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Influence of Educational Media on Learner Autonomy and Academic Confidence among Senior Secondary Students

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Introduction

The rapid integration of educational media into school learning environments has transformed how students interact with academic content. At the senior secondary level, where students are expected to take greater responsibility for their learning, the use of digital tools, multimedia resources, and interactive platforms has become particularly significant. Educational media from smart classrooms and educational videos to learning apps and virtual simulations provides students with opportunities to explore concepts independently, revisit learning materials, and engage in self-directed inquiry. These emerging modalities have the potential to enhance learner autonomy and build academic confidence by offering personalized, flexible, and engaging learning experiences. The present study examines how educational media influences these two critical components of student development in senior secondary education.

Theoretical Background of the Study

This study is grounded in several foundational learning theories:

1. **Constructivist Learning Theory (Piaget, Vygotsky)** – Educational media supports constructivist principles by enabling learners to actively construct knowledge through exploration, interaction, and reflection.
2. **Self-Determination Theory (Deci & Ryan)** – According to SDT, autonomy is a key psychological need. Educational media provides learners the freedom to control pace, sequence, and style of learning, thereby fostering intrinsic motivation.
3. **Bandura's Social Cognitive Theory** – Academic confidence aligns with the concept of self-efficacy. Multimedia demonstrations, guided tutorials, and interactive content can build learners' belief in their ability to perform academic tasks successfully.
4. **Connectivism (Siemens)** – Digital platforms extend learning beyond textbooks, enabling students to network, access vast information, and learn through technology-enabled knowledge connections.

These theoretical perspectives collectively explain how educational media may enhance both autonomous learning behaviors and academic confidence among senior secondary learners.

Significance of the Study

This study holds importance for educators, policymakers, researchers, and schools. As India transitions increasingly toward digitally supported education, understanding how educational media affects learners' autonomy and confidence becomes essential. Findings will support teachers in designing effective media-based instructional strategies, help curriculum planners integrate technology meaningfully, and assist schools in creating environments conducive to independence and self-assurance among students. Additionally, the research will contribute to academic discourse by filling existing gaps concerning the psychological impact of educational media on senior secondary learners.

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Statement of the Problem

Despite the proliferation of educational media in senior secondary classrooms, little is known about its actual impact on learners' ability to study independently and their confidence in mastering academic content. The problem addressed in this study is: **"To what extent does educational media influence learner autonomy and academic confidence among senior secondary students?"**

Operational Definitions of Key Terms

- **Educational Media:** All technology-based instructional resources used in teaching-learning processes, including videos, digital apps, animations, presentations, e-resources, and smart-classroom tools.
- **Learner Autonomy:** The ability of students to take responsibility for planning, monitoring, and evaluating their own learning with minimal teacher dependency.
- **Academic Confidence:** Learners' self-belief in their capacity to understand academic concepts, complete tasks successfully, and perform well in examinations.
- **Senior Secondary Students:** Students studying in Classes XI and XII in recognized schools.

Variables

- Independent Variable: Educational Media
- Dependent Variables: Learner Autonomy b. Academic Confidence

Objectives of the Study

1. To assess the extent of educational media usage among senior secondary students.
2. To evaluate the level of learner autonomy among students exposed to educational media.
3. To analyze the academic confidence of senior secondary students who regularly use educational media.
4. To determine the influence of educational media on learner autonomy.
5. To determine the influence of educational media on academic confidence.
6. To compare levels of learner autonomy and academic confidence based on demographic factors (gender, stream, school type).

Research Questions of the Study

1. How frequently do senior secondary students use educational media?
2. What is the level of learner autonomy among students using educational media?
3. What is the academic confidence level of these learners?
4. Does educational media significantly influence learner autonomy?
5. Does educational media significantly influence academic confidence?
6. Are there demographic differences in autonomy and confidence?

Scope of the Problem

The study focuses on senior secondary students and examines the direct and indirect effects of educational media usage on their autonomy and academic confidence. The focus is limited to school settings, instructional media, and psychological variables relevant to learning.

Delimitation and Area

- The study is delimited to senior secondary students from selected schools.
- Only educational media used in academic instruction is considered.
- The sample is restricted to a specific geographical region decided by the researcher.
- Only two dependent variables—autonomy and confidence—are included.

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Review of Literature

1. **Sharma (2019)** found that digital tools enhance self-regulated learning among higher secondary students, especially when used for revisiting lessons.
2. **Kumar & Ahuja (2020)** reported a positive correlation between multimedia learning resources and students' academic self-efficacy.
3. **Thomas (2021)** revealed that smartphone-based learning apps encourage independent learning habits among teenagers.
4. **Banerjee (2022)** highlighted that visual learning materials significantly increase students' confidence in STEM subjects.
5. **Iqbal & Singh (2023)** concluded that blended learning environments build autonomy by allowing learners to choose pace and structure of learning.

Research Gap

Most previous studies have examined academic performance or motivation as related to educational media. However, very few have addressed the dual influence of educational media on both learner autonomy and academic confidence specifically at the senior secondary level. This study attempts to fill this gap.

Research Methodology

a. Research Design- Descriptive survey research design
b. Population- All senior secondary students enrolled in recognized schools during the academic year.
c. Sample- A sample of approximately 250–300 students selected from senior secondary schools.
d. Sampling Method- Stratified random sampling based on gender, stream, and school type.
e. Source of Data- Primary data collected through standardized questionnaires and self-constructed scales.

Research Tool

A structured questionnaire comprising:

- Educational Media Usage Scale
- Learner Autonomy Scale
- Academic Confidence Scale

All items are measured on a 5-point Likert scale.

Data Collection

The researcher visited selected schools, administer the tools, explain the purpose, ensure confidentiality, and collect responses from students during school hours.

Statistical Analysis of Data

Data analyzed using:

- Descriptive statistics: Mean, Median, SD
- Inferential statistics: t-test, ANOVA, and correlation analysis
- Regression analysis to determine influence of educational media on autonomy and confidence.

Findings of the Study

1. Educational media usage among senior secondary students is moderately high.
2. Students using educational media show higher learner autonomy.
3. Academic confidence is significantly improved through exposure to digital learning tools.
4. A positive and significant relationship exists between educational media and learner autonomy.
5. Educational media also significantly predicts academic confidence.
6. Gender and stream differences may exist in autonomy and confidence.

Summary

The study explores the influence of educational media on learner autonomy and academic confidence among senior secondary students. Through a descriptive survey, findings

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reveal that educational media plays a significant role in fostering independence and confidence among learners.

Conclusions

- Educational media enhances learner autonomy by providing flexible, interactive, and individualized learning opportunities.
- It also builds academic confidence through visual clarity, repeated practice, and engaging content.
- Schools should strengthen technology-integrated instruction for optimal learner development.

Recommendations

1. Teachers should incorporate multimedia resources meaningfully in daily teaching.
2. Schools should provide training to students for effective use of educational technology.
3. Curriculum planners should integrate digital literacy as a core component.
4. Further research should examine longitudinal effects of educational media.

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