.g., Ahmad and Nigam (2008), Kaushik and Rani (2005), Narashimah (2000), Jahedi (2012), Sharma (2009), Washington (2009), Chabra (2001), Ali (2011), Chabra (2011), Kaur (2011), Varghese (2005) and Klinger (2011). These researchers had brought up the positive and significant relationship between achievement motivation and academic achievement. In all these studies achievement motivation had been found to be an important determinant of academic performance of students.

The primary objective of the present investigation was only to study the relationship between academic achievement and achievement motivation of male and female students of secondary schools of Govt. and Private-Aided with the rural and urban backgrounds. The same have been established. The probable reasons of contradictory findings may be assigned to absolute lack of self attribution for performance and parental or peer pressure. However, factors responsible for such contradictory finding, if any, on this issue is a matter of further investigation in future.

In the light of the findings of the study, it is proposed to ensure effective counseling for the development of the right level of achievement motivation towards academic success. Counseling as a program in the school may be made more practical in orientation rather than the present situation, where all the teachers and parents function primarily as lecturers. This can be achieved by establishing of a separate and functional ‘diagnostic and counseling unit’ in the school to see to the welfare, growth and development of the students in areas of educational achievement. Counseling program in the schools need to be very sensitive to the psychological interests and the value of the students since they are enduring traits on which
their academic performance rests. Motivation is a non-cognitive trait. Therefore, it is amenable to modification through training to improve the motivational level of children to bring out positive results in academic achievement.

(ii) **There existed a positive and significant relationship between academic achievement and learning style of the secondary school students.**

Learning style had the highest coefficient of correlation with academic achievement in the present study and all the learning styles are correlated positively and significantly to each other and with academic achievement also. This finding was in line with the similar findings by many other researchers in this field (e.g., Sharma and Verma (2009), Patnaik (2005), Jahedi (2004), Ali (2008), Singh (2008), Sharma (2011), Abidin et. al (2011), Dangwal (2010), Malathi et. al., (2006) and Vaishnav (2013). These researchers had also found the higher correlation between learning style and academic achievement and indicated that higher the achievement score, the better the learning style among students.

In most of the cases it is observed that very successful learners learn in several different ways. According to Dunn & Dunn also, multi style learners tend to achieve more and score better than learners with one or two learning styles. But, every student has certain degree of preference in each type of learning style – enactive, verbal, figural, reproducing and constructive and most of them have dominance in one or more styles of learning. As a result, it was inferred that most students possessed multiple learning styles or a combination of different learning styles. As such, they are able to learn effectively and it affects on the students’ overall academic achievement.

Therefore, it is proposed that by the knowledge of preferred learning style, students may improve their academic achievements and strengthen the weaken areas of studies. It is because adequate knowledge of learning style possessed by each learner will help them to adopt appropriate modes of study or study techniques that suit them. To determine preferred learning styles observation tests, interviews and questionnaires need to be administered to students. This would empower the teachers in improving academic performance of students. It is also proposed that the teachers should find out their own preferred learning style which often becomes predominant teaching learning style and affect the learning style of the students. Parents are also required to be made aware about different kind of approaches of learning styles to help their wards learn best.
(iii) There existed no significant relationship between academic achievement and parental involvement of secondary school students.

This finding of the study matches with the findings of previous studies of Sahoo (2005) and Nuzhat (1998) who also found an insignificant relationship between academic achievement and parental involvement. On the contrary, studies of Kaushik and Rani (2005), Kaur (2011), Vamadevappa (2005), Singh and Devgun (2012), Lasso (2008), Jassal (2011), Jeynes (2001) and Vellymalay (2011) found academic achievement is positively and significantly correlated with parental involvement.

The finding does not support pre-assumption that there exist positive significant association between academic achievement and parental involvement. In fact, parental involvement in the child’s academic work at home makes the child motivated. Parents who show positive involvement in academic activities of their children and counsel them properly on how to value school work are highly involved parents. Such parents discuss with their children school related topics and help them, plan their work and even assist in difficult assignments. These stated factors might be lacking badly in the sample of the present study which has resulted into mismatch of the finding. Therefore, it is suggested that teachers and parents may try to eliminate above possible reasons that are lying behind the result so that the students excel well in academic achievement.

(iv) There existed a positive and significant relationship between achievement motivation and learning style of secondary school students.

The finding that learning style had positive and significant relationship with achievement motivation is also in agreement with the findings of previous studies. Prakash and Patnaik (2005), Verma (2009) who reported that learning style preferences were low where there was low achievement motivation. Jahedi (2004) found that there was significant correlation between motivational belief components (self efficacy, intrinsic value and test anxiety) and self regulated learning components (cognitive strategy use and self regulation) of the students. Further, Ali (2011) indicated the significant impact of motivation in problem based learning environment.

The positive correlation in the present study may be explained on the basis of the fact that in a good motivational climate, students are at ease with themselves and with one another to achieve their motive of excellence. Motivated environment prevailing in the class and home
may foster a sense of belongingness which in turn helps to develop intrinsic motivation to learn. Teachers at classroom, in planning, conducting and evaluating teaching learning process need to be taken care so as to cope with the variations in learning styles of the students.

(v) **There existed a positive and significant relationship between achievement motivation and parental involvement of secondary school students.**

Muthee (2011), Muola (2010), Kaushik and Rani ((2008) reported that involvement of parents facilitates achievement motivation, school engagement and academic success. It showed that student’s motivation to do well in academic work is to some extent dependent on the nature of their parental involvement.

The findings of positive relationship between parental involvement and achievement motivation further establish the fact that parents are the first teachers. In fact, sound foundation of the proper motivation and study habit is laid by parents at home. It is interesting to note that the most potent variable for this purpose is found to be parental involvement.

Therefore, it is recommended that parents need to be aware of the importance of their role in their children’s achievement motivation so that they can provide necessary facilities at home. This finding also implies that parents may improve the motivational level of students through appropriate manipulation of the home environment. Parental care and supervision also play an important role in this context.

On the basis of these findings it is suggested that an array of programmes may be offered by the schools so that parents, no matter their degree of willingness, available time, ability and social economic status may be able to participate in academic activities of their children. After this training program children’s school performance may be checked on long term basis. Teachers may specifically pinpoints areas of needs, weakness or strength of a pupil to the parents so that they can work on it as a way of getting them acquainted as how to help the child. These above mentioned facts conclude that parents and teachers are to work in collaboration in order to bring the best out of every student as much as possible.

(vi) **There existed a positive and significant relationship between learning style and parental involvement of secondary school students.**

A number of researchers had found the relationship between learning styles and academic achievement, but hardly any effort had been made to ascertain the relationship
between learning styles of students and their parents’ involvement in academics. In the present investigation, the correlation between learning style and parental involvement, if any, had been tried. A significant positive correlation of learning style and parental involvement had been found. This suggests that parental involvement have the direct impact on learning style, which in turn, influences academic performance. Thus, it is self evident that sufficient cares need to be taken by the parents at home to improve learning of the student.

5.2.3. Findings related to gender difference

(i) There existed significant difference between male and female secondary school students in academic achievement.

The female students are found better than their counterpart male students in their academic achievement. The male and female students both are with above average academic achievement. The achievement distribution in the sub-samples is also different. The achievement concentration of females is high in above average and below average groups. The result states that there is influence of gender on academic achievement.

The studies of Berhany (2011); Chabra (2001), Chabra (2012) and Neubauer were supporting the result of the present study that female students had a significantly higher academic achievement than male students. Where as the studies of Sidhu (2005), Schmidt et.al., (2006), Narashimah (2000), Pannier and Paret (2008) reported that there was no significant difference between male and female in their academic achievement.

The better academic achievement of the female students to the male students is in accordance to widely accepted fact that female students excel more in the classroom. Reports of higher grades, a keen interest in study and an all round better attitude to education have been attributed to females. The possible factor to be taken into this account now is to have enough opportunities for female students to achieve their full potential in the way male students do in the education system. Whereas, male students’ underachievement have centered on alleged biological differences, different learning styles, teacher’s expectations, a lack of male role models and the feminization of the classroom.

Based on the findings, it is recommended that teachers, parents and the community are needed to provide the necessary moral support to either of the gender without showing any discrimination in achieving excellence in studies. Schools and teachers are suggested to use some new ideas to increase boys’ academic achievement like using mentoring, using gap
students, changing sets or learning groups, harnessing father’s influence, monitoring behavior, more active learning, structured lessons, increasing rewards and literacy, reviewing the culture of the school, improving writing and assessment, listening to boys’ learning needs, using information technology, increasing challenge, raising expectations and teacher education for boys.

(ii) **There existed a significant difference between male and female secondary school students in achievement motivation.**

Male students are more motivated for their achievement than female students. In the sample, more number of male students are with High and Very High group distribution of achievement motivation. Whereas, the more number of female students are with low average and average group. Thus, the result states that there is influence of gender on achievement motivation.

The result that male and female students differ significantly in their achievement motivation, is in accordance of the studies of Chabra (2012), Sarfaraz (2008), Ballard (2006) and Sood (2006).

The underlying factor for such difference may be due to unrecognized, unintended and unknown biases in the minds of the parents, teachers, administrators and peers in the school. Social and cultural norms, poverty, fear of female vulnerability, parent’s and teacher’s perceptions, low self image and self confidence of female students, hidden curriculum and lack of supportive facilities such as separate schools, toilets, transportation and lack of women teachers may also be the possible reasons for this low motivation of female students. But if all mediating variables are taken care of, then male and female both will perform well alike.

Therefore, to minimize the significant difference in achievement motivation, it is suggested that both need to be competed equally in every academic endeavor. Parents, teachers and the school at large are supposed to overcome the age-long gender bias, and come to grip with the truth that gender is not a barrier in academic achievement.

(iii) **There existed no significant difference between male and female secondary school students in learning style.**

Male and female students have an equal magnitude of preference for enactive, figural and reproducing learning styles. Although a perusal of other means reveals that male students
are more inclined to enactive, reproducing and constructive learning styles than their counterparts. Female students were more inclined to figural and verbal than male students in their learning style.

The results of present study are partially supportive by the previous research conducted by Singh (2008), Jaiswal (2010) and Rajsheer S. (2013). Other studies carried out by Verma (2002), Pureyidathil et.al. (2005), Malathi et.al. (2006), Gakhar (2008) and Sharma (2011) also supported gender differences with regard to some learning styles through using different tools of learning styles. Learning styles probably differ by gender but research results vary widely.

In fact these marginal differences in ‘means’ in the present study may be attributed to chance factor and male and female students are not different from each other with regard to enactive, figural and reproducing learning styles. Of course, female students seem to have significantly more inclination towards verbal and constructive learning styles than male students. The findings appear to be true beyond chance factor.

The analysis of differences in learning style is important to get the information of the ‘learning process’ which provides a framework for curriculum and instructional decisions. Ultimately this helps every learner to succeed in school. It would be better to provide an equal opportunity for all students to be successful in education and school.

(iv) **There existed no significant difference between male and female secondary school students in parental involvement.**

The distribution of parental involvement in the sub sample was different. Parental involvement for female students was more in Average and High parental involvement groups whereas, parental involvement for male students was more in Very High parental involvement group. The mean scores show that female students get more parental involvement than the male students.

Vamadevappa (2005), Varghese (2005), Acharya and Joshi (2011) also found significant difference of male and female achievement. Nuzhat (2005) found that involvement of mothers was very high with the academic career of female than male students. Olatoye and Ogunkola (2008) also found that the parental involvement for male and female students doesn’t differ in anyway. In a study, Olatoye and Agbatogun (2009) discovered that male pupils enjoy more of parental involvement than the female pupils. Conway (2008) on the other hand concluded that parents are more involved with their daughters than sons.
This difference between gender achievement and involvement of parents may be due to the fact that discrimination between male and female has diminished now days. Most parents extend equal importance to both.

Keeping in view the findings, it is suggested that schools may use different strategies, for both genders. Some of the remedial strategies which parent education programs, parent information center, meaningful participation, parent volunteer programs, traditional parent involvement policies, collaborative teaching and promotion of cultural understanding etc.

5.2.4. Findings related to locality difference

(i) There existed no significant difference between rural and urban background secondary school students in academic achievement.

The achievement distribution of the sub-sample shows a slight difference between the achievement of rural background and urban background students. The rural background secondary school students possessed high level of academic achievement than their counterpart urban background school students only in below average group. The urban and rural background students hold an above average level of academic achievement.

The findings of Narashimaha (2000) and Crowley (2001) were contradicting the above result as it found a significant influence of urban over rural students. But Howley (2002) reported that there is no difference between rural and urban education.

The present analysis of the sampling revealed that the students belonging to the rural areas but studying in urban schools along with the students of urban areas even in absence of best facilities had high motivation for their achievement. This suggests that environment, facilities and resources play a crucial role in learning and academic achievement.

(ii) There existed a significant difference in achievement motivation between rural and urban secondary school students.

Urban background students were on the higher level of achievement motivation than the rural background students. The comparison of the achievement motivation distribution of the sub samples indicates that the achievement is higher in average and Very High groups of urban background students whereas, the number of students of rural background were more only
in High Achievement Motivation group. So, there is influence of locality on the achievement motivation of the students.

Findings of Kaur & Mehta (2007) and Narashimah (2000) are in support of the present study.

The study has suggested that the achievement motivation of the students of urban background (146.21) is higher than the achievement motivation of the students of rural background (139.65). But the academic achievement of the rural background is higher (356.83) than the academic achievement of the urban background (347.03). In general, it is believed that higher achievement motivation leads to higher academic achievement. But findings under current discussion are contradictory to it. The findings are justified because of two reasons. Firstly, in the present study the students with rural backgrounds were selected from the urban schools and not the schools located in rural area. Secondly, students hailing from rural areas due to competitiveness of modern age to outperform their urban counterparts in academic studies due to higher level of achievement motivation and parental involvement.

(iii) There existed a significant difference in learning style between rural and urban secondary school students.

The higher mean value is in favour of ‘urban background’ students which imply that secondary school students hailing from urban background had significantly higher level of preference of learning style than their rural counterparts. Urban background students appeared to have greater magnitude of enactive, figural, verbal and constructive learning styles in comparison to ‘rural background’ students. On the reproducing learning style rural and urban students were found to be alike.

The results indicated that urban background students have significantly higher preference of learning style than rural background students. The obtained findings with regard to rural-urban difference in learning style of the secondary school students do not get direct support from any study. This is because hardly anyone has studied differences in learning style of rural and urban students by using Learning style Inventory of Misra. Some studies however, employing different tools of learning styles have shown differences in preference of learning style of rural and urban students e.g., Verma (2002), Akhtar (2011), Vyas (2002) and Singh R. (2008) whereas, Aruna et. al., (2006) found no difference.
This finding of the study revealed that achievement motivation and parental involvement have their direct impact on learning style, which in turn, influences academic performance. Thus, it necessitates that sufficient care has to be taken by the parents at home and teachers at classroom in planning, conducting and evaluating teaching learning process so as to cope with the variations in learning styles of the students.

(iv) There existed no significant difference in parental involvement between rural and urban secondary school students.

Kanupriya and Jassal (2011) and Lokeshwari (2014) also found no significant difference in getting parental involvement on studies with respect to locality.

This finding of the investigation suggests that rural and urban tenth standard students sought equal guidance and involvement of parents in their studies, meaning thereby that parents from rural, as well as, urban background are equally aware of the importance of academic achievement and education in the modern ages. That is why, there is not such difference in urban and rural student’s parental involvement and both types of parents convey their expectations to their children equally.

5.2.5. Findings related to type of school management difference

(i) There existed a significant difference in academic achievement between Govt. and Private-Aided secondary school students.

Govt. school students possessed higher level of academic achievement than the Private-Aided school students. As regards to the distribution of achievement, the concentration in the Private-Aided schools was very high in above average achievement group, but it was high in below average and average groups in Government schools.

Narashimah (2000) observed that Private-Aided schools performed better than government schools. Jayshee (2008) and Pandey observed a positive relationship between classroom environment and secondary school learner’s academic achievement. Pandey (1997) observed that the classes of private-aided schools had a more learning conducive climate. Kingdom (1999), Govinda and Varghese (1993) found that the better quality are strongly associated with higher achievement.

Government and Private-Aided schools are lagging behind and have to face several challenges related to educational outcome. Observation, discussion and inquiries made
during the study indicate that these schools have dearth of financial resources and inadequate infrastructure facilities like laboratory, library and play ground which also have an impact upon the academic achievement of schools. Further, they have not much independence and leverage in using their discretion for professional development of teachers.

Therefore, it is recommended that these schools may promote autonomy in exercising administrative, financial and academic powers to strengthen schools and activities needed to bring about and sustain the development of teachers and students.

(ii) There existed a significant difference in achievement motivation between Govt. and Private-Aided secondary school students.

Private-Aided school students are more motivated for their achievement than their counterpart in Government schools. As regards to the distribution of achievement motivation, the concentration in the Private-Aided schools is more in High and Very High Achievement Motivation groups but it is high in Average and Low Achievement Motivation group in Government schools.

Sarfaraz and Nigam (2008) in their study found that motivation is significantly related to academic achievement of aided and private higher secondary students. Narashimah (2000) also found positive influence of type of school management on achievement motivation.

The present study has also shown the lower level of achievement motivation of the students of Government schools. Probable reasons behind the low motivational process may be the prevailing school and classroom environment include: satisfaction, friction, competitiveness, cooperation, difficulty, student cohesiveness; teachers’ qualification, physical setup, curriculum, subject matter, classroom organization, teaching method, teacher-student interaction and student-student interaction and attitude of students and their parents towards school and teachers.

Hence, it is proposed to promote autonomy in mobilizing and utilizing financial and human resources. The facilities which may be initiated to motivate staff and to promote better performance in Govt. and Private-Aided schools are making available teaching-learning materials, arranging educational visits by teachers and heads, resourcing educational innovations and developing incentive schemes. These steps would give confidence and leverage for motivating and encouraging teachers and students to develop competence and professional and educational growth.
Further, it is also suggested that a congenial atmosphere may be developed in schools. Free coaching centers may be arranged for the preparation of boards and purpose of Entrance Test in various vocational courses. Educational Technology inputs and computers are required to be essential for present day system of education. Hence, well equipped Educational Technology laboratories and computer laboratories may be established in schools. Parents also need to be encouraged to participate in their children’s studies and achievements.

(iii) Secondary school students studying in Government and Private-Aided schools didn’t differ significantly with respect to their preference for learning style.

In Indian context, there are limited studies (Aggarwal (1982) & Verma (2004) available which attempted to investigate the difference between Government and Private-Aided school students with regard to their learning style. Aruna et. al., (2006) and Malathion et. al., (2006) found no significant difference in the learning style of higher secondary students in terms of their school management.

The present study clearly shows that students of Government school prefer figural learning style and students of Private-Aided school prefer verbal learning style. Whereas, enactive learning style make a choice of both. The difference that exists between the students of Government and Private-Aided school with regard to learning style, reinforces the proposition that each schools opts and develops a peculiar type of learning environment and help the student in adopting peculiar type of learning style accordingly. The preferences of government school students for figural, reproducing and constructive learning style over enactive and verbal learning styles also establish this fact. Therefore, it can be concluded that Private-Aided schools and Government schools follow the same learning environment that is why, the students show the similarity in their learning style preferences.

The most important finding of the study as analysed is that achievement motivation is directly related to learning style, which in turn, influences academic performance. Thus, it necessitates that through reflective process, with continuous help, guidance and support and on the basis of teachers’ appraisal and motivation, professional and educational development activities may be conducted at school level. These development activities include: study circle, visit to other institutions, group activities, educational excursions, storytelling, guidance by faculty heads, role play, demonstrations, mentoring, counseling, action research, subscribing to journals and magazines, inviting experts and professionals from outside and encouraging teachers to join a distance education course for their professional growth.
(iv) **There existed a significant difference in parental involvement between Govt. and Private-Aided secondary school students.**

Private-Aided school students enjoy more parental involvement than their counterpart in Government schools. It was established in this study that parental involvement in Government and Private-Aided schools varies and parents of students in Private-Aided schools are more involved in their ward’s schooling than parents of students in Government schools. This is probably due to the variations in the social and cultural background of the students and their families. The variations may be explained by the likely difference in parent’s educational qualifications or socio economic status. The difference may also be in the level or type of parental involvement. Whatever the case may be, Government school students’ parents should be more alive to their responsibilities. This result is supported by the studies of Olatoye and Agbatogun (2009).

In actual, no one is more than parents in sending signals to their ward on the importance of reading and education through their own examples, assistance and involvement. Therefore, parents are required to have the high aspirations and expectations as a way of building the lives of the children and their future too.

**5.3. TENABILITY OF HYPOTHESES**

On the basis of the results of various statistical procedures employed, the hypotheses formulated for the study and presented in chapter one could be reexamined to evaluate their tenability.

The conclusions arrived in this regard are presented in the form of summary in Table 5.1—
Table 5.1. Hypotheses Formulated for the study and their tenability.

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<tr>
<th>No.</th>
<th>Hypotheses</th>
<th>Tenability</th>
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<td>1.</td>
<td>Secondary school students don’t possess average level with respect to—</td>
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<tr>
<td></td>
<td>(a) Academic Achievement</td>
<td>Substantiated</td>
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<td>(b) Achievement Motivation</td>
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<td>(c) Learning Style</td>
<td>Substantiated</td>
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<td></td>
<td>(d) Parental Involvement</td>
<td>Substantiated</td>
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<td>2.</td>
<td>There exists no significant relationship between the secondary school students with respect to—</td>
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<td>(a) Academic achievement &amp; Achievement motivation</td>
<td>Substantiated</td>
</tr>
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<td></td>
<td>(b) Academic achievement &amp; Learning style</td>
<td>Not substantiated</td>
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<td></td>
<td>(c) Academic achievement &amp; Parental involvement</td>
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<td></td>
<td>(d) Achievement motivation &amp; Learning style</td>
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<td></td>
<td>(e) Achievement motivation &amp; Parental involvement</td>
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<td></td>
<td>(f) Learning style &amp; Parental involvement</td>
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<td>3.</td>
<td>There exists no significant difference between Male &amp; Female secondary school students with respect to—</td>
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<td></td>
<td>(a) Academic Achievement</td>
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<td></td>
<td>(b) Achievement Motivation</td>
<td>Not substantiated</td>
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<td></td>
<td>(c) Learning Style</td>
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<td>4.</td>
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<tr>
<td></td>
<td>(b) Achievement Motivation</td>
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<td></td>
<td>(c) Learning Style</td>
<td>Not substantiated</td>
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<td></td>
<td>(d) Parental Involvement</td>
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</tr>
<tr>
<td>No.</td>
<td>Hypotheses</td>
<td>Tenability</td>
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<td>5.</td>
<td>There exists no significant difference between Government &amp; Private-Aided secondary school students with respect to—</td>
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<tr>
<td></td>
<td>(b) Achievement Motivation</td>
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<td></td>
<td>(c) Learning Style</td>
<td>Substantiated</td>
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<tr>
<td></td>
<td>(d) Parental Involvement</td>
<td>Not substantiated</td>
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5.4. LIMITATIONS

Limitations of the present study restrict scope and generalizability of the findings and some such limitations are listed below:

(i) **Limitations related to controllable variables**: limited time and resources available for the study; the small sample size as compared to large number of the variables and the multivariate techniques of data analysis employed.

Larger sample size would have increased generalizability of the results.

(ii) **Limitations related to uncontrollable variables**: limited information regarding variables like achievement motivation, learning styles, parental involvement was available because students were the only source for collecting the same. The reliability of cross checking of the data was also limited.

Data collection from multiple sources could prove better results.

(iii) **Limitations related to confounding variables**: mood, anxiety, awareness, situation and environment at the time of data collection had also played a vital role to limit general application of the findings.

5.5. SCOPE FOR FURTHER RESEARCH

The study was carried out to find out the relationship of achievement motivation, learning style, parental involvement and academic achievement of secondary school students.
Information gathered during analysis of data and findings suggest further scope of research work in this direction as follows:

(i) Secondary school education forms the basis of the life career ahead. For overall success, except academic development personality development also has equal share. Therefore, effect of academic development along with its correlates on personality development may also be investigated.

(ii) A further study by incorporating additional variables related with school and home environment may also be taken up so that a more comprehensive effect on academic achievement could be investigated.

(iii) Similar studies on primary as well as higher secondary schools may be conducted so that academic achievement at such stage could be improved.

(iv) A similar study may be carried out for extensive areas so that findings could be applied in more general way.

(v) This study covers only students’ perception whereas parent’s perception doesn’t involve anywhere. Therefore, keeping the same pattern some questionnaire and interview may be administered for parents also.

(vi) It has been felt that most of the studies in general have been conducted by taking the variable as in the present study and also by observing parents’ role only where in general mothers play more active role than fathers. Therefore, there is an urgent need to investigate the correlation between these variable with an active role of father.

(vii) For more practical application of such studies it is recommended that a longitudinal study can be carried out in which training exercises can be given to students with low levels of motivation, measures aimed at knowledge of the learning styles and remedial lessons for those who are cognitively low. This can help students to set up realistic goals which match their abilities. The longitudinal study may helpful in bringing out the efficacy of such interventions in improving the academic output of the learners.

(viii) It is also suggested that similar studies may also be extended in different states Education boards, CBSE & ICSE boards so that findings on comparative base could be obtained.
The use of ICT in teaching aids, laboratory and library facilities in the schools have greater influence on achievement motivation and learning styles of students, therefore, it is further suggested that studies may be conducted by incorporating these tools.

(ix) Study of influence of environmental and psychological factors in association on the inculcation and development of achievement motivation and parental involvement will also prove fruitful in leading further course of secondary level education.

5.6. FIELD APPLICATION—PILOT STUDIES

The result of this study has established that Achievement Motivation, Learning Style and Parental Involvement, all the three independent variables are significantly correlated to each other and further in association they are also directly correlated with Academic Achievement (Fig. 5.1).

![Diagram](image)

Fig. 5.1. Correlates of academic achievement

To meet the skill demand of the high-tech dependent world of 21st century, students need to acquire better academic achievement. This involves various strategies by which all the three correlative variables can be manipulated for their better performance.

Some such steps for action in the field under each strategy are discussed below.

**Strategy : Learning Style**

(i) *Action Step* : Develop structured, sequenced & advanced syllabus for better learning experiences of the students. Give preferences to frequent assignments, clear grading criteria, repetition and explanations.
(ii) **Action Step**: Use standardized ‘**self survey**’ questionnaires to determine the preferred learning styles for students and teachers. It will explore the strongest and weakest styles of learning to help in better educational outcome. Government and policy makers may be involved for enforcement of the action plan.

(iii) **Action Step**: Provide opportunities of ‘**quick practices and assignment**’ based activities on particular learning skills and styles. Concentrate on increasing the reproducing ability by the use of ‘**enactive**’ and ‘**figural**’ styles of learning.

**Strategy: Achievement Motivation**

(i) **Action Step**: Introduce methods that will increase ‘**self confidence**’ to achieve good Grade Point Average (GPA). Higher level of self confidence enhances the motivation.

(ii) **Action Step**: Introduce methods to increase the sense of ‘**role responsibility**’ and ‘**self control**’ because more personal control experiences more motivation. If this strategy is successfully used, it will enhance the achievement in school related issues.

(iii) **Action Step**: Provide guidance and counseling for exploring potential career choices, thus increase the motivation to achieve goals and success in school. Better understanding and day-to-day experience provide more confidence in choosing career.

(iv) **Action Step**: Curriculum for pre service teachers may focus activities of learning styles, motivating techniques and parenting policies for the prospective teachers. The subject content for students may be designed and delivered by innovative activities.

**Strategy: Parent Empowerment**

(i) **Action Step**: Provide parents with a sense of empowerment and encourage them to view the school and education in a positive light. Listen to parent’s questions and concerns and invite their suggestions on important school issues.
(ii) *Action Step*: Survey the parents about their interest in learning and more about school education policy, child development and parenting etc. Develop ‘parent education programs’ based on their requirements.

(iii) *Action Step*: Develop a ‘parent information center’ at the school with resources on academic and school related topics as well as parenting and family issues.

(iv) *Action Step*: Constitute some Parental Involvement laws or policies to practiced effectively.

Some pilot studies on different correlates i.e., Learning Style, Achievement Motivation and Parental Involvement on a group of 25-30 students by incorporating above suggestions be initiated and continued for 2-3 academic years. The information on the performance be monitored on regular basis. After completion of study-period, data related to academic achievement be collected and analysed to gauze the effect.