

**CHAPTER - V**

**FINDINGS, CONCLUSION, IMPLICATIONS  
AND SUGGESTIONS**

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#### **5.0.0 INTRODUCTION**

The experimental research conducted on 80 learners of KV no 1, Angul and 80 learners of KV no 2, Angul as control group and experimental group concluded some distinctive data which are elaborated in following sections. The learners of the experimental group were provided timely interventions in the form of e-contents as supplementary material based out of biological sciences classroom lectures of the day. The results show evidence that e-content mediated teaching-learning supplements have a positive impact on attitudes and achievements of learners.

#### **5.1.0 FINDINGS**

5.1.1.0 Significant differences were found between pre and post test scores of biological science attitudes of control and experimental groups which state that e-content mediated teaching learning had positively influenced experimental group (KV No2) respondents attitudes towards science.

Mean scores from pre and post attitude survey for control group were 41.39 and 35.95 respectively, and for experimental group these were 40.69 and

37.49 respectively, this shows a decline in attitude towards science, considering this attitudinal decline to be due to the online exhaustion and screen time fatigue, the broad gap between pre and post test scores of control group and the retention of declining attitudes by experimental group states the effectiveness of e-contents in encouraging attitudinal retention among learners of experimental group.

**5.1.2.0 Significant difference between pre and post test scores between science achievements of control and experimental group was found in the results which point towards the fact that e-content mediated teaching-learning has a positive impact on experimental (KV No2) respondents' achievements in science.**

Mean scores from pre and post test scores for the control group were 75.63 and 67.25 respectively, and for experimental group these were 75.00 and 74.75 respectively, this shows a decline in achievements in science, considering this achievement decline to be due to the online exhaustion due to pandemic induced turmoil, the broad gap between pre and post test scores of control group and the retention of declining achievements by experimental group states the effectiveness of e-contents in encouraging achievement retention among learners of experimental group.

## **5.2.0 CONCLUSION**

Based on the findings it is concluded that e-content has been observed as an effective tool in the teaching-learning process. It has enhanced the students' learning, and has motivated all the students in the experimental group to improve attitudes and achievements towards science.

## **5.3.0 EDUCATIONAL IMPLICATIONS**

The results of this study have several important implications. This study adds to the literature on the effectiveness of e-contents in biological science

classes of class IX with attitudes and achievements of learners towards science. Results appear to indicate that e-contents are an effective instructional strategy for improving achievement in and attitudes towards science test scores of students within the duration of the study. This study has referential adequacy because this study could be replicated for any performance task by any teacher wanting to test how students perform when learning through e-contents and to maximize teaching-learning.

#### **5.4.0 SUGGESTIONS FOR FURTHER RESEARCH**

- The study could be conducted similarly in different geographical areas, school boards, diverse learner age groups, larger time scale (unlike 1.5 years of current study) other subjects (like English, Chemistry, Math, Physics, and Geography etc) following which their data could be collected to provide insights into a broad perspective of attitudes and achievements of learners.
- Institutional instructors and private coaches could be studied for their e-content delivery and a study related to student satisfaction, attitudes and achievements could be performed to list the causes of inclination towards non-academic coaches.
- Minimizing lecture methods and using new diverse & multisensory methods can be introduced as prerequisites to conduct a study on effectiveness of e-contents and insights could be gathered.
- Both theoretical knowledge and practical knowledge can be enhanced through e-content thus more research must go into designing more engaging e-contents and testing the effectiveness of engagement provided in relation to the types of e-document design, depth, conciseness and composition.
- In-service training on designing e-contents and their effect on immediate learners would provide interesting insights. New technical experts & innovative designers can be identified.

- The school and its libraries with more electronic technology (kindle, PCs, laptops, instructional TV etc) based learning materials, projectors, instructional T.Vs, computer rooms, technology infused classrooms and all other provisions would provide clearer data on learner's attitudes towards ICT based e-content in teaching-learning process.
- E-content acceptance factors like students' characteristics, lecturers' support, technology support and system, institutional support, course content, knowledge management, and online discussion groups could be facilitated experimentally for maximization of e-content mediated learning and data collection.
- Action research could be performed to enhance effectiveness of e-content through continuous improvements in e-content design, learning transactions and students' perceptions.