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ARTICLE



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Development of a Program Using Artificial Intelligence in English Language Learning for the Students of Secondary Level and to Test Its Effectiveness

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Abstract: Artificial intelligence is an emerging field in educational teaching. AI is transforming various industries and education is no exception for that. with the help of artificial intelligence English language learning become more personalised, efficient, and engaging. Initially, the research surveyed Secondary Schools, the survey was conducted using a questionnaire for English language teachers. The researcher had also taken the pretest and post-test of the students. Based on the survey results the researcher selected the content to develop the program using artificial intelligence in English language learning for the students of secondary level. After the pilot study, the program was implemented followed by the post-test and retention test. Students' feedback was also taken after the implementation of the program. Multi-method and product development research methods were used for this research. The purpose of this paper mainly focuses on the comparison of traditional teaching methods with AI-assisted teaching methods, the development of the program using artificial intelligence for English language learning, and testing the effectiveness of the program. It also attempts to explore how AI can be used to teach the English language effectively it further aims to explain how AI can be used to foster learners' autonomy and to assist the teachers to conduct the lessons effectively. Further, it explores the Strategies for implementing AI in English language learning, properly examining the potential application of AI in education and language learning. with the help of AI language educators can create a more personalised and engaging learning experience for their students however successful implementation of AI in language education requires careful planning professional development ongoing evaluation and the possibilities of implication of AI in the classroom adopting new learning approaches and pedagogical modification.

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1.1 Introduction

Artificial intelligence is an emerging field in educational teaching. AI is transforming various industries and education is no exception for that. with the help of artificial intelligence English language learning become more personalised, efficient, and engaging.

The integration of Artificial Intelligence (AI) into English language learning for secondary-level students. It delves into the theoretical foundations, potential benefits, challenges, and implications of utilizing AI-driven tools and platforms to enhance English language acquisition among secondary school students. The paper discusses the role of AI in personalized learning, adaptive assessment, language immersion, and cultural sensitivity, shedding light on the transformative potential of AI in secondary-level English language education.

Therefore, the researcher had prepared the Elevate English-AI- Powered learning programme for teaching the Secondary school students.

In the mind of the researcher following Research questions were aroused

- What are the difficulties the teachers faced in teaching the English language to secondary school students? (Objective no. 1)
- What teaching methods did teachers use rather than traditional methods to teach English subjects to Secondary school students? (Objective no. 1)
- What kind of a programme can be prepared by using Artificial Intelligence and implemented in secondary school students? (Objective no. 2)
- How does the developed program help students to learn and retain the concepts effectively? (Objective no. 3)
- How will implementation of this program help the students to retain concepts better as compared to students who are taught regular teaching methods? (Objective no. 4)

1.2 Significance of the study

- The researcher proposes to use Elevate English-AI- Powered learning programme to make teaching-learning of English subjects more effective.
- This study was significant for students, teachers, teacher training programmes, and professionals in special education.
- Retention, understanding, correlation and achievement in marks is possible through the prepared program for secondary school students.
- The program prepared by the researcher would make the material readily available for use in the classroom.
- The present study would help teachers to plan and conduct similar programmes for different subjects in the classrooms making modifications wherever necessary.

1.3 Objectives of the Study

- To find out the existing teaching methods and difficulties faced by English teachers in teaching English subjects for secondary school students.



- To develop Elevate English-AI- Powered learning programme for secondary school students. for English subjects and to test its effectiveness.
- To find out the retention of the developed program.
- To know the opinion of participant students about the developed programme

1.4 Research hypothesis

- Developed programme is effective for Secondary school students in English subject.
- The pretest and post-test scores of the two groups differ after the implementation of programme.

1.5 Null hypothesis

The following Null Hypothesis was stated for the study:

H01: There is no significant difference between the mean scores of experimental and control groups on the post-test.

H02: There is no significant difference between the mean scores of the experimental and control groups on the Retention Test.

1.5 Scope

- The results apply to secondary school students for learning the English subject.
- A program for secondary school students enhances their understanding of the new concepts of English subject.

1.6 Limitations and Delimitations

- There is no control over the attitude, readiness, age, attention, interest and motivation of the students.
- Conclusions of the study depend on responses given by the participants to the programme and achievement test.
- The validity of the program developed by the researcher is determined from the inputs given by the selected experts.

2.1 Methodology

Population: All the secondary schools affiliated with the SSC Board in Pune city. There are 115 secondary schools in Pune city among them 62 schools were selected.

Sampling Technique: Purposive Sampling

Size: 62 secondary schools (176 English teachers)

For Experiment: -

Population: All the secondary schools affiliated with the SSC Board in Pune city.

Sampling Technique: Purposive Sample

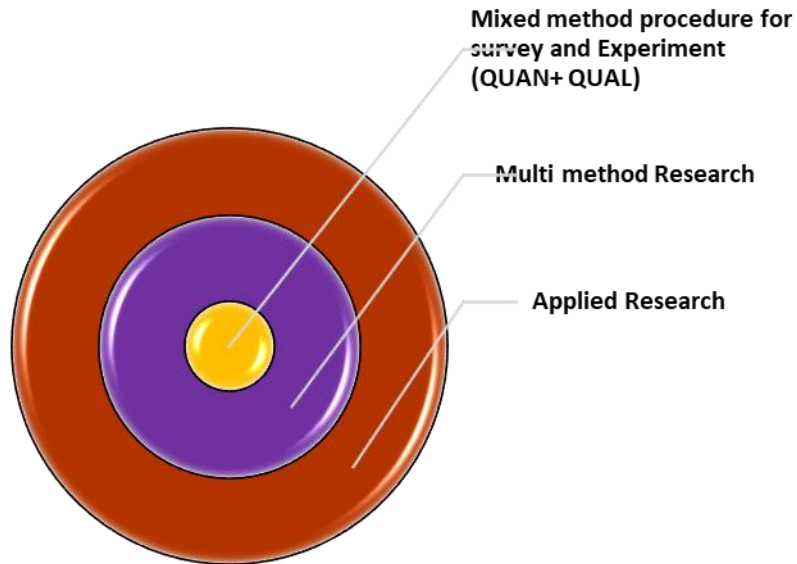
Sample Size: 02 schools- 90 students {45 (Experimental) + 45 (Control)}

2.2 Research Method:

A mixed method is used in the present Research

Mixed methods research is a research design (or methodology) in which the researcher collects, analyses, and mixes

both quantitative and qualitative data in a single study or a multiphase program of inquiry. The following figure gives an idea about the research work at a glance. Multi-method research is used in this study.



2.3 Research Design

Two-group pre-test-post-test design

01	X	02	03
01	C	02	03

Where,

01-Pretest

X- Experimental Group

C- Control Group

02- Post-test

03- Retention test

3.1 Objective Wise Research Methodology

Objective wise Conclusions:

- Traditional methods are mostly used in secondary schools.
- Elevate English-AI- Powered learning programme for secondary school students is effective for learning and retention.
- The students had a positive opinion regarding the AI programme.

- Elevate English-AI- Powered learning programme for secondary school students is very useful for learning English subject.

3.2 Main Conclusion

Elevate English-AI- Powered learning programme for secondary school students enhances learning and retention for secondary school students.

3.3 Contribution of the Study to the field of education

- The study has contributed to the teachers of Secondary schools in terms of teaching methodology to secondary students.
- The study will help secondary teachers in implementing the new paradigms of English teaching.
- The product in this study will be useful for the teachers to plan their teaching Scientifically and Systematically during the English language teaching.
- This research will enhance the secondary students' achievement in English language learning.
- The product developed in this study will be useful for Secondary school students from special, integrated, or inclusive schools and different board schools.
- The Product may be useful for teachers while teaching other subjects at different levels and special students also.

3.4 Suggestions for Further Research

- Similar studies can be done on different School subjects.
- Further research can focus on training teachers and students to use different AI tools for effective teaching and learning.
- Further researchers can undertake where a complete syllabus that may be developed using AI-powered tools and published in the form of a book.
- Further Research can be done on different levels of Students.
- Such kind of programme can be prepared for other level students with suitable modifications and More activity-based, effective programmes can be developed for lower classes of Schools.

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