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Life skills in relation to achievement in genetics among eleventh standard students

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Abstract

Life skills play an important role to promote all the traits of people including social, physical, behavioural and mental well being. The perception about life skills has received a lot of attention by the experts from various fields. The values of Life skills are desirable for adolescence to eliminate the obstacles and preparing them for the challenges of life. Life skills help them to bring positive contribution by the academic performance. The present study highlights how life skills training promote achievement among the adolescence students. The objective of the present study was to investigate the effectiveness of life skills training on academic achievement and achievement in genetics among eleventh standard students. The sample comprised of 64 students from Government school. Modules on Genetics based on Life Skills and Achievement test in genetics were prepared by the investigators. The life skills are taught with different methods chosen by the investigators. Experimental group received pre-test with life skills treatment and control group was not given the treatment and pre-test. Post-test was given to both the groups. The result revealed that the 'treated group' has scored better than the control group on Academic achievement and Achievement in Genetics with the influence of pre-test. It may be concluded that life skills methodology is an effective training to bring positive outcomes within the adolescents.

Keywords: Life skills training, adolescence, achievement in genetics, academic achievement

1. Introduction

In the school years, adolescence period is a crucial one. Depression, anxiety, lack of ability to understand the content and behavioural problems are challenging factors faced by the adolescents. Many researchers found that life skills education play a vital role in the stage of adolescence for protecting them from their difficulties. Life skills are abilities that help us to adapt and behave positively so that one can deal effectively with the challenges of everyday life (World Health Organization, 1993) [18]. It promotes mental health and competence among the learners. Each learner is unique and their needs are different. Life skills build confidence and positive values within the learners to communicate and collaborate with others and shape their behaviour. Life skills education always merges with science education to support 21st century skills (National Science Teachers Association 2004) [10]. Life skills education and Science education prepare the learners for developing their own skills and practical knowledge to sustain their academic achievement. Life skills is the essential need to transform the learners' knowledge across the boundary. The present study highlights how life skills training improve the academic achievement and achievement of eleventh standard students in genetics.

1.1 Life skills

Life skills are the skills that enable the students to find out their own identity and make them as an independent learner.

1.2 Achievement test in Genetics

It refers to achievement of the students from the lesson 'Genetics, after the period of training.

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1.3 Academic achievement

Academic achievement is the outcome of the students from various domains of learning activities.

1.4 Prior studies

Yadav and Iqbal (2009) [19] studied the impact of life skill training on self-esteem, adjustment and empathy among adolescents. The result revealed that subjects improved significantly in post condition on self-esteem, emotional adjustment, educational adjustment, total adjustment and empathy. Prajina, P.V and Premsingh, J. G (2015) [12] found that the tribal children possess less life skills, score comparatively less percentage of academic scores and also found that life skills and academic achievement are positively correlated. Fallahchai (2012) [6] expressed that the students who had received academic and life skills training gained significantly higher scores in life skills and academic achievement than those with no training. Balasundari and Benjamin (2014) [2] showed that there was significant Relationship between life skills and academic achievement of high school students in karaikudi region. The students who had received life skills and Academic training gained significantly higher scores in life skills and academic achievement.

2. Methodology

2.1 Research Question

The present study attempted to answer the following question.

Does training in Life skills improve the achievement in Genetics and academic achievement among the students from eleventh standard?

2.2 Objective of the study

To investigate the effectiveness of life skills training on achievement in genetics and academic achievement among eleventh standard students

2.3 Hypotheses

There is no significant difference in mean scores of achievement in genetics and academic achievement between the pupils given 'Life-skills' training with pre-test and the pupils was not given the same.

2.4 Sample

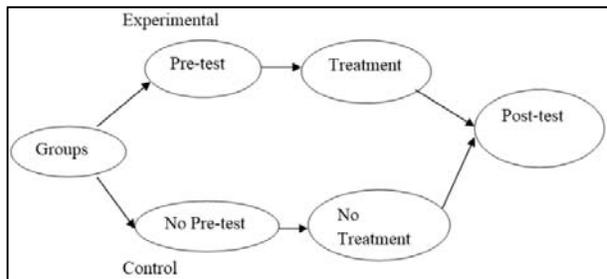
The sample consisted of 64 eleventh standard biology group students from Government schools in Chennai. Random sampling technique was used.

2.5 Tools used for this study

Modules on Genetics based on Life skills was developed and standardized by the investigators and public exam marks from tenth standard has been taken as an academic achievement marks. Achievement Test has been developed for 50 marks from the lesson 'Genetics'. The reliability of the tool was found to be 0.71.

2.6 Research Design

Two group pre-test, post- test comparison design has been followed to measure achievement of the students. One experimental group and one control group was adopted. Pre-test was given to experimental group only and Post test was applied to both groups simultaneously.



The data for the present study have been collected from Government higher secondary schools. Modules were prepared using 'Genetics' lesson taken from text book which has five contents namely Multiple Alleles, Quantitive inheritance, Sex Determination, Sex - linked Inheritance and Pleiotropy. The contents were designed by selecting life skills namely, communication, critical thinking, creative thinking and problem solving. Lessons were taught by life skills which had different methodologies to bring sustainable achievement among the students.

3. Analysis and Interpretation

3.1 Statistical Techniques: Mean and Standard Deviation is used to verify this hypothesis.

Table 1: Mean scores of Achievement in Genetics and Academic achievement of experimental and control groups

Variables	Groups	N	Mean	SD	
Achievement in Genetics	Pre-test	Experimental	32	28.81	5.916
		Control	-	-	-
		Total	32	28.81	5.916
	Post-test	Experimental	32	47.91	1.174
		Control	32	30.75	4.096
		Total	64	39.33	9.148
Academic Achievement	Experimental	32	355.13	60.301	
	Control	32	353.22	53.431	
	Total	64	354.17	56.524	

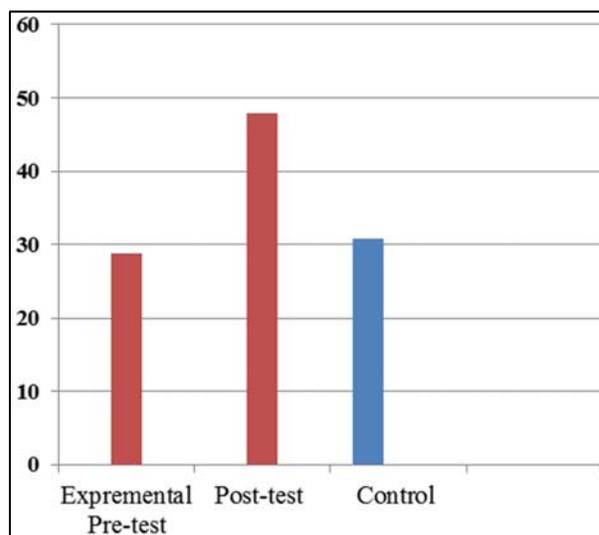


Fig 1: showing the result of Achievement in Genetics between experimental and control groups

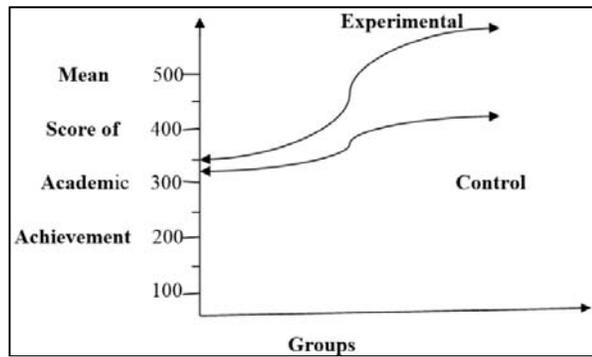


Fig 2: Academic Achievement of experimental and control groups.

From the above table and graphical diagrams, the mean scores of achievement in genetics and academic achievement showed that the experimental group treated by life skills and pre-test, has scored higher than the 'control group' which used only the traditional method. It may be concluded that using innovative methodology in learning process brings positive outcomes among the learners at all levels.

3.2 Important finding

There is a significant difference in mean scores of achievement in genetics and academic achievement between the pupils given 'Life-skills' training with pre-test and the pupils who were not given the life skills training and pre-test.

4. Discussion

The result of the present study revealed that the students who were in experimental group have scored higher level of achievement in genetics and academic achievement than the students who were in control group which agreed with the result of Balasundari and Benjamin (2014) [2] who found that the students who had received life skills and Academic training gained significantly higher scores in life skills and academic achievement. The result was also supported by Amirian (2012) [1] who found that teaching the problem-solving, self awareness, coping with stress skills separately, these three factors together have an impact on students' academic achievement and there are significant differences between them.

5. Educational Implications

Life skills is the survival skills' and foundation for all contexts of our life by developing responsibility, competence, relationship, behaviour and achievement. It is vital to make awareness among the students about life skills and its importance in daily life. It creates holistic development within the learners to get academic success. The awareness about Life skills is important for teachers as well as parents to promote mental well being among the learners in all walks of life. It helps them to increase their academic success and multidisciplinary actions. Students also have to realise the value of life skills to make their life safe, secure and employability. Teachers should address the benefits of life skills to build confidence, social relationship, behaviour, new ways of thinking, decision making and problem solving among them.

Central Board of Secondary Education has followed life skills education in their curriculum through various activities and methodologies. State Government should

strictly follow the life skills education and activities at school level to generate curiosity and active participation among the learners. It will reduce the level of stagnation and wastage. The essential role of our Government is to make possible changes in the educational policy as well as implementing the same at school level. The policy should consider the role of psychologist at school level to reduce the stress, family issues and poor academic performance of the students. They should teach the importance of life skills and how it brings mental health and positive attitudes to get sound academic achievement.

6. Conclusion

The findings of the present study confirmed that training with life skills is a promising methodology to teach the content well. Life skills training are a participatory process which makes active learning, enthusiastic participation and meta cognitive ability among the learners for their academic performance and achievement. It can be concluded that life skills and academic achievement are interdependent and inter-related. Hence it is necessary to make possible changes in the curriculum and teaching and learning methodology to bring holistic achievement among the learners.

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