Edutainment Strategies in Enhancing Reading Comprehension among Undergraduate Students

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Abstract: Although the term edutainment itself seems to be new in teaching – learning process, it is quite popular in the entertainment industries especially in the developments of entertaining programs such as amusement parks, television shows, and computer games in the tardy of twentieth century. There also an immense paradigm shift in the teaching – learning process from teacher- centred instruction in to learner- centred instruction with more interactive, engaging, experiential method. Learning theorists such as John Dewey and others who have imbibed the concepts of cognitive psychology for their doctrines of pedagogy emphasised the importance of initiative and excitement of learners to learn and affirmed learning as a lifelong activity which is a primary to human subsistence. Nel Noddings, one of the notable contemporary education theorists, argued education to be instrumented towards the basic aim and / or life of mankind and its happiness. (Happiness and Education,2003). Johan Huizinga (1872-1945) advocated that play and joyfulness are essential to all learners' performance. Hence, it can be conceived that play, or playfulness are an important factors in education too. Theories like Mihaly Csikszentmihalyi from the field of positive psychology argued that human beings could perform better when they are engrossed in joyful activities (Flow, 1975). Thus, it can be generalised that learners also could perform better when learning engrossed with joyful activities. In the same way, despite the concept edutainment is often used in the computer based games and gamifying endeavours, this concept also applies to other aspects of human life. Out of the many activities of instructional processes, the reading followed by comprehension among the students is considered to be the most difficult activity. Hence, an attempt has been made to examine the efficacy of edutainment strategies in enhancing reading comprehension among undergraduate students through an experimentation administered over 50 undergraduate students. The results indicated that edutainment strategies effective in enhancing all types of selected comprehension among undergraduate students.

Keywords: Edutainment, Reading Comprehension, Strategies, Undergraduate Students

I. INTRODUCTION

The terms edutainment and infotainment are similar to each other. Both the terms utter the concept of integrating entertainment in to the teaching - learning process. While infotainment integrates entertainment in to information and processing of information, the concept edutainment integrates entertainment with educational concepts. Edutainment generally tries to educate or simplify interaction among the learners through different forms of edutainment.Edutainment is successful in making both the teachers and learners are engaging and hilarious in the learning process and the whole class room environment becomes fun. The countries like United States, United Kingdom, and other countries in Africa using edutainment widely to address issues related to health and social aspects of their people. Hence, it is better to adopt such concept in the teaching learning process too.

II. EDUCATIONAL THEORIES SUPPORT EDUTAINMENT

The theories that justify the Entertainment - Education as follows:

- Aristotle’s Persuasion Theory: Petty, Cacioppo (1986) states that psychological features affect the response of anyone to messages. The study also indicated that the source factors of message such as the credibility, attractiveness, and expertise mainly influence a person's response. Thus, it is inferred that the characteristics of the learners are to be integrated in to the source of information rather than information itself.
- Ajzen’s Theory of Reasoned Action: Fishbein (1976) justified that social interaction influences the behaviours including beliefs and perceived social norms. Hence, it is better to include more number of interaction in the learning process rather more information.
- Bandura’s Social Learning Theory (1977): This theory advocates that individuals learn from consequences of others’ behaviour. So, edutainment tries to give room for learning through consequences.
- Roger’s Diffusion Theory (1962): Roger pinpoints that behaviour disseminates from particular group to other group through an appropriate medium. For instance, Television plants the thought, but social media make stronger it and triggers to mature. Thus, television based learning will be effective in disseminating knowledge over a period of time.

Pedagogy in Edutainment

- Relevance: Learning is more possible when learners witness the worth of the acquaintance they are given.
- Incremental Learning: Learning will be effectual while learners are permitted to learn at their own pace.
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- Distributed Learning (Fossard): The idea behind this learning is learners discover knowledge from diverse sources and diversified means. Hence, it is imperative to prepare learners to gain knowledge from those diversified means.

III. METHODOLOGY

Objective:
The aim of this present investigation examine how extend the edutainment strategies enhance the reading comprehension among undergraduate students with a different background variable.

Methodology:
Method of the study:
The one group pre-test and post-test design was adapted to the present experimentation.

Sample:
A sample of 50 undergraduate students from basic sciences of Alagappa Govt. Arts College, Karaikudi was selected by adopting random sampling technique. The sample includes both male and female.

Tools:
Prepared entertainment strategies and captured videos of those strategies based on the Short Leaning Objectives [SLO] and quiz though Kahoot mobile app which used as the edutainment strategies and test of Reading comprehension were the tools that administered in the present study.

Procedure:
The experimentation has been conducted for three months. In the day 1, the pre comprehension tests were conducted. The first week begins with the presentation of prepared entertainment science videos based on the Short Leaning Objectives [SLO].

Based on the embedded science concepts of the selected standard, the above stated activities which trigger reading comprehension were developed. The activities each consist at the least one or more science comprehension. During the second phase, the above developed activities are administered. Thus, the number of activities were recorded and projected as an entertainment.

At the end of the experimentation, comprehension of the students was assessed through following types of questions which justified here under.

Westwood (2001) advocated that there are four levels of comprehension. Those four levels of comprehension were employed conceiving through below notions.

a) Literal level - The facts and details can be processed based on memorization and understanding only [Jose, et al (2013)]. Hence, this level of comprehension has been examined through true or false, multiple choice and fill in the blank question with W form questions.

b) Interpretative level - From the definitions of Jose, et al (2013) hypothetical and interlinking of concepts were tested through subjective test with open ended, thought-provoking questions.

c) Applied level - This level of comprehension analyzes or synthesizes information and applying it to other information. The clarity, accuracy, apparent exaggeration or bias in the contents also will be assessed by this level of comprehension. The recitation technique was used to assess this type of comprehension.

d) Appreciate level - This level of comprehension is more abstract and it is meant for a deeper understanding and emotional reactions to the language, ideas, imagery and values expressed by content (Jose, et al 2013). The extempore was used to test this level of comprehension.

IV. RESULTS

Hypothesis – 1
Pre test reading comprehension score differ from post-test reading comprehension score among undergraduate students.

| S. No | Science Comprehension | Pre – Test | Post-test | Calculated ‘t’ value | Remark at .05% level |
|-------|------------------------|------------|-----------|----------------------|---------------------|
| 1.    | Lexical                | 31.50      | 43.58     | 21.07                | Significant         |
| 2.    | Literal                | 32.07      | 43.01     | 18.02                | Significant         |
| 3.    | Interpretative         | 25.12      | 46.01     | 36.00                | Significant         |
| 4.    | Applied                | 21.48      | 40.01     | 23.27                | Significant         |
| 5.    | Appreciative           | 27.98      | 44.02     | 25.01                | Significant         |
| 6.    | Inferential            | 32.08      | 43.12     | 14.01                | Significant         |

(At 0.05% level of significance with table value of 1.96)

The above table indicates that pre test reading comprehension score differ from post-test reading comprehension score among undergraduate students with respect to all types of reading comprehension enhanced though edutainment strategies. Hence, it is concluded that the edutainment strategies enhancing the reading comprehension irrespective of its type.

Hypothesis – 2
Male and female undergraduate students differ in their reading comprehension score acquired through the edutainment strategies.

| S.No | Gender | N | Mean | SD | Calculate d ‘t’ value | Remark |
|------|--------|---|------|----|-----------------------|--------|
| 1.   | Male   | 25 | 39.72| 5.8 | 1.365                 | NS     |
| 2.   | Female | 25 | 41.96| 5.7 |                       |        |

(At 0.05% level of significance with table value of ‘t’ is 2.06)

The result of above table indicates that male and female undergraduate students differ in their reading comprehension score acquired through the edutainment strategies. Hence, it is concluded that the edutainment strategies enhancing the reading comprehension irrespective of the gender and the variable gender has no influence in it.
Hypothesis – 3

Reading comprehension scores of students scored above 60% marks and below 60% marks in their previous exam differ each other.

Table A.3

| S.No | Group                                      | N  | Mean | SD | Calculate d ‘t’ value | Remark |
|------|--------------------------------------------|----|------|----|-----------------------|--------|
| 1.   | Students secured below 60% in previous exam | 2  | 40.48| 2.7| 0.664                 | NS     |
| 2.   | Students secure above 60% in previous exam  | 2  | 41.02| 2.9|                       |        |

(At .05% level of significance with table value of ‘t’ is 2.06)

The result of the above table indicates that the reading comprehension scores of students scored above 60% marks and below 60% marks in their previous exam differ each other. Hence, it is concluded from the statistical finding that the edutainment strategies enhancing reading comprehension irrespective of high and low achievers and the variable academic achievement has no influence on it.

Hypothesis – 4

There exists significant relationship between reading comprehension and achievement in previous exams among undergraduate students.

Table A.4

| S.No | Variable                                      | N  | Calculate d ‘r’ value | Remark |
|------|------------------------------------------------|----|-----------------------|--------|
| 1.   | Achievement in previous exams                 | 5  | 0.349                 | S      |
| 2.   | Science comprehension                          | 5  | 0.276                 |        |

(At .05% level of significance for 48 df table value of ‘r’ is 0.276)

The result of the above table indicates that the reading comprehension and achievement in previous exams among undergraduate students have significant relationship each other. Hence, it is inferred that the reading comprehension is similar to achievement in previous exams among undergraduate students. Further, it is conceived that the edutainment strategies could also enhance the achievement of the undergraduate students along with reading comprehension.

V. DISCUSSION

- Edutainment strategies enhanced the reading comprehension among undergraduate students.
- Gender has no influence in enhancing reading comprehension through Edutainment strategies.
- Edutainment strategies enhancing reading comprehension irrespective of high and low achievers and the variable academic achievement have no influence on it.
- It is conceived that the edutainment strategies could also enhance the achievement of the undergraduate students along with reading comprehension.

Moreover, the findings indicate that the edutainment strategies excel in promoting reading comprehension of the students. In each dimensions and phases, the values and performance of the students are more in the edutainment strategies. The internalizing of the values among students was also easier through edutainment strategies. Since, the values are inculcated through processing information; there may be possibilities to retain the information learnt for longer, and even permanently.

Educational Implications

The results of the present investigation have very significant value in the field of science education and potential value furthering our understanding of learning behaviour in science. Process approach in science education can be applied for the vitalization and improvement. This also has an implication on the curriculum development standard setting, vitalising instruction, class room teaching, development of resource materials, etc.

VI. CONCLUSIONS

In the Pavlo’s classical conditioning experiment, he has stated the importance of the activities in retaining the things that learnt. The activity based learning helps an individual for any habitual formation results into the values. Thus, the edutainment strategies also can be used to promote the reading comprehension of the students.

REFERENCES

1. B.B.Ganguly, “Experience in developing instructional materials for integrated science curriculum”, UNESCO Regional Office for Education in Asia and Oceania Publication, Bangkok, 1978.
2. Boswood, Tim, New Ways of Using Computers in Language Teaching. New ways in TESOL series II. Alexandria, VA: Teachers of English to Speakers of Other Languages, 1997. ISBN 9780939701699.
3. Caillois, R. Man, Play, and Games. Urbana and Chicago: University of Illinois Press (originally published in 1958; translated from the French by Meyer Barash), 2001. ISBN 025207033X.
4. Chi, M.T.H., de Leeuw, N.,Chiu, M., & LaVancher, C. (1994). Eliciting self-explanations improves understanding. Cognitive Science, 18, 439-477.
5. Clifford Stoll, High Tech Heretic (Doubleday, 1999, ISBN 0-285-48975-7).
6. Construct explanatory answers facilitate learning. Educational Psychology, 27, 91-109.
7. Csikszentmihalyi, Mihaly, Creativity: Flow and the Psychology of Discovery and Invention. New York: Harper Perennial, 1996. ISBN 0-06-092820-4.
8. Csikszentmihalyi, Mihaly, Finding Flow: The Psychology of Engagement With Everyday Life. Basic Books, 1998. ISBN 0-465-02411-4.
9. Csikszentmihalyi, Mihaly, Good Business: Leadership, Flow, and the Making of Meaning. New York: Penguin Books, 2003. ISBN 0-14-200409-X.
10. Dimensions of Lexical Repertoire in Reading Comprehension and
11. E.Van Glaser feld, “An introduction to Radical Constructivism”, Watzlaniick (Ed) Newyork, 1984, pp.173-177.
12. Edutainment 2006, and Zhigeng Pan. Technologies for E-Learning and Digital Entertainment: First International Conference, Edutainment 2006, Hangzhou, China, April 16-19, 2006: Proceedings. Lecture Notes in Computer Science, 3942. Berlin: Springer, 2006.
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13. Edutainment 2007, and Kin-chuen Hui. Technologies for E-Learning and Digital Entertainment: Second International Conference, Edutainment 2007, Hong Kong, China, June 11-13, 2007: Proceedings. Lecture Notes in Computer Science. 4469. Berlin: Springer, 2007.

14. Fletcher Ch., van den Broek P., Arthur E. (1996). A Model of Narrative Comprehension and Recall, In Models of Understanding Text, (eds) Britton B., Graesser C. Lawrence Erlbaum Associates Inc. Publishers, Mahwah, New Jersey.

15. Gasparinato, A., & Grigoriadou, M. (2010). Learning from Texts in Computer Science. The International Journal of Learning, Vol. 17, 2010, ISSN 1447-9494.

16. Gasparinato, A., & Grigoriadou, M. (2011). Supporting students' learning in the domain of Computer Science. Computer Science Education.

17. Gouli, E., Gogoulou, A., Papanikolaou, K., & Grigoriadou, M. (2006). An Adaptive Feedback Framework to Support Reflection, Guiding and Tutoring. In G.Magoulas and S.Chen (Eds.) Advances in Web-based Education: Personalized Learning Environments, 178-202.Idea Group Inc. ISBN: 1-59140-691-9.

18. Graesser, A.C., McNamara, D.S., & Louwerse, M.M. (2003). What Do Readers Need to Learn in Order to Process Coherence Relations in Narrative and Expository Text? In A. P. Sweet & C.E. Snow (Eds.), Rethinking Reading Comprehension (pp. 82-98). New York: Guilford Publications.

19. Grigoriadou M., Tsagano G., Cavoura Th. (2005). Historical Text Comprehension Reflective Tutorial Dialogue System, Educational Technology & Society Journal, Special issue, 8 (40), 31-40.

20. Griva, Eleni. September 2014, “Reading Skills and Strategies: Assessing Primary

21. Huizinga, Johan. Homo Ludens; a Study of the Play-Element in Culture. Boston: Beacon Press, 1955. ISBN 978-0807046814.

22. Incidental Vocabulary Acquisition.” Academy Publisher, Volume 3, 2008, pp.70-84.

23. Kohls, W. (1988). The use of knowledge in discourse processing: A construction-integration model. Psychological Review, 95, 163-182.

24. Kolb, D.A., (1984). Experiential Learning. Prentice-Hall, Englewood Cliffs, NJ.

25. Lin, Carolyn A., and David J. Atkin. Communication Technology and Social Change: Theory and Implications. LEA's communication series, Mahwah, N.J.: Lawrence Erlbaum Associates, 2007. ISBN 9780805856149.

26. MacLaren B., Koedinger K. (2002). When and Why Does Mastery Learning Work: Instructional Experiments with ACT-R “SimStudents”, Proceedings of 6th International Conference, ITS 2002, Spain, 355-366.

27. Mathan S., Koedinger R., (2002). An Empirical Assessment of Comprehension Fostering Features in an Intelligent System. Proceedings of 6th International Conference, ITS 2002, Spain, 330-343.

28. McNamara, D.S., Kintsch, E., Songer, N.B., & Kintsch, W. (1996). Are good texts always better? Text coherence, background knowledge, and levels of understanding in learning from text. Cognition and Instruction, 14, 1-43.

29. McNamara, D.S., Levinstein, I.B., & Bonthum, C. (2004). I START: Interactive strategy trainer for active reading and thinking. Behavioural Research Methods, Instruments, and Computers, 36, 222-233.

30. Meyer, Bonnie J.F. & Melissa N. Ray. 2011.” Structure strategy interventions: 4, No. 1.

31. N.Vidhya, “Science Teaching for 21st Century”, Deep & Deep publications, New Delhi, 1996.

32. Noddings, Nel. Happiness and Education. Cambridge, UK: Cambridge University Press. 2003. ISBN 9780521807630.

33. Oakhill, J. (1984). Inferential and memory skills in children’s comprehension of stories. British Journal of Educational Psychology, 54, 31-39. Pressley, M., Wood, E., Woloshyn, V., Martin, V., King, A., & Menke, D. (1992). Encouraging mindful use of prior knowledge: Attempting to

34. P.M.Bharagav, 1977, John R. Mayar, 1962-68, Gagne (1966) are quoted by P.C.Bhatt, “Reading comprehension in Teaching and Learning”, Common Wealth Publication, New Delhi, 2005. pp.7-8.

35. P.Sivakumar and R.Krishnaraj, “Information Processing Models of teaching theory & Research”, Neekamal Publication, Hyderabad, 2005, p.79.

36. P.Sivakumar and R.Rammath, “Reading the comprehension of the IX standard students: An evaluative study”, Endeavours in Education, 2(2) pp.70-76, June 2011.

37. Pranysky, Marc. "Don't Bother Me Mom, I'm Learning!": How Computer and Video Games Are Preparing Your Kids for Twenty-First Century Success and How You Can Help! St. Paul, MN: Paragon House. 2006. ISBN 9781557788580.

38. Riviera D., Greer J. (2002). Exploring Various Guidance Mechanisms to Support Interaction with Inspectable Learner Models, Proceedings of 6th International Conference ITS, Spain, 442-452.

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