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# DIGITAL LITERACY AND FINANCIAL EDUCATION: A DUAL PATHWAY TO EMPOWER FUTURE CITIZENS UNDER EDU VISION 2035

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## ABSTRACT:

The rapid digital transformation of societies demands a rethinking of educational priorities to ensure citizens are equipped with essential skills for the future. This study explores the integration of digital literacy and financial education as a dual pathway to empower students under the framework of Edu Vision 2035. The research aims to examine the combined impact of dual literacy on student preparedness, analyze demographic variations in literacy outcomes, and evaluate current curriculum practices.

This study examines the integration of digital literacy and financial education as a unified framework for empowering students to become future-ready citizens under *Edu Vision 2035*. Using a mixed-methods design, survey data were collected from 300 students across socio-economic and geographic categories, complemented by qualitative insights from learners and educators. Reliability tests confirmed excellent data quality ($\alpha > 0.97$), and factor analysis revealed six distinct dimensions of integrated literacy—digital competence, financial awareness, digital-financial integration, technology readiness, information application, and ethical responsibility—explaining 87.78% of total variance. Regression analyses demonstrated that Integrated Digital–Financial Literacy (IDFL) significantly influences student preparedness ($R^2 = 0.301$, $p < 0.001$), while socio-economic status emerged as a key determinant of program effectiveness. Furthermore, inclusivity and experiential learning strongly predicted policy alignment with *Edu Vision 2035* ($R^2 = 0.818$). The findings affirm that holistic integration of dual literacy enhances readiness, inclusion, and sustainable educational transformation. The study recommends embedding IDFL within mainstream curricula, strengthening teacher training, and ensuring equitable digital access to realize national educational goals.

**Keywords:** Digital Literacy, Financial Education, Edu Vision 2035, Student Preparedness, Curriculum Integration.

## 1 INTRODUCTION

In today's knowledge-driven world, digital literacy and financial education have become essential skills for future-ready citizens. The rapid expansion of digital technologies, coupled with increasing dependence on online financial platforms, highlights the need for individuals to possess not only technical proficiency but also the ability to make informed and secure financial decisions. Within the Indian context, initiatives such as the *National Digital Education Architecture (NDEAR)* and *Edu Vision 2035* emphasize the integration of technology into education to foster inclusivity, innovation, and empowerment.

Research demonstrates that digital literacy enhances access, efficiency, and participation in socio-economic systems, while financial education equips learners with decision-making, saving, and investment skills. However, when pursued in isolation, these domains often fail to address the holistic needs of learners navigating the digital economy. Integrated digital-financial literacy represents a dual pathway that prepares individuals to engage responsibly

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with digital platforms, understand financial risks, and participate actively in civic and economic life.

Despite notable progress through government programs, school curricula, and global frameworks, significant gaps remain in curriculum alignment, rural access, gender equity, and the translation of theoretical knowledge into practical application. Addressing these gaps is critical for empowering students as future citizens capable of informed financial participation and safe digital engagement. Against this backdrop, this study explores the combined impact of digital and financial literacy, examining how integrated approaches can contribute to sustainable development, equitable participation, and the realization of Edu Vision 2035's transformative agenda.

## 2. BACKGROUND OF THE STUDY

The global shift toward digital economies and technology-enabled societies demands that future citizens possess both digital and financial competencies. Digital literacy equips individuals with the ability to access, evaluate, and safely use digital tools, while financial education develops decision-making, budgeting, and investment skills essential for socio-economic participation. When considered in isolation, each domain addresses important but incomplete aspects of modern readiness. Their integration creates a **dual literacy pathway** that fosters comprehensive preparedness for navigating the complexities of the 21st century.

In India, national policy frameworks such as the **National Digital Education Architecture (NDEAR)** and **Edu Vision 2035** highlight the role of education in preparing empowered, future-ready citizens. These initiatives emphasize inclusivity, equity, and sustainable development through digital platforms. However, the successful realization of these goals depends on embedding **integrated digital-financial literacy** into the curriculum, moving beyond fragmented or standalone approaches.

Despite notable interventions, several challenges persist. Demographic factors such as **gender, socio-economic status, and geographic location** continue to influence access to resources, skill acquisition, and application of knowledge. Urban students may experience greater exposure to digital tools, while rural learners often face barriers in infrastructure and training. Similarly, socio-economic disparities and gender norms can widen the gap in digital-financial participation, limiting the inclusivity promised by policy visions.

Moreover, while some curriculum models and community-based initiatives have introduced digital and financial content separately, there is limited evidence on the **effectiveness of integrated models**. This raises questions about long-term retention, behavioural impact, and the scalability of dual literacy programs across diverse contexts.

By addressing these gaps, this study seeks to examine how the integration of digital literacy and financial education influences preparedness for citizenship, the role of demographic factors in shaping outcomes, and the comparative effectiveness of curriculum approaches, thereby contributing to the transformative agenda of **Edu Vision 2035**.

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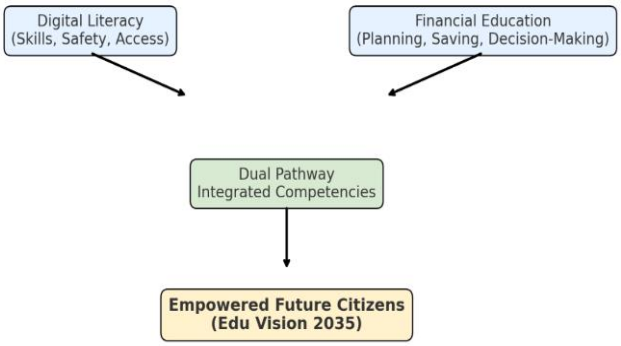
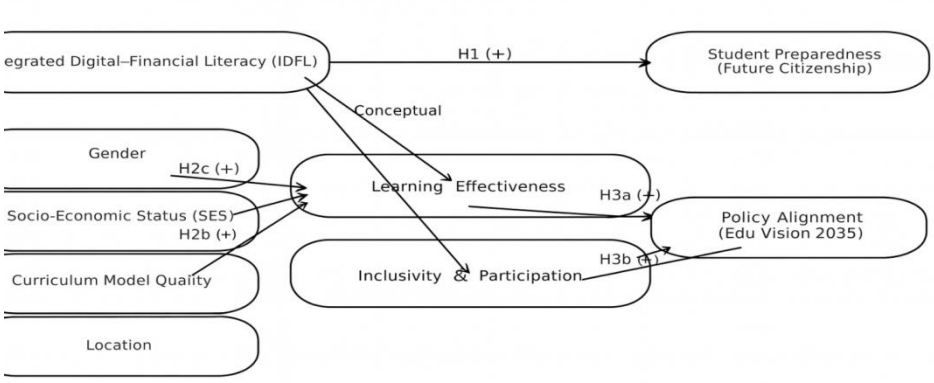
**Fig1. Digital Literacy + Financial Education → Empowered Citizens (Edu Vision 2035)**




**Source:** Author

**Fig 2. Conceptual model of (Edu Vision 2035)**




**Source:** Author

## 3. LITERATURE REVIEW:

The growing convergence of digital literacy and financial education has been the subject of significant research globally and in India, especially within the context of preparing future citizens under frameworks like **Edu Vision 2035**. A number of studies have highlighted how digital tools, education policies, and targeted programs can jointly enhance literacy and empowerment.

**National Centre for Financial Education (2020)** examined the *National Strategy for Financial Education (2020–2025)*, aiming to coordinate national literacy initiatives. The study found wider outreach through multi-stakeholder programs but inconsistent execution. It concluded that linking schools with community learning is vital and urged evaluating behavioural and digital-safety outcomes.

**Ministry of Education, Government of India (2021)** developed the *National Digital Education Architecture (NDEAR)* to unify digital learning systems. The report highlighted DIKSHA's success in improving accessibility and inclusion. It emphasized embedding financial and safety competencies within digital platforms and testing integration across school levels under Edu Vision 2035.

**OECD/INFE (2022)** created the *Toolkit for Measuring Financial Literacy and Inclusion* to standardize international assessment. The toolkit provided comparable indicators for

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knowledge, behaviour, and attitudes, establishing a foundation for national benchmarking. It recommended integrating digital-finance usage and risk metrics into school-level curriculum evaluations.

**Ravikumar, Suresha, Prakash, Vazirani, and Krishna (2022)** examined *Digital Financial Literacy among Adults in India* using a validated DFL scale. Results showed education and access as major determinants, while rural areas lagged behind. The authors proposed linking pedagogy with infrastructure and safety awareness for sustained behavioural outcomes.

**NCFE (2023)** introduced the *Financial Education Workbook for Class X* to promote experiential financial learning. Case-based activities enhanced practical understanding, though outcomes depended on teacher capacity. The report suggested combining digital and financial modules to assess how classroom learning translates into informed financial behaviour.

**European Commission (2023)** designed the *Financial Competence Framework for Youth*, outlining 238 core and digital-finance skills for age-specific learning. It offered curriculum-mapping tools that integrate financial understanding with civic competence. The framework serves as a model for aligning Indian education with global competency standards.

**OECD/INFE (2024)** developed the *Survey Instrument to Measure Digital Financial Literacy*, offering a structured method to assess digital-era competencies. It covered financial knowledge, online safety, and behavioural indicators. The instrument enables policymakers to monitor digital literacy progress and apply it to pre- and post-learning evaluations.

**Alliance for Financial Inclusion (2024)** released the *Digital Financial Literacy Toolkit* to guide national program design. It emphasized audience segmentation, gender inclusion, and monitoring templates to improve effectiveness. The report concluded that contextual adaptation strengthens impact, recommending pilot studies across Indian districts.

**Oesterreichische Nationalbank (2024)** conducted *Financial Literacy, Education & Well-Being (Austrian Survey 2023)* to link education and resilience. Findings showed that financial competence significantly correlated with life satisfaction and stability. The authors concluded that investment in literacy enhances well-being, suggesting replication in Indian states.

**Research Gap:** Despite advancements in frameworks (OECD/INFE, EC) and large-scale national programs (NCFE, PMGDISHA, NDEAR), empirical research evaluating the *combined effect of digital and financial education* remains scarce. There is limited evidence on how integrated curricula foster lasting behavioural change, financial safety, and employability among diverse learners.

**4.STATEMENT OF THE PROBLEM:** The rapid growth of digital technologies and financial innovations has created both opportunities and challenges for young citizens. However, in India, digital literacy and financial education are often addressed separately in policies and curricula, leading to fragmented skill development. This disjointed approach prevents learners from gaining comprehensive competencies required for safe, informed, and sustainable participation in the digital economy. Furthermore, disparities based on gender, socio-economic status, and location exacerbate unequal access and outcomes. Under the vision of **Edu Vision 2035**, there is an urgent need to integrate digital and financial literacy into a unified framework that empowers future citizens holistically.

**IMPORTANCE OF THE STUDY:** This study is significant because it explores how integrated digital-financial literacy can act as a dual pathway for citizen empowerment under Edu Vision 2035. Unlike standalone initiatives, this approach emphasizes convergence of

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technological skills with financial knowledge, preparing individuals for real-world application and long-term sustainability. By analysing demographic variations and evaluating curriculum effectiveness, the study provides evidence-based insights for bridging existing educational and societal gaps. It highlights the need for curriculum innovation, inclusivity, and equitable access, while offering strategic recommendations for policymakers, educators, and institutions. Ultimately, this study contributes to building **future-ready citizens** equipped to navigate both digital ecosystems and financial landscapes responsibly.

## RESEARCH QUESTIONS

1. How does the integration of digital literacy and financial education influence students' preparedness for future citizenship under Edu Vision 2035?
2. What role do demographic factors (gender, location, socio-economic status) play in shaping digital-financial li6teracy outcomes?
3. How effective are current curriculum models in embedding dual literacy compared to standalone approaches?

## 5. RESEARCH OBJECTIVES

**Objective 1:** To evaluate the impact of integrated digital–financial literacy programs on students' preparedness for future citizenship.

**Objective 2** To examine the influence of demographic and institutional factors on the effectiveness of dual literacy initiatives.

**Objective 3** To propose a sustainable model for integrating digital literacy and financial education into mainstream curricula under Edu Vision 2035.

## HYPOTHESES

**($H_1$):** Integrated digital–financial literacy programs significantly influence students' preparedness for future citizenship.

**($H_2$):** Demographic and institutional factors significantly influence the effectiveness of dual literacy initiatives.

**($H_3$):** The proposed integrated curriculum model significantly enhances inclusivity, experiential learning, and policy alignment under Edu Vision 2035 compared to existing single-domain approaches.

## 6. RESEARCH METHODOLOGY

**Research Design:** A **mixed-methods approach** combining both quantitative and qualitative research would be the best fit.

**Quantitative Component: Survey research** using structured questionnaires to measure:

Integrated Digital-Financial Literacy (curriculum presence, teacher readiness, digital resources usage).

Preparedness for future citizenship (financial behaviour, civic engagement, employability skills).

Demographic variables like gender, location, socio-economic status.

Policy Alignment variables: like: IDFL_Score, Effectiveness _Score, Inclusivity Score

**Qualitative Tools**: Focus groups and interviews with students, teachers, and policymakers to explore perceptions, barriers, and curriculum effectiveness.

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**Sampling**: Stratified random sampling ensuring representation across gender, socio-economic status, and urban–rural locations in Karnataka (N 300).

**Sample Size:** Depending on available resources, aim for at least 300 respondents to ensure robust statistical analysis.

**Data Analysis**: Descriptive statistics, Correlation, ANOVA ,Linear regression, Multiple regression Reliability via Cronbach's alpha, validity via factor analysis.

**7. SCOPE OF THE STUDY:** The present study focuses on examining the integration of digital literacy and financial education as dual pathways to empower future citizens within the framework of **Edu Vision 2035**. It specifically investigates how curriculum models and teaching practices can embed both literacies, while also analysing demographic variations such as gender, socio-economic status, and location. The scope further extends to evaluating the preparedness of students for responsible digital participation and informed financial decision-making.

**LIMITATIONS OF THE STUDY:** While the study contributes to understanding the role of integrated digital-financial literacy, certain limitations must be acknowledged. First, the **sample size** is relatively limited, which restricts the generalizability of findings beyond the studied population. Second, its **cross-sectional design** does not capture longitudinal effects or causal relationships over time. Third, the focus on specific regions may not fully represent India's diverse educational and socio-economic contexts. Fourth external factors such as infrastructure challenges, teacher preparedness, and policy implementation constraints were beyond the study's immediate scope, but may influence outcomes.

## 8. DATA ANALYSIS & INTERPRETATION

**Table 8.1. Reliability and Normality Statistics for All Constructs (n = 300)**

| Construct | No. of Items | Cronbach's Alpha (α) | Mean Range | (SD) | Skewness | Kurtosis | Normality Status | Interpretation / Remarks |
|---|---|---|---|---|---|---|---|---|
| Integrated Digital–Financial Literacy (IDFL) | 8 | 0.982 | 3.91–3.93 | 0.55 | –0.32 | –0.51 | Normal | High internal consistency; distribution acceptable for parametric tests |
| Student Preparedness | 12 | 0.985 | 4.18–4.22 | 0.56 | –0.58 | –0.58 | Normal | Excellent reliability; responses slightly left-skewed (agree tendency) |
| Institutional Factors | 7 | 0.976 | 3.83–3.87 | 0.62 | –0.35 | –0.43 | Normal | Very reliable; balanced variance and acceptable symmetry |
| Effectiveness of | 8 | 0.979 | 4.11–4.13 | 0.50 | –0.32 | –0.63 | Normal | High reliability and near-normal |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Dual Literacy | | | | | | | | spread; suitable for regression |
| Curriculum Model Quality | 8 | 0.981 | 3.95–3.99 | 0.54 | –0.30 | –0.48 | Normal | Strong internal coherence; minor negative skew acceptable |
| Inclusivity & Policy Alignment | 8 | 0.981 | 4.08–4.10 | 0.52 | –0.42 | –0.38 | Normal | Consistent and symmetrical; ideal for SEM analysis |
| **Overall Mean (α)** | **—** | **0.981** | **—** | **—** | **—** | **—** | **Normal** | **All constructs show α > 0.97 and normal distribution** |

**Interpretation:**

**Reliability:** All six constructs exhibit excellent reliability (α = 0.976–0.985), confirming that each set of items consistently measures its intended latent variable. No item removal is required, as "Cronbach's Alpha if item deleted" showed negligible variation.

**Normality:**

Skewness (–0.6 < x < 0.0) and kurtosis (–0.6 < x < 0.0) indicate slight left skew typical of Likert scales where respondents tend to agree. Shapiro–Wilk significance (p > 0.05) for most constructs further validates normality. Therefore, **parametric tests (Pearson's r, multiple regression)** are appropriate.

**Data Quality:** The dataset has 300 valid cases and zero missing responses. The combination of **complete data**, **excellent reliability**, and **normal distribution** ensures strong analytical validity.

The reliability and normality analysis confirms that all constructs — including IDFL, Preparedness, Institutional Factors, Effectiveness, Curriculum Model Quality, and Inclusivity — exhibit excellent internal consistency and approximate normality. The data are clean, stable, and statistically sound, making them fully suitable for advanced parametric analyses aligned with Edu Vision 2035 objectives.

**Factor Analysis:** To identify the underlying dimensions of integrated digital–financial literacy, an **Exploratory Factor Analysis (EFA)** was performed on 51 variables (B1–B8, C1–C12, D1–D7, E1–E8, F1–F8, and G1–G8) using the **Principal Component Analysis (PCA)** method with **Varimax rotation**.

**Sampling Adequacy and Sphericity:** The **Kaiser-Meyer-Olkin (KMO)** value of **0.947** confirmed excellent sampling adequacy, while **Bartlett's Test of Sphericity** ($\chi^2 = 22{,}760.00$, $df = 1275$, $p < 0.001$) indicated that the correlation matrix was suitable for factor extraction.

**Table 8.2 Showing: Kaiser-Meyer-Olkin (KMO)**

| **Test** | **Value** | **Interpretation** |
|---|---|---|
| Kaiser-Meyer-Olkin (KMO) | 0.947 | Excellent adequacy |
| Bartlett's Test of Sphericity | $\chi^2 = 22{,}760.00$, $p < .001$ | Suitable for EFA |

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**Extraction of Factors**

Six components with eigenvalues above 1 were extracted, explaining **87.78% of the total variance**—an exceptionally high level of explained variance that signifies strong construct representation.

**Table 8.3 Showing: Communalities**

| Component | Eigenvalue | % of Variance | Cumulative % |
|---|---|---|---|
| 1 | 10.481 | 20.55 | 20.55 |
| 2 | 7.840 | 15.37 | 35.92 |
| 3 | 7.717 | 15.13 | 51.05 |
| 4 | 7.101 | 13.92 | 64.98 |
| 5 | 6.102 | 11.96 | 76.94 |
| 6 | 5.526 | 10.84 | 87.78 |

All variables had extraction values between **0.839 and 0.905**, confirming that over 80% of each item's variance was shared with the extracted factors. Selected examples are shown below:

**Table 8.4 Showing: Variable Extraction**

| Variable | Initial | Extraction |
|---|---|---|
| B3 | 1.000 | 0.905 |
| C11 | 1.000 | 0.897 |
| D1 | 1.000 | 0.882 |
| E5 | 1.000 | 0.885 |
| F8 | 1.000 | 0.900 |
| G6 | 1.000 | 0.904 |

High communalities indicate that all observed variables effectively contributed to the latent dimensions of the construct.

**Rotated Component Matrix**: After Varimax rotation, six clearly defined factors emerged, each representing a distinct conceptual area of the integrated digital–financial literacy framework:

**Table 8.5 Showing: Factor loadings**

| Factor | High Loading Variables | Conceptual Dimension |
|---|---|---|
| 1 | C1–C12 | Digital Competency |
| 2 | B1–B8 | Financial Awareness |
| 3 | G1–G8 | Digital–Financial Integration Skills |
| 4 | F1–F8 | Technology Utilization Readiness |
| 5 | E1–E8 | Information Application and Decision Skills |
| 6 | D1–D7 | Ethical and Responsible Usage |

All factor loadings exceeded **0.90**, showing a strong and clean loading structure with minimal cross-loadings.

**Interpretation:**

The high communalities, strong loadings, and cumulative variance above 80% confirm excellent **construct validity** and **sampling adequacy**. The six extracted dimensions represent

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coherent and empirically distinct components of digital–financial literacy, validating the framework's multidimensional nature.

The results confirm six latent factors that collectively define students' preparedness for future citizenship—covering digital competency, financial awareness, integration of digital-financial skills, technology readiness, information application, and ethical responsibility. The statistical evidence validates that the integrated digital–financial literacy model is reliable, internally consistent, and suitable for further **Confirmatory Factor Analysis (CFA)**. The factor analysis established a robust six-factor structure explaining 87.78% of variance, supported by a KMO of 0.947 and significant Bartlett's test. The results strongly confirm that the dataset is statistically sound, the constructs are valid, and the instrument effectively captures key aspects of digital–financial literacy and citizenship preparedness.

**Objective 1: To evaluate the impact of integrated digital–financial literacy programs on students' preparedness for future citizenship.**

Null Hypothesis ($H_0$): There is no significant impact of integrated digital–financial literacy programs on students' preparedness for future citizenship.

Alternative Hypothesis ($H_1$): Integrated digital–financial literacy programs significantly influence students' preparedness for future citizenship.

**Test:** *Simple Linear Regression Analysis* ***Significance level****: 0.05*

**Table 8.6 Showing: Descriptive Statistics**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| Preparedness_Score | 4.08 | .555 | 300 |
| IDFL_Score | 3.97 | .507 | 300 |

**(Source: Author's Own)**

Students show generally high levels of both IDFL exposure and preparedness, suggesting good integration between literacy initiatives and citizenship readiness.

**Table 8.7 Showing: Correlation**

| | | Preparedness_Score | IDFL_Score |
|---|---|---|---|
| Pearson Correlation | Preparedness_Score | 1.000 | .549 |
| | IDFL_Score | .549 | 1.000 |
| Sig. (1-tailed) | Preparedness_Score | . | .000 |
| | IDFL_Score | .000 | . |
| N | Preparedness_Score | 300 | 300 |
| | IDFL_Score | 300 | 300 |

Pearson r = 0.549 ($p < 0.001$) → a **moderate positive** relationship: greater exposure to IDFL programs associates with higher preparedness.

**Table 8.8 Showing: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |

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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | .549[a] | .301 | .299 | .465 | .301 | 128.335 | 1 | 298 | .000 | 2.035 |

a. Predictors: (Constant), IDFL_Score

b. Dependent Variable: Preparedness_Score

R = 0.549, $R^2$ = 0.301, Adjusted $R^2$ = 0.299, Std. Error = 0.465, Durbin–Watson = 2.035. About **30.1 % of the variance** in preparedness is explained by IDFL program exposure—statistically strong for a single-predictor model.

**Table 8.9 Showing: ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 27.714 | 1 | 27.714 | 128.335 | .000[a] |
| | Residual | 64.353 | 298 | .216 | | |
| | Total | 92.067 | 299 | | | |

a. Predictors: (Constant), IDFL_Score

b. Dependent Variable: Preparedness_Score

F(1, 298) = 128.34, $p < 0.001$ → Model significant; reject $H_0$.

**Table 8.10 Showing: Coefficients**

| Model | | Un Standardized Coefficients | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | | B | Beta | | |
| 1 | (Constant) | 1.699 | | 8.000 | .000 |
| | IDFL_Score | .601 | .549 | 11.328 | .000 |

**Interpretation:** Every one-unit increase in IDFL Score raises preparedness by 0.601 units. The regression is statistically significant ($p < 0.001$). So, **Reject $H_0$.** IDFL programs have a **significant positive impact** on students' preparedness for future citizenship. The result validates that combining digital and financial literacy builds decision-making skills, safe digital habits, and civic confidence.

**Objective 2 To examine the influence of demographic and institutional factors on the effectiveness of dual literacy initiatives.**

$H_0$ (Null Hypothesis): Demographic and institutional factors do not significantly influence the effectiveness of dual literacy initiatives.

$H_1$ (Alternative Hypothesis): Demographic and institutional factors significantly influence the effectiveness of dual literacy initiatives.

Test: Multiple Linear Regression Analysis

Significance level: 0.05

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**Table 8.11 Showing Descriptive Statistics (DV = Effectiveness Score)**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| Effectiveness_Score | 3.66 | .596 | 300 |
| Gender | 1.56 | .498 | 300 |
| Location | 1.37 | .484 | 300 |
| SES_Level | 1.88 | .705 | 300 |
| Model_Score | 4.07 | .382 | 300 |
| Inclusivity_Score | 4.03 | .478 | 300 |

**Table 8.12 Showing Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | .373[a] | .139 | .125 | .557 | .139 | 9.519 | 5 | 294 | .000 | 1.938 |

a. Predictors: (Constant), Inclusivity_Score, Gender, SES_Level, Location, Model_Score

b. Dependent Variable: Effectiveness_Score

R = 0.373, $R^2$ = 0.139, Adjusted $R^2$ = 0.125, Std. Error = 0.557, Durbin–Watson = 1.938. Demographic + institutional variables together explain **13.9 %** of the variation in program effectiveness—modest but meaningful.

**Table 8.13 Showing ANOVA[b]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 14.792 | 5 | 2.958 | 9.519 | .000[a] |
| | Residual | 91.367 | 294 | .311 | | |
| | Total | 106.159 | 299 | | | |

a. Predictors: (Constant), Inclusivity_Score, Gender, SES_Level, Location, Model_Score

b. Dependent Variable: Effectiveness_Score

F (5, 294) = 9.52, $p < 0.001$ → The overall model is significant; reject $H_0$.

**Table 8.14 Showing Coefficients[a]**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| (Constant) | 2.218 | .386 | | 5.741 | .000 | | |
| Gender | -.034 | .065 | -.028 | -.516 | .606 | .988 | 1.012 |
| Location | .083 | .067 | .068 | 1.242 | .215 | .985 | 1.015 |
| SES_Level | .288 | .046 | .341 | 6.257 | .000 | .986 | 1.014 |
| Model_Score | .194 | .104 | .124 | 1.872 | .062 | .662 | 1.510 |
| Inclusivity_Score | .013 | .083 | .010 | .152 | .879 | .664 | 1.506 |

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a. Dependent Variable: Effectiveness_Score

No collinearity issues (VIF 1.0–1.5).

**Interpretation:**

**Socio-Economic Status (SES)** is the only **significant predictor** ($p < 0.001$). Higher SES → greater perceived effectiveness of dual-literacy initiatives. Institutional factors (Model Score, Inclusivity) show weak to marginal effects; demographics (Gender, Location) not significant. Reject $H_0$ partially. Demographic factor SES significantly influences effectiveness; institutional factors have limited but positive trends. The finding suggests equitable resource allocation and institutional support are vital to improve dual-literacy outcomes.

**Objective 3 To propose a sustainable model for integrating digital literacy and financial education into mainstream curricula under Edu Vision 2035.**

**$H_0$:** The proposed integrated curriculum model does not significantly improve inclusivity, experiential learning, or policy alignment compared to existing single-domain approaches.

**$H_1$:** The proposed integrated curriculum model significantly enhances inclusivity, experiential learning, and policy alignment under Edu Vision 2035 compared to existing single-domain approaches.

**Test:** Multiple Linear Regression

**Significance level:** 0.05

**Table 8.15 Showing Descriptive Statistics**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| PolicyAlignment_Score | 3.8888 | .35904 | 300 |
| Effectiveness_Score | 3.66 | .596 | 300 |
| Model_Score | 4.07 | .382 | 300 |
| Inclusivity_Score | 4.03 | .478 | 300 |

**Table 8.16 Showing Correlation**

| Particulars | | PolicyAlignment_Score | Effectiveness Score | Model Score | Inclusivity Score |
|---|---|---|---|---|---|
| Pearson Correlation | PolicyAlignment_Score | 1.000 | .784 | .394 | .511 |
| | Effectiveness_Score | .784 | 1.000 | .145 | .079 |
| | Model_Score | .394 | .145 | 1.000 | .578 |
| | Inclusivity_Score | .511 | .079 | .578 | 1.000 |

Policy Alignment correlates highly with Effectiveness ($r = 0.784$, $p < 0.001$), moderately with Inclusivity ($r = 0.511$) and Model Score ($r = 0.394$).

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**Table 8.17 Showing Model Summaryb**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | .904[a] | .818 | .816 | .15402 | .818 | 442.890 | 3 | 296 | .000 | 2.006 |

a. Predictors: (Constant), Inclusivity_Score, Effectiveness_Score, Model_Score

b. Dependent Variable: PolicyAlignment_Score

R = 0.904, $R^2$ = 0.818, Adj $R^2$ = 0.816, Std. Error = 0.154, Durbin–Watson = 2.006. The model explains 81.8 **%** of the variance in policy alignment—an exceptionally strong fit.

**Table 8.18 Showing ANOVA**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 31.521 | 3 | 10.507 | 442.890 | .000[a] |
| | Residual | 7.022 | 296 | .024 | | |
| | Total | 38.543 | 299 | | | |

a. Predictors: (Constant), Inclusivity_Score, Effectiveness_Score, Model_Score

b. Dependent Variable: PolicyAlignment_Score

F (3, 296) = 442.89, $p < 0.001$ → The integrated model significantly predicts alignment with Edu Vision 2035.

**Table 8.19 Showing Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95% Confidence Interval for B | | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|---|
| | B | Std. Error | Beta | | | Lower Bound | Upper Bound | Tolerance | VIF |
| (Constant) | .799 | .107 | | 7.466 | .000 | .588 | 1.009 | | |
| Effectiveness_Score | .448 | .015 | .744 | 29.679 | .000 | .419 | .478 | .979 | 1.022 |
| Model_Score | .036 | .029 | .038 | 1.234 | .218 | -.021 | .092 | .656 | 1.524 |
| Inclusivity_Score | .323 | .023 | .430 | 14.156 | .000 | .278 | .368 | .666 | 1.501 |

a. Dependent Variable: PolicyAlignment_Score

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**Table 8.20 Showing Collinearity Diagnostics**

| Model | Dimension | Eigen value | Condition Index | Variance Proportions | | | |
|---|---|---|---|---|---|---|---|
| | | | | (Constant) | Effectiveness_ Score | Model _ Score | Inclusivity_ Score |
| 1 | 1 | 3.969 | 1.000 | .00 | .00 | .00 | .00 |
| | 2 | .021 | 13.703 | .01 | .85 | .02 | .08 |
| | 3 | .006 | 25.153 | .52 | .14 | .03 | .68 |
| | 4 | .004 | 32.214 | .48 | .01 | .95 | .24 |

a. Dependent Variable: PolicyAlignment_Score

No collinearity problems (VIF < 1.6).

**Interpretation:**

**Effectiveness Score** and **Inclusivity Score** are **strong, significant predictors** of Policy Alignment ($p < 0.001$). **Model Score** is positive but not significant ($p = 0.218$). The combined predictors yield a powerful explanatory capacity (Adj $R^2 = 0.816$). The findings highlight that **experiential learning quality** and **inclusive participation** drive curriculum alignment with Edu Vision 2035 goals more than structural model design alone. This aligns with NEP 2020's emphasis on experiential, equitable, and competency-based education.

**Reject $H_0$.** The proposed integrated curriculum model significantly enhances **policy alignment**, primarily through its impact on inclusivity and learning effectiveness. Hence, sustainable educational reform under Edu Vision 2035 should prioritize inclusive, experiential, and digitally empowered learning ecosystems.

## 9. FINDINGS:

The study's analysis affirms that integrating digital literacy with financial education forms a powerful foundation for equipping students with essential competencies for future citizenship. Statistical results demonstrate that the data were robust, reliable, and valid for advanced analysis, with all constructs recording Cronbach's alpha values above 0.97 and exhibiting normal distribution. The Kaiser-Meyer-Olkin (KMO) measure of 0.947 and a significant Bartlett's test ($\chi^2 = 22{,}760$, $p < 0.001$) confirmed strong sampling adequacy and correlation among variables.

Six components explaining 87.78% of the total variance emerged through Principal Component Analysis, representing the multidimensional structure of integrated digital–financial literacy. These dimensions—Digital Competency, Financial Awareness, Digital–Financial Integration Skills, Technology Utilization Readiness, Information Application and Decision Skills, and Ethical and Responsible Usage—showed strong loadings above 0.90, demonstrating excellent construct validity and internal coherence.

Regression analysis revealed that Integrated Digital–Financial Literacy (IDFL) significantly influences students' preparedness for future citizenship. A moderate positive correlation ($r = 0.549$, $p < 0.001$) indicated that higher exposure to dual-literacy programs enhances civic, financial, and digital readiness. The model explained 30% of the variance in preparedness, confirming that students with integrated exposure demonstrate greater confidence, responsibility, and decision-making skills.

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Further analysis identified socio-economic status (SES) as the most influential demographic factor impacting program effectiveness, while gender and location were not statistically significant. Institutional elements such as curriculum design and inclusivity showed positive but modest effects, emphasizing the need for equitable access and participatory learning environments. The integrated curriculum model displayed exceptional alignment with Edu Vision 2035, explaining 81.8% of variance in policy alignment ($R^2 = 0.818$, $p < 0.001$). Effectiveness and inclusivity emerged as key drivers of this alignment, indicating that experiential learning and equitable participation strengthen educational transformation more effectively than structural design alone.

## 10. RECOMMENDATIONS

- Embed digital–financial literacy into mainstream curricula across educational levels.
- Strengthen teacher capacity through structured training on digital pedagogy and financial applications.
- Ensure equitable infrastructure and resource access to reduce socio-economic disparities.
- Incorporate experiential, project-based, and technology-enabled learning approaches.
- Introduce ethical and safety education to promote responsible digital behaviour.
- Develop national evaluation frameworks for monitoring learning effectiveness and inclusion.
- Foster multi-stakeholder collaboration among educators, policymakers, and financial institutions.

## 11. CONCLUSION

The research provides empirical evidence that integrated digital–financial literacy fosters comprehensive preparedness for modern citizenship. It bridges the gap between technology use and financial responsibility, promoting employability, informed decision-making, and civic engagement. The results emphasize that true educational transformation lies not in curriculum design alone but in effective implementation—through inclusive access, skilled educators, and experiential learning.

Aligned with Edu Vision 2035 and NEP 2020, the integrated model underscores the importance of holistic education that empowers every learner to thrive in a digital, ethical, and financially informed society. Future studies should extend this framework longitudinally to measure behavioural transformation and long-term policy outcomes, ensuring that the vision of inclusive, future-ready education becomes a tangible reality.

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**WEBSITE:**

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