**Title: Enhancing Virtual Learning Platforms for Elementary School Students: A Multi-Method Approach**

**Introduction:**

Virtual learning platforms have grown because to COVID-19's impact on elementary education. For 6–12-year-old elementary school pupils, this transition presents many opportunities and problems. Virtual learning provides flexibility and various teaching tools, but it also pushes young learners to develop academic and social-emotional skills.

The rise of virtual learning alarms primary schools. Tech access and internet availability increase educational inequality and the digital gap. Distance learning and equity challenge socially disadvantaged pupils. The quick shift to online learning has challenged instructors and parents to teach. New strategies may be needed to encourage, engage, and track students in digital teaching.

This project will study and improve primary school virtual learning systems under present constraints. This study will analyze young learners' information choices, behavior, and experiences to improve virtual learning. Parents, educators, and technology developers will help. Psychology, information science, and education create primary school virtual learning platforms. Students' academic, social-emotional, and lifetime learning is the purpose of online education research.

Students 6-12 use this research most. These pupils have varied talents, experiences, and learning styles. They have different VR learning platform needs. Parents, teachers, and educational technology producers impact kids' virtual learning. LMSs, instructional apps, digital libraries, and communication platforms are available to virtual learners.

Elementary school virtual learning environment issues need attention. All must have quality education in the changing education landscape. This study examines elementary schoolers' virtual learning information needs, preferences, and barriers. The results will improve inclusive and effective educational technology development and implementation. Parents, teachers, and educational technology developers can construct virtual learning platforms that emphasize student engagement, accessibility, and learning. This research may improve primary school education by developing a more equal and responsive digital learning ecosystem.

**Research Questions:**

1. What are the information needs and preferences of elementary school students regarding virtual learning platforms?
2. How can virtual learning platforms be redesigned to better accommodate the learning styles and developmental needs of elementary school students?

**Description of Criterion:**

We assess virtual learning systems' usability, engagement, accessibility, content relevancy, and educational standards. Usability is usability and navigation, whereas engagement is student interest. Content relevance assesses educational goals and student interests, while accessibility fosters diversity. Norms ensure great education. Usability, engagement, accessibility, and content analysis will decide how well virtual learning systems serve elementary school learners. Many parameter strengths and shortcomings are identified in this research to inform virtual learning environment development. Engaging, accessible, and instructive platforms are needed.

**Research Design:**

This mixed-methods study evaluates how well virtual learning platforms help primary school students. Student information behavior, preferences, and virtual learning are studied using qualitative and quantitative methodologies.

Student virtual learning platform selections will be revealed in individual and focus group interviews. Students will discuss experience, challenge, and improvement in focus groups led by researchers. Personal interviews reveal motives, experiences, and views. Thematic coding and interpretation of student responses reveal patterns, themes, and emerging categories in qualitative data analysis.

To augment qualitative insights, quantitative surveys and usability testing can analyze students' virtual learning platform usage, contentment, and efficacy. Primary school will track virtual learning tool preferences and attitudes. Usability of virtual learning platforms will be examined. Work completion, error rates, and travel patterns are desired.

Research requires various data gathering, processing, and interpretation. Students' virtual learning platforms will benefit from quantitative and qualitative methodologies. Quantitative and qualitative data can corroborate results, reveal patterns, and reveal virtual learners' knowledge preferences.

Mixed-methods data can be used to develop engaging narratives, explanatory frameworks, and practical virtual learning environment improvements. Integrating data sources helps academics understand virtual learning students' requirements, preferences, and challenges. With this understanding, virtual learning systems can be more engaging, accessible, and informative.

**Concept Map:**

A diagram of a school

Description automatically generated

**Fig 1: Concept Map**

The concept map depicts "Enhancing Virtual Learning Platforms for Elementary School Students: A Multi-Method Approach." The study covers introduction, user groups, information settings, research questions, criteria, and design. The graphic depicts how the project will help elementary children study virtually. It takes into account student diversity, parents and teachers, usability, and content relevancy. This study examines students' information behaviour, preferences, and virtual learning experiences using qualitative and quantitative approaches. Qualitative and quantitative data are used to investigate and enhance elementary school virtual learning systems.

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