SUMMARY, FINDINGS AND SUGGESTIONS

A resume of the present research is presented in this chapter. It gives an account of the objectives of the study, the outline of research design and the conclusions emerged from the findings obtained by the analysis of data.

The present study was planned mainly to develop life skills through select pedagogic strategies based on the prepared module at Higher Secondary level. The extent of knowledge of teachers on life skills and prevailing classroom teaching learning strategies and the needs of higher secondary school teachers in imparting life skills education in the classroom were recognized through survey method. A preliminary analysis of the data was attempted and tested the hypotheses formulated for the study. The study in retrospect is followed by a short description of the conclusions drawn from the study and a brief summary of the findings. The chapter concludes with implications and practical suggestions on the basis of the findings emerging from of the study.

7.1 Research in retrospect

The study is designed to develop life skills and environmental awareness among students. Investigator made an attempt to understand the various teaching learning strategies that are used by higher secondary school teachers for transaction of environmental education curriculum at higher secondary schools in Kerala. A module on life skills education and select pedagogic strategies for environmental education were also developed and their effectiveness has been tested through pre test post test non equivalent control group design.

7.2 Title of the Study

DEVELOPMENT OF LIFE SKILLS THROUGH SELECT PEDAGOGIC STRATEGIES AMONG HIGHER SECONDARY SCHOOL STUDENTS.
7.3 Objectives

1. To design and prepare a life skills education module (LSEM) on environmental education
2. To test the effectiveness of the life skills education module (LSEM) for developing life skills and environmental awareness among higher secondary school students
3. To examine the pedagogic strategies used by teachers for transacting environmental education at higher secondary level
4. To study the programmes and constraints in conducting life skills education at higher secondary stage
5. To suggest strategies for promoting life skills and environmental education at higher secondary level

1.8 Hypotheses

- There is no significant difference between the experimental and control groups in the pre test, post test and delayed post test scores of Life Skills Inventory
- There is no significant difference between the experimental and control groups in the pre test, post test and delayed post test scores of Environmental Awareness Test

7.5 Variables

The two levels of instruction – teaching with life skills education module and conventional method were the independent variable and life skills development and environmental awareness were the dependent variables.
7.6 Tools

The tools used for collecting data were the following

- Life Skills Inventory
- Environmental Awareness Test
- Questionnaire for Science Teachers

7.7 Methodology

The present study was intended to develop life skills through select pedagogic strategies among higher secondary school students by adopting Survey and Experimental methods. The study was conducted in Malappuram District, Kerala. Investigator selected 30 schools for conducting survey among teachers. The survey was conducted among 174 science teachers at higher secondary level to know the extent of awareness regarding life skills and to identify the different interactive pedagogic strategies used by teachers and the difficulties involved while implementing it in higher secondary classroom and a questionnaire was used for the purpose.

Investigator designed a life skills education module (LSEM) for the experimental phase of the study. The LSI and EAT was also prepared and validated by the investigator following the standard procedure prescribed. The experimental method was used to test the effectiveness of the developed module. The experiment was conducted at MSM HSS, Kallingaparamba, Malappuram. The experimental study was conducted on a sample of 116 higher secondary school students. The research design adopted for the experiment was pre-test post-test non equivalent control group design. Before the experiment, the LSI and EAT was administered as pre tests among both the groups. Investigator taught both the groups. In this design, the experimental group receives the treatment condition and both experimental and control groups were measured and compared on the life skills and environmental awareness for testing the significance of the difference. The results are stated and discussed below.
7.8 Major findings

- The study revealed that 96% of higher secondary school teachers are aware of the value of life skills education and its importance.

- High teacher people ratio coupled with work over load and it is the main difficulty in implementing interactive strategies in classroom.

- Most of the teachers (58%) used Lecture method, followed by Lecture cum discussion (23%) followed by group discussion (8%), lecture cum demonstration (6.9%), seminar (3.4%) and debate (0.6%) as per the findings of the teachers. It shows that the teachers are aware of many participatory learning strategies like role play, brainstorming, problem solving method etc and instead of using these strategies they are stick on to the lecture method because of its merits, wide coverage of portions in a crowded classroom and also to complete syllabus in time.

- Majority (97%) of the teachers think that it is essential to promote life skills in students

- Life skills are essential for the students to face the challenges in life according to 94 percent teachers.

- Environmental education is a suitable medium for developing life skills among the higher secondary school stage as per 84 percent of teachers.

- As per 62 percent of the teachers opined that the present curriculum is suitable to certain extent and 9 percent of teachers favoured the curriculum for promoting life skills. But 28 percent teachers opined that present curriculum is not at all suitable for developing life skills.

- However the teachers found that it is difficult to promote life skills with the present workload (70%).
Most of the teachers (71%) proposed to reduce work load and they should be given training in life skills. 11 percent teachers demanded that they should be given separate training in life skills. 8 percent of teachers claimed that the curriculum should be restructured for incorporating life skills, 5 percent teachers agreed that there should be separate curriculum for life skills and 3 percent teachers suggested appointing separate teachers for giving training in life skills.

71 percent of the teachers claimed that lack of specific curriculum; instructional materials and time were impeding the programmes for developing life skills. 8 percent of teachers opined that non availability of instructional materials, 5 percent teachers said that the difficulty to develop life skills is lack of specific curriculum and a few percent of teachers 3 and 2.8 percent respectively indicated that it is due to lack of cooperation and lack of facilities in the schools. 5 percent teachers point out the negative attitude of parents.

The life skills component self awareness showed a significant difference in the post test and delayed post test showed the retention capacity of life skills education module.

While for the component empathy it showed highly significant difference among control and experimental group for the post test. But for delayed post test it did not showed any significant difference among experimental and control group. This result revealed the non retention power of component empathy.

Critical thinking showed high significant difference in favour of experimental group in post test. The delayed post test showed no difference among two groups established the non retention power of the component critical thinking.
The fourth component of life skills creative thinking showed high significant difference in advantage to the experimental group in both post test and delayed post test.

As that of creative thinking, the problem solving skill also showed significant difference at 0.01 levels in favour of experimental group.

The decision making did not showed any significant difference in both post test and delayed post test.

For the component Interpersonal relationship the post test showed no significant difference among experimental and control group. Contrary to post test, the delayed post test showed significant difference at 0.01 levels.

The communication skill of students made a significant difference at 0.01 levels for both post test and delayed post test.

The stress management also like the communication skill portrayed a high significant difference in favour of experimental group.

The composite score on life skills portrayed highly significant difference among the experimental group and it is in advantage to experimental group.

The summary of results of each component of life skills in post test and delayed post test is presented in the table 7.1

Table 7.1
Summary of Results on components of Life Skills

<table>
<thead>
<tr>
<th>Life Skills</th>
<th>Post test</th>
<th>Delayed Post test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level of Significance</td>
<td>Level of Significance</td>
</tr>
<tr>
<td>Self awareness</td>
<td>.05</td>
<td>.05</td>
</tr>
<tr>
<td>Empathy</td>
<td>.01</td>
<td>NS</td>
</tr>
<tr>
<td>Critical thinking</td>
<td>.01</td>
<td>NS</td>
</tr>
<tr>
<td>Creative thinking</td>
<td>.05</td>
<td>.01</td>
</tr>
<tr>
<td>Problem solving</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>Decision making</td>
<td>NS</td>
<td>NS</td>
</tr>
<tr>
<td>Interpersonal relationship</td>
<td>NS</td>
<td>.01</td>
</tr>
<tr>
<td>Communication skill</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>Stress management</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>Total sample</td>
<td>.01</td>
<td>.01</td>
</tr>
</tbody>
</table>
The results illustrated that all the components were shown a significant difference for the post test except the decision making and interpersonal relationship.

- The delayed post test represented that all of the components of life skills were significant except for empathy, critical thinking and decision making.

- The decision making skill did not shown any significant difference on both the post test and delayed post test.

- The gain scores Life Skills Inventory was found to be significant at 0.01 levels and the mean gain score of the experimental group is greater than that of the control group establish that the experimental group is an edge over the control group in the life skills.

- The performance of experimental and control group on post test of Environmental awareness test were dissimilar and it was in favour of experimental group. Hence, this group can be considered to be advantageous over the control group in the case of Environmental awareness test.

- The mean gain scores of Environmental awareness Test are found to be significant at 0.01 levels. As high mean gain scores are seen associated with the experimental group and it indicates the advantage of experimental group over control group.

- High retention scores in Environmental awareness were seen associated with the experimental group suggests that experimental group have advantage over the control group with regard to delayed post test scores.

- The treatment given to the Experimental group has long term effect and it is significantly superior in developing Environmental awareness among students.
The critical ratios of environmental awareness test indicated significant difference in mean post test scores, gain scores and delayed post test scores between Experimental and control group. In all comparisons, experimental group show advantage over the control group.

7.10 Educational implications

The study has wide implications in the educational sector. The findings of the study can be used by educators to make revolutionary change in all fields. From the study it is learned that though the teachers were aware of life skills and its importance they are not capable of effectively imparting life skills education classes. Also, the survey among teachers revealed that there is dire need of life skills education materials. In this context the module developed by the investigator on life skills will surely help them to mitigate the problem. Moreover, this module helps the educational practitioners in designing and implementing life skills education classes within the school set-up.

The effective implementation of life skills education classes help students to think critically about issues of their life, use their decision making and problem solving skill for taking crucial decisions with confidence. No doubt, the life skills should empower the students to face the challenges of both life and society. Further, the duration of the life skills education is a factor in developing and retaining the life skills, so the implication is imparting life skills education from the beginning of school stage for a longer period of time at all levels. The implications for teachers are evident that this module can very well be used by teachers with their convenience in the classroom. Lastly, students benefit from the life skills education classes and they can become a part of national development by realising their inner potential. The interactive pedagogic strategies used in the module can be used by teachers of all subjects for effective transaction of the content in the classroom.
7.11 Suggestions for promoting Life Skills Education

The present study revealed that life skills education was not given proper attention at higher secondary level. For promotion of life skills education, there is a need of instructional materials for the teachers and efforts should be taken to give training in life skills education for both in-service and pre-service teachers. There is an urgent need to integrate life skills education in the curriculum of teacher education and the prospective teachers should be trained in imparting life skills education effectively. Life skills education promotes life skills of prospective teachers which will in turn help them to improve teacher-pupil relationships, better academic performance and quality output. Moreover if a teacher trainee has mastered the concept of life skills and the knowledge of developing and promoting life skills; it will sequentially pass on to several students which he/she come across in teaching learning process. So it is imperative to introduce life skills education in teacher education curriculum to develop competent and creative teachers and also a worthwhile generation of students.

There is a specific need to take efforts to promote life skills education at all levels of education, starting from primary to tertiary levels. Effective measures should be taken for integrating life skills education while revising the present higher secondary curriculum. The present study revealed that lack of instructional materials is also a major constraint in imparting life skills education. So there should be adequate supply of materials in the form of modules, CDs and booklets for teachers. The teachers should be given training in pedagogic strategies, especially in cognitive apprenticeship, role play, brainstorming, concept mapping, debate and futures wheel which were proved to be effective in developing life skills among students.

Government agencies like NCTE, SCERT and NCERT should take active interest in promoting life skills education by supplying instructional modules and packages and by providing financial assistance as and when required. Research and experiments in Life skills education shall be promoted and the teachers shall be made aware of the findings of research.
7.12 Suggestions for further research

- One area of future research is required on the enhancement of life skills among tribal students in Kerala.
- The other area of future research is developing life skills among students with special needs both the gifted and disabled children.
- Life skills education research can be undertaken the prospective teachers of college of education.
- Life skills education can be introduced to students of distance education programmes of open schools in India.
- LSEM can be used on nationwide samples and their follow up effect on the higher education and career of students can be assessed.

7.13 Conclusion

The younger generations are future assets of any nation. So it is the responsibility of every teacher to empower their students and make them to realize their potential and help them to optimum utilize their inner strength. This research on developing life skills through select pedagogic strategies provides guidance for effective implementation of life skills education classes. The present study examined the various interactive pedagogic strategies that teachers are using in the classroom and the difficulties faced by them for implementing it. The study revealed that though they are aware of many interactive strategies, it is very difficult for them to implement in the large crowded classroom. The teachers also unaware of how to inculcate life skills among students and there is dire need of instructional materials for developing life skills. The experimental treatment proved the effectiveness of prepared module for developing life skills and environmental awareness. The developed life skills education module contributes information on interactive strategies for effective transaction of curriculum. When implemented systematically in real classroom set-ups, it can enhance students’ life
skills and support positive behaviour. The teachers who are using this module could convincingly improve their teaching learning process in the classroom. The investigator would consider herself honoured if the findings of the study were used by teachers, educationists and policy makers for improving the current teaching learning practices in classroom and for conducting more extensive researches on life skills. This attempt will definitely produce worthwhile and competitive generation who will lead our country into progress.