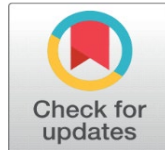


HAPPINESS THROUGH CONCEPT MAPPING STRATEGY: AN EXPERIMENT WITH SOCIAL-SCIENCE STUDENTS

Richa Sharma¹✉, Dr. Anjali Dashora²✉

¹ Research Scholar, Faculty of Education, Pacific Academy of Higher Education and Research University, Udaipur, Rajasthan-313003

² Assistant Professor, Faculty of Education, Pacific Academy of Higher, Education and Research University, Udaipur, Rajasthan-313003



Corresponding Author

Richa Sharma,
richasharmaapsgroup@gmail.com

DOI

[10.29121/shodhkosh.v5.i1.2024.1957](https://doi.org/10.29121/shodhkosh.v5.i1.2024.1957)

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Copyright: © 2024 The Author(s). This work is licensed under a [Creative Commons Attribution 4.0 International License](https://creativecommons.org/licenses/by/4.0/).

With the license CC-BY, authors retain the copyright, allowing anyone to download, reuse, re-print, modify, distribute, and/or copy their contribution. The work must be properly attributed to its author.



ABSTRACT

Happiness could also be learned from the outside because the schemas of our brains are customized for positive connections with happiness and others (Celestine, 2022). Therefore, the present study explored the effect of concept mapping strategy on the happiness level of IX-grade social-science students of the U.P. board school. The researcher employed the Quasi-Experimental Method of research with a Pretest-Posttest Randomized Experimental Design. The study utilized a sample of 66 students through purposive sampling and a standardized Oxford Happiness Questionnaire (OHQ) developed by Hills and Argyle (2002) was employed to assess the happiness level. The experimental group was taught using developed instructional material on concept mapping strategy and the control group was through lecture-cum-demonstration method. The Independent Samples t-Test revealed a significant effect of the concept mapping strategy on the happiness level of the secondary-level students. It could be inferred that the concept mapping strategy is much superior to the lecture-cum-demonstration method for ensuring significantly improved happiness level of secondary-level students of social-science subject. This research suggests that using concept mapping teaching strategy with the use of introductory videos could help students feel happier, which would ultimately improve their overall academic performance.

Keywords: Concept Mapping Strategy, Concept Maps, Happiness, Social-Science Teaching, Education

1. INTRODUCTION

Happiness is the overall subjective experience that comes from our positive emotions. Moreover, happiness is a personal experience for everyone, and how we share, act, and express the value of happiness for all people ultimately determines how happy the world is (Celestine, 2022). It is clear that happiness comes from our positive emotions, hence it is an individual experience. Happiness could also be learned from the outside because the schemas of our brains are customized for positive connections with happiness and others (Celestine, 2022). This means learning to be happy could be game game-changing move in our daily lives because the importance of happiness in one's life is self-explanatory. In order to discuss the importance of happiness construct in our lives, Brooks (2020) claimed that there has been a significant increase in scientific research on happiness over the past three decades. Even Nobel Prize winners Daniel Kahneman and Angus Deaton, who both teach at Princeton University, have researched happiness and have produced extensive essays and research on the topic. If we talk about the factors responsible for measuring happiness, Ryan and

Deci (2001) outlined them as: lack of negative emotions, the presence of pleasant emotions, and life happiness. The University of Pennsylvania even launched a positive psychology graduate degree program. Martin Seligman, one of the most renowned social psychologists in the world, oversaw this graduate program. The peer-reviewed Journal of Happiness Studies has been published since 2000 and is well-regarded in the academic community. Now the question is which factors are responsible for happiness, hence to answer this, the underlying causes of happiness were examined by Dfarhud, Malmir, and Ahmadi (2014) in two dimensions: the first was endogenic factors, which included sub-factors like personality, cognitive, biological, and ethical; the second was exogenic factors, which included sub-factors like behavioral, social-cultural, economical, geographical, life events, and aesthetics. They claimed that the important determinants of happiness are biological sub-factors from the endogenic dimension. Hence, the happiness construct is worth studying to explore other untouched aspects of it. Concept mapping strategy is also an important construct in the present study and its effect was examined on the happiness level of IX-grade social-science students studying in the school affiliated with the U.P. board of education.

According to Cornell University (2023), concept maps are a potent tool for comprehending relationships among ideas; these understood linkages are visually displayed, which can aid in learning course material at a deeper level and improve retention.

Concept maps are diagrams that construct interconnections between various ideas so that users may understand the connections between them. Concepts and relationships are the two primary components of any concept map, regardless of complexity. Concepts are represented by boxes, ovals, or circles called nodes, while relationships are represented by arrows called cross-links (Boogaard, 2021).

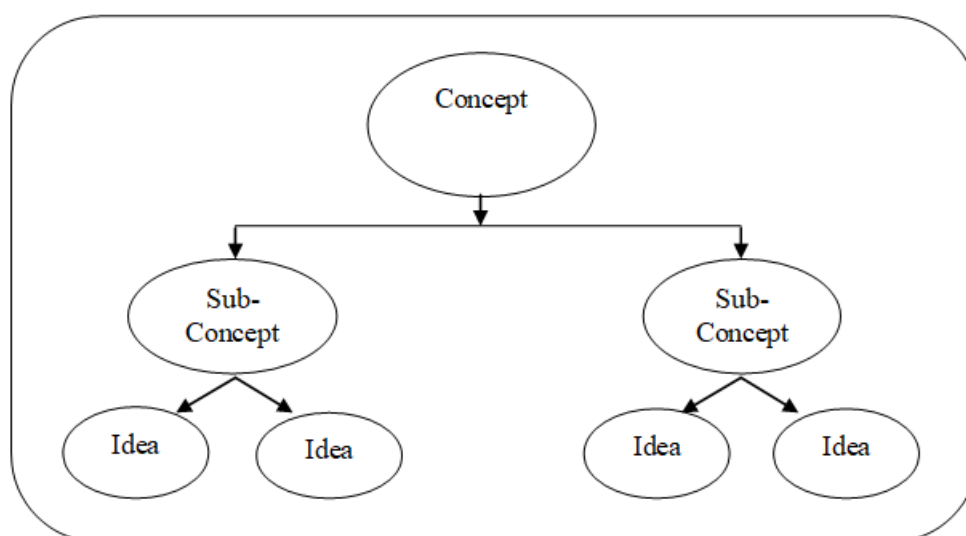


Fig-1.1: A simple concept map representing concept, sub-concept & related ideas

Source: <https://www.interaction-design.org/literature/topics/concept-maps>

The following are the goals of a concept map: delving deeply into a subject, planning your ideas, recalling crucial details, and comprehending relationships. There are four types of concept maps: i) Hierarchy maps are used to show the hierarchy of things like people's roles and levels of superiority; ii) Flowcharts are used to visualize steps of a process; iii) System maps are used to visualize systems and how they are related; connecting links can include positive or negative signs to tell correlation among systems. iv) Spider maps are used to diagram concepts; the core idea is at the center and subtopics branch outwards in a radial pattern (Boogaard, 2021). The concept maps are very much useful to visually represent the written matter, hence making the learning effective and long-lasting.

2. REVIEW OF RELATED LITERATURE

Korkmaz (2021) developed a psycho-education program based on the concepts of schema therapy and evaluated its impact on the levels of happiness and despair among teachers and program was found to be significantly helpful in lowering depression and raising the happiness levels of the treatment group subjects. A research synthesis was conducted by Bergsma, Buijt, and Veenhoven (2020) to evaluate the efficacy of happiness training programs and the

authors concluded that attending training sessions improves happiness. Assarniya, Hajebi, and Monirpoor (2019) investigated the impact of multidimensional spiritual education on the target students' happiness and sense of duty and found that the pupils' levels of responsibility and happiness increased dramatically as a result of this spiritual program. Fereydouni, Omid, and Tamannaeifar (2019) investigated the impact of choice theory education on tertiary students' satisfaction and sense of self and concluded that the program was highly beneficial in raising the happiness and self-esteem of the experimental group pupils.

Jena (2021) looked into how concept mapping affected secondary students' performance in physical science. Comparing the concept mapping process to the conventional teaching approach, the author found that the students' achievement in Physical Science had improved dramatically. Concept mapping was used by Rigi, Tafazoli, Moonaghi, and Taghipour (2020) to assess the impact of education on midwifery students' critical thinking abilities. Critical thinking abilities considerably improved in two groups following a month of the intervention. The impact of the concept mapping approach on students' academic performance and cognitive processes in the Life Science course was investigated by Nath and Sahoo (2019). The authors found concept mapping as an educational technique has a major impact on the cognitive process of the learners by boosting confidence and lowering exam anxiety. Ahmed and Abdelraheem (2016) examined the impact of a digital-based concept mapping technique on the attitudes and academic performance of university students. The findings indicated that students who were taught using the digitally based concept mapping tool performed better than those who were taught using the traditional approach.

3. OBJECTIVES OF THE STUDY

1. To study the happiness level of the IX-grade social-science students.
2. To study the effect of concept mapping strategy on the happiness level of IX-grade social-science students.

4. METHODOLOGY

To test the framed null hypothesis, i.e., *there exists no significant effect of the concept mapping strategy on the happiness level of IX-grade social-science students*, the researcher employed the 'Quasi-Experimental Method' of research with a 'Pretest-Posttest Randomized Experimental Design'. The sample of the study consisted of 66 (39-M & 27-F) students purposively selected from Shri Jagdamba Inter College, Agra (U.P. Board). The sample was randomly assigned to experimental (33) and control groups (33). The researcher constructed a total of 14 lesson plans based on concept mapping strategy as instructional material in the Social-Science (History-07 & Civics-07) subject. Flowcharts under concept maps were used to make lesson plans. Each lesson plan was completed in two days. The intervention period lasted from Sept, 1 2023 to Oct, 12 2023. The experimental group (19M & 14F) was taught using developed instructional material on concept mapping and the control group (20M & 13F) was through lecture-cum-demonstration method for 42 days. The data on happiness level was obtained using a standardized *Oxford Happiness Questionnaire (OHQ)* developed by Hills and Argyle (2002).

5. ANALYSIS OF DATA

The complete analysis was carried out using IBM SPSS (2012), Version 21.0 computer software and the objective-wise data analysis is as follows:

1. To study the happiness level of the IX-grade social-science students

A standardized Oxford Happiness Questionnaire (OHQ) was used to collect the Happiness Level data. The researcher employed descriptive statistics, such as Mean, Standard Deviation (S.D.), Skewness, and Kurtosis, to describe the data.

Table-1.1: Mean and standard deviation of happiness level of social-science students

Variable	Group	Test	Mean	S.D.
Happiness-Level	Experimental-Group	Pre-Test	56.52	12.76
		Post-Test	106.97	19.40
	Control-Group	Pre-Test	54.91	11.51
		Post-Test	60.00	12.30

The mean and standard deviation (S.D.) of the pretest-posttest happiness level scores of the students assigned to experimental and control groups at the time of the intervention programme are displayed in table-1.1 above.

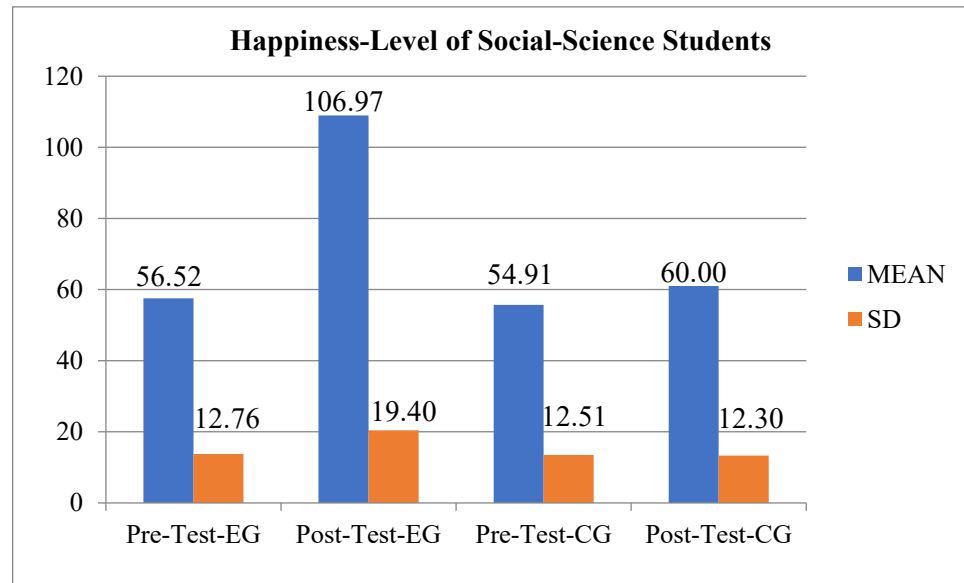


Fig-1.2: Graphical representation of mean and S.D. of happiness level

It is evident from the above figure-1.2, that the average happiness level (106.97) after the intervention programme using Concept Mapping Strategy is greater than the average happiness level (56.52) before the intervention programme. The pretest and posttest standard deviation values of the experimental group were 12.76 and 19.40 respectively showing that many variations were found about the happiness level of the students after the intervention programme. Meanwhile, it is also visible from the previous fig-1.2, that the average happiness level (60.00) after the intervention programme using Lecture-cum-Demonstration Method is slightly greater than the average happiness (54.91) level before the intervention programme. The pretest and posttest standard deviation values of the control group were 12.51 and 12.30 respectively showing that after the intervention programme, the happiness level of the students became slightly homogeneous.

Table-1.2: Significant values of skewness and kurtosis of happiness level of social-science students

Group	Test	Skewness			Kurtosis		
		Statistics (S)	SE	Sig. (S/SE)	Statistics (S)	SE	Sig. (S/SE)
Experimental Group	Pre-Test	-0.154	0.420	-0.36	-1.053	0.820	-1.28
	Post-Test	0.756	0.420	1.80	-0.348	0.820	-0.42
Control Group	Pre-Test	0.050	0.420	0.11	-1.172	0.820	-1.42
	Post-Test	0.150	0.420	0.35	-1.331	0.820	-1.62

*SE=Standard Error

Rose, Spinks, and Canhato (2015) provided a thumb rule for interpreting the skewness and kurtosis values. This rule states that if the skewness or kurtosis statistical value is divided by the corresponding standard error value, a significant value is obtained. If this value falls within the range of ± 1.96 , the distribution may be regarded as normal. Based on the above table-1.2, which shows that all skewness and kurtosis significance values fall within the range of ± 1.96 (Rose et

al., 2015), it could be inferred that the pretest-posttest data of IX-grade social-science students regarding the happiness level of the experimental and control groups was normally distributed.

2. To study the effect of concept mapping strategy on the happiness level of IX-grade social-science students.

To analyze this objective, gain scores for the experimental and control groups were computed to determine the effect of the concept mapping strategy on the happiness level. The pre-test scores were subtracted from the post-test scores to get the gain scores. Independent Samples t-Test was used to compare the means of gains scores of experimental and control groups.

Table-1.3: Independent t-test value for experimental & control groups of happiness level

Variable	Group	N	Mean	S.D.	Mean Difference	SE _{MD}	T	Df	p-value
H.L.	Experimental	33	50.05	21.55	45.151	4.101	10.245	64	0.000*
	Control	33	05.01	02.46					

*p<0.01

It is visible from the above table-1.3, that the independent t-test value at 64 df was found to be 10.245. The significance value (p-value) was found to be 0.000 and the p-value was less than 0.01-level of significance. Therefore, the framed null hypothesis, i.e., *there exists no significant effect of the concept mapping strategy on the happiness level of IX-grade social-science students* was rejected at 0.01-level of significance. Rejection of H_0 revealed that with a 99% level of confidence, it could be said that *there was a significant effect of the concept mapping strategy on the happiness level of IX-grade social-science students*.

6. MAJOR FINDINGS AND CONCLUSION

The outcomes demonstrated that the effect of concept mapping teaching strategy was observable at the time of post-tests. The findings suggested that the concept mapping teaching strategy could raise the happiness level of social-science students of IX grade studying in a school affiliated with the Uttar Pradesh Board of Education. Moreover, it may also be inferred that the concept mapping strategy is much superior to the lecture-cum-demonstration way of teaching for providing significantly improved happiness level for social-science students of secondary level.

Another conclusion would be that the concept mapping teaching strategy, when combined with introductory videos, skillful sketching or drawing, colored chalk, and a student-centered recapitulation strategy, could help students feel happier, which would ultimately improve their overall academic performance. The researcher had not found any direct study that explored the effect of concept mapping strategy on the happiness level of the social-science students at the secondary level. Thus, the usefulness of the Concept Mapping Strategy in raising the degree of happiness of social-science students studying in the school of the U.P. Board was demonstrated by the present study. The present project aims to benefit society and contribute to the body of knowledge in the field of education.

CONFLICT OF INTERESTS

None

ACKNOWLEDGMENTS

None

BIBLIOGRAPHY

- Ahmed, A., & Abdelraheem, A. (2016). Investigating the effectiveness of digital-based concept mapping on teaching educational technology for undergraduate students.
- Assarniya A. A., Hajebi, M. Z., & Monirpoor, N. (2019). The effectiveness of multidimensional spiritual education on happiness and responsibility of male students. *Iranian Journal of Educational Sociology*, 2(1), 126-133.
- Bergsma, A., Buijt, I., & Veenhoven R (2020) Will happiness-trainings make us happier? A research synthesis using an online findings archive. *Front. Psychol.* 11:1953. doi: 10.3389/fpsyg.2020.01953

- Boogaard, K. (2021). What is a concept map? Here's everything you need to know.
- Brooks, A. C. (2020). The 3 equations for a happy life, even during a pandemic.
- Celestine, N. (2022). The science of happiness in positive psychology 101.
- Cornell University. (2023). Concept mapping. The Learning Strategies Centre.
- Dfarhud, D., Malmir, M., & Khanahmadi, M. (2014). Happiness & health: The biological factors- systematic review article. *Iranian Journal of Public Health*, 43(11), 1468–1477.
- Fereydouni, H., Omid, A., & Tamannaefar, S. (2019). The effectiveness of choice theory education on happiness and self-esteem in university students. *Journal of Practice in Clinical Psychology*, 7(3).
- Hills, P., & Argyle, M. (2002). The Oxford Happiness Questionnaire: a compact scale for the measurement of psychological well-being. *Personality and Individual Differences*, 33, 1073–1082.
- Jena, B. (2021). Effectiveness of concept mapping strategy on learning achievement in physical science of secondary school students.
- Korkmaz, Z. (2021). The effect of the schema therapy-based psycho-education program on the depression and happiness levels of teachers. *Humanistic Perspective*, 3(3), 720-736.
- Nath, I., & Sahoo, K. C. (2019). Effect of concept mapping strategy on students' cognitive processes and academic achievement in life science.
- Rigi, Z. M., Tafazoli, M., Moonaghi, H. K., & Taghipour, A. (2020). The education effect based on concept mapping on critical thinking skills of midwifery students.
- Rose, S., Spinks, N., & Canhoto, A. (2015). Tests for the assumption that a variable is normally distributed. *Management Research*.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being.