# EFFECTIVENESS OF CONSTRUCTIVIST APPROACH BASED MODULE ON THE ENHANCEMENT OF TWENTY FIRST CENTURY LEARNING SKILLS IN ENGLISH SUBJECT AMONG THE SECONDARY SCHOOL STUDENTS IN WEST BENGAL

A thesis submitted in partial fulfilment of the requirements for the degree of

**DOCTOR OF PHILOSOPHY** 

Researcher Debolina Mukherjee Registration No. TZ203819 of 2021

> Supervisor Dr. Rajinder Singh Assistant Professor



# DEPARTMENT OF EDUCATION SCHOOL OF HUMANITIES & SOCIAL SCIENCES TEZPUR UNIVERSITY TEZPUR, ASSAM, INDIA APRIL, 2024

# CHAPTER VI SUMMARY & OVERVIEW

#### **6.0 INTRODUCTION**

This final chapter of the study serves as a concise synopsis of the main ideas or situations of the research study. It is a succinct overview of the principal concepts, points or themes examined in this segment. This chapter concerning the comprehensive summary of the present research can be treated as study aids that conveniently offers the readers a wonderful opportunity to review and comprehend the various dimensions of the research in its entirety. It effectively appeals to potential readers, research academics, and educators by offering a time and energy-saving approach that consistently delivers a comprehensive grasp of the study's fundamental concepts, key points, and significant developments.

#### **6.1.0 RATIONALE OF THE STUDY**

There exists an urgent need to address the escalating requirements and demands of 21st century India to focus on the nature of the learning approach that would be that most suitable for the present-day educational environment. The prioritisation of cultivating 21st century learning skills should be regarded as a fundamental objective within the realm of education. But the problem arises from the manner in which the education system operates in most of the places in India, particularly at the school level. Mostly, the methods employed in the educational process in Indian academic institutions often hinder skills development among students. Development of learning skills like critical thinking, collaboration, creativity & communication, should be a major part of the hidden curriculum of the institution. In the contemporary day, the absence of these proficiencies poses significant challenges to one's ability to navigate, survive and thrive within society. Students who lack these skills they have to encounter hurdles and hindrances almost in every step in their lives, including academia, professional endeavours, and social life. Thereby, while teaching any core subject, the teachers should attempt to develop and enhance those skills among students. Hence, the investigator has shown a strong inclination towards the study of the development of the 4Cs. It is very important for all the students to be capable of practicing and nurturing these skills right at the secondary stage as this time period serves as a critical juncture for establishing a robust educational groundwork prior to advancing to the higher secondary stage. If at this secondary stage they are enriched with these skills it will surely facilitate their learning in their subsequent higher studies.

English is an academic discipline that encompasses a detailed study of the English language, including its grammatical structures, literary texts such as poetry, rhymes, short tales, novels, drama and essays, as well as various forms of written expression such as paragraph

construction, letter composition, and narrative development. It can be said that it is not just a necessity but also an extremely fascinating subject. English language has the potential to link one with the world outside. The study of English as a subject has a vast world to explore. English acts as an official language in India, hence facilitating the mitigation of linguistic barriers among individuals who speak different languages. English is widely utilised as a global means of communication across various regions worldwide. Therefore, in present time, it is very essential to master over the language. This is why English is considered as a mandatory subject in Indian schools. Here the researcher, who identifies with an English background, has selected the field of English subject as her area of critical inquiry. Through this research study, she aims to make a valuable contribution to the process of English learning.

As it is a common scenario in Indian classrooms where teachers are using traditional lecture methods without encouraging any involvement of the pupils, and consequently, the students have to resort to cram words without even realising the underlying meaning or the concept, it becomes imperative for the English teachers to gain insight into effective learning strategies for their students. While conventional approach of teaching fails to address individuality and uniqueness of students, English teacher needs to be receptive to embracing new and improved teaching techniques that prioritise and promote active student participation. With consideration of these various factors the investigator intended to study how constructivism may be implemented in English class for effective English learning with the prime objective of enhancing 4Cs among learners. Undoubtedly, the learning theory of Constructivism is increasingly garnering considerable attention. Therefore, it is necessary for the investigation to examine important aspects such as constructivist strategies for classroom utilisation, and the necessity and significance of 21st Century Learning Skills among secondary level students, particularly in relation to the English subject.

# **6.2.0 STATEMENT OF THE PROBLEM**

The research problem may be more precisely articulated as "EFFECTIVENESS OF CONSTRUCTIVIST APPROACH BASED MODULE ON THE ENHANCEMENT OF TWENTY FIRST CENTURY LEARNING SKILLS IN ENGLISH SUBJECT AMONG THE SECONDARY SCHOOL STUDENTS IN WEST BENGAL".

#### **6.3.0 OPERATIONAL DEFINITIONS OF THE TERMS USED**

**Constructivist Approach Based Module:** Constructivist approach-based module in English subject refers to the adoption of a learner-driven approach to the development of a module in the field of English as an academic subject. In this study constructivist approach denotes a series of learning experiences (learning content, learning activities etc.) that were designed within constructivist framework in the form of a module by the researcher herself to attain the predetermined objective which was the enhancement of twenty first century learning abilities within a specific period of time. This constructivist approach-based module, briefly termed as CAM, was developed from the selected units of the English textbook Bliss for students of class IX under West Bengal Board of Secondary Education (WBBSE) in accordance with the core principles of constructivism learning theory, and embraced certain identified innovative classroom strategies and activities that had the potential to involve the learners dynamically in their process of English learning. Here constructivist approach-based module was assessed by taking into consideration its effectiveness as an instructional pedagogy for the development of 4C skills.

**Twenty first century learning skills:** In the current study, twenty first century learning skills denote four crucial abilities or competencies, namely the skill of critical thinking, creativity, collaboration & communication which are imperative to be inculcated among young learners to cope up with on-going changes, growing demands, myriad challenges of twenty first century world of progress and rapidity. Notably, the efficacy of constructivist approach on the twenty first century learning skills among secondary learners was assessed in this study.

**Secondary School Students:** In the present research study secondary school students denote those students who were studying in class IX in West Bengal.

**Gender:** It refers to the binary gender identities of learners as male students/female students studying in class IX in West Bengal.

**Locality of institution:** It refers to the area in which the school is situated in West Bengal. It can be located in rural and in urban area.

# 6.4.0 OBJECTIVES OF THE STUDY

1.To develop a constructivist approach-based module from the selected units of the English Textbook for students of class IX in order to enhance twenty first century learning skills in English subject

2.To study the effect of the constructivist approach-based module (CAM) over traditional lecture method (TLM) on the enhancement of overall Twenty first century learning skills in English subject with regard to the pre-test and post-test scores.

3.To study the effect of CAM over TLM on the enhancement of component wise Twenty first learning skills in English subject with regard to the pre-test and post-test scores

4.To study the effect of Group, Gender and their interaction on overall Twenty first century learning skills by considering the pre-test as covariate

5.To study the effect of Group, Gender and their interaction on component wise Twenty first learning skills by considering their representative components at pre-test level as covariates

6.To study the effect of Group, Locale of Schools and their interaction on overall Twenty first century learning skills by considering pre-test as covariate

7.To study the effect of Group, Locale of Schools and their interaction on component wise Twenty first century learning skills by considering their representative components at pre-test level as covariates

# 6.5.0 HYPOTHESES OF THE STUDY

 $H_01$ . There is no significant difference between the mean scores of overall Twenty first century learning skills developed through CAM and the mean scores of overall Twenty first century learning skills developed through TLM in English subject with regard to pre-test and post-test scores.

 $H_02$ . There is no significant difference between the mean scores of component wise Twenty first century learning skills developed through CAM and the mean scores of component wise Twenty first century learning skills developed through TLM in English subject with regard to pre-test and post-test scores.

a. There is no significant difference between the mean scores of critical thinking skill developed through CAM and the mean scores of critical thinking skill developed through TLM in English subject with regard to pre-test and post-test scores.

b. There is no significant difference between the mean scores of creativity skill developed through CAM and the mean scores of creativity skill developed through TLM in English subject with regard to pre-test and post-test scores.

c. There is no significant difference between the mean scores of collaboration skill developed through CAM and the mean scores of collaboration skill developed through TLM in English subject with regard to pre-test and post-test scores.

d. There is no significant difference between the mean scores of communication skill developed through CAM and the mean scores of communication skill developed through TLM in English subject with regard to pre-test and post-test scores.

 $H_03$ . There is no significant effect of Group, Gender and their interaction on overall 21st century learning Skills students by considering their pre- twenty first century learning skills test as covariate.

 $H_04$ . There is no significant effect of Group, Gender and their interaction on component wise 21st century learning Skills students by considering their pre- twenty first century learning skills test as covariate.

a. There is no significant effect of Group, Gender and their interaction on critical thinking skill by considering their pre-critical thinking test as covariate

b. There is no significant effect of Group, Gender and their interaction on creativity skill by considering their pre-creativity test as covariate

c. There is no significant effect of Group, Gender and their interaction on collaboration skill by considering their pre-collaboration test as covariate

d. There is no significant effect of Group, Gender and their interaction on communication skill by considering their pre-communication test as covariate

 $H_05$ . There is no significant effect of Group, Locale of Schools and their interaction on overall Twenty first century learning Skills students by considering their pre- twenty first century learning skills test as covariate

 $H_06$ . There is no significant effect of Group, Locale of Schools and their interaction on component wise Twenty first century learning Skills students by considering their pre- twenty first century learning skills test as covariate

a. There is no significant effect of Group, Locale of Schools and their interaction on critical thinking skill by considering their pre-critical thinking test as covariate

b. There is no significant effect of Group, Locale of Schools and their interaction on creativity skill by considering their pre-creativity test as covariate

c. There is no significant effect of Group, Locale of Schools and their interaction on collaboration skill by considering their pre-collaboration test as covariate

d. There is no significant effect of Group, Locale of Schools and their interaction on communication skill by considering their pre-communication test as covariate

## 6.6.0 DELIMITATIONS

This research study was delimited to the subsequent points:

- a) The study was delimited to the school going learners of West Bengal studying only in class IX.
- b) The current study was delimited to one district of West Bengal.
- c) The current study was delimited to co-educational schools.
- d) The current study was delimited to two Governmental high schools.
- e) The current study was delimited to Bengali medium schools affiliated to West Bengal Board of Secondary Education (WBBSE).

# 6.7.0 METHODOLOGY OF THE STUDY

The current research remained purely experimental research that adopted quasi experimental method with Non-equivalent Control Group Design, employed to assess the effectiveness of an intervention called Constructivist approach-based module (CAM) over traditional lecture method (TLM) in enhancing 4Cs in English subject among the schoolchildren studying at secondary educational stage.

#### 6.7.1 SAMPLE AND SAMPLING

In this research, the investigator employed Stratified random sampling method in order to select two schools (R.I. V and S.H.S) from two different strata (Urban & Rural) for conducting the experiment. Then from these selected schools class IX pupils were selected as the sample of this study by using intact group sampling technique. Total 168 class IX students of Sec.-A, Sec.-B of R.I.V. and Sec.-A, Sec.-B of S.H.S. from the Dist. Birbhum, West Bengal were taken as the sample of this study with the help of intact group sampling method. Noticeably, out of these four sections two sections (Sec. A of both the schools) were

considered as the Experimental Group, and the rest two sections (Sec. B of both the schools) were taken as the Control Group for this current study. Out of 168 school children 86 students constituted the members of experimental group while 82 students constituted the members of control group. The number of total male students was 90 and female students was 78. In terms of locality of the school, 86 students belonged to the urban area school whereas 82 students belonged to the rural area school. The specifics of the sample used in this study are provided in table below

| Sl.<br>No. | Name of the<br>Schools                | Locale<br>Of<br>Schools | Name of<br>the<br>Learning<br>Stage | Category of the<br>Sections Taken<br>for the<br>Experiment | No. of<br>Students<br>in Each<br>Section | No of<br>Students<br>Gender<br>Wise | Sections<br>forming<br>the Groups |
|------------|---------------------------------------|-------------------------|-------------------------------------|--|--|-------------------------------------|-----------------------------------|
| 1          | Rajatpur<br>Indranarayan<br>Vidyapith | Rural                   | Class IX                            | А  | 42                                       | 25 (Male)<br>17(Female)             | Experimental<br>Group             |
|            |                                       |                         |                                     | В  | 40                                       | 22(Male)<br>18(Female)              | Control<br>Group                  |
| 2          | Srinanda<br>High<br>School            | Urban                   | Class IX                            | А  | 44                                       | 23 (Male)<br>21(Female)             | Experimental<br>Group             |
|            |                                       |                         |                                     | В  | 42                                       | 20 (Male)<br>22(Female)             | Control<br>Group                  |
|            |                                       |                         |                                     | Sub -Total   | 86                                       | 48 (Male)<br>38(Female)             | Experimental<br>Group             |
|            |                                       |                         |                                     |  | 82                                       | 42(Male)<br>40(Female)              | Control<br>Group                  |
|            |                                       |                         |                                     | Total  | 168                                      | 90 (Male)                           | Experimental<br>Group             |
|            |                                       |                         |                                     |  |  | 78(Female)                          | Control<br>Group                  |

Table-6.1. Detailed Description of the Sample Under Study

# 6.7.2 INSTRUCTIONAL APPROACHES ADOPTED IN THE STUDY

In this study the investigator applied two different approaches for imparting instruction to the schoolchildren of experimental & the control groups. They were like so-

A. Constructivist Approach Based Module (CAM) as an innovative instructional approach

B. Traditional Lecture Method (TLM) as a conventional instructional approach

#### 6.7.3 TOOLS USED

Twenty first Century Learning Skills Enhancement Assessment in English Subject, a Selfdeveloped tool was employed by the researcher in this study. It was a comprehensive assessment tool, consisted of four sub tools. Among them 3 were tests- Critical Thinking Skill Test in English Subject, Creativity Skill Test in English Subject, Communication Skill Test in English Subject and one is an observation schedule for assessing Collaborative Skill of students. As these four measuring tools were part of one comprehensive tool, they were given equal weightage in terms of score. The total marks of the entire tool were 240 as individually 60 marks was allotted for each of them. All these assessing tests were based on WBBSE syllabus of English subject for class IX students of academic year 2021-2022.

#### **6.7.4 TECHNIQUES OF DATA ANALYSIS**

The investigator analysed the quantitative data by the means of appropriate statistical techniques depending on its need and relevancy to the study and the nature of collected data. Descriptive statistics like mean, standard deviation, standard error of mean, graphic representation of data & inferential statistics such as ANOVA, ANCOVA of parametric family were employed by the researcher to analyse the obtained data.

#### **6.8.0 OVERALL CONCLUSIONS**

The primary discoveries of this study served as the base for drawing comprehensive conclusions. When considering the present study from a broader perspective, it was possible to derive conclusions by examining a total of 25 experimental effects. The present study entailed a set of 25 experimental effects that were directly associated with the six main objectives of the research. The first five cases of experimental effects were related to the first and second objectives (i.e., study the effect of CAM over TLM for the enhancement of overall twenty first century skills, study the effect of CAM over TLM for the enhancement of component wise twenty first century skills comprising critical thinking, creativity, collaboration & communication in English subject learning. Next ten cases of experimental effects were related to the third and fourth objectives (i.e., studying the effect of Gender, also the Group- Gender interaction on the enhancement of overall twenty first century skills such as critical thinking, creativity, collaboration & component wise twenty first century skills such as critical thinking, creativity, collaboration & component wise twenty first century skills such as critical thinking, creativity, collaboration & component wise twenty first century skills such as critical thinking, creativity, collaboration & component wise twenty first century skills such as critical thinking, creativity, collaboration & component wise twenty first century skills such as critical thinking, creativity, collaboration & communication in English subject learning). The last ten cases of experimental effects were related to the fifth and sixth objectives (i.e., study the effect of Locale and the

interaction between Group and Locale on the enhancement of overall twenty first century skills, and study the effect of Locale and also the interaction between Group and Locale on the enhancement of component wise twenty first century skills which are critical thinking, creativity, collaboration & communication in English subject learning). All of these experimental effects were analysed and studied with the help of ANOVA and ANCOVA. The statistical outcomes, obtained from ANOVA and ANCOVA analysis of all the 5 cases which were concerned about examining the experimental effect on the basis of treatment group, revealed that in every case the experimental cohort accomplished better than the control cohort. So, there existed neither any case in which the control group did better than the treatment group nor any case in which no substantial difference was found between the experimental & the control groups. Further, the ANCOVA of the next five cases which were concerned about examining the experimental effect on the basis of gender, showed that out of 5 cases, in 4 cases no significant difference was observed between boys and girls students, and only in one case it was discovered that male learners performed better in comparison with the female learners; so, no case was found where Female students performed better compared to the Male students. Subsequently, the ANCOVA analysis of the next more five cases which were concerned about examining the experimental effect on the basis of interaction effect between group and gender, exhibited that in all the 5 cases interaction effect between Group & Gender was found insignificant; there was no case found in which interaction effect between Group & Gender was found significant at 0.05 level. As per the ANCOVA results in the next five cases which were concerned about examining the experimental effect on the basis of locale of school, showed that out of 5 cases, in 2 cases significant difference was observed between Urban schoolchildren and the Rural schoolchildren, and it were the Urban learners who performed better compared to Rural Students at 0.05 level. And in the rest of the 3 cases no statistically significant difference was observed between the Urban & the Rural learners, and so no single case was found where the Rural learners performed better contrary to Urban learners. Finally, the ANCOVA analysis of the last five cases which were concerned about examining the experimental effect on the basis of interaction effect between group and locale, revealed that out of the 5 cases, in 2 cases only interaction effect between Group & Locale was found significant at 0.05 level while in the remaining 3 cases the Group & Locale interaction effect was found insignificant. Taking into consideration all these inferences, the researcher arrived at the conclusion that the advantageous side of CAM as teaching-learning strategy for fostering the acquisition and advancement of Twenty first century learning skills among learners cannot be ignored at all.

Because Constructivist Approach based Module had significant merit over TLM in terms of the development of 4Cs (overall as well as component wise) in the field of English Subject learning of students at secondary stage of education. When it comes to the development of overall 4Cs and its components on the basis of gender, both males and females were found to be benefitted equally from their learning through CAM in comparison to TLM when both the groups were matched with respect to their pretest scores except one case where the male students were found to have superior score in communication skill in comparison to the female students when both the groups were coordinated in terms of pre-communication scores. When it is about the enhancement of overall 4Cs and its components on the basis of locale of school, it was found that in case of the development of overall 4Cs and critical thinking skill among learners, the urban school students achieved significantly higher scores than the rural school students when both of the groups were matched on their respective pretest scores; but in case of the enhancement of creativity, collaboration & communication abilities, both the groups-urban as well as the rural school students performed equally well when both the groups were matched on their respective pretest scores. Nevertheless, it can be widely concluded that the usage of CAM exhibited greater potential for enhancing overall Twenty first century skills, and also its components in comparison to the usage of TLM in English teaching classroom.

# **6.9.0 EDUCATIONAL IMPLICATIONS**

The present study yields several educational implications. Those implications are briefed below.

# FOR TEACHERS/EDUCATORS

- The present study has the potential to provide guidance to educators, specifically English language teachers, in developing a comprehensive understanding of the principles of constructivism and thereby, facilitating its application within the classroom setting.
- The teachers should make effort to employ constructivist module for developing various abilities of the school children, not solely focus on the acquisition of language skills or academic achievement.
- Teachers would be benefited from the study as they would be able to provide quality education for learners from a holistic perspective with significant focus on the development of the 4C skills.

- Findings from the research could also assist in offering the in-service possibilities for teachers to brush up on their skills in accordance with contemporary needs.
- Proper care must be taken by teachers to employ constructivist assessment that would make the students feel connected with their real-life situation.
- Finally, this study has the potential to provide valuable insights for educators seeking to develop innovative classroom situations that foster students' active engagement in constructing meaning, which is the fundamental objective of education.

# FOR SCHOOL STUDENTS

- This study also emphasises on the transition from an instructor-centred to a studentcentred classroom where learners are granted full autonomy to independently explore and uncover knowledge when constructivist approaches are employed in English instruction. Students would be benefitted with such flexible and liberal learning approach which would assist them to grow in life in true sense.
- Students would get the scope to gain familiarity with both the discourses of constructivism and twenty first century learning skills, and to realize the urgent need for being part of such constructivist learning that focuses on the development of 4Cs.
- Students would be empowered to critically comprehend, analyse, interpret and evaluate information, and to create new knowledge on the basis of logical analysis and understanding
- Students would be able to develop constructive, productive, imaginative power by the development of creativity in terms of ideational fluency, and originality in the area of English subject.
- Proper care must be exercised to consider English subject learning through CAM as a helpful tool for developing collaborative skill among learners in terms of facilitating their coordination, group interaction, cooperation.
- It would encourage students' communication skills in terms of their expressive capacity in speaking and writing tasks that are very crucial for individual's success in the real world where they would work with many people and navigate among different perspectives of others.
- To prevent the prevailing underachievement of students in examinations and their misunderstandings regarding certain topics in the English subject area with the help of constructivist learning. The findings of the study could provide learners great assistance to prevent their poor academic result, and to build a strong academic career.

# FOR PARENTS

- The parents would be enriched with awareness and understanding of the novel theories and techniques (Constructivism and 4Cs), contemporary themes of educative process that their children are experiencing now.
- The parents could also benefit as this research would assist them to support their children by guiding their everyday activities and assisting them in developing positive self-expression and independence skills.
- The outcomes of the present investigation would also be extremely valuable in fostering effective parent-teacher relationship.

# FOR CURRICULUM DEVELOPER

- The findings of this study have significant implications for the inclusion of constructivist approach in the process of school curriculum development.
- Curriculum Designers should revise the current English curriculum to facilitate the fostering the acquisition of 21<sup>st</sup> century essential skills and abilities for making the school curriculum meaningful and up to date.
- This study would inform curriculum developers to treat the discourse of 4Cs not as alien subject to be taught separately, but to be included within the core subject area in integrated way.

# FOR POLICY MAKERS

- The results of the current study are expected to be of great use to secondary education policymakers as they endeavour to execute constructivist learning strategies and also 4Cs enhancing strategies for determining the most suitable extracurricular and curricular activities to build the ideal secondary education programme.
- Policies relating to the constructivist education and the development of the 4Cs in language acquisition need to be more carefully specified at both national and local level. The issue has been addressed in NEP, 2020 at national level, but policy makers should focus on the challenges during the process of translating the innovative theories into actual classroom scenario, and their probable practical solutions.

# FOR HIGH AUTHORITIES & ADMINISTRATORS

- The adoption of a constructivist approach for academic as well as skill development is recommended for all school authorities in West Bengal, as well as other regions of India, irrespective of the school's locale and management.
- The head of the high schools might be encouraged to go for several corrective actions to address obstacles to successfully completing the English education at secondary level.
- DIETs and state departments of education should incorporate the constructivist method of teaching and also 4Cs enhancing teaching strategies into the teacher training programs.
- Lastly, the current research would inform administrators about the current status of English education at secondary stage in West Bengal; as a result, it may prove more beneficial to administrators and policy makers as well in dealing with the challenges that are laid out here.

# FOR RESEARCHERS

- The current study would aid scholars better grasp the problems and difficulties that schools of West Bengal are currently experiencing while delivering English education.
- This investigation might assist the researcher to conduct additional research on the concerns this study brings up.

# 6.10.0 FUTURE RESEARCH SUGGESTIONS

There exist multiple avenues for prospective research directions that can be pursued in future research studies. Those suggestive directions for further investigation are pointed below-

- This experimental study can be conducted in different context for broader application of the outcomes of the present study. For example, similar study can be carried out to find out the effectiveness of the CAM on the development of 4Cs among learners of various schools in different states of India.
- The present study concentrated on the English learning of students at their secondary level of educations. A corresponding experimental study can be undertaken to encompass students across various grade levels, including primary, elementary, secondary and higher secondary education.

- Further studies on the same research problem can be conducted across different academic disciplines, or areas of study. Future research may include other language subjects such as Bengali, Hindi, and Sanskrit, or social science subjects like History, Geography and science subjects like Life science, Physics, Chemistry, Mathematics by developing constructivist module for enhancing students' learning experience in those subject areas.
- Later research endeavours may investigate the same research problem but within the context of some alternative school boards such as *Indian Certificate of Secondary Education* (ICSE), *Central Board of Secondary Education* (CBSE), and *Visva Bharati* (VB) board. Comparisons can be drawn regarding the impact of CAM on students' learning under different boards of education. Thereby, a potential avenue for research involves conducting a comparative study to assess the efficacy of the constructivist perspective-based teaching approach on a diverse population of learners from various school boards.
- Inclusion of other demographic variables may have the potential to widen the scope of this research study. Students of different age, socio-economic status, family structure, management of their school might differ in students' responding to the constructivist approach. Along with these variables, other demographic variables like income status, marital status, political affiliation and education level of teachers may have effect on their responding to constructivist approach. So, experimental studies to investigate the interaction effects of constructivist approach with alternative demographic variables can be studied for further research.
- Researchers may expand the range of this research through additional statistical analysis by incorporating multiple covariates. In future research, it may be beneficial to include various covariates such as students' pretest scores in English academic achievement, intelligence levels, attitudes towards constructivist learning, personality traits, resilience, and study habits etc.
- Future research can be undertaken to explore teachers' beliefs, perceptions, attitudes, and interest in constructivism concerning the 4Cs development (Critical thinking, Creativity, Collaboration & Communication) through innovative classroom practices. Similarly, conducting an evaluative study on the beliefs, perceptions, interests, and attitudes of students towards the constructivist approach as a learning strategy for fostering twenty-first century skills holds significant potential as a valuable avenue for future research. Noticeably, further studies may be undertaken to examine whether

any significant difference exists in students' as well as teachers' interest, attitude beliefs, perceptions of the constructivist classroom with regard to their gender, socio economic status, the locale and management of their school.

- Constructivist approach has been utilised as a comprehensive teaching learning theory in this study. Researchers may delve into this research problem by looking into it from a more detailed, specific and precise angle. In future research the focus can be made upon the Cognitive Constructivist approach towards learning upholding only those learning strategies that are in line with Piagetian view about constructivism or upon the social constructivist approach towards learning based on Vygotskian view about constructivism in the context of 4Cs in English subject learning.
- The research problem of this study had been dealt with purely quantitative approach of research by analysing the numerical data statistically. Similar study can be addressed intensively by undertaking qualitative approach of research to explore participants' thought, opinion about constructivist learning strategy and its influence on students' learning outcomes along with 4Cs development. Coding, theme generation can be done to penetrate into the various facets of the research phenomenon and thereby, to provide more in-depth and comprehensive conclusions.
- Qualitative research study could be undertaken to explore the characteristics and role of teachers in constructivist classrooms in the inculcation of Twenty first century learning skills among learners.
- Development of teaching learning module in English subject within the context of constructivism for enhancing of L.S.R.W. skills in English may be regarded as another major direction for future study. Concentration can be given to develop students' abilities of speaking, reading, writing, and listening in English with the help of constructivist approach to learning.
- This study focused on the inculcation & augmentation of 4Cs. In future research endeavours there is a huge scope to conduct researches with objectives to develop Literacy skills (IMT) referring to literacy relating to information, media & technology; and also, Life skills (FLIPS) referring to skills of flexibility, leadership, initiative, productivity and also social skills which are also necessary to be cultivated among today's learners.