Chapter 6

SUMMARY AND CONCLUSIONS

6.1 Introduction
6.2 Recapitulation of the study
6.3 Major findings and conclusions of the study
6.4 Summary of conclusions
6.5 Tenability of hypotheses
6.6 Implications of the study
6.7 Suggestions for further research
6.1 Introduction

In this chapter, the investigator portrays a brief summary of the study in retrospect which includes the hypotheses, objectives and methodology of the research work carried out along with analytical supports and statistical techniques employed. The compendious deliberation of the result procured from the study in a structured manner and the recommendations and the possible implications emanated for further practice and research for maximising the learning outcome of higher secondary school geography students are also explicated in this chapter.

6.2 Recapitulation of the study

Since the focus of the study was to develop a model of teaching based on the objective ‘create’ for promoting self directed learning among the geography students at higher secondary level. For that the investigator followed mixed methods approach incorporating, pre-test-post test non equivalent group design to test the effectiveness of developed model of teaching. The manifold facets of the present study is summarised in the nearby heads.

6.2.1 Statement of the problem

The present investigation targets to develop a model of teaching for the effective curriculum transaction in Geography. Hence the problem under investigation was entitled as “Developing a model of teaching based on the objective 'create' for promoting self directed learning among the geography students at higher secondary level”.

6.2.2 Variables of the study

Variables are the vital characteristic that can be observed and measured and varies among people under different conditions. The independent variables selected
for the study are the developed model of teaching and present activity oriented approach. The dependent variables considered in the study are self directed learning, creativity and academic achievement among the geography students at higher secondary level.

### 6.2.3 Hypotheses of the study

1. The prevailing modes of pedagogical practices are inadequate for the effective curriculum transaction in geography at higher secondary level with special reference to the enhancement of creativity and self-directed learning.

2. There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes for promoting self directed learning among the geography students at higher secondary level.

3. There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes with respect to enhancing creativity among the geography students at higher secondary level.

4. There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes with respect to the academic achievement among the geography students at higher secondary level.

5. There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ among sub
samples of students at higher secondary level based on gender, locale, and type of management with regard to

- Self directed learning
- Creativity
- Academic achievement

6. There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ among the geography students at higher secondary level with regard to Retention in

- Self directed learning
- Creativity
- Academic achievement

6.2.4 Objectives of the study

1. To identify the prevailing modes of pedagogic practices and the hindrances confronted by the educational practitioners for the effective curriculum transaction in geography students at higher secondary level with special reference to creativity and self directed learning

2. To find out the initial level of knowledge constructs and structured patterning of self directed learning among the geography students at higher secondary level

3. To analyze the entry level creativity status of geography students at higher secondary level
4. To develop a model of teaching based on the objective ‘create’ for promoting self directed learning among the geography students at higher secondary level

5. To test the effectiveness of developed model of teaching based on the objective ‘create’ for promoting self directed learning among the geography students at higher secondary level

6. To test the effectiveness of developed model of teaching based on the objective ‘create’ for enhancing creativity among the geography students at higher secondary level

7. To test the effectiveness of developed model of teaching based on the objective ‘create’ with regard to the academic achievement among the geography students at higher secondary level

8. To compare the effectiveness of developed model of teaching based on the objective ‘create’ among sub samples of students at higher secondary level based gender, locale, and type of management with regard to

   • Self directed learning
   • Creativity
   • Academic achievement

9. To compare the effectiveness of developed model of teaching based on the objective ‘create’ among the geography students at Higher Secondary Level with regard to Retention in

   • Self directed learning
Summary and Conclusions

- Creativity
- Academic achievement

10. To analyze the appropriateness of the developed model of teaching based on the objective ‘create’ for promoting self directed learning among the geography students at higher secondary level

6.2.5 Methodology in brief

Methodology concerns the procedure adopted for the actualisation of the objectives of the study. It is briefly depicted below.

The present study was focused on the set sequential procedure of developing a learning model of teaching based on the objective create for promoting self directed learning among the geography students at higher secondary level. In the present study the investigator followed mixed methods approach incorporating both quantitative and qualitative approach to find out the effectiveness of developed model of teaching. Pre-test post-test non equivalent group design was adopted to test the effectiveness of developed model. The study was oversight through four phases namely: cardinal, developmental, experimental, and terminal.

In the cardinal phase, the investigator conducted need analysis about the prevailing modes of pedagogic practices and the hindrances confronted by the educational practitioners for the effective curriculum transaction in geography at higher secondary level and to find out the initial level of knowledge constructs and structured patterning of self directed learning from a representative sample of higher secondary school geography teachers and to analyze the entry level creativity status of geography students at higher secondary level.
In the second phase the investigator developed the model of teaching based on the objective ‘create’ for promoting self directed learning among the geography students at higher secondary level. The developed model was validated through the model validating judgement schedule.

In the experimental phase the investigator enfold the procedure of experimentation of the developed model to test the effectiveness of developed model in terms of self directed learning, creativity, and academic achievement among the geography students at higher secondary level to compare the effectiveness of developed model among the sub samples based on gender, locale and type of management and to analyse the retention of students on self directed learning, creativity and academic achievement. For that the investigator selected experimental group and control group. The experimental group was taught by applying the developed model and the control group through prevailing activity oriented approach. The effectiveness of developed model in terms of self directed learning, creativity, and academic achievement was estimated by employing achievement test, self directed learning scale, and creativity test in geography and by comparing the pre test scores with post test scores and retention test scores.

The terminal segment the investigator developed and administered the learner satisfaction form to analyze the appropriateness of the developed model among the geography students at higher secondary level and obtain the feedback from the students.

6.2.6 Analytical supports and techniques employed

- Semi structured interview
- Self directed learning perception questionnaire
Summary and Conclusions

- Entry level creativity scale
- Model validation judgment schedule
- Lesson designs based on prevailing activity oriented approach
- Lesson designs based on the developed model
- Self directed learning scale
- Creativity test in Geography
- Achievement test
- Learner satisfaction form

6.3 Major Findings and conclusions of the study

The major findings and conclusions that emerged from the analysis of the data obtained on qualitative and quantitative analysis based on the objectives formulated have been presented in the following segments:

Segment I

The first section portrays the findings emerged from Need analysis through Semi structured interview to analyze the prevailing modes of pedagogic practices and the hindrances confronted by the educational practitioners for the effective curriculum transaction in geography at higher secondary level, Self directed learning perception questionnaire to analyze the initial level of knowledge constructs and structured patterning of self directed learning from a representative sample of higher secondary school geography teachers and experts, and through Entry level creativity scale to analyze the entry level creativity status of geography students at higher secondary level.
Conclusion – 1

Prevailing modes of pedagogic practices are inadequate for the effective curriculum transaction in geography at higher secondary level.

This conclusion is supported by the following findings.

- Most of the teachers are following pedagogic practices like activity oriented approach, discussion and lecturing methods in their geography classrooms. Majority of the teachers placed their opinion that the prevailing tactics of pedagogic practices for ascertaining the competencies of geography learning is not at all sufficient. Almost all the teachers are employing lecturing and large group instruction in their geography class rooms, only few teachers are opined that in certain situations they apply certain pedagogic strategies like small group instruction, computer based instruction, co-operative learning, and brainstorming. While evaluating about the skills and abilities self-possessed by the students after they were exposed to the prevailing tactics of curriculum transaction almost all the teachers commented that most of the higher secondary geography learners are at novice level. These observations conform that even though there are some instructional practices, the prevailing tactics of pedagogic practices for the effective curriculum transaction in Geography are inadequate in promoting the capabilities of students and there is a lacuna in practicing of innovative curriculum transaction modalities at higher secondary school level.

- The next segment of the interview poll, the investigator tries to stab the hindrances and challenges confronted by the teachers for the effective curriculum transaction of Geography. Almost all the teachers selected were
Summary and Conclusions

of the opinion that there is lack of motivation from the part of learners to learn geography. Most of the higher secondary school classrooms are overcrowded and the physical environment is not supportive to practice individual and student directed learning modalities. Almost all the teachers are having anxiety about academic achievement of students and they are not confident to implement the advanced methods of teaching in the pedagogic confrontations. Lack of properly oriented curriculum restrict students from actively engage in generating questions, exploring solutions, share their ideas, pause challenging learning and to make own decisions. These remarks empowered the investigator to consider needful precautions while developing the model and implementing the developed model.

The concluding segment of the interview that rejuvenation is needed in the prevalent pedagogic practices of curriculum transaction in the area of geography education. Most of the teachers proposed creative learning techniques, problem solving techniques and self directed learning modalities as alternative avenues instead of the prevalent pedagogic practices in rehearsing new vistas in the learning space of geography at higher secondary level. It is realised that illustrious and noteworthy pedagogic practices create an interactive learning leeway for fabricating creative and divergent knowledge sharing designs in geography.

From the above findings it is clear that there is an urgent need to rejuvenate the geography curriculum and its transaction practices entrenched with creative practices and self directed learning modalities.
Conclusion – 2

Most of the teachers are so far not cognizant about self directed learning and how far it can be corroborated to promote this skill through geography education.

This conclusion is supported by the following findings.

- While analyzing the responses of teachers regarding the initial level of knowledge constructs and structured patterning of self directed learning, majority of the teachers selected for the study opined that they did not formulate certain policies for the enhancement of student’s level of responsibility. All most all the teachers agree that self directed learning is an innovative trend in the field of geography education. This response indicate that at the higher secondary level only a small portion of teachers are giving importance to self directed learning modalities while transacting the geography curriculum. Less than half of the teachers are teaching their students the self efficacious skill for the proper vision of life. Most of the teachers do not hold conferences and discourses with students for empowering them about their individual studies, learning proposals, and learning activities. Less than half of the teachers agree that they are managing a variety of pedagogical practices that will facilitate students learning and stimulate real life situations. Only half of the teachers are providing their students the opportunity to express their personal opinions and judgments and the opportunities to contribute and continuously learn from group interactions and the consequent self modification.

- The results of the analysis of self directed learning perception questionnaire
Summary and Conclusions

shows that through the present curriculum transaction modalities the augmentation of skills namely critical thinking, creative thinking, problem solving, decision making and the like were not at a satisfactory level. Less than half of the teachers selected for the study replied that they give ample provision and archetype of resource patterning for students to explore their ideas through self paced learning activities. The researcher noted that most of the teachers perceive that their students are not self confident and self reliant enough to do their learning tasks. Only a small proportion of teachers selected for the study provide opportunities to hone and refine creative skills by mediating self directness in learners through appropriate learning tasks. Most of the teachers do not yet tried to think about do self directed learning have a comparable effect to creativity. Only a small proportion of teachers are quite sure that their students are cognizant with the evaluation criteria for modified network of thinking and subsequent twinning of curious learning with logic of assessment.

- While analyzing the reasons for showing reluctance to implementing self directed learning, all most all the higher secondary school geography teachers perceive that self directed learning classes are very difficult to control. Majority of the teachers are of the notion that teachers can communicate the learning content in a more responsible way than the self directed learning methods and they are doubtful about students responsibilities in self directed learning. Most of the teachers perceive that self directed learning is more complex and need more time for preparation. All most all the teachers agree that there is no sufficient training to
Summary and Conclusions

implement self directed learning modalities in the geography classrooms. Most of the teacher replied that self directed learning is not practical in our present educational scenario and self assessment practices are very difficult to implement.

From the above findings it is clear that most of the teachers are so far not cognizant about self directed learning and how far it can be corroborated to promote this skill through geography education. So there is a requisite of promoting self directed learning among the geography students at higher secondary level.

Conclusion – 3

Most of the students selected for the study are not creative up to expected level.

This conclusion is supported by the following findings.

- When going through the responses regarding entry level creativity status of higher secondary school geography students, it is clear that only a small proportion of students are having excellent ideas to create new things based on a theme. About half of the select students are never captivated easily by the observation of indefinable events in the nature. More than half of the samples never prefer to think self reflectively and in a creative way and only a negligible percentage of students are always able to effectively utilize hands own experiences for creative experimentations.

- Analysis of the response of students regarding entry level creativity status shows that about half of the students never like to work hard continuously till the attainment of perfection and more than half of the students are never interested in adventurous and challenging creative learning tasks. Majority of
the students replied that they have hesitation in breaking rules for the attainment of creative masterpieces and they replied that ambiguous and fascinating ideas are never being a source of thrill in their life.

- From the table 5.6 it is noted that most of the students never forget the learning environment when they get immersed in the specific creative task which is interesting and they are never able to find out their own alternative, if the given solution is not acceptable. More than half of the select sample never wait for the avenues of self expression by exhibiting prepared projects in the classroom and they never utilize every chance to inquire things deeply that they don’t know well.

From the above findings the researcher understood the lacuna in the creativity to accommodate contenting interest, positions, preferences, and perspectives or ensuring a level playing field to address gaps in curriculum, pedagogic practices and the imagination that emerge from the dispensing of information. The findings of the need analysis leads to developing an appropriate model of teaching in to the effective curriculum transaction assume paramount significance.

Segment II

The first section portraits the findings emerged from the analysis of test scores obtained through the conduct of the experiment and the administration of self directed learning scale, creativity test in geography, achievement test in geography, and learner satisfaction form are explained below.
Conclusion – 4

The developed model of teaching based on the objective ‘create’ is effective for promoting self directed learning among the geography students at higher secondary level.

This conclusion is substantiated by the following findings of the study.

1. The result of test of significance of the difference between mean pre test score on self directed learning of the experimental and control group using independent sample t-test do not differ significantly. (Table 5.16; CR=.0.416; P>.05) whereas the test of significance of the difference between mean post test scores shows that the two groups differ significantly. (Table 5.17; CR=47.877; P<.01).

2. While comparing the significance difference between pre-test and post-test scores on self directed learning of experimental group using paired t-test, the obtained 't' value is significant at .01 level (Table 5.18; CR=43.220) and for the control group it is not significant at .05 level (Table 5.19; CR=.561).

3. The analysis of variance of pre test and post test scores on self directed learning of experimental and control group indicates that there is no significant difference in their pre test scores (Table 5.20; F=0.174) and that there is significant difference in their post test scores (Table 5.20; F=2292.23).

4. The analysis of covariance of pre test and post test scores on self directed learning of experimental and control group shows that F ratio is significant for self directed learning (Table 5.21; F = 2297.770, P<.01).
5. The comparison of the adjusted means of the post test scores on self directed learning of experimental and control group indicate that the adjusted post-test scores of experimental group is higher as compared to the control group which implies better performance of the experimental group (Table 5.22; adjusted post-test mean of experimental group = 83.05; control group = 35.62)

Thus the developed model of teaching based on the objective ‘create’ is effective for promoting self directed learning among the geography students at higher secondary level

**Conclusion – 5**

The developed model of teaching based on the objective ‘create’ is effective for enhancing creativity among the geography students at higher secondary level

This conclusion is substantiated by the following findings of the study.

1. The result of test of significance of the difference between mean pre test score on creativity of the experimental and control group using independent sample t-test do not differ significantly. (Table 5.25; CR=.1.891; P>.05) where as the test of significance of the difference between mean post test scores shows that the two groups differ significantly. (Table 5.26; CR=41.84; P<.01).

2. While comparing the significance difference between pre-test and post-test scores on creativity of experimental group using paired t-test, the obtained 't' value is significant at .01 level (Table 5.27; CR=42.44) and for the control
group it is also significant at .01 level (Table 5.28; CR=6.987) but the control group has the lesser increase compared to experimental group.

3. The analysis of variance of pre test and posttest scores on creativity of experimental and control group indicates that there is no significant difference in their pre test scores (Table 5.29; F=3.577; P>.05) and that there is significant difference in their post test scores (Table 5.29; F=1751.247; P<.01).

4. The analysis of covariance of pre test and post test scores on creativity of experimental and control group shows that F ratio is significant for self directed learning (Table 5.30; F =1718.23, P<.01).

5. The comparison of the adjusted means of the post test scores on creativity of experimental and control group indicate that the difference between them is statistically significant (Table 5.31; adjusted post-test mean of experimental group = 82.78; control group = 36.63) which implies better performance of the experimental group

Thus the developed model of teaching based on the objective ‘create’ is effective for enhancing creativity among the geography students at higher secondary level.

Conclusion – 6

The developed model of teaching based on the objective ‘create’ is effective with regard to the academic achievement among the geography students at higher secondary level

This conclusion is substantiated by the following findings of the study.
Summary and Conclusions

1. The result of test of significance of the difference between mean pre test score on academic achievement of the experimental and control group using independent sample t-test do not differ significantly. (Table 5.34; CR=.1.8374; P>.05) where as the test of significance of the difference between mean post test scores shows that the two groups differ significantly. (Table 5.35; CR=2.501; P<.05).

2. While comparing the significance difference between pre-test and post-test scores on academic achievement of experimental group using paired t-test, the obtained 't' value is significant at .01 level (Table 5.36; CR=53.196) and for the control group it is also significant at .01 level (Table 5.37; CR=35.71) but the control group has the lesser increase compared to experimental group.

3. The analysis of variance of pre test and posttest scores on academic achievement of experimental and control group indicates that there is no significant difference in their pre test scores (Table 5.38; F=3.376; P>.05) and that there is significant difference in their post test scores (Table 5.38; F=6.250; P<.05).

4. The analysis of covariance of pre test and post test scores on academic achievement of experimental and control group shows that F ratio is significant for self directed learning (Table 5.39; F =7.06, P<.01).

5. The comparison of the adjusted means of the post test scores on academic achievement of experimental and control group indicate that the difference between them is statistically significant (Table 5.40; adjusted post-test mean
Summary and Conclusions

of experimental group = 19.04; control group = 15.126) which implies better performance of the experimental group.

Thus the developed model of teaching based on the objective ‘create’ is effective with regard to the academic achievement among the geography students at higher secondary level.

Conclusion – 7

The developed model is equally beneficial for promoting self directed learning among the male and female geography students at higher secondary level

This conclusion is substantiated by the following findings.

1. The result of test of significance of the difference between mean post test score on self directed learning of male and female students using independent sample t-test do not differ significantly. (Table 5.44; CR=0.047; P>.05).

2. The analysis of variance of post test scores on self directed learning of male and female students indicates that there is no significant difference in their post test scores (Table 5.48; F=0.002; P>.05).

3. The analysis of covariance of pre test and post test scores on self directed learning of male and female students shows that F ratio is not significant for self directed learning (Table 5.49; F = 0.007, P>.05).

Thus the developed model of teaching based on the objective ‘create’ is equally beneficial for promoting self directed learning among the male and female geography students at higher secondary level.
Conclusion – 8

The developed model is equally beneficial for promoting self directed learning among the urban and rural geography students at higher secondary level

This conclusion is substantiated by the following findings.

1. The result of test of significance of the difference between mean post test score on self directed learning of urban and rural school students using independent sample t-test do not differ significantly. (Table 5.44; CR=0.042; P>.05).

2. The analysis of variance of post test scores on self directed learning of urban and rural school students indicates that there is no significant difference in their post test scores (Table 5.51; F=0.003; P>.05).

3. The analysis of covariance of pre test and post test scores on self directed learning of urban and rural school students shows that F ratio is not significant for self directed learning (Table 5.52; F = 0.041, P>.05).

Thus the developed model of teaching based on the objective ‘create’ is equally beneficial for promoting self directed learning among urban and rural school geography students at higher secondary level.

Conclusion – 9

The developed model is equally beneficial for promoting self directed learning among government and aided school geography students at higher secondary level

This conclusion is substantiated by the following findings.

1. The result of test of significance of the difference between mean post test score on self directed learning of government and aided school students
Summary and Conclusions

using independent sample t-test do not differ significantly. (Table 5.44; CR=0.466; P>.05).

2. The analysis of variance of pre-test and post-test scores on self directed learning of government and aided school students indicates that there is no significant difference in their pre-test and post-test scores (Table 5.54; F=0.051; P>.05).

3. The analysis of covariance of pre test and post test scores on self directed learning government and aided school students shows that F ratio is not significant for self directed learning (Table 5.55; F = 0.008, P>.05).

Thus the developed model of teaching based on the objective ‘create’ is equally beneficial for promoting self directed learning among the government and aided school geography students at higher secondary level.

Conclusion – 10

The developed model is more beneficial for male students than the female students for enhancing creativity among the geography students at higher secondary level

This conclusion is substantiated by the following findings.

1. The result of test of significance of the difference between mean post test score on creativity of male and female students using independent sample t-test differ significantly. (Table 5.60; CR=4.759; P<.01).

2. The analysis of variance of post test scores on creativity of male and female students indicates that there is significant difference in their post test scores (Table 5.64; F=22.64; P<.01).
Summary and Conclusions

3. The analysis of covariance of pre test and post test scores on creativity of male and female students shows that F ratio is significant for creativity (Table 5.65; F = 23.47 P<.01).

Thus the developed model of teaching based on the objective ‘create’ is more beneficial for male students for enhancing creativity among the geography students at higher secondary level.

Conclusion – 11

The developed model is more beneficial for enhancing creativity among urban students than rural school geography students at higher secondary level.

This conclusion is substantiated by the following findings.

1. The result of test of significance of the difference between mean post test score on creativity of urban and rural school students using independent sample t-test differ significantly. (Table 5.60; CR=4.907; P<.01).

2. The analysis of variance of pre test and posttest scores on creativity of urban and rural school students indicates that there is significant difference in their post test scores (Table 5.66; F=24.082; P<.01).

3. The analysis of covariance of pre test and post test scores on creativity of urban and rural school students shows that F ratio is not significant for creativity (Table 5.68; F = 24.181, P<.01).

Thus the developed model of teaching based on the objective ‘create’ is more beneficial for enhancing creativity among urban students than rural school geography students at higher secondary level.
Summary and Conclusions

Conclusion – 12

The developed model is more beneficial for enhancing creativity among government school students than aided school geography students at higher secondary level.

This conclusion is substantiated by the following findings.

1. The result of test of significance of the difference between mean post test score creativity of government and aided school students using independent sample t-test differ significantly. (Table 5.6; CR = 4.150; P < .01).

2. The analysis of variance of post test scores on creativity of government and aided school students indicates that there is significant difference in their post test scores (Table 5.7; F = 17.22; P < .01).

3. The analysis of covariance of pre test and post test scores on creativity government and aided school students shows that F ratio is not significant for creativity (Table 5.71; F = 16.84, P < .01).

Thus the developed model of teaching based on the objective ‘create’ is more beneficial for enhancing creativity among the government than aided school geography students at higher secondary level.

Conclusion – 13

The developed model is equally beneficial for enhancing academic achievement among the male and female geography students at higher secondary level

This conclusion is substantiated by the following findings.

1. The result of test of significance of the difference between mean post test score on academic achievement learning of male and female students using
independent sample t-test do not differ significantly. (Table 5.76; CR=0.47; 
P>.05).

2. The analysis of variance of post test scores on academic achievement of male 
and female students indicates that there is no significant difference in their 
post test scores (Table 5.80; F=0.229; P>.05).

3. The analysis of covariance of pre test and post test scores on academic 
achievement of male and female students shows that F ratio is not significant 
for academic achievement (Table 5.81; F = 0.328, P>.05).

Thus the developed model of teaching based on the objective ‘create’ is 
equally beneficial for promoting academic achievement among the male and female 
geography students at higher secondary level.

Conclusion –14

The developed model is equally beneficial for promoting self directed learning 
among the urban and rural geography students at higher secondary level

This conclusion is substantiated by the following findings.

1. The result of test of significance of the difference between mean post test 
score on academic achievement of urban and rural school students using 
independent sample t-test do not differ significantly. (Table 5.76; CR=1.440; 
P>.05).

2. The analysis of variance of post test scores on academic achievement of 
urban and rural school students indicates that there is no significant 
difference in their post test scores (Table 5.83; F=2.074; P>.05).
Summary and Conclusions

3. The analysis of covariance of pre test and post test scores on academic achievement of urban and rural school students shows that F ratio is not significant for academic achievement (Table 5.84; \( F = 2.194, P > .05 \)).

Thus the developed model of teaching based on the objective ‘create’ is equally beneficial for enhancing academic achievement among urban and rural school geography students at higher secondary level.

Conclusion – 15

The developed model is equally beneficial for enhancing academic achievement among government and aided school geography students at higher secondary level

This conclusion is substantiated by the following findings.

1. The result of test of significance of the difference between mean post test score on academic achievement of male and female students using independent sample t-test do not differ significantly. (Table 5.76; CR=0.466; \( P > .05 \)).

2. The analysis of variance of pre test and posttest scores on academic achievement of male and female students indicates that there is no significant difference in post test scores (Table 5.86; \( F = 0.217; P > .05 \)).

3. The analysis of covariance of pre test and post test scores on academic achievement of male and female students shows that F ratio is not significant for academic achievement (Table 5.87; \( F = 0.140, P > .05 \)).

Thus the developed model of teaching based on the objective ‘create’ is equally beneficial for enhancing academic achievement among the government and
Summary and Conclusions

aided school geography students at higher secondary level.

Conclusion – 16

The developed model based on the objective create is effective for retaining self directed learning among the geography students at higher secondary level.

This conclusion is substantiated by the following finding.

The mean retained scores on self directed learning of experimental group is 1.98 and standard deviation is 2.37 and the control group with mean retained score 6.49 and standard deviation is 8.97, which is significant at .01 level (Table 5.89; CR=5.593). Therefore, it can be stated that there is significant difference between the retained scores on self directed learning of experimental and control group. So the developed model based on the objective ‘create’ helps more in retaining self directed learning among the Geography students at higher secondary level than the prevailing activity oriented approach.

Conclusion – 17

The developed model based on the objective create is effective for retaining creativity among the geography students at higher secondary level.

This conclusion is substantiated by the following finding.

The mean retained scores on creativity of experimental group is 2.90 and standard deviation is 3.32 and the control group with mean retained score is 5.85 and standard deviation is 8.67, which is significant at .01 level (Table 5.90; CR=3.660). Therefore, it can be stated that there is significant difference between the retained scores on creativity of experimental and control group. So the developed model based on the objective create helps more in retaining creativity among the geography students at higher secondary level than the prevailing activity oriented approach.
Conclusion – 18

The developed model based on the objective create is effective for retaining academic achievement among the geography students at higher secondary level.

This conclusion is substantiated by the following finding.

The mean retained scores on academic achievement of experimental group is 2.82 and standard deviation is 2.25 and the control group with mean retained score is 5.10 and standard deviation is 9.65, which is significant at .01 level (Table 5.91; CR=2.636). Therefore, it can be stated that there is significant difference between the retained scores on academic achievement of experimental and control group. So the developed model based on the objective create is effective for retaining academic achievement among the geography students at higher secondary level than the prevailing activity oriented approach.

Conclusion – 19

The developed model based on the objective create is appropriate for promoting self directed learning among the geography students at higher secondary level.

This conclusion is substantiated by the following finding.

1. The average response of the select sample of students (The table 5.92) who were exposed to the developed model of teaching reveals that the developed model is appropriate for learning geography at higher secondary school level.

2. The transfer of textual learning contents to a more creative and self initiated unusual learning discourses and episodes to try to push themselves beyond their statuesque. This offered them an opportunity to have a sense of
ownership on their own potential leaning and empowered them to self innovate and self explore patterns and make creative connections throughout the learning process.

3. As a concluding remark it can be stated that the developed model enabled the students to move from being stuck and generating more meaningful creative connections and co creation in designs and the consequent responsibility independence. Demystifying geography learning through the developed model based on the objective ‘create’ to promote valuable self worthy and unpacking pedagogical implications and classroom applications accounting for self refinement.

6.4 Summary of conclusions

The present study punctuate the instantaneous urgency of activating progressive instructional ideas for rejuvenating the student community with self directed learning skills that terminates to enfold full-fledged expertise in geography learning. The present study unveil the need for ameliorating prevailing modes of pedagogic practice in geography and the developed model is competent to ascertain the ramification of geography curriculum by promoting self directed learning, enhancing creativity and academic achievement, among geography students at higher secondary level.

Through the comparison of the interaction effect of developed model, it is apparent that the developed model is effective for promoting self directed learning among geography students at higher secondary level. The study found that the orientation of the developed model acted as a support to direct the learning endeavors within a creative layout that lead to self planning, self monitoring, self
Summary and Conclusions

management, and self evaluation of geographic tasks. No significant difference was observed in post test scores among subsamples of students based on gender, locale and type of management with regard to self directed learning, and the developed model based on the objective ‘create’ proved equal benefit for male, female, urban, rural, government, and aided school students.

From the study, it is evident that the developed model is effective for enhancing creativity among the geography students at higher secondary level. The study revealed that the experimental facet of the self directive mindset is influential in planning and designing solution pathways for the geographic tasks creatively. Significant mean difference was observed in post test scores among subsamples of students based on gender, locale and type of management and the developed model based on the objective ‘create’ proved more beneficial for male, urban, and government school students compared to the female, rural, and aided school students with regard to creativity.

The study also found that the exposure through the developed model is found effective for enhancing the academic achievement among the geography students at higher secondary level. The radiance of self direction pierced through the mediation and the rehearsing of the developed model effectuated an impetus to the enhancement of the proficiency level of geography. No significant difference was observed in post test scores among subsamples of students based on gender, locale and type of management with regard to academic achievement, and the developed model based on the objective ‘create’ proved equal benefit for male, female, urban, rural, government, and aided school students towards academic achievement.

It is evident that the developed model of teaching based on the objective
‘create’ for promoting self directed learning among the geography students at higher secondary level is also effective with regard to retention in self directed learning, creativity, and academic achievement. The staged implementation of the developed model energize them in optimizing the learning outcomes and enabled the students in upbringing their level of performance as well as maximising the creative potentials of students in strategizing of geographic endeavours. A qualitatively empowered structure has been noted among the students and it highlight and support the students as he or she acquire the knowledge, skill, experience and motivation needed to produce results for knowledge production and actively construct a knowledge representation to discover knowledge for themselves.

6.5 Tenability of the Hypotheses

The study furnished sufficient substantiations to determine the validity of the hypotheses set for the specific purpose. In this segment an attempt has been made to test the validity of the hypotheses formulated.

Hypotheses I

The prevailing modes of pedagogical practices are inadequate for the effective curriculum transaction in geography at higher secondary level with special reference to the enhancement of creativity and self directed learning.

This hypothesis was examined mainly by means of the data acquired through the semi structured interview from the select sample of higher secondary school geography teachers and experts (50). The findings indicate that:

Item no. 1 of the semi structured interview unveil that majority of the teachers (94%) are following pedagogic practices like activity oriented approach, discussion and constructivist approach in their geography classrooms. Only a couple
Summary and Conclusions

of teachers having high academic qualifications states that they are practicing certain innovative strategies like peer tutoring, brainstorming, co-operative learning, problem solving, computer based instruction in regular interval and few teachers are only aware about these innovative instructional practices, but they are not practicing these advance strategies. Majority of the teachers (84%) placed their opinion that the prevailing pedagogic practices for ascertaining the competencies of geography learning, materialized through item no.2 of the interview is not at all sufficient. A small proportion of the teachers observe moderately sufficient (13%) and 3% of the teachers were of the notion as sufficient. The remarks relating to the third item which tries to know about the pedagogic practices that are often applied in the Geography class rooms unveil that majority (95%) of teachers are employing lecturing and large group instruction in their geography class rooms, only few teachers are opined that in certain situations they apply certain pedagogic strategies like small group instruction, computer based instruction, co-operative learning, problem based learning and brainstorming. While evaluating item that queries about the skills and abilities self possessed by the students after they were exposed to the prevailing tactics of curriculum transaction almost all the teachers commented that most of the higher secondary geography learners are at novice level (87%), and 11% noted that their students are at basic level and 2% at advanced level. These observations substantiate that the prevailing tactics of pedagogic practices for the effective curriculum transaction in geography are inadequate in promoting the capabilities of students and there is a lacuna in practicing of innovative curriculum transaction modalities at higher secondary school level.

The next segment of the interview, the investigator tries to stab the
hindrances and challenges confronted by the teachers for the effective curriculum transaction of geography. Almost all the teachers selected were of the opinion that there is lack of motivation from the part of learners to learn geography. They often show reluctance to open mindedness and flexibility in experimenting solution pathways for effectively learning geography content because of the absence of self-confidence and intellectual dispositions. Most of the higher secondary school classrooms are overcrowded and the physical environment is not supportive to practice individual and student directed learning modalities. Almost all the teachers are having anxiety about academic achievement of students by concentrating on the understanding of the concepts, principles and theories and that prevent them from adopting and experimenting with the modern and innovative instructional practices like individualized and self directed learning modalities. It was found that the prevailing pedagogic practices and the instructional process do not serve for educating people with proper orientation towards critical thinking, creative thinking and the skills of independent and autonomous learning.

The concluding segment includes the item no. 7 regarding facilitative tactics suggested by the teachers and experts to overbear the hindrances and challenges outfaced while transacting the geography were challenge based learning activities (81%), (80%) experiential learning methods and the real life situations in learning tasks (84%). 90% of the teachers are proposing creative learning techniques like problem solving. 80% of teachers allude different models of teaching for effective curriculum transaction. Majority of teachers insinuate peer tutoring (78%), independent learning methods (92%), self-regulated learning (90%), and self directed learning (93%). Regarding the assessment practices a reasonable number of
teachers suggests peer assessment (79%), and learner self assessment (82%). While responding to the concluding segment of the interview, item no 8, almost all the teachers (95%) reflected that rejuvenation is needed in the prevalent pedagogic practices of curriculum transaction in the area of geography education. A group of teachers opined that the curriculum transactions are to be activated by innovative and creative instructional practices. For that preceptors should move away from the text books and effectuate the curriculum that involve more novice out of box activities that foster creative thinking and true self directed learning experiences.

The above indications and findings prove that Hypothesis I is accepted.

Hypothesis 2

There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes for promoting self directed learning among geography students at higher secondary level.

For the purpose of statistical analysis, the above hypothesis was converted in to null hypothesis as follows:

**Null hypothesis**: There is no significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes for promoting self directed learning among geography students at higher secondary level.

Following are the findings of data analysis to substantiate the hypothesis (Table 5.14 to 5.22).

The results of independent t-test acquired by comparing the post-test scores of experimental and control group (Table 5.17) is significant at .01 level
Summary and Conclusions

The results of paired t-test for comparing the pre-test and post-test scores of experimental group (Table 5.18) is also significant at .01 level (CR=47.877). The F ratio obtained in the ANOVA for post-test scores (Table 5.20) is significant at .01 level (F=2292.23). Moreover, the F ratio obtained in the ANCOVA (Table 5.21) of post-test self-directed learning scores of students in the experimental and control groups (F=2297.770) is also significant at .01 level. When the adjusted means of experimental group is estimated they are found to be higher than the mean scores of control group (Table 5.22). Therefore, from the above findings, it can be conclusively stated that the experimental group is better than the control group which shows the effectiveness of the developed model of teaching for promoting self-directed learning among the geography students at higher secondary level. Hence, the hypothesis II is proved to be tenable and sustainable and rejects the null hypothesis and accepts the hypothesis that there is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes for promoting self-directed learning among geography students at higher secondary level.

Thus the Hypothesis II is accepted

Hypothesis 3

There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes with respect to enhancing creativity among geography students at higher secondary level.

For the purpose of statistical analysis, the above hypothesis was converted into null hypothesis as follows:
Null hypothesis: There is no significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes with respect to enhancing creativity among geography students at higher secondary level.

Findings of data analysis to substantiate the hypothesis (Table 5.23 to 5.31).

The results of independent t-test obtained by comparing the post-test scores of experimental and control group (CR=41.84) is significant at .01 level (Table 5.26). The results of paired t-test for comparing the pre-test and post-test scores of experimental group (CR=42.444) is also significant at .01 level (Table 5.27). The F ratio acquired in the ANOVA for post-test scores (Table 5.29) is significant at .01 level (F=1751.247). More over the F ratio obtained in the ANCOVA (Table 5.30) of post-test creativity scores of students in the experimental and control groups (1718.231) are also significant at .01 level. When the adjusted means of experimental group is estimated they are found to be higher than the mean scores of control group (Table 5.31). The results signify the better status of developed model of teaching for enhancing the level of creativity among the geography students at higher secondary level. Thus, the hypothesis III is proved to be tenable and sustainable and the null hypothesis is rejected and accepts the hypothesis that there is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes for enhancing the level of creativity among geography students at higher secondary level.

Thus the Hypothesis III is accepted
Hypothesis 4

There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes with respect to the academic achievement among geography students at higher secondary level.

For the purpose of statistical analysis, the above hypothesis was converted into null hypothesis as follows:

**Null hypothesis:** There is no significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes with respect to the academic achievement among geography students at higher secondary level.

Findings of data analysis to substantiate the hypothesis (Table 5.32 to 5.40).

The results of independent t-test acquired by comparing the post-test scores of experimental and control group (CR=2.501) is significant at .05 level (Table 5.35). The results of paired t-test for comparing the pre-test and post-test scores of experimental group (CR=53.194) is also significant at .01 level (Table 5.36). The F ratio obtained in the ANOVA for post-test scores (F=6.250) is significant at .01 level (Table 5.38). Moreover, the F ratio obtained in the ANCOVA (Table 5.39) of post-test scores on academic achievement of students in the experimental and control groups (F=7.06) is also significant at .01 level. When the adjusted means of experimental group is estimated they are found to be higher than the mean scores of control group (Table 5.40). Therefore, from the above findings, it can be conclusively stated that the experimental group is better than the control group which shows the effectiveness of the developed model of teaching for improving the
Summary and Conclusions

academic achievement among the geography students at higher secondary level. Hence, the hypothesis IV is proved to be tenable and sustainable and rejects the null hypothesis and accepts the hypothesis that there is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes with respect to the academic achievement among geography students at higher secondary level.

Thus the Hypothesis IV is accepted

Hypothesis 5

There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ among sub samples of students at higher secondary level based on gender, locale, and type of management with regard to

- Self directed learning and
- Creativity
- Academic achievement

For the purpose of statistical analysis, the above hypothesis was converted into null hypothesis as follows:

Null hypothesis: There is no significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘among sub samples of students at higher secondary level based on gender, locale, and type of management with regard to

- Self directed learning and
- Creativity
Summary and Conclusions

- Academic achievement

1. Findings of data analysis to substantiate the effectiveness among subsamples with regard to self directed learning (Table 5.41 to 5.56).

   The results of independent t-test attained by comparing the post-test self directed learning scores of subsamples based on gender, locale and type of management in the experimental group (CR=0.047, 0.042, 0.466) is not significant at .05 level (Table 5.44). The F ratio obtained in the ANOVA for post-test scores of subsamples based on gender, locale and type of management in the experimental group (F=0.002; 0.003, 0.051) is not significant at .05 level (Table 5.48, 5.51, 5.54). More over the F ratio obtained in the ANCOVA (Table 5.49, 5.52, 5.55) of post-test self directed learning scores of subsamples in the experimental groups (F=0.007, 0.041, 0.008) is also not significant at .05 level. Therefore, from the above findings, it can be conclusively stated that there is no significant difference between subsamples of students based on gender, locale and type of management with regard to self directed learning, and the developed model based on the objective ‘create’ proved equal benefit for male, female, urban, rural, government, and aided school students towards self directed learning. Hence, the first part of the hypothesis V is rejected.

2. Findings of data analysis to substantiate the effectiveness among subsamples with regard to creativity (Table 5.57 to 5.72).

   The critical ratio obtained by comparing the post-test creativity scores of subsamples based on gender, locale and type of management in the experimental group (CR=4.759, 4.907, 4.150) is significant at .01 level (Table 5.60). The F ratio
obtained in the ANOVA for post-test creativity scores of subsamples based on gender, locale and type of management in the experimental group (F=22.646; 24.082, 17.22) is significant at .01 level (Table 5.64, 5.67, 5.70). More over the F ratio obtained in the ANCOVA (Table 5.65, 5.68, 5.71) of post-test creativity scores of subsamples in the experimental groups (F=23.47, 24.181, 16.84) is also significant at .01 level. Therefore, from the above findings, it can be conclusively stated that there is significant difference between subsamples of students based on gender, locale and type of management and the developed model based on the objective ‘create’ proved more beneficial for male, urban, and government school students compared to the female, rural, and aided school students with regard to creativity when exposed through the developed model of teaching based on the objective ‘create’. **Hence, the second part of the hypothesis V is accepted.**

3. Findings of data analysis to substantiate the effectiveness among subsamples with regard to academic achievement (Table 5.73 to 5.88).

The critical ratio attained by comparing the post-test scores on academic achievement of subsamples based on gender, locale and type of management in the experimental group (CR=0.47, 1.440, 0.466) is not significant at .05 level (Table 5.76). The F ratio obtained in the ANOVA for post-test scores on academic achievement of subsamples based on gender, locale and type of management in the experimental group (F=0.229; 2.074, 0.217) is not significant at .05 level (Table 5.80, 5.83, 5.86). More over the F ratio obtained in the ANCOVA (Table 5.81, 5.84, 5.87) of post-test scores on academic achievement of subsamples in the experimental groups (F=0.328, 2.194, 0.140) is also not significant at .05 level. Therefore, from the above findings, it can be conclusively stated that there is no
significant difference between subsamples of students based on gender, locale and type of management with regard to academic achievement, and the developed model based on the objective ‘create’ proved equal benefit for male, female, urban, rural, government, and aided school students towards academic achievement. **Hence, the third part of the hypothesis V is rejected.**

**Thus hypothesis V is partially accepted**

**Hypothesis 6**

There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ among the geography students at higher secondary level with regard to Retention in

- Self directed learning and
- Creativity
- Academic achievement

For the purpose of statistical analysis, the above hypothesis was converted in to null hypothesis as follows:

**Null hypothesis:** There is no significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ among the geography students at higher secondary level with regard to Retention in

- Self directed learning and
- Creativity
- Academic achievement
Summary and Conclusions

1. Findings of data analysis to substantiate the effectiveness among the students categorized on the basis of subsamples with regard to retention in self directed learning (Table 5.89).

   The mean retained scores on self directed learning of experimental group is 1.96 and standard deviation is 2.37 and the reported mean retained scores on self directed learning of control group is 6.49 and standard deviation is 8.97. The t-value obtained in the unpaired t-test is significant at .01 level (CR=5.593). Since the mean differences between the post test and delayed post test of students in the experimental group (1.98) was smaller than that of the control group (6.49), it can be interpreted that the developed model based on the objective ‘create’ is superior to the prevailing activity oriented approach of teaching on retaining self directed learning among the geography students at higher secondary level. **Hence, the first part of the hypothesis VI is accepted.**

2. Findings of data analysis to substantiate the effectiveness among the students categorized on the basis of subsamples with regard to retention in creativity (Table 5.90).

   The mean retained scores on creativity of experimental group is 2.90 and standard deviation is 3.32 and the reported mean retained scores on creativity of control group is 5.85 and standard deviation is 8.67. The t-value obtained in the unpaired t-test is significant at .01 level (CR=3.660). That is the mean differences between the post test and delayed post test of students in the experimental group (2.90) was smaller than that of the control group (5.85), it can be interpreted that the developed model based on the objective ‘create’ is superior to the prevailing activity oriented approach of teaching on retaining creativity among the geography students.
at higher secondary level. **Hence, the second part of the hypothesis VI is accepted.**

3. Findings of data analysis to substantiate the effectiveness among the students categorized on the basis of subsamples with regard to retention in academic achievement (Table 5.91).

   The mean retained scores on academic achievement of experimental group is 2.82 and standard deviation is 2.45 and the reported mean retained scores on academic achievement of control group is 5.10 and standard deviation is 9.65. The t-value obtained in the unpaired t-test is significant at .01 level (CR=2.636). Since the mean differences between the post test and delayed post test of students in the experimental group (2.82) was smaller than that of the control group (5.10), it can be interpreted that the developed model based on the objective ‘create’ is superior to the prevailing activity oriented approach of teaching on retaining academic achievement among the geography students at higher secondary level. **Hence, the third part of the hypothesis VI is accepted.**

   **Thus hypothesis VI is accepted**

   The conclusions arrived in this regard is presented in summary form in table 5.93
Table 5.93
Conclusions arrived with regard to tenability of the hypotheses

<table>
<thead>
<tr>
<th>Sl.No.</th>
<th>Hypotheses Formulated</th>
<th>Tenability of the Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The prevailing modes of pedagogical practices are inadequate for the effective curriculum transaction in geography at higher secondary level with special reference to the enhancement of creativity and self directed learning.</td>
<td>Accepted</td>
</tr>
<tr>
<td>2</td>
<td>There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes for promoting self directed learning among geography students at higher secondary level.</td>
<td>Accepted</td>
</tr>
<tr>
<td>3</td>
<td>There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes with respect to enhancing creativity among geography students at higher secondary level.</td>
<td>Accepted</td>
</tr>
<tr>
<td>4</td>
<td>There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ and prevailing activity oriented modes with respect to the academic achievement among geography students at higher secondary level.</td>
<td>Accepted</td>
</tr>
</tbody>
</table>
| 5     | There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ among sub samples of students at higher secondary level based on gender, locale, and type of management with regard to  
  • Self directed learning  
  • Creativity  
  • Academic achievement | Partially accepted           |
| 6     | There is significant difference in the mean scores of groups exposed to the developed model of teaching based on the objective ‘create’ among the geography students at higher secondary level with regard to Retention in  
  • Self directed learning and  
  • Creativity  
  • Academic achievement | Accepted                    |
6.6 Implications of the Study

The present study was aimed to developing a model of teaching based on the objective ‘create’ for promoting self directed learning among the geography students at higher secondary level. The investigator tested the effectiveness of the developed model and the findings of the study revealed that the developed model of teaching based on the objective ‘create’ is effective for promoting self directed learning among the geography students at higher secondary level. The study also revealed that instruction based on the developed model was not only effective for promoting self directed learning, but also effective for the enhancement of creativity and academic achievement among the geography students at higher secondary level. The findings of the present study have the following implications:

1. At the commencement of the study the investigator analyses the prevailing pedagogic practices followed by the educational practitioners for transacting the geography curriculum by conducting an interaction with select experts and teachers in this field of geography. The conclusions rationalised in this respect confirms that a reorganisation of the prevailing pedagogic practices in geography is unavoidable in order to overcome the void between what the learners supposed to achieve from the geography learning environment and what skills and expertise they are expected to acquire to meet the requisition of 21st century society. They have to expend their lives in technology driven, globalized world in which the purpose of education is not just making a student literate, but adds creative thinking, knowledge ability and self sufficiency by integrating multi-sensory, interactive and innovative approaches. Since knowledge is no longer an end but a means to
creating better problem solvers and encourage lifelong learning. This situation demands the pedagogical landscape evolved through the developed model can create better problem solvers and encourage lifelong learning in every geographic task assignments.

2. In the prevailing tactics of pedagogic practices of geography learning the teachers experience certain hindrances and challenges in the effective processing of information and imparting of knowledge to the students. The interaction with the teachers reveal that majority of them are still combating to deal with the subject productive even though some advancements in the pedagogic practices of geography learning like activity oriented approach were acquainted into the curriculum. A major rationale behind this hindrances and challenges can be the inadequacy of innovative and creative teaching models and methods which directs the learners to think and function independently. These self directed and independent thinking mechanisms evolved through the phased programming of the developed model based on the objective ‘create’ can prepare students to reflect on how they learn and by developing their skills to pursue their learning goals and to assume personal responsibility for their own learning to upgrade the landscape of geography learning.

3. Before developing the model, the investigator assessed the initial level of knowledge constructs and structured patterning of self directed learning from a representative sample of higher secondary school geography teachers. The observations emerged in this respect evidence that most of the teachers are so far not cognizant about self directed learning and how far it can be
Summary and Conclusions

corroborated to promote this skill through geography education. Teachers are a force directing students towards increasingly authentic, congruent, ethical behaviour, and the touchstone of integrity. Since the school atmosphere and society distinguish their virtue, teachers will further likely cherish and educate their students for self directed learning towards an ambient that models, assist, and values self directed learning. Therefore it is the need of the hour to consentize the teachers enough to better understand what is meant by self directed learning. All the practitioners in the field of geography education need to be made aware of and be prepared to empower students by promoting their involvement in learning, and helping learners to change from passive recipients of geography information to active controllers of their learning.

4. The qualitative assessment toll regarding the entry level creativity status of geography students at higher secondary level allows students to estimate the amount of their creative thinking abilities attained towards the prevailing pedagogic practices and provide opportunity to depict their creativity and expose their individuality. The outgrowth of the creative thinking status is especially significant for the rapid changing and ambiguous world demanding creative learning and creative action based learning strategies to augment understanding of problematic situations, to catalyze new synthesis, to contemplate possible alternatives in various challenging situations that could happen in future, and to generate multiple solutions that are non identical from the past. The present study highlights the necessity of developing advanced creative learning modalities by incorporating creativity
Summary and Conclusions

enhancing strategies and techniques for the effective assimilation of knowledge to up bring the creativity status of geography students at Higher Secondary Level.

5. The investigator developed the model with the outlook of promoting self directed learning trends to equip ones to conduct dispositions using the inner thinking frames in extraordinary manipulated learning contextualities. So that the students can meticulously articulate diverse learning practices, knowledge and thinking capacities in a clever way to make them self efficacious and to produce something new by connecting ideas. The practice through the model empowered and motivated the students to use their own initiative for learning by fostering a sense of responsibility for learning, growing autonomy involving goal setting, planning, and the capacity for self monitoring, self management, and self assessment of the learning process.

6. The phased programming of the developed model based on the objective ‘create’ reveals that the creative efforts of the students are properly shaped and translated the students own perception of the creative endeavor through reflective trendy analysis and connectedness. When the students are involved in creative endeavors it become a way of expressing their creative articulations of mind in developing and reinforcing creativity through building and structuring the learning facts. The facilitation through the developed model has improved the learners ownership of the learning process, the knowledge to be investigated, and set a framework for creative engagement, opportunity to be innovative and expressive.
Summary and Conclusions

7. If students are trained through autonomous orientation to learn, act, and apply geographic knowledge and skills effectively, they should see it as a subject which describe and explain patterns of physical and human features and relate these to the uniqueness of places and events. Students who are interested in geographic occurrences become more confident of their expertise to learn the subject which allows them to follow the academic excellence. They need to perceive that they can develop a better understanding of the geographic concepts, formalizing solution pathways, reason out conceptual setting and be favorably disposed towards the geography subject. So care should be taken to foster a sense of curiosity, motivation and excitement about geography learning by effectively integrating the developed model to teach academics in a much more schematized pattern.

8. The prevailing practice of curriculum transaction in geography possesses deficiency in the set level of creative exposition and frequently failed to create rational and responsible self directed learners towards the accomplishment of goals and objectives of geography education. With this background sketch in view the investigator developed the model based on the objective ‘create’ that focus on not only to orient the students about the geographic problems in the creative world but also to prepare them to confident enough to take liable rational decisions about their future. The observations emerged from the present study evidence that the developed model is fruitful in achieving the aims and objectives of geography education in the entire realm of school education as well as that of higher education. So
appropriate curriculum transaction designs and instructional practices are devised for the implementation process. The developed model should be implemented to transact the geography curriculum in the present higher secondary school classrooms to cast a change from the prevailing activity oriented pedagogic practice to design a cartographic mode of knowledge construction and adaptation.

9. For long teachers are the authority to practice the assessment and evaluation emphasizing on students results and scores, grades on test of content mastery and on the attainment of the learning goals. A learning programme designed to engage students to be self directed must provide opportunities for students to take part in the ongoing assessment of their learning process. In the present study, the investigator employed certain self assessment modalities namely entry level creativity scale, self directed learning scale, learner satisfaction form, and self assessment scale to collect and assess the data qualitatively. These self assessment modalities and the orientation through the developed model support learners in becoming self directing and increasingly more able to self evaluate their learning process by knowing how to give, receive and make good use of constructive feedback. So there is a needfulness to intensify the status of assessment practices from the instructional practitioners to the student community to help them acquire the capacity for self-analysis, self-modification, and self-referencing.

10. The study indicate a need for parental education on the significance of self directed learning trends among students and its relevance for promoting self directed learning at this changed global scenario. Because a conducive home
environment is required for the development of students self directed learning potential. Self direction will bring empowerment in the students and can equip them for the rigours of the working atmosphere of the future. So the authorities should consider necessary arrangements for planning and conducting parental meetings and counseling programs to concentrate parents for building awareness and support for robust self directed learning and its significance on general and global knowledge economy.

11. The developed model can be carried out effectively along with modern practices of pedagogic transaction for all subjects to exhibit and evolve certain natural capacities in an individual way according to the aptitudes we are endowed with, the expertise we encounter, the strengths we discover, the special interests that initiate to direct and motivate learners and the disposition of learning that they develop. By considering these aspects on experiential space, the geography teachers should create an interactive learning environment that offer programs that not only helps them at examinations but also sensitizes them to the world around and to function independently.

12. The developed model groom learners to look at problems in dynamic ways to express conceptualized facts in a structured manner, cultivate the successful accomplishment of learning tasks individuality and helps them to rehearse more adult roles, develop creative insights into felt problems to find alternatives and solve their problems in order to maintain effective productivity, provide cognitive unrestrained support for learners to arrive at challenging outcomes, processes information to begin to shape their own
opinions and ideas, to make their own decisions, choose their own activities, they learn to inspire their own efforts by taking more responsibility for themselves and begin to work and evaluate their own progress.

13. The investigator experimented the developed model also with the perspective of retaining the skills of self directed learning, enhancing creativity and academic achievement among the geography students at higher secondary level, it was derived that the developed model was very effective not only for promoting self directed learning creativity and academic achievement but also for retaining the select skills. The pedagogic transaction of geography with self directed viewpoint using creative strategies would privilege out learners with deeper thinking, innovation, and self reflection. So there is a needfulness to shift the responsibility of assessment from teachers to students to help them acquire the capacity for self-analysis, self-modification, and self-referencing a learner friendly instructional atmosphere for the effective curriculum transaction of geography at higher secondary level. So the authorities should introduce this model at higher secondary school level.

6.7 Suggestions for further research

1. An investigation can be conducted to understand the issues involved while implementing other models developed through the objective ‘create’.

2. A study can be conducted on the effectiveness of self directed learning practice in activating professional excellence among school practitioners in geography education.

3. Develop an instructional design to find out the relationship between the
various process skills in geography.

4. Develop a documentary based on environmental degradation for promoting creative trends to conserve natural environment.

5. Create a collaborative online learning community that respects and supports student’s learning challenges, values life experience, and challenges thinking to nurture creative process.

6. Develop an e-content for promoting self directed learning based on blended learning model in geography at higher secondary school level.

7. Develop a blend of innovative models based on creativity for promoting learner autonomy among the students at higher secondary level.

8. Developing certain visual tools for enhancing creative and innovative ability among higher secondary school students

9. A critical inquiry in to the impact of self directed learning skills for promoting 21\textsuperscript{st} century creative abilities among the students at multiple levels.

10. Promoting self directed learning through web based instructional design tool supporting multiple learning styles.

11. A study can be conducted to develop collaborative activities and an atmosphere of sharing and mutual support to allow students to share and teach others what they have learned and produced.

12. A model for enhancement of thinking capabilities with due emphasis on creative activities and performance based assessment in geography.
13. Capacitate and equip the teachers to develop certain instructional designs and appropriate learning episodes for a creative classroom.

14. Structure instructional materials based on fundamental principles of geography across various grade levels to engage all learners in self exploration of geographic concepts.

15. Enhance perspective teacher education programmes based on self oriented learning practice to emphasize geography teaching through creative curriculum transaction avenues.

As an ultimate enriched reflective investigation paved the way for putting it all together by matching self directedness to the objective ‘create’ to teaching model, the investigator have exemplified to engage the learners in the process of frequent self efficacious learning practices. The developed model based on the objective ‘create’ to serve as a model for learning capitalize on what students looking for and the learners celebrate the opportunities available to engage and process the reflection of new knowledge constructed. Information is inherently logical and presented as a series of unconnected concepts. So the teacher need to organize and follow appropriate instructional practices in a clear structure to make connections with creative, systematic, self oriented approach to managing behavioural crescendo.