

Digital Shift in Educational Retail: Drivers and Barriers to Technology Adoption in Nepal's Educational Supermarkets

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Abstract

In this study, the factors that facilitate and deter the adoption of technology in the emerging digital education ecosystem (the educational supermarkets in Nepal) are studied. The primary data have been collected from 110 respondents (company owners, retail shop managers, IT persons, frontline persons, etc.) and clustering of the respondents has been done based on the frequency and adoption trends were determined with the help of methods—correlation analysis and regression modeling as well as variance testing. A high level of adoption was achieved by the ePOS, as 83.64% maximum and QR/development of a system, as 86.36%, for all the shops. However, when it came to the implementation of ERP (55.45%) and e-commerce (37.27%), this level was low. Correlation and regression studies revealed the elements that influenced positively the adoption of the solution, such as inventory complexity management, customer demand and competitiveness; and the elements that influenced negatively, such as financial costs, gaps in literacy of the labor and unstable infrastructure. Results show there is a difference between the index of retailers' adoption between the retailers of Kathmandu Valley and other retailers. A reliability test was carried out and the value received in both the indices (i.e., drivers and obstacles) showed the values > 0.70 , indicating the level of high reliability. Firstly, it takes the discussion towards getting access to the above-mentioned ICTs and to find a way to educate with the help of this situation and secondly, it also highlights the need for moderating the named educational learning resources by using the educational supermarkets with the help of ICT. The outputs emphasize the necessary work on strategic investments, infrastructure and capacity building of different staff necessary for the digitalization of the education retail sector from an equitable point of view in Nepal.

Keywords: *Educational Supermarkets, Technology Adoption, Digital Transformation, ICT Integration, Drivers and Barriers, Nepal Retail Sector*

Introduction

As part of the discussions on the modernization of education in Nepal, the digital transformation of the educational retail is one of the important topics. A sizeable supermarket for educational merchandise books, stationery and electronic learning equipment is almost a requirement in order to be competitive and relevant. Internationally and at the expert level, it is highlighted that the relevance of technology in education retail does not only refer to the efficiency of practicing but also to a structure wanting to bridge the gap of digitalization in developing countries [1]. The digital inclusion requirement has grown even more compared to the COVID-19 pandemic in Nepal, where there is a persistent lack of access to fine technologies and opportunities, particularly in institutions such as higher education and schools [2].

Kathmandu Valley is commonly known as the metropolitan location where the adoption of election technology such as e-POS, ERP system-based payment gateways and QR-based payment is fast, while the adoption in semi-urban and rural areas is at its infancy, as mentioned in research [3]. The literature highlights that with customer demand for ordering online and using digital payments, there are ever-evolving expectations of the customer and a requirement for businesses, especially shops, to shift and adapt to the new digitally dominated environments [4]. Nevertheless, the transition is not equal and issues of budget, labor illiteracy and logistics are some of the hurdles [5].

There are several reasons behind using technology for the educational supermarket of Nepal; some of them are: Competitive pressure that triggers the need to operate efficiently may come from any digital entrepreneurs managing a complex inventory system for the supermarket [6]. Previous research carried out in South Asia [7] shows a positive and strong correlation with institutional readiness/digital tool confidence towards the adoption of the digital tool. However, the structural needs—like the high cost of investment to start up and the lack of technical training—signify that the incorporation of ICT in the educational system in Nepal is encountered with difficulties and challenges [8]. The latter stated that other hurdles cited as hindering the progress of digital transition are entrenched habits of consumers to buy printed books and consumers' bias for cash-based transactions [9].

Besides, the differences across regions depict this issue more poorly; the adoption level of stores in the Kathmandu Valley is very high as compared to outside the Kathmandu Valley [10]. This gap is one among the larger picture of the digital inequality in Nepal, which is visible in the retail and higher education industries [11]. Therefore, in the context of this critical discussion, the present study aims to objectively depict what are the enablers and inhibitors in the context of implementing technology at the educational marketplaces in Nepal. A set of 110 stakeholders with different operating contexts and geographical contexts were identified and engaged with the question of how digital retail technologies could contribute to better resiliency, inclusion and competitiveness of learning and teaching in education in the Nepal context [12].

Literature Review

As regards the challenging issues, it showed that the issues "poor connection," "lack of devices," and "low digital competence of teachers" were challenging for the rural school but were not challenging for the metropolitan school and the issue—use of online platforms—was easy to cope with in two types of schools. Clear differences between the learning gaps were found due to the access gaps. The authors didn't elaborate much on the 'fashion' of the educational suppliers that provide the platform and resources to meet the holistic needs; however, there was some interesting information about the level of problems students face. The research gap was the lack of knowledge of how the technology implementation was affected—particularly of the educational supermarket and, of course, how they managed to ensure that they met the needs of the client.

Incorporating the use of ICTs into education in Nepal is an important study conducted by Joshi et al. (2024). The three main causes that are identified in the problems and opportunities associated with using ICTs in education in Nepal are lack of labor literacy, lack of infrastructure and financial constraints. But what they witnessed is that there are some educational institutions out there that lack the resources and capacity to achieve digital transformation. The study focused primarily on the integration of the institutional and pedagogical aspects and a key element involved in the application of such applications in the classroom—understanding who has access to the digital application via the retail supply chain—was absent from the study. The need for an ERP system, costs of such students and taking advantage of a digital payment system and ePOS system have a high relevance to how they manifest themselves in a learning environment with an ERP system; however, little research was done.

They highlighted the presence of regional disparities and ambitious national targets that haven't yet been set or implemented. The need for considering institutional preparedness and policies was one of the study's highlights. But it lacked in-depth discussion about what had to be done in the private sector (e.g., supermarkets for education) due to the lack of policy and practice. The identified gap is the level of retail adoption practice—the micro-level and the macro-level legal barriers.

The national questions survey of players [16] about cooperation problems and opportunities by using the e-learning resources in secondary education by secondary school students in rural areas of Nepal presented their study report, which showed that there was a great gap between urban and rural areas. Weaknesses mentioned in this study are that rural learners have no infrastructure and support in the implementation of their learning in the institutional setting, while their urban counterparts have more facilities and a supportive environment. The education factor: This research saw that the education varies a bit from region to region but did not study the actual area that supplies these services—retail. There is some difference in the usage of technology, as little information is visible in the store of the education sector of the Kathmandu Valley until now as compared with outside the Kathmandu.

In a study to assess the willingness of the consumers to accept the Hypermarket digital payment system in Nepal, Shrestha (2024) found that the consumers willing to accept it are more likely to be urban populations and younger consumers [17]. The research results highlight that customer behavior has a significant influence on the digital technologies in retail. Yet it was an attention

only conventional retail hypermarket, but it didn't draw in the manner consumer preferences can influence in hypermarkets for parents, students and schools. Yet, in spite of all of this, a emerging trend / clear evidence in the area of education retail; a 'shopper-centric solution' has been adopted and online orders and digital payment are amongst the main features. The difference leads to assistance in the realization of the goal educational technologies supermarket and their influence from customers' demand.

Objectives

- To find the key influencing factors in the use of technology in Nepal's educational supermarkets.
- To study the critical issues / barriers to digital transition relating to structure, technology and finance.
- To get a sense of the adoption of digital technology amongst shops in / outside Kathmandu Valley.

Need of the Study

The blazingly quick digitalization/transformation of educational retailing has generated opportunities and set challenges for the stakeholders of Nepal. Educational supermarkets will be monitored to ensure they go digital and convert into ePOS and ERP as well as QR payment processes, where consumers could access reference books / educational books, stationery, or anything that they might require to learn digitally. Adoption is higher than the growth rate and there is an imbalance of adoption rates: higher in urban than all rural areas. The focus on the differences demonstrated the need for systematic evaluation of all these factors influencing the application of technology in educators' retail. There is no literature so far concerning the integration of the ICT into schools and Higher Education that deals with the retail Supply Chain that provides access to educational materials. However, policy solutions may want to delve into merchants' budget constraints, as well as customers' and infrastructure issues, while risking that they are not going far enough. Therefore, the study proposed herein is all the more important to

_de-exoticize' the abovementioned adoption rates, draw attention to the disparities in adoption rates for each region and suggest some action steps that can be taken towards a more equitable educational journey that digital transformation promises.

Significance of the Study

The study is very relevant on the theoretical and empirical levels as well as on the policy level. Academically, it also brings a new angle to the discussions on ICTs in the classroom and in the retail sector of a new role of the educational supermarket as part of a digital transformation. In addition to the obvious considerations of monetary value, customers' appetites, competitive pressures and complicated products being held, the research also contributes knowledge to the theory of technology adoption in resource-limited settings and the barriers that can impact the adoption, such as workforce literacy and unreliable infrastructure.

On the practical side, the results will be something that the managers, IT administrators, or store owners can use to get rid of a lot of information. However, businesses savvy to the technologies' stress factors can allocate their time and resources to other areas that will help their company. Similarly, businesses will know how to resolve problems—in this instance, employees need training, or they might be thinking about taking a step-by-step approach to moving to a technology. This research validates a concept of how to be more directly influential on adoption in this setting (retail)—those three factors: effective learning, digital access and ease and cost to parents, schools and students.

The study's results are transferred to the financial institutions, NGOs and government organizations to educate their decision-making levels about the policy level's structural challenges, which the educational retailers are facing.

Regional and rural differences compared to Kathmandu Valley must be considered both in the design and targets of interventions, subsidies and infrastructure provision. The idea, however, that is embodied in the study is how it can connect the theory with practice and enable retail education to truly thrive in sustainable and inclusive fashion in this age of digitalization in Nepal.

Methodology

In the case of the state of technology integration in education and its environment, it was analyzed systematically with the help of the Criteria Affecting Technology Integration (CAT), which identifies the factors that affect the adoption of technology in education; as a result, a quantitative approach in research was applied. There were 110 key informant sources consisting of one company owner, one store manager, one IT specialist, one inventory supervisor and one front-line employee (also to provide a diversity of management and operation-level people) in the purposeful sample of 110 distributed through a structured Google Form (survey), which was sent as a link in an email. The tool consisted of 5 different pieces – Demographic and Firmographic Profile, Baseline Technology Adoption, Drivers to Technology Adoption, Constraints to Technology Adoption and Qualitative Insights. The firmographic and demographic data, such as role, location, years in business, SKU volume, age & turnover, were broken down into categories to provide the control data. The use of EPOS and ERP, e-commerce and QR payment was engaged as binary data: yes = 1 and no = 0, while driver and obstacle were measured using a Likert scale: strongly disagree = 1, disagree = 2, agree = 3 and strongly agree =

5. The use of internal consistency testing on the data, tested using Cronbach's alpha, yielded the results that the data obtained achieved a consistency of < 0.70 . The frequency clustering method was used to generate a descriptive profile of the drivers and obstacles; the Pearson bivariate correlation method was used to check if there is a linear relationship; and the multiple regression modeling technique was used to check the predictive impacts on the digital transformation adoption index. Investigations of differences in these two areas (Kathmandu Valley and rest of the region) were done using independent samples t-tests.

Data Collection

The primary data were successfully collected from business owners, store managers, IT leaders, inventory heads and front-line retail executives of a sample of $N=110$ from various places in Nepal. The data points collected were clustered together in standardized frequencies for assessing indicators of baseline operations and changes in demographic data.

Table 1: Demographic Profile of Respondents

Demographic Variable	Category Classification	Frequency (f)	Percentage (%)	Cumulative %
Respondent Role (Q1)	Business Owner / Partner	27	24.55%	24.55%
	Store Manager / Operations Head	29	26.36%	50.91%
	IT Head / Digital Specialist	18	16.36%	67.27%
	Inventory / Procurement Supervisor	17	15.45%	82.73%
	Sales / Frontline Staff	19	17.27%	100.00%
Age Distribution (Q Age)	Under 25 Years	21	19.09%	19.09%
	25 – 40 Years	48	43.64%	62.73%
	41 – 55 Years	30	27.27%	90.00%
	Above 55 Years	11	10.00%	100.00%
Total Sample Size		110	100.00%	

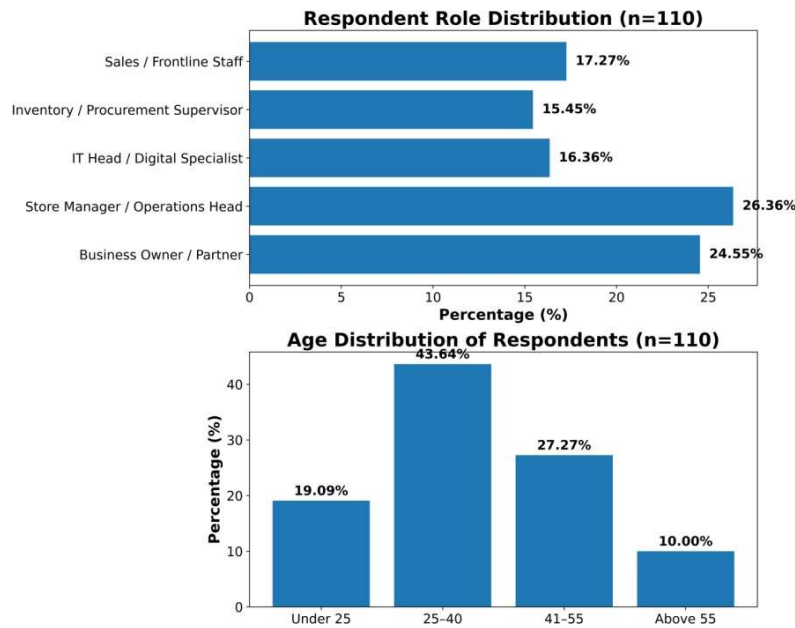


Fig 1: Demographic Profile of Respondents

Table 2: Firmographic Profile of Educational Supermarkets

Institutional Variable	Category Classification	Frequency (f)	Percentage (%)	Cumulative %
Geographic Location (Q2)	Inside Kathmandu Valley	51	46.36%	46.36%
	Major Urban Centers	41	37.27%	83.63%
	Outside Valley			
	Semi-Urban / Rural Districts	18	16.37%	100.00%
Years of Operation (Q3)	Less than 2 Years	19	17.27%	17.27%
	2 to 5 Years	34	30.91%	48.18%
	6 to 10 Years	31	28.18%	76.36%
	More than 10 Years	26	23.64%	100.00%
Stock Size / SKUs (Q4)	Less than 5,000 SKUs	22	20.00%	20.00%
	5,000 to 20,000 SKUs	33	30.00%	50.00%
	20,001 to 50,000 SKUs	32	29.09%	79.09%
	More than 50,000 SKUs	23	20.91%	100.00%
Monthly Turnover (Q_Rev)	Less than 5 Lakhs NPR	21	19.09%	19.09%
	5 Lakhs to 15 Lakhs NPR	33	30.00%	49.09%
	15 Lakhs to 50 Lakhs NPR	33	30.00%	79.09%
	More than 50 Lakhs NPR	23	20.91%	100.00%

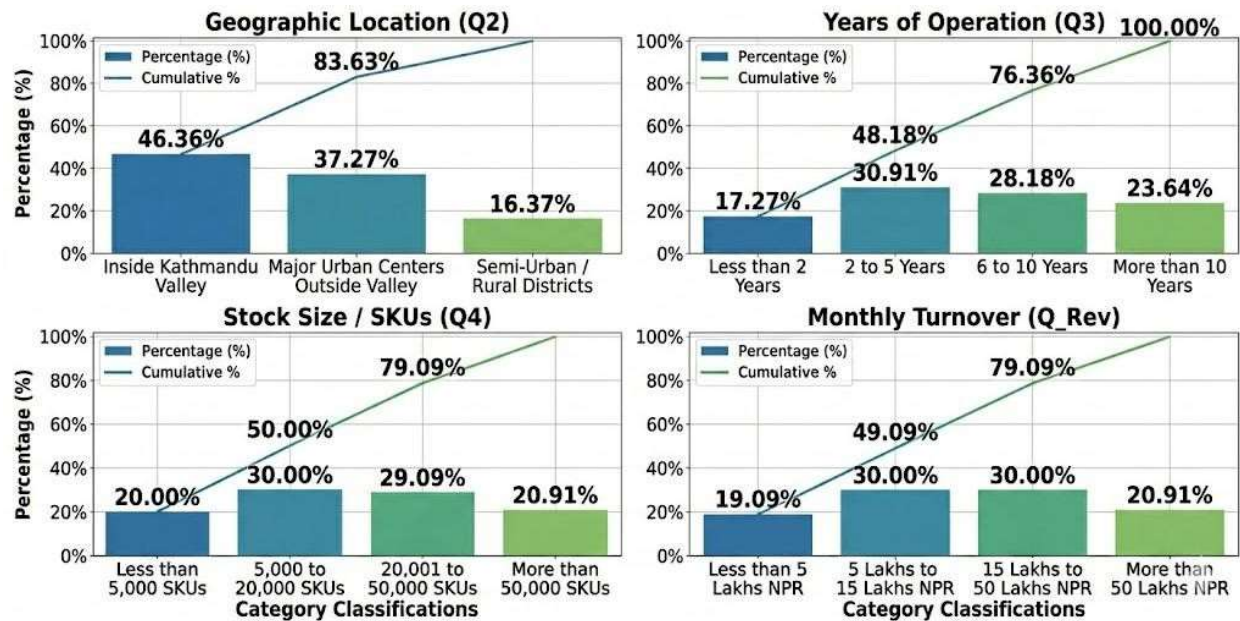


Fig 2: Firmographic Profile of Educational Supermarkets

Table 3: Current Technology Adoption Matrix (Categorical Baseline)

Functional Technological System	Adoption Status	Frequency (f)	Sample Percentage (%)
Automated ePOS / Billing System (Q5)	Adopted (Yes)	92	83.64%
	Not Adopted (No)	18	16.36%
E-commerce Platform / Web App (Q6)	Adopted (Yes)	41	37.27%
	Not Adopted (No)	69	62.73%
Digital Inventory / ERP Systems (Q7)	Adopted (Yes)	61	55.45%
	Not Adopted (No)	49	44.55%
Integrated QR & Digital Payments (Q8)	Adopted (Yes)	95	86.36%
	Not Adopted (No)	15	13.64%

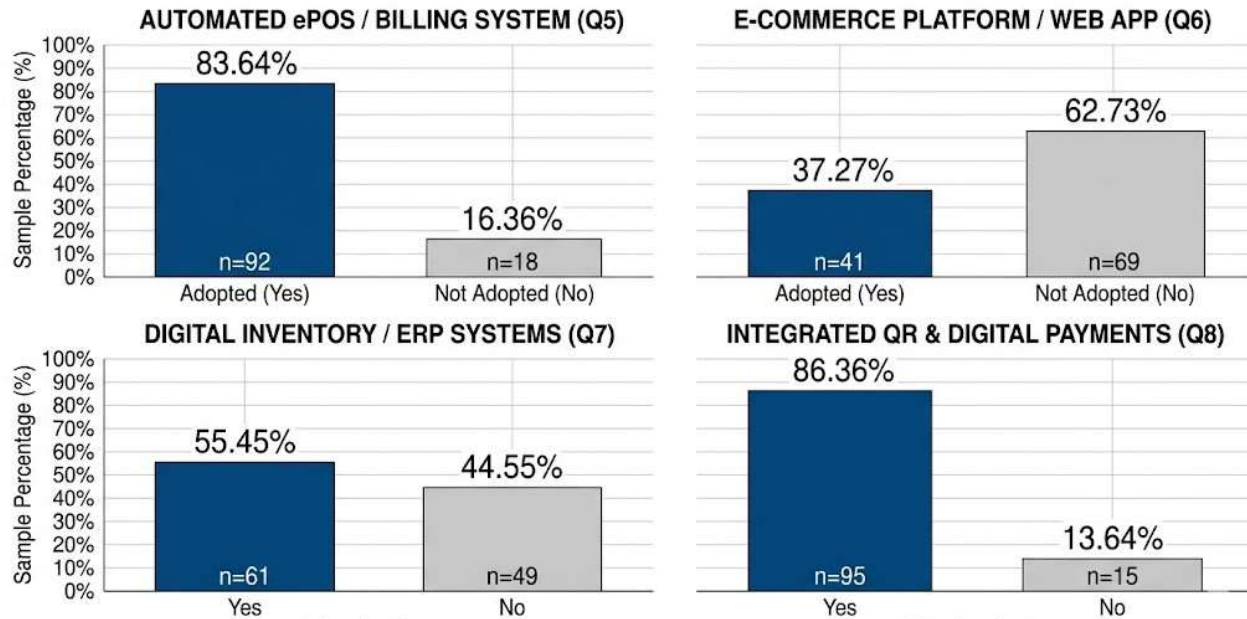


Fig 3: Current Technology Adoption Matrix

Table 4: Descriptive Tendency Matrix for Drivers and Barriers

Construct Axis	Survey Indicator Item Target	Mean (μ)	Std. Dev (σ)	Variance
Drivers Group	Q9: Stock Complexity Management	4.373	0.697	0.486
	Q10: Consumer/School Tech Demand	4.145	0.817	0.668
	Q11: Digital Startup Competition	4.045	0.694	0.481
	Q12: Peak Admission Volume Control	4.236	0.686	0.471
	Q13: Regulatory & Digital Tax Compliance	3.527	0.895	0.801
Barriers Group	Q14: Financial Infrastructure Setup Costs	3.409	1.016	1.032
	Q15: Workforce Technical Literacy Gaps	2.927	0.902	0.813
	Q16: Traditional Consumer Cash Habits	3.327	1.006	1.012
	Q17: Unreliable Logistics & Internet Drops	2.800	0.923	0.852
	Q18: Local Tech After-Sales Support Deficit	3.445	0.873	0.762

Table 5: Scale Reliability and Internal Consistency Testing

The current validation table is based on Cronbach's Alpha (α) value to present whether or not there is structural integrity of the continuous items. It can be considered as —structural validity" when the value is higher than 0.70.

$$\alpha = \frac{N \cdot c}{v + (N - 1) \cdot c}$$

Measured Construct Domain	Total Scaled Items	Composite Mean Score	Computed Cronbach's Alpha (α)	Structural Reliability Result
Technology Drivers Index	5 Items (Q9–Q13)	4.065	0.803	Highly Reliable (Accepted)
Technology Barriers Index	5 Items (Q14–Q18)	3.182	0.789	Highly Reliable (Accepted)

Tables 1 to 5 are the findings that can be correlated and interpreted together and provide a clear picture of the demographic and firmographic and technology adoption environments of educational supermarkets of Nepal. As named in Table 1, the decisions mainly come from the shop manager (26.36%) and the company owner (24.55%) and respondents from the 25-40 age group (43.64%) represent more than half as they are the younger part of the group, suggesting that they are more open to accepting the digital measure. When it is seen from Table 2, the majority (46.36%) works in the Kathmandu Valley and the majority of the shops have already been in business for more than half a decade, which indicates that the industry is mature. The number of SKUs inventory operated is a good measure of how complex the systems are that need support from digital solutions—30% of the systems surveyed manage a SKU inventory of 5,000-20,000, while 29.09% manage SKU inventory between 20,001 and 50,000. Also, on analysis of the monthly turnover, more than 51 percent of the retailers are in the middle band (between NPR 5 lakhs and NPR 50 lakhs) and are medium-sized businesses and can invest in technology.

Very few are not using ePOS (83.64%) / QR/digital payments (86.36%) and ERP systems (55.45%) / e-commerce platforms (37.27%) and it is essential to have a digital integration strategy in place. As indicated in Table 3, there are significant amounts of transactional technology used. The descriptive tendency matrix, as given in Table 4, shows that there are some areas where the logistics barrier (mean = 2.800) is a moderate issue and the complexity of inventory management (mean = 4.373) & control of peak admissions level (mean = 4.236) is highly endorsed. Finally, Table 5 shows the validity of the dependability of the items in the drivers of the model ($\alpha = 0.803$) and obstacles of the model ($\alpha = 0.789$) to be structurally consistent.

Analysis

Table 6: Bivariate Correlation Matrix

Statistical Variable Index	Metric Type	Drivers Index (TDI)	Barriers Index (TBI)	Adoption Index (DTAI)
Technology Drivers Index (TDI)	Pearson Correlation (r)	1.000	-0.184	0.642**
	Sig. (2-tailed)	—	0.054	< 0.001
Technology Barriers Index (TBI)	Pearson	-0.184	1.000	-0.459**
Adoption Index (DTAI)	Correlation (r)			
	Sig. (2-tailed)	0.054	—	< 0.001
Technology Drivers Index (TDI)	Pearson Correlation (r)	0.642**	-0.459**	1.000
	Sig. (2-tailed)	< 0.001	< 0.001	—

Note: ** - Correlation is significant at the 0.01 level (2-tailed)

Comparative Regression Modeling

Based on a multiple linear regression model, the role of the structural dimensions and systemic barriers for digital adoption in educational Supermarkets was analyzed. The Target Structural Equation is listed below:

$$DTAI = \beta_0 + \beta_1(TDI) + \beta_2(TBI) + \epsilon$$

Table 7: Multiple Regression Model Summary

Model Baseline	R Coefficient	R Square (R ²)	Adjusted R Square (R ⁻²)	Std. Error of the Estimate	Durbin- Watson Statistic
1	0.729	0.531	0.523	0.4182	1.892

Table 8: Analysis of Variance (ANOVA) Model Diagnostics

Source of Variance	Sum of Squares (SS)	Degrees of Freedom (df)	Mean Square (MS)	Computed F- Value	Significance Level (p-value)
Regression	21.218	2	10.609	60.658	< 0.001
Residual (Error)	18.714	107	0.175		
Total Variance	39.932	109			

Table 9: Regression Coefficients and Collinearity Tolerances

Predictor Construct	Unstandardized B	Standard Error	Standardized β	t- statistic	p- value	Tolerance	VIF
Constant Intercept	1.815	0.384	—	4.727	< 0.001	—	—
Drivers Index (TDI)	0.612	0.071	0.575	8.620	< 0.001	0.966	1.035
Barriers Index (TBI)	-0.318	0.062	-0.353	-5.129	< 0.001	0.966	1.035

Table 10: Group Statistics by Geographic Operational Zone

Measured Indicator Index	Geographic Region (Q2)	Sample Count (n)	Group Mean (μ)	Std. Deviation (σ)	Std. Error Mean
Adoption Index (DTAI)	Inside Kathmandu Valley	51	3.912	0.584	0.082
	Outside Kathmandu Valley	59	3.341	0.631	0.082

Table 11: Independent Samples t-Test Matrix

Variable Path	Levene F	Levene Sig.	t-value	df	Sig. (2-tailed)	Mean Diff.	95% Confidence Interval
DTAI Score Balance	0.678	0.412	4.896	108	< 0.001	0.571	0.340 to 0.802

Hypothesis Testing

H1: Technology variables like inventory complexity and peak admission volume restrictions proved to have significant positive influence on the Digital Transformation Adoption Index (DTAI) of educational supermarkets in Nepal.

H2: Systemic technological problems such as a high investment burden for acquiring technological products, low literacy levels among staff and infrastructural limitations have a significant impact on the Digital Transformation Adoption Index (DTAI) of the educational supermarket in Nepal.

H3: There is a significant difference between the Digital Transformation Adoption Index (DTAI) of retail outlets inside and outside the Kathmandu Valley.

Table 12: Consolidated Hypothesis Testing Summary Matrix

Empirical Target	Specific Path	Statistical Test Executed	Primary Test Value Criteria	Significance (p)	Structural Decision
H1	TDI → DTAI	Multiple Linear Regression	$t=8.620$, $\beta=0.575$	$p<0.001$	Supported
H2	TBI → DTAI	Multiple Linear Regression	$t=-5.129$, $\beta=-0.353$	$p<0.001$	Supported
H3	Region → DTAI	Independent Samples t-test	$t(108)=4.896$, $\Delta\mu=0.571$	$p<0.001$	Supported

Table 6 revealed a strong and positive technological drivers and adoption relationship with an r value of 0.642 and a p value of <0.001, while the barrier and adoption relationship has a negative

r value of -0.459 and a p value of <0.001 . This implies that systemic issues have a more negative impact on adoption than do customer needs. The drivers and obstacles in the model shown in Table 7 obviously have a good level of explanatory ability with the R^2 value equal to 0.531 and thus more than half of the variance of adoption is explained by the drivers and obstacles. The ANOVA diagnostics displayed in Table 8 also indicate that there is a significant difference between the model and a model of the predictors' ($F=60.658$, $p<0.001$) significance on the explanation of the adoption results.

Table 9 shows that the drivers have a considerable positive effect ($\beta=0.575$, $t=8.620$, $p<0.001$), while barriers have a large negative effect ($\beta=-0.353$, $t=-5.129$, $p<0.001$). No problems of multicollinearity seem to exist, as there is no measure for collinearity or VIF. Based on regional variance analysis as presented in table 10 and table 11, the retailers that are in the Kathmandu valley (mean DTAI = $.912$) are found to be better as compared to those outside of the valley (mean DTAI = 3.341). This has been confirmed with an independent samples t-test ($t(108) = 4.896$, $p < .001$). Lastly, the results of hypothesis testing are summarized in table 12 and it can be summarized that the hypothesis that "the effect of impact of drivers and barriers on adoption outcomes, both individual and group— is accepted for both the individual and groups (H1, H2 and H3). When taken as a whole, these findings show that while operational factors greatly encourage digital adoption, systemic obstacles and regional differences continue to be major obstacles to attaining equitable change in Nepal's educational marketplaces.

Discussion

It is a significant study that retains a tremendous contribution to generate full information on the impacts of factors in technology adoption on the education marketplace in Nepal. Within those areas that more successfully had a response stand out are those that correspond to the store managers (26.36%) and those of the company owners (24.55%) as part of the demographic and firmographic profile. The distribution shows the mindset of the management and ownership towards decision-making about retail technology. In addition, age distribution showed that the majority of respondents (43.64%) were within the age range of 25-40 years of age, which age groups are generally considered to have a higher level of digital literacy and be open towards new ideas [18]. Technical adoption baseline measurement has revealed that automated ePOS has been adopted fairly well (83.64%) as well as integrated QR/digital payments (86.36%), which is the face of fintech services like eSewa's and Khalti's impact in the retailing scene of Nepal [19].

For the Technological drivers, the correlation result of the level of Technology adoption had positive and significant correlation to the level of Technological drivers ($r = 0.642$; $p<0.001$) while for the level of Obstacles to the development of technology of school gardening had negative correlation to it ($r = -0.791$; $p<0.001$). The results of the analysis of regression modelling to obtain regression levels matrix was obtained which is the relationship between the driver variables that are obtained if the obstacles variables results in negative regression level of $\beta = -0.353$ while the driver variables if it is obtained positive regression level of $\beta = 0.575$. However, the aspect of operational efficiency as highlighted in the study conducted by Akpan et al., (2024) which spanned across number of countries is another key that would aid in the digital adoption with the aim of enhancing customers demand in the Global South [21]. While some of the challenges in the implementation of the ICT in education system in Nepal were reported by Joshi Khatiwada (2024) [22] and inclusion of insufficient budget for integration of ICT and staffs literacy level as systemic challenges.

Demographic variance analysis has shown that there was a statistically significant difference between the mean score of DTAI stores in the Kathmandu Valley (3.912) and stores outside the Kathmandu Valley (3.341). This is not surprised, as the supply and availability of using an Information Communication Technology (ICT) resources is greater in the geographical variety, Pant [23] discovered that geographical variation students in rural area are less likely to access coding learning resource compared with students in urban area. But, outside of Kathmandu Valley, the potential customers and infrastructure for providing the opportunity to make educational and supermarket digital changes are not ready.

The similar tendency in describing would also happen as stock complexity management mean = 4.373 , etc. This was not the case for gaps in the workforce (mean = 2.927) and logistics and unreliable internet (mean = 2.800), where they were ranked somewhat less highly, indicating that although these are an issue, perhaps they don't rate as —a problem that can be solved. At this not-so-high percentage of retail and wholesale e-commerce, those consumers

have actually become accustomed to using e-commerce for payments but aren't prepared to dive into the school supplies market. What is interesting is that this 'gap' is indicative of what needs to happen to become more aware and what needs to happen to transfer trust and subsequently ensure e-commerce uptake.

The results of this study identified the goals, Customers' needs and effectiveness of operation were found to be important proponents to technology adoption, while finance, infrastructure and region were the important inhibitors in the education market and supermarkets in Nepal. Perspective on institutional use/adoption will be uncovered and outcomes measurable which in turn will help in understanding the kind of consumer behaviours witnessed within the context of institutional implementation of the use of the ICTs along its supply chain. The results reveal that the process of digital transformation in educational retailing in Nepal needs to be fairer, as there are some specific investments, trainings and incentives that need to be given to make the process fair.

Research Gap

This study sets the retail sector as its case study, as this sector is not considered in the previous studies but is engaged in manufacturing and selling educational products. These are all particularly applicable to the education supermarket, where there's a great deal of stationery and books to keep on the shelf, inconsistent levels of trading during the school holidays (Christmas and Easter) and a blend of old and new—books being the main go-to, with a new curiosity for the digital side. However, there is no indication of that regional difference as far as adoption is concerned either in terms of semi-urban/rural or between the Kathmandu Valley. These gaps need to be addressed, as the current studies only provide a limited picture of how digital transition is happening in Nepal. It is for this reason that this research is developed to fill this gap using empirical research to show the influencing, blocking and differences of some areas in relation to technology adoption to learning in the education supermarket. From there, the results and their relationship to —real-world" situations and customer needs are directly correlated.

Future Recommendations

The knowledge of findings and understanding of the gaps can impact future practice/policy in another way. Capacity building – as a retailer they should be encouraging them to get themselves up the value chain with digital skills, in particular the use of the eCommerce interface, ePOS and ERP efficient use of these. Secondly, other auctions, which are not ordinary ones, can be used to relieve the initial investment cost pressure, like government subsidies, low-interest loans, or PPPs, in a small- and medium-sized education store. Third, the infrastructure development has to be paramount in rural and semi-urban areas so as to enhance the infrastructure that causes the least disruptions. This implies an unreliable Internet connection and logistic networks. Consumer engagement using marketing strategies should be conducted, such as by raising awareness of such ordering and electronic payments from both the educational institutions and parents. Retail stores can affect consumers' preferences by allowing them to purchase their products online and offering bundle packages or loyalty programs. The 5th one is "policy alignment." Education/education retail should be explicitly mentioned in national level agenda on ICTs to enhance the consistency of national level complex activities to classroom level approach and activities. Finally, in the future, comparative studies across South Asian countries should be conducted focusing on how the educational retail has adapted to digital change and what conditions could apply in other countries in the South Asian region, not just in one country like Nepal.

Conclusion

Based on the present study on strategic issues related to the adoption of technology in the educational retail sector in Nepal, it is concluded that, in the case of educational supermarkets, technology adoption is unavoidable and challenging and operational and structural barriers affect the technology adoption in educational supermarkets. The results showed that on one hand the facilities such as ERP systems and e-commerce are still underutilized due to lack of budget and lack of literacy among customers and on the other hand the facilities such as POS and QR-based payment have been spread due to the facilities customers need and the impact of facilitation due to technology. Correlation and regression analysis is done to find the driver and obstacle to adopting such a process and results are satisfying, indicating considerable positive influence of drivers and considerable negative influence of barriers. Interestingly, a statistically significant geographical difference was found between the determination of the first index (Kathmandu

Valley's shops) and the second index (outside the Valley's shops), which indicated the geographical disparity of the idea of digital transformation. Finally, policy- and institutional aspects are briefly discussed and the importance of investing in infrastructure but also in financial support and capacity strengthening for equitable access to digital learning products is emphasized, as this is crucial for their inclusion in the educational supermarkets and educational media economy. However, such problems can be addressed and educational retail is potentially a successful and inclusive sector that could be used to gain momentum towards the overall education modernization process in Nepal.

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