BOPPPS Model Based Instruction for Fostering Self Awareness among Students of Secondary School Level

Dr. Sheenu G S*, Prof. (Dr.) Issac Paul**
*Assistant Professor, Kerala University College of Teacher Education, Kollam, India.
Email. sheenugs.1976@gmail.com
**Professor, GCTE ,Thycaud, Thiruvananthapuram, Kerala
Email. chenal4u@gmail.com

Key words: **BOPPPS Model, Self Awareness**

Abstract

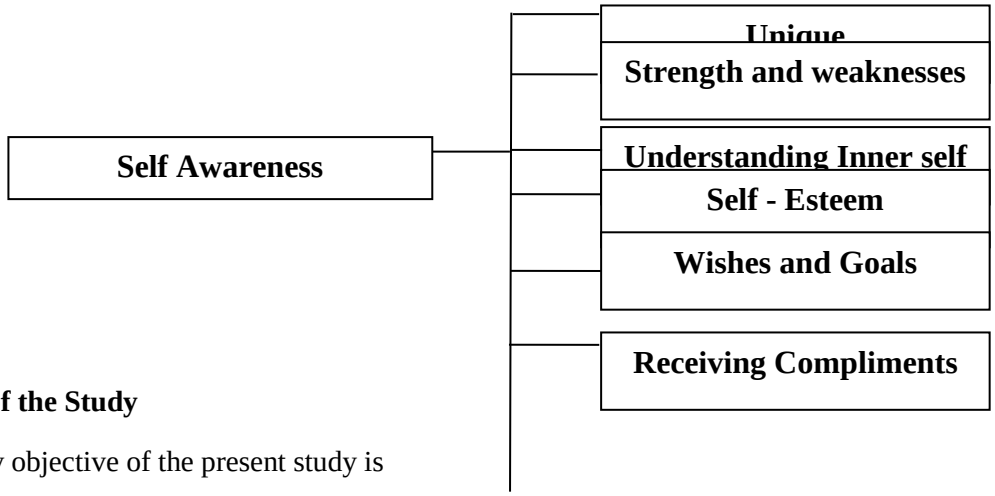
The investigation aims to determine how BOPPPS Model based instruction foster Self Awareness among the students at secondary school level. Using a pre-test post-test non-equivalent comparison group design, the current investigation was created as a quasi-experimental examination. Experimental and control groups were created from a random sample of sixty secondary school students in the Kollam district of Kerala, India The control group received the prevailing modes of curricular transaction whereas the experimental group received BOPPPS Model based instruction. Prior to and following the intervention, a Self Awareness inventory was given as a pre-test post-test. The study's findings indicate a substantial difference between the experimental and control groups' mean post-test scores in terms of Self Awareness, with the experimental group's mean scores being considerably higher than the control group's. This proved that the experimental treatment which included a BOPPPS Model based instruction was successful in fostering secondary school students to strengthen their Self Awareness.

Introduction

In the present study, the investigator developing a participatory learning program with the support of BOPPPS Model for secondary school students and compared their effectiveness in terms of Self Awareness. BOPPPS teaching model is the most common, successful and established model for creating high quality learning. BOPPPS model was first proposed by Douglas Kerr (1978) of University of British Columbia. The teaching concept of BOPPPS model divide the classroom teaching into Bridge-in, Outcomes, Pre assessment, Participatory learning, Post assessment and Summary. The developed program, if found effective, would be of great use to secondary school teachers in fostering Self Awareness. Self Awareness includes recognition of 'self'. Our character, our strengths and weaknesses, desires and dislikes. Developing Self Awareness can help us to recognize when we stress or feel under pressure. It is often a prerequisite to effective communication and interpersonal relations, as well as for developing empathy with others. No two individuals are alike. Everyone is unique. All individuals have likes and dislikes which are unique to each. All of us are born with different natural strengths and weaknesses that are a part of our personality. Sometimes we may worry about how others perceive us. A correct understanding about our inner self - the core of our existence can contribute positively for us to have

an authentic life. Self Esteem increases our confidence. To face the challenges and opportunities productively one should have belief in oneself. We all do set some goal for ourselves. A plan is necessary to accomplish our goals because without a plan, goal is just a wish. Giving and receiving compliments is important for all children to develop self esteem and respect for others.

Elements of Self Awareness



Objective of the Study

The primary objective of the present study is

To test the effectiveness of BOPPPS Model based instruction for fostering Self Awareness among Students of Secondary School Level

Hypothesis of the Study

BOPPPS Model based instruction is effective in fostering Self Awareness among Students of Secondary School Level

Methodology in Brief

The current study compared the effectiveness of BOPPPS Model based instruction and prevailing activity oriented mode on Self Awareness of Secondary School students, hence used an experimental approach. The present investigation was designed as a Quasi- Experimental study, using the Pre-test-Post –test Non-equivalent Comparison Group Design. In the experimentation phase pre-test post-test non-equivalent group design was adopted to assess the effectiveness of BOPPPS Model based instruction. The random sample of 60 Secondary School students of Kollam District, Kerala was categorized as one experimental group and one control group. The experimental group was treated with BOPPPS Model based instruction and control group with the prevailing activity-oriented modes of curriculum transaction. A Self Awareness inventory was administered as pre-test post-test before and after the treatment of independent variable. The experiment was conducted during normal hours at the select institution. The scores synthesized through the pre-test and post-test were inquest quantitatively to ascertain the effectiveness of BOPPPS Model based instruction.

Statistical Techniques of the Study

- Inferential statistics like Independent sample t-test to determine the significance of the difference between the students' perception.

- Analysis of variance (ANOVA) to determine whether there is a significant difference between the experimental group and control group, BOPPPS Model based instruction over prevailing activity oriented mode for the Self Awareness scores (Pre-test, Post-test and gain scores).
- Analysis of Covariance (ANCOVA) used to test the comparative effectiveness of the BOPPPS Model based instruction over prevailing activity mode for Self Awareness post-test scores with pre-test scores as covariance.

Analysis and Interpretation

Analysis of the collected Data to find out the Effectiveness of BOPPPS Model based instruction for fostering Self Awareness among students of Secondary School Level

The t-value, using the test of significance of difference between means were calculated and tested for significance. The mean and standard deviation of the pre-test scores of Experimental and Control groups with respect to Self Awareness were subjected to test of significance of difference.

Table I. Results of Test of Significance of Difference between the mean Pretest scores of Experimental and Control group with respect to Self Awareness.

Variable	Group	Size	Mean	SD	T value	P
Self Awareness	Experimental	30	43.76	6.52	0.937	P>0.05
	Control	30	42.20	6.42		

From the table t, for df (1,58), t0.05 = 2.001

Table I shows that the t- value obtained for Self Awareness was not significant even at 0.05 level. Hence, there were no significant difference between the mean pre-test scores of Experimental and Control groups with respect to Self Awareness. This indicated that the pre-Experimental status of the students in the Experimental and Control groups were the same with respect to Self Awareness.

The mean and standard deviation of the post test scores of Experimental and Control group with respect to Self Awareness were subjected to test of significance of difference.

Table II. Results of Test of Significance of Difference between the mean Post test scores of Experimental and Control group with respect to Self Awareness

Variable	Group	Size	Mean	SD	T value	P
Self Awareness	Experimental	30	58.60	2.85	5.08	P<0.05
	Control	30	51.96	6.54		

From the table t, for df (1,58), t0.05 = 2.001

Table II shows that the t- value obtained for Self Awareness was significant at 0.05 level. Hence, there were significant difference between the mean pre-test post test scores of Experimental group and Control Group with respect to Self Awareness.The mean post test score of Experimental group was significantly higher than that of the mean post-test scores of the Control group. This clearly proved that the Experimental treatment using BOPPPS Model based instruction was effective for fostering Self Awareness of secondary school students.

The mean gain scores of the Experimental and Control group with respect to Self Awareness were found out and compared for significance of the mean difference between the independent samples. The details of the analysis is given in the Table III.

Table III Results of Test of Significance of Difference in Mean Gain Scores of Experimental and Control Group with Respect to Self Awareness

Variable	Group	Size	Mean	SD	T value	P
Self Awareness	Experimental	30	14.80	7.01	2.28	P<.05
	Control	30	9.76	9.89		

From the table t, for df (1,58), t0.05 = 2.001

Table III shows that the t – value obtained for Self Awareness was significant at 0.05 level. Hence there were significant differences in the mean gain scores of the Experimental and Control groups with respect to Self Awareness.. The mean gain score of Experimental group was significantly greater than the mean gain score of Control group with respect to Self Awareness. This clearly proved that BOPPPS Model based instruction was more effective for fostering Self Awareness of students at secondary school level.

By using single factor ANCOVA, the investigator studied the relative effectiveness of BOPPPS Model based instruction and Activity Based Instruction on Self Awareness. Before proceeding to Analysis of Covariance (ANCOVA), the scores were subjected to Analysis of Variance (ANOVA). The summary of the results of ANOVA are given in Table IV

Table IV. Summary of Analysis of Variance (ANOVA) of Pre test (x) and Post test (y) scores in Experimental and Control groups with respect to Self Awareness

Variable	Source of Variation	df	SSx	SSy	MSx (Vx)	MSy (Vy)	Fx	Fy
Self Awareness	Between Groups	1	36.817	660.017	36.817	660.017	.878	25.89
	Within Groups	58	2432.167	1478.167	41.934	1478.167		
	Total	59	2468.983	2138.183				

From the table of F, for df (1/58), F0.05 = 4.006

Table IV shows the Fx value and Fy value obtained for Self Awareness. The Fx value was less than the table value and hence was not significant at 0.05 level. This indicated that there was no significant difference between pre-test scores of the Self Awareness of Secondary School Students in the Experimental and Control groups. The Fy value obtained was greater than the table value and hence was significant at 0.05 level. The significant Fy value indicated that the Experimental and Control groups differ significantly in the post test scores with respect to Self Awareness. For correcting the post test(y) scores for the difference in the pre-test(x) scores, the adjusted sum of squares and mean square variances for post test scores were computed and F-ratio was calculated. Hence ANCOVA was adopted and its summary is shown in Table V

Table V. Summary of Analysis of Covariance (ANCOVA) of pre-test (x) and Post test (y) Scores in Experimental and Control Groups with Respect to Self Awareness

Variable	Source of Variation	df	SSx	SSy	MSx (Vx)	MSy (Vy)	Fyx
Self Awareness	Between Groups	1	36.817	660.017	673.051	673.051	26.189
	Within Groups	58	2432.167	1478.167	1464.904	25.70	
	Total	59	2468.983	2138.183			

All Fyx values were significant at 0.05 level. From the table of F, for df (1/57), $F_{0.05}$= 4.009

Table V. shows that the Fyx value obtained for Self Awareness was greater than the table value and hence were significant at 0.05 level. The Fyx value for the adjusted post test score showed that the final scores of the Experimental and Control groups differ significantly. The adjusted means for the post test scores of the students in the Experimental and Control groups were computed using correlation and the results are tabulated in the Table VI

Table VI. Adjusted Means for the post test scores of students in the Experimental and Control group with respect to Self Awareness

Variable	Groups	N	Mx	My	Mxy	SEm	t value	Level of Significance
Self Awareness	Experimental	30	43.76	58.600	58.658	.929	7.26	p<0.05
	Control	30	42.20	51.966	51.909	.929		

All the t values were significant at 0.05 level. From the table of t, for df (1/57), t0.05 = 2.003

Table VI shows that all the t-value obtained for Adjusted Means for the post test scores of students in the Experimental and Control groups with respect to Self Awareness were significant at 0.05 level. As the adjusted mean score of the Experimental group was significantly higher than that of the Control group, Self Awareness of the Experimental group was better than that of the Control group. Thus, it was concluded that BOPPPS Model based instruction was more effective than Activity Based Instruction for fostering Self Awareness among students at Secondary School Level.

Findings and Conclusions

The major findings that have emerged from the study are listed below

BOPPPS Model based instruction for fostering Self Awareness among students at Secondary School Level

The t- value obtained for the means of pre-test score of Self Awareness was 0.937 and the value was not significant even at 0.05 level. Hence, there was no significant difference between the mean pre-test scores of Experimental and Control group with respect to Self Awareness. This indicated that the pre-Experimental status of the students in the Experimental and Control groups were the same with respect to Self Awareness. The t-value obtained for the means of post test score of Self Awareness was 5.08 and the value was significant at 0.05 level. Hence, there were significant differences between the mean post test scores of Experimental and Control group with respect to Self Awareness. The mean post test scores of Experimental group were significantly higher than that of the mean pre-test scores of the Control group. This clearly proved that the Experimental treatment using BOPPPS Model based instruction was effective for fostering Self Awareness among Students at Secondary

School Level. The t – value obtained for the mean gain score for Self Awareness was 2.28 and the value was significant at 0.05 level. Hence there were significant differences in the mean gain scores of the Experimental and Control group with respect to Self Awareness. The mean gain score of Experimental group (14.80) was significantly greater than the mean gain score of Control group (9.76). This clearly proved that BOPPPS Model based instruction was more effective for fostering Self Awareness among students at Secondary School Level. From the analysis using ANOVA, the Fx value for Self Awareness was 0.878. Since the value is less than the table value required, Fx value is not significant at 0.05 level of significance. This reveals that there is no significant difference between the pre test scores on Self Awareness of the students in Experimental and Control group.

The Fy value for Self Awareness was 25.89, significant at 0.05 level. The significant Fy value indicated that the Experimental and Control groups differ significantly in the post test scores with respect to Self Awareness. Since the sample selected for the present study was intact classroom groups, it cannot be conclusively said that these groups differed significantly by merely comparing the post-test scores or gain scores of Experimental and Control group. So, when the post-test scores of the Experimental and Control group were compared using ANCOVA, the Fyx value for Self Awareness was 26.18. The significant ratio shows that the mean post test scores of self Awareness of Experimental and Control group differ significantly after they were adjusted for the difference in the pre-test scores. The difference in the adjusted means for post-test scores of Self Awareness of Experimental and Control group were tested for significance and the t-value obtained was 7.26 which was significant at 0.05 level. This reveals that there is significant difference in the adjusted means scores on Self Awareness of Experimental and Control group. This leads to the conclusion that BOPPPS Model based instruction is significantly effective in fostering Self Awareness among Students at Secondary School Level. Hence the hypothesis is substantiated.

References

[1] Arunrung, Phaphaphasid. (2020). Development of participatory learning activities to enhance life skills for children and youth along the Ladpraow Watersides's community. http://medwelljournals.com/abstract/doi=ssience 2020.95.102 .

[2] Lynne. (2014). Influences on teachers' use of participatory learning strategies in health education classes. Health Education Journal, v73n6p702-713. http://sagepub.com.ej1044577

[3] Carvalho H,West,C.A.(2011). Voluntary Participation in an Active Learning Exercise Leads to a Better Understanding of Physiology. Advances in Physiology Education, 35(1)53-58.

[4] Goria et al.(2023) A Participatory pedagogical model for online distance learning: ideation and implementation. Erick: EJ1375873 V24n1 Article 9 p145-161

[5] Hicks, A., & Sinkinson, C. (2021). Participation and presence: Interrogating active learning. Portal: Libraries and the Academy, 21(4), 749-771.

[6] Kaur,M.(2014). Life skills among school going adolescents in relation to certain personal variables: MIER Journal of Educational studies, Trend & Practices, November 2014, v4, n2p218-230.

[7] Lin, C. C., & Tsai, C. C. (2012). Participatory learning through behavioral and cognitive engagements in an online collective information searching activity. International Journal of Computer-Supported Collaborative Learning, 7, 543-566.

[8] Marzano et al.(2019) Online Participatory Learning for low- qualified adult learners. International journal of web based learning and teaching technologiesv14n2 Article 4 p50-66

[9] Nurwalidah. (2018).The implementation of life skills – oriented participatory learning strategy to improve reading and writing skills. http://Knepublishing.com/index.php/Kne-social/article/view/2695/5816

[10] Prajina, P. V., & Premsingh, G. J. (2015). A study on life skills in relation to the academic achievements of tribal children. International Journal of Recent Scientific Research,6(8), 5722-5724.

[11] Surma, (2017) Life skills counselling for enhancing the personality of high school students. http://hdl.handle.net/10603/200801

[12] Subita,G.V.(2013). Current Educational System Imparting Life Skills Education. http://www.indiaeducationreview.com

[13] Sung, Y. (2009). The Effect of Social Skills on Academic Achievement of Linguistically Diverse Elementary Students: Concurrent and Longitudinal Analysis (Doctoral dissertation, Virginia Tech).

[14] Shalby P, Jose. (2016). A Study on the Effect of Cognitive Apprenticeship Model on Achievement Select Thinking Skills and Social Skills Among Commerce Students of Higher Secondary Schools in Kerala State. [Doctoral Dissertation, KannurUniversity].Shodhganga@INFLIBNET.http://hdl.handle.net/10603/316908

[15] Vyas, T., & Gunthey, R. (2017). Emotional Maturity and Self Confidence among Adolescent Students. International Journal of Indian Psychology5(1).

[16] Yadav, P., & Iqbal, N. (2009). Impact of life skill training on self-esteem, adjustment and empathy among adolescents. Journal of the Indian Academy of Applied Psychology35(10), 61-70.