Chapter VI

Summary

6.0 Introduction

The concept of life skills is not new. Instead, it has marked its existence for decades. The conceptualized life skills were considered when Botvin introduced these skills in his intervention programs against numerous types of substance abuse during 1980-84. Since then, the term life skills has been popularly used mainly in health, especially in the case of reproductive health, HIV/AIDS, and other substance abuse-related issues such as drugs and smoking by different national and international bodies working in the field of health and education. Officially, Life skill education was accredited by World Health Organization through Ottawa Charter for Health Promotion in 1986. According to their functional areas and specific working interests, different organizations defined life skills distinctively. United Nations International Children's Education Fund (UNICEF, 2004) describes life skills "as a behaviour change or behaviour development approach designed to address a balance of three areas: knowledge, attitude and skills". In other words, life skills are the competencies guiding young minds to make better choices related to their career, relationship habits, and managing their social, physical, and mental health.

Specifically, life skill education equips individuals with particular skills essential for a successful and healthy life. In the same way, science education provides the child with scientific concept knowledge and uncountable skills such as reasoning, analyzing, inferring, and many more. At the same time, there is innumerable research evidence that science education in India is limited to imparting knowledge without emphasizing any scientific skills. Shukla (2005), Dey (2014); Lodh (2014); Karim A (2018) reported decreasing satisfaction of students with the teaching of science in the higher classes in school and teacher-centred curriculum in addition with teacher cantered pedagogy, as the most commented explanations for diminishing interest of students towards science education. Shamsiah (2013), and Moeed in 2013, revealed better pedagogical approaches are the considerable need for enriching science education in India. The present study is an initiative to polish the fading science education, improve scientific skills, and develop life skills among students. The study aimed to integrate life skill education with a regular science curriculum to learn life skills, conceptual understanding, and scientific skills.

6.1 Title of the Study

Developing and Implementing Life Skill Based Activities in Science and Technology Subject in CBSE Schools of Vadodara city

6.2 Objectives of the Study

Following were the objectives of the study:

1. To develop Life Skill-based Activities in Science and Technology subject for class IX.
2. To implement Life Skill-based Activities for class IX in Science and Technology Subject.
3. To study the effectiveness of life skill-based activities in terms of students' achievement in science and technology subjects.
4. To study the effectiveness of life skill-based activities in terms of improvement in life skills.
5. To study the opinion of students about implemented Life Skill-based activities in Science and Technology at class IX.

6.3 Hypothesis

To achieve above mentioned objectives, the following null hypotheses were formulated:
H01: There will be no significant difference in the post-test mean achievement score in the Science and Technology subject of class 9 students of the Experimental and Control group.
H02: There will be no significant difference in the Mean achievement score in the Science and Technology subject of class 9 students of the experimental group in pre-test and post-test.
H03: There will be no significant difference in the Mean achievement score in the Science and Technology subject of class 9 students of the control group in pre-test and post-test.

6.4 Definition of the Terms used

Life Skills-based Activities: The life skill-based activities include various learning activities prepared on selected concepts such as tissue, types of tissue, force, cell organelles, water; from the subject of science and technology at class IX. The activities comprised role play, quizzes, hands-on projects, discussions, surveys, debates, etc., looking into the scope of thinking, emotional and social skills. Considering the nature of

the content, activities were developed and it was taken care of that designed activities should also supplement content knowledge along with developing life skills.

The program in the form of life skill-based activities was designed to enhance the students' conceptual understanding by supplementing different learning experiences through activities and developing life skills among students.

6.5 Operational Definitions

Effectiveness: The effectiveness of the present work was studied in terms of the understanding of the learned concepts, which was measured as the significance of the difference between the post-test mean scores of the experimental group and the control group concerning the given treatment through developed life skill-based activities. The effectiveness was also interpreted as the improvement in life skills of the experimental group after the treatment.

Achievement: Achievement in the present study was measured by administering a situational test. The test was constructed by the researcher on the IX standard science concepts from first term course.

6.6 Delimitation of the Study

The study was delimited to the following:

1. The study was delimited to class 9th CBSE Schools of Vadodara City.
2. The study also delimited ten core life skills: self-awareness, empathy, critical thinking, creative thinking, decision-making, problem-solving, effective communication, interpersonal relationship, coping with stress, and coping with emotions, as given in the CBSE manual of life skills for IX standard.
3. The study was also delimited to the selected topics from the first term syllabus of Physics, Chemistry, and Biology in the standard IX CBSE Science & Technology textbook.

6.7 Research Design

Research design embraces different steps followed by the researcher to execute research in a logical sequence, namely, deciding population, deciding sample, finalizing tools and techniques, data collection and analysis of data. It could also be referred to as the "blueprint of practical work in a research". Gay & Airasian (2000) stated that "A design is a general strategy for conducting a research study" (cited by Best, 2006:.29).

For constructive and successful accomplishment in any research, the proper layout is essential and decided by the nature of the study. The present study was experimental, as

it includes practical and controls groups and treatment (life skill-based activities) plans as the variables. The study was implemented in an actual classroom situation with experimental and control groups as separate intact classes. One group considered the experimental group, was executed with the program, and the other was a control group to compare results and study the effectiveness of the implemented program. The program was committed to an entire class and not to the individuals, as it would be challenging to implement treatment randomly to the individuals in an actual classroom situation. Hence, considering the practical limitations of the virtual classroom, a quasi-experimental design was selected for the study. The pre-test post-test non-equivalent group design was followed in this research.

The design of the study is presented as follows:

O1 X O2

O3 C O4

O1 and O3 are pre-tests, O2 and O4 are post-test, X stands for Experimental Group, and C stands for Control Group.

The researcher took one control and one experimental group as intact classes. Developed programs in the form of life skill-based activities were planned for the experimental group only, and the control group was taught through the traditional method. Achievement test (pre-test and post-test) was used to measure the program's effectiveness in understanding the concepts of science and technology subject by comparing the scores of experimental and control groups. The point concerning life skills was studied with the help of worksheets and field notes (grading was done to analyze the worksheets and field notes). This design is one of the most effective in minimizing the threats to experimental validity and extraneous variables.

6.8 Population

A population can be considered a total number of individuals (exhibiting similar characteristics) knowingly or unknowingly being a part of the research, participating in the study through their representation (sample), and to whom the whole investigation was carried out. For the present study, the population constituted the number of students studying in IX standard in CBSE schools of Vadodara city for 2015-2016.

CBSE Annual report (2014-15) mentioned 317 CBSE affiliated schools in Gujarat state. The number of schools in Vadodara city, affiliated to CBSE in 2015, was 22. The population for the study was comprised of all the IX class students studying in these CBSE English medium secondary schools of Vadodara city during the year 2015-16.

6.9 Sample

A small portion of the population, on which observations were made and generalized to an entire population, could explain the sample in any research. As defined by Creswell (2012), an example "is a subgroup of the target population….".

The current study focused on developing and implementing life skill-based activities for IX standard students of CBSE schools. As the study was experimental, it needs particular pre-requites essential for the research. Based on these pre-requites, the sample of the study was selected purposively.

Two secondary schools, both affiliated to CBSE, were selected purposively based on the following criteria:

1. Availability and accessibility of computer laboratory along with intelligent boards for PowerPoint presentations.
2. Students of the school had enough exposure to computer laboratories and smart boards.
3. Well-equipped different science laboratories (Physics, chemistry, and biology).
4. Playground, indoor and outdoor space for activities, and any other educational constructive work.
5. Co-operation from principal, teachers, and other administration for the operational success of the program.
6. The selected schools have all the infrastructural facilities (smartboards linked with computers and well-equipped science labs) and fulfil other requirements for the program's implementation.
7. The school readily consented to provide those facilities to the researcher for the effective implementation of the program.

There were forty-five students in the class selected for the experiment and forty-two students in the control group. As the experiment was conducted at the start of the session, final marks achieved by the experimental and control group students in a science subject at the eighth standard were compared to match the groups. Based on last scored marks in a science subject, 40 students from each experimental and control group were considered

samples for the current study. Students of the experimental group were taught (science and technology through life skill-based activities) in the academic year 2015-16 for one semester by the researcher while the students of control group were taught by their teacher in usual method.

6.10 Different Phases of the Research Design

The research design for the present study includes different stages such as developing the program and data collection tools, implementing the program, and collecting required data for the analysis.

6.11 Phase I: Development of the Program and Tools

6.12 Development of Program

A thorough review of past literature on life skill education and science and technology subject apprised that tremendous amount of work has been done earlier in both the fields (life skill education and science and technology subject). However, the integrated approach was still needed to be explored. The present research work applied a unified strategy for developing a program (life skill-based activities) for the research. The focus of the study was not only on the Development of life skills but also aid students with an in-depth understanding of science concepts. They grasped life skills from these concepts by applying and realizing importance of these science concepts in their (students') daily life.

After an extensive review of related literature on life skills and science and technology subjects, the researcher formulated the framework for the program. CBSE Teacher's Manual on Life Skills classes IX-X (2010), Continuous and Comprehensive evaluation Manual by CBSE, reports of WHO and UNICEF on life skill education, and reviews from related literature were explored and analysed for the Development of program and tools for data collection.

6.12.1 Stage one: Pre-Development Stage

The Development of any program needs a complete understanding and analysis of the problem. To comprehend and analyze the current scenario in teaching-learning of life skill education in the CBSE schools of Vadodara City, the researcher visited some of the CBSE schools with a list of questions in the form of a survey. The survey has five questions related to teaching life skill education and science and technology subjects. The researcher has visited nearly ten CBSE schools of Vadodara city. After analyzing the responses obtained from the teachers of those schools, the researcher concluded that

life skill classes were taken as a separate subject in most schools, and even in some of the schools, there was no subject or period related to life skills education. The researcher also assessed a considerable gap between the life skills manual and the implementation of that manual in schools. For science teaching, generally lecture cum demonstration method was in practice. There was hardly any hands-on experience given to the students even though schools have extensive laboratories. All these reviews guided the researcher to develop such a program that would help develop life skills among students and the concept knowledge.

6.12.2 Stage Two: Development of the Program

As presented in the previous section, the study deliberated to develop a program including activities based on life skills and science and technology subject concepts from the first semester of IX standard in CBSE schools of Vadodara city. The program includes two subjects (life skill education and science and technology) integrated, so both the subjects were analysed separately. After a detailed discussion with the guide and other experts (in life skill education) and studying the review findings, it was finalized that all the ten life skills adopted by CBSE were taken care of in the program. Considering all the ten life skills mentioned in the CBSE Manual of life skill education for IX-X, further activities were developed as an essential base of the program.

The development part was divided into two steps, detailed below:

6.12.2.1 Step 1: Identifying Science and Technology Concepts.

Before developing the program, the NCERT book of Science and Technology subject for IX standard was thoroughly analysed by the researcher and discussed with the guide and science teachers of IX standard to find the most appropriate topics for the study. It helped the researcher understand the content competencies and provided the idea to develop life skills among students through the concepts of science and technology subject. After detailed scrutiny, the researcher selected fifteen topics from the first term course syllabus for developing the program. The topics were set based on specific criteria related to daily life; possible life skill-based activities could be designed and integrated with life skill education. The selected subjects were cell, cell organelle, Tissue, animal tissue, Mixture, separation of Mixture, types of tissues, water, evaporation, life history of Newton, conservation of energy, states of matter, crop production, crop variety. After determining and evaluating selected topics, activities were developed on the issues chosen by the researcher. The developed activities were grounded on content (selected topic) knowledge and helped build life skills among students.

6.12.2.2. Step 2: Developing Life Skill Based Activities for identified concepts.

Life skill-based activities integrated with science concepts were developed in the form of a program. The program was implemented during 2015-16 for the first semester of IX standard in two selected CBSE schools of Vadodara city.

A detailed description of the Development of the program was presented in this section. The final draft of the program was developed after going through the following stages:

1. In an integrated approach, various activities were developed considering the content knowledge of selected science concepts and life skills (all the ten core life skills adopted by CBSE).
2. Activities were planned to keep in mind the objectives of science teaching and life skill education at IX standard.
3. The rough framework of the program was formulated with possible activities. Since all the three categories of life skills (thinking, social and emotional skills) were included in the study, it was ensured in each activity that one or more components (ten core life skills) from each category should be taken care of.
4. The rough draft of the developed program was given to the three experts from the field of life skill education and science to analyse the appropriateness of the activities to the level of students and validate its content and methodology.
5. After expert validation and getting comments and feedback from them, the final draft of the program was developed. The modified program was all set for the execution of the experimental group.

The activities developed on selected topics of science subjects were categorized as activity 1, activity two, unto activity 15. Different activities were designed for a different topic chosen, such as activity one was about Tissue and activity two was on Types of Tissue. Similarly, other activities were developed on all other selected topics and named activity 3, activity 4, and so on.

6.13 Development of Tools

The researcher prepared different tools for data collection to evaluate the effectiveness of the developed program. All the developed tools were detailed as under:

Pre- and post-achievement test: The test was constructed by the investigator. Experts validated it. To achieve the objectives of the present study, a test comprised of multiple short answer questions was prepared and validated by the subject experts. Achievement test was based on subject and administered on experimental as well as control groups. The test has situation based questions related to the topics from the science and

technology subject covered under the study (such as cell, tissue, force, cell organelles). The test has eleven questions and one comprehension, which has three sub-questions. Most of the questions have two or more sub-questions and carry different marks. The test was subjective (short answer type) and included questions that needed different life skills and subjective knowledge.

Worksheets: Five Worksheets based on different activities were prepared by the Researcher for appraising Life skills. These worksheets were assessed using a checklist given by CBSE in Chapter IV of Teacher's Manual on Continuous and Comprehensive Evaluation, classes IX-X for assessing Life Skills, along with the help of field notes.

Field Notes: Record of the activities were maintained in the form of field notes. Field notes also include students' reviews, specific observations, and their behaviour during and after each activity. Field notes helped the Researcher keep track of the students' participation during the activity in the form of queries raised and answered, deducing, and inferring content knowledge, enthusiastically reflecting their views and experiences related to the concepts taught and life skills during the discussion session.

Checklists: Checklists framed by the researcher were based on the checklist given in Chapter 4 of CCE Manual By CBSE. Further, CBSE has clustered the ten core Life Skills into three major Skills: Thinking, Emotional, and Social skills and highlighted different indicators to assess these Life Skills. These checklists were based on the indicators detailed in CBSE CCE Manual. Some of the Indicators were: students' creativity, motivation, concept clearing abilities, problem-solving, patience, appreciating others, comfortable in every situation, healthy completion, argumentative, showing respect, stress management, anger control, imaginative, responsible, flexible, analyse problems, active listener, question raisers, empathetic, co-operative, creative, coping with stress, etc. These checklists are further graded based on a five-point grading scale as given in the Chapter 4 of CCE Manual By CBSE.

The grading scale includes A*, A, B, C, and D.

Grading Scale: The five-point grading scale is given below

Most indicators in a skill	A*
Many indicators in skill	A
Some indicators in skill	B
Few indicators in skill	C
Very few indicators in skill	D

These grades were given by using descriptive indicators used in the checklist of all the life skills reflected by the students in the worksheets and during the class.

Opinionnaire: It was prepared to understand the opinion of the students towards the life skill-based activities (Developed Program) in science and technology subject. The opinionnaire includes open-ended questions seeking students' suggestions and their opinion towards the developed program.

6.14 Phase II: Implementation of the Program

The developed program (Appendix A), which includes various activities, was implemented in the classroom. Investigator took the first-semester course of science subject of 9th standard during the session of 2015-16 to administer the program. In the experimental group, the program was administered, and the control group was taken care of by the traditional method by their regular teachers. Investigator administered the developed program in the first half of the academic session in 2015 as the developed program includes topics of first-semester course of IX standard. As the Researcher's purpose was to study the development of life skills (if taught through science subject), only the selected topics (mentioned in Phase 1: Development of the program) were taught by the investigator through developed activities (developed program). The class teacher took the remaining syllabus of the first term.

6.15 Phase III: Data Collection

6.15.1 Administration of Pre-test

Investigator implemented the pre-test in both experimental and control groups. The pre-test was implemented before implementing the developed program in the experimental group and at the same time in the control group. The pre-test was administered at the start of the session in March 2015.

6.15.2 Administration of Worksheet / Field Notes

Notes were maintained by the researcher to record students' reviews, specific observations, and their participation and behaviour throughout each activity and also during discussion. Worksheets were implemented by the researcher after some of the activities to assess improvement in life skills.

6.15.3 Administration of the post-test

Investigator administered post-test on both control and experimental groups after the implementation of the program. At the end of the first-semester course in August 2015,

the post-test was administrated by the investigator on both the control and experimental group.

6.15.4 Administration of the opinionnaire

Opinionnaire was implemented to know the opinion of the students of the experimental group about the developed program. The opinionnaire includes thirteen open-ended questions framed with a viewpoint to seek students' reactions about the developed program.

6.16 Data Analysis

Data analysis includes analysis of complete data cumulated by the researcher through different means to study the effectiveness of the developed program in terms of achievement in science and technology subject as well as improvement in life skills

Since the collected data were quantitative and qualitative, analysis of the collected data was done using different data analysis techniques. Non-parametric statistics were applied for quantitative data analysis. Wilcoxon Rank Test and Mann Whitney U test were applied to measure the influence of the intervention.

Qualitative responses collected from the opinionnaire were analyzed through quantitative content analysis. Quantitative content analysis was done by coding the data provided in the opinionnaire and analyzing it through frequency count and percentage.

6.17 Major Findings

Significant findings of the present study are:

1. The first objective of this research was to develop Life skill-based activities on the topics of science and technology subject of IX standard. Fifteen topics from the science and technology NCERT book of IX class were selected. The program was developed considering the needs and demands of the students and the experiment. The expanded program includes activities based on the concept of knowledge integrated with life skill education to fulfil the requests of both subjects. The program consists of indoor and outdoor activities along with one field trip.
2. Drafting an activity-based program with an integrated approach (life skill education merged with science concepts) evidenced the verity that it is possible to outline content knowledge of any academic subject through life skill-based activities.
3. The developed program, which includes various Life skill-based activities, was implemented during the science period. The total time entailed during the

experiment was almost 1,770 minutes, consisting of pre-test and post-test durations, excluding fieldwork timings.

4. During the implementation of the program, it was observed by the researcher that most of the students were enthusiastic for every next task and actively participated in most of the activities. Initially, few students felt shy and apprehensive while taking part in the training and were hesitant to introduce themselves voluntarily for the action. Later, after two moves, students found interest in the activities and felt confident while performing any responsibility during the task.
5. The Mean achievement scores of the group taught through the program was 54.53, which was much higher than the mean achievement scores of the group (26.48) taught traditionally. The calculated U value was 0, and the Z value was 7.69, which was significant at 0.01 level of significance, which strongly validates the program's effectiveness concerning achievement in science and technology subjects. It could be concluded that students of the experimental group developed a better understanding of the science concepts after implementing the program.
6. On comparing mean achievement scores of pre-test (which was calculated as 22.175) with the scores of the post-test (calculated as 49.725) of the experimental group, it can be extrapolated that at the end of the experiment, students developed more clarity in science concepts taught through the life skill-based activities.
7. Similarly, a comparison of mean achievement scores of pre-test (20.35) and post-test (22.375) of the control group reveals that students taught through the traditional method didn't exhibit much improvement.
8. The results indicated an upward trend in the number of students under grade A with every progressive worksheet.
9. Similarly, there was a noticeable downward trend in the count of students under grades B, C, and D.
10. The findings revealed favourable responses from the students towards the developed program. According to them, the activities carried out during the program were meaningful and helpful in developing the science concepts.
11. Life skill education integrated with science topics helped students develop different skills necessary in life, such as communication, coping with stress, managing emotions, and interpersonal skills.
12. The activities proved to be an effective remedy for the students to understand the concept of science by observing, analyzing, and inferring the conclusion

themselves. In other words, the use of different activities helps students understand and comprehend the idea more effectively and improve their life skills.

13. Students felt the teaching-learning process adopted during the program made concepts easier to grasp.
14. 95% of the students opined that learning through activities was an entertaining and delightful experience. According to them, Such activities help in developing a concentration in uninteresting topics also, as during any activity most of the students were engaged in one or another task.
15. When asked about adequacy concerning the number of activities taken under different topics, 40% responded with a favourable response.
16. More than 50% of the students marked all the activities as exciting and enjoyable.
17. 75% of the students believe that a better understanding of science concepts could also help develop most life skills.
18. Most of the students responded, a better understanding of the concepts and relating science concepts with daily life situations, in response to the question, "What changes do you perceive in yourself after the program in terms of your understanding of science concepts?"
19. A remarkable number of students commented that the program helped create interest in boring topics, developed an interpersonal relationship while knowing each other during the activities, developed teamwork and team management, enhanced communication skills, developed inquiry skills, creativity, and thinking skills.
20. More than 80% of the students thought that both the subjects (Science and life skill education) could be proved as helping hand to each other for the better understanding of one another.

6.18 Implications of the Study

The study aimed to analyze the effectiveness of the integrated approach on both the subjects, i.e. science and technology, and life skill education. The findings of the survey highlighted the success of this practice of teaching-learning. In general, the results reflect the program's effectiveness, as students taught through life skill-based activities were statistically leading in achievement in science and technology subjects and outstanding in life skill performance, compared with students taught through the traditional skills method. Favourable responses from the students about the program suggested that the

activities triggered interest and curiosity and developed life skills among experimental group students. Considering the importance of the study in the field of both science and technology and life skill education, as well as, findings of the study, the following implications can be drawn from the survey:

1. Life skill-based activities integrated with science and technology subjects help students develop life skills and content knowledge of the topic.
2. In addition, the program guided students to understand any issue or topic from different perspectives by analyzing the pros and cons of that topic.
3. Students develop the skill of self-analysis, self-learning, and appreciating others' perspectives through teamwork.
4. Students apply concepts taught in the schools by relating those concepts of the regular curriculum with daily life situations, which eventually develop their understanding and curiosity for the subject.
5. Furthermore, such programs guide students to think critically and creatively, behave responsibly and confidently, use decision-making and problem-solving skills while facing life challenges.
6. The program will help and guide teachers while preparing such integrated approaches at any level of the teaching-learning process, even for specific learners.
7. It could be of utmost importance for the teachers and curriculum developers to prepare quality and need-based pedagogy for an effective teaching-learning process.
8. The researcher has integrated activities with the science subject, but it could be blended with any issues to make the content more exciting and skilful.
9. Such a program will also help teachers deal with the students' behavioural issues in a regular class.
10. The interactive strategies used by the researcher during and after the implementation of the activity can be used by the teacher to make the class more lively and arouse interest and curiosity among students.
11. The study authenticated that, if given a conducive and advantageous classroom environment to the students, any subject or topic could be made exciting and learnable.

6.19 Suggestions for Further Study

As reported by the number of research work and many commissions, the status of science education does not need any debate. Similarly, life skill education in India is still

surviving in darkness. The present study, as an integrated approach, was an initiative in this direction. The focus of the current work was to develop an integrated and activity-based program, implement that program and study its effectiveness in terms of achievement in science and technology subjects along with improvement in life skills among students. The review of literature and experiences gained during the study helped the researcher comprehend different perspectives that need further research and analysis. These were:

1. The researcher took science as a second subject for blending with life skills. A study may be taken up considering other issues also.
2. Preparing modules on concepts of different subjects relating to real-life situations and how to deal with those situations can be considered as an exciting study.
3. The researcher took the second stage for the experiment; a Similar Study may be undertaken at other education locations.
4. The researcher studied all the ten core life skills during the experiment. Considering single life skill can be further researched more profoundly, and its relationship with other skills or its relationship with science concepts can be taken up as a study.
5. The present study considered a few topics of science and technology; the complete syllabus may also be taken up for further research.
6. Further, the researcher took CBSE board students as a sample; more studies can be conducted at the state, national or international boards, and even at the college and university levels.
7. Going a step further, a study can be undertaken to survey the effect of such programs on the students while selecting a stream of education at the higher secondary level or the college level.
8. The role of parents in encouraging children to participate in subject-based life skill programs can also be studied.
9. A study can also be conducted to analyze the effect of subject-based life skill programs on children with special needs learning.
10. A critical study on the integration of life skill education in the regular school curriculum of CBSE schools can also be studied.

6.20 Conclusion

National Curriculum Framework (NCF, 2005) pointed out the importance of science education at secondary age by stating that at this age, students should be prepared to learn science as an integrated discipline with more advanced tools of learning, in particular, advanced technological modules and composite pedagogy. Further, the report also mentioned life skills as a necessity to meet the demands and challenges of everyday life. Like this, life skill education and science and technology are of utmost priority in the contemporary period. They were such a significant subject, in this day and age much-debated also. Notwithstanding that, the status of both the issues is yet abysmal. The integration of both the themes uplifted the inadequacies of each other and resulted in a positive outcome. Grover (2006) related life skill education with mathematics education and found satisfactory results.

In the present study, the researcher attempted to develop an activity-based program to enhance life skills and create a conceptual understanding of science and technology subjects among IX standard students of CBSE school. Different activities were framed on selected topics, keeping in view the learning needs of the students. The findings revealed that students were in favour of such classroom teaching-learning approaches. Learning outcomes in terms of achievement in science and technology subjects were also noteworthy.

To conclude, it could be stated that life skill-based activities, if applied in a regular classroom, could convincingly improve the teaching-learning process and yield desired results. Such efforts will produce a worthwhile and competitive generation who will behave responsibly, consider better and informed choices, and mark their presence in the development of society and the country.