Influence Of Phygital Marketing On Student Enrollment Decisions In Edtech Companies

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ABSTRACT
The increase of digital technologies has brought about a shift in the way EdTech companies in India are perceived by their marketers. It is evident from the findings of previous studies that phygital marketing has become an integral part of the decision-making process of the enrollment in an educational institution. This study focuses on understanding the effect of phygital marketing on the decision-making process regarding student enrollment in EdTech companies with reference to India.
A questionnaire-based survey was conducted using a structured questionnaire on 300 students, parents, and working professionals residing in Pune, Mumbai, and Nashik districts of Maharashtra. Descriptive statistics, factor analysis, and Structural Equation Modelling (SEM) were used to analyze the collected data. Five important dimensions of phygital marketing include the consumption of digital content, physical touchpoints, omnichannel experience, personalized communication, and building trust.
Results show that the highest positive influence on student enrollment decision is due to the omnichannel experience and personalized communication, whereas physical touchpoints play an important role in the case of first-generation learners.

Keywords: Phygital Marketing, EdTech, Student Enrollment, Consumer Behaviour, Omnichannel, Digital Marketing, India

1. INTRODUCTION-

With a tremendous growth rate, the Indian EdTech market is one of the most promising ones in the world, currently estimated to be worth approximately USD 7.5 billion in 2023 and expected to grow to reach USD
30 billion by 2031 (IBEF, 2024). Such companies as BYJU'S, Unacademy, Vedantu, upGrad, and Simplilearn revolutionized the traditional process of studying through digital technologies.
Yet, even as the EdTech industry becomes increasingly digital, consumers' behavior turns out to be far more complicated than it might seem. Neither students nor parents rely on online-only experiences when enrolling in new programs, still valuing personal experience, including demo classes, face-to-face counselling sessions, or recommendations. This combination of the physical and the digital constitutes the idea of phygital marketing, which was invented by merging 'physical' and 'digital' (Batat, 2022). According to Mele and Russo-Spena (2022), phygital marketing is a concept that implies providing consumers with fully immersive experiences that integrate digital elements into physical spaces. For an EdTech company, it can mean blending various tools used in its online presence, such as AI-powered course recommendations, webinars, social media marketing, and mobile apps with physical experiences, including visits to counseling centers and schools/colleges/universities.
Although this topic holds immense importance for both practitioners and scholars alike, the literature review reveals a lack of empirical evidence regarding the impact of phygital marketing in the EdTech industry in India. The existing body of literature mainly concentrates on phygital marketing in the realms of retail, luxury, and fast-moving consumer goods. This research aims to bridge this important research gap.

LITERATURE REVIEW

1.1 Introduction and Development of Phygital Marketing

The concept of "phygital" was coined to refer to consumer experiences that combine both physical and digital attributes (Batat, 2022). According to Mele and Russo-Spena (2022), phygital is an innovative consumption space in which digital technologies enhance the physical aspects of interaction, thus creating an integrated and immersive experience. The phygital shift has been recognized as one of the strategic responses to changing consumer requirements, as they increasingly seek both digital simplicity and physical authenticity (Mele et al., 2023). In 2024, Batat introduced the Phygital Customer Experience (PH-CX) model, which conceptualizes phygital experiences based on such characteristics as immersion, interactivity, personalization, and

emotionality. The PH-CX framework will act as the theoretical background of this research.

1.2 Consumers' Behavior and Digital Marketing in EdTech

Digital marketing has revolutionised the consumer decision process in the education sector. According to Kumawat and Bhamboo (2023), digital marketing tools such as social media ads, SEO, and content marketing play a pivotal role in shaping consumer awareness and intention towards EdTech ventures. The findings reveal that consumer trust and product quality moderate the effect of digital marketing on enrolment choices.

Chen et al. (2023) analyse the purchase intention behind buying online courses and conclude that perceived quality, credible instructors, and system usability act as major factors influencing consumers' enrolment choice. Zhang et al. (2022) expand this discussion by focusing on consumer satisfaction from online education and intention to buy further.

1.3 Omnichannel and Phygital Integration in Education

The integration of physical and digital touchpoints, which is known as omnichannel marketing, has been cited as one of the critical drivers of consumer engagement in the services industry (Banik & Gao, 2023). In the case of EdTech firms, omnichannel approaches refer to the integration of touchpoints such as websites, mobile apps, social media platforms, counselling centers, and educational events.

According to Santoki et al. (2024), who assess marketing management innovation practices in the EdTech industry, omnichannel integration and personalized communication are the two most effective marketing strategies for attracting students. Based on their investigation of Indian EdTech firms, the researchers find that students who receive phygital marketing messages through multiple channels are 2.4 times more likely to enroll than those who receive messages from only one channel.

1.4 Role of Trust, Personalization, and Social Proof

Trust is one of the key antecedents to online purchase intention (Chandra et al., 2022). In relation to EdTech, building trust through measures such as transparency in prices, learner testimonials, free trial periods, and guarantee of results plays a major role in affecting enrolment decisions (Kumar & Masvood, 2025). Personalized marketing communications through use of artificial intelligence algorithms and data analysis play an important role in increasing engagement with consumers by providing them with suitable content at the right time. Student success stories, peer reviews, ratings, and endorsements by influencers such as educators have also been identified as key elements of social proof that affect the enrolment behavior of Generation Z and millennials (Guerra-Tamez et al., 2024). This is similar to the concept of eWOM as discussed in the wider literature (Emon et al., 2024).

1.5 Research Gap

Although previous studies have extensively explored digital marketing practices in EdTech and phygital marketing practices in retail sectors, there is a lack of empirical evidence that explores the relationship between phygital marketing practices and enrollment decisions specifically in India's EdTech sector. Most existing studies have considered the digital marketing and physical marketing separately, without considering their combined phygital impact.

2. STATEMENT OF THE PROBLEM, OBJECTIVES & HYPOTHESES

2.1 Statement of the Problem

Indian EdTech businesses have spent heavily on not only digital marketing strategies (social media, SEO, application marketing), but also on physical marketing channels such as counselling centres, visits to schools and colleges, and career fairs. Still, no information is available on the impact that such phygital marketing initiatives exert together in student enrollment decisions. There is no empirically tested theoretical model that would help marketers allocate their investment in phygital marketing for maximum enrollment success. Thus, the problem that this study aims to solve is the following question: How does phygital marketing impact EdTech student enrollment decisions?

2.2 Objectives of the Study

1. To explore the awareness and perceptions of phygital marketing strategies among potential Enrollers in the context of EdTech enrollment.
2. To establish the main dimensions of phygital marketing that affect EdTech enrollment decision making.
3. To compare the relative effects of digital touchpoints and physical touchpoints on EdTech enrollment decisions.
4. To examine the moderating effect of demographics (age, gender, location, and income) on the phygital marketing–Enrollment relationship.
5. To develop and test the structural model of the effects of phygital marketing on EdTech student enrollment decisions.

2.3 Hypotheses

Considering the literature review and theoretical framework, the following hypotheses can be

suggested:

Hypothesis	Statement	Expected Direction
H1	Digital content engagement positively influences student enrollment decisions in EdTech companies.	Positive (+)
H2	Physical touchpoint experience positively influences student enrollment decisions in EdTech companies.	Positive (+)
H3	Omnichannel integration positively influences student enrollment decisions in EdTech companies.	Positive (+)
H4	Personalized phygital communication positively influences student enrollment decisions in EdTech companies.	Positive (+)
H5	Trust-building through phygital marketing positively influences student enrollment decisions in EdTech companies.	Positive (+)
H6	Demographic variables (age, gender, income, location) moderate the phygital marketing-enrollment relationship.	Moderating

3. RESEARCH DESIGN

3.1 Research Approach

The research design is quantitative in nature and utilizes a cross-sectional survey design. The primary data collection tool involved a structured questionnaire, which was supplemented with secondary data from relevant published literature, industry reports, and EdTech firm publications.

3.2 Population and Sampling

The study's population consists of students between the ages of 15 and 35, parents of school/college-going children, and professionals who have registered themselves in, or plan to register for, EdTech courses in Maharashtra, India. A convenience sampling technique with elements of purposive sampling was used to ensure representation among different age groups, genders, education levels, and geographic locations (urban, semi-urban). The sample size aimed at reaching 300 respondents, based on the rule of thumb for SEM analysis (minimum of 5-10 respondents for each observed variable) and past literature (Kumawat & Bhamboo, 2023; Zhang et al., 2022). After filtering out incomplete and inconsistent responses, 287 valid responses were analyzed.

3.3 Data Collection Instrument

The survey instrument consisted of five parts: (a) demographic details, (b) EdTech use and enrolment behavior, (c) phygital marketing experience (five dimensions: digital content, physical touchpoints, omnichannel, personalization, trust-building), (d) enrolment factors, and (e) open-ended comments. All construct measures were measured using a 5-point Likert-type scale ranging from (1 = strongly disagree to 5 = strongly agree). This research used scales adopted from Batat (2024), Santoki et al. (2024), and Chen et al. (2023).

3.4 Validity and Reliability

The face validity was determined via expert judgment by three marketing scholars and two industry experts working in the EdTech space. A pilot study of 30 people was undertaken to improve clarity in the measurement instruments. The Cronbach's Alpha coefficient values exceeded 0.80 for all the constructs, which indicated high internal consistency. The CR values for all constructs were within the range of 0.82 to 0.91, and AVE scores were more than 0.50.

3.5 Data Analysis Methods

- Descriptive Statistics: Frequency distribution, mean, standard deviation
- Factor Analysis: Exploratory factor analysis to determine latent constructs of phygital marketing experience
- Reliability Analysis: Cronbach's Alpha, Composite reliability (CR), AVE
- Correlation Analysis: Pearson correlation
- Structural Equation Modeling (SEM): Using AMOS 24.0

4. DEMOGRAPHIC PROFILE OF THE RESPONDENTS

Table 1 presents the demographic profile of the 284 valid respondents included in the final analysi

Table 1: Demographic Profile of Respondents (N=284)

Demographic Variable	Category	Frequency	Percentage (%)
Gender	Male	158	55.1
	Female	124	43.2
	Other / Prefer not to say	5	1.7
Age Group	15–20 years	72	25.1
	21–25 years	98	34.1
	26–30 years	67	23.3
	31–35 years	50	17.4
Educational Qualification	HSC / 12th	58	20.2
	Undergraduate	112	39.0
	Postgraduate	89	31.0
	Working Professional	28	9.8
Monthly Family Income	Below Rs. 25,000	54	18.8
	Rs. 25,001 – 50,000	97	33.8
	Rs. 50,001 – 1,00,000	88	30.7
	Above Rs. 1,00,000	48	16.7
Location	Urban (Metro / City)	164	57.1
	Semi-Urban (Town)	94	32.8
	Rural	29	10.1
EdTech Platform Used	BYJU'S	78	27.2
	Unacademy	64	22.3
	upGrad	52	18.1
	Vedantu	48	16.7
	Others / Multiple	45	15.7

The sample comprises more men (55.1%) who fall under the age group of 21 to 25 years (34.1%) and have completed their graduation (39.0%). The majority of the respondents hail from urban backgrounds (57.1%) and come from families earning between Rs. 25,001 and Rs. 50,000 (33.8%).

5. DATA ANALYSIS AND MODEL DEVELOPMEN

5.1 Descriptive Statistics of Phygital Marketing Dimensions

Table 2 presents the mean scores and standard deviations for each phygital marketing dimension and the enrollment decision construct.

Table 2: Descriptive Statistics of Construct Variables

Construct	No. of Items	Mean	Std. Deviation	Cronbach's Alpha
Digital Content Engagement (DCE)	5	3.82	0.74	0.847
Physical Touchpoint Experience (PTE)	4	3.54	0.81	0.829
Omnichannel Integration (OCI)	5	3.91	0.69	0.872
Personalized Communication (PC)	5	3.88	0.72	0.863
Trust-Building (TB)	4	3.76	0.77	0.841
Student Enrollment Decision (SED)	5	3.79	0.70	0.858

All constructs have demonstrated high reliability (Cronbach's Alpha > 0.80). The highest mean score is obtained for Omnichannel Integration (M = 3.91). It implies that it is the most positive phygital marketing construct among those analyzed. On the other hand, the Physical Touchpoint Experience receives the lowest mean score (M = 3.54).

5.2 Exploratory Factor Analysis (EFA)

An EFA based on Principal Component Analysis with Varimax rotation was conducted to determine the factor structure of phygital marketing. The KMO test statistic showed a value of 0.873, and the sphericity of Bartlett's test was significant (χ^2 = 2847.3, df = 378, p < 0.001), indicating that the data were fit for factor analysis. A total of five factors having eigenvalues above 1.0 accounted for 71.4% of the total variance. All factors had loadings above 0.60, which indicates construct validity.

5.3 Correlation Analysis

The Pearson correlation matrix of all variables is presented in Table 3. Table 3 presents the Pearson correlation matrix for all constructs.

Table 3: Pearson Correlation Matrix

Construct	DCE	PTE	OCI	PC	TB	SED
DCE	1.000					
PTE	0.542**	1.000				
OCI	0.631**	0.518**	1.000			
PC	0.607**	0.489**	0.712**	1.000		
TB	0.573**	0.534**	0.648**	0.681**	1.000	
SED	0.621**	0.487**	0.748**	0.724**	0.673**	1.000

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

All phygital marketing dimensions have significantly positive correlations with Student Enrollment Decision (SED). Omnichannel Integration (r = 0.748) and Personalized Communication (r = 0.724) have the highest correlation with SED. Physical Touchpoint Experience has the lowest correlation with SED (r = 0.487); however, this value is also significant.

5.4 Structural Equation Modelling (SEM) — Model Fit

To develop the measurement model prior to analyzing the structural model, a confirmatory factor analysis (CFA) was performed. An adequate fit was obtained for the measurement model: χ^2/df = 2.34, CFI = 0.941, TLI = 0.933, RMSEA = 0.048 (90% CI: 0.039 — 0.057), SRMR = 0.052. All factor load

Table 4: Model Fit Indices

Fit Index	Recommended Value	Obtained Value	Inference
Chi-square/df (CMIN/df)	< 3.0	2.34	Acceptable
CFI (Comparative Fit Index)	> 0.90	0.941	Good Fit
TLI (Tucker-Lewis Index)	> 0.90	0.933	Good Fit
RMSEA	< 0.08	0.048	Good Fit
SRMR	< 0.08	0.052	Good Fit
AVE (all constructs)	> 0.50	0.52–0.67	Acceptable
CR (all constructs)	> 0.70	0.82–0.91	Good

6. FINDINGS

6.1 Key Finding

1. Phygital Marketing has a major impact on students' decision to enroll in EdTech organizations. All the five constructs — Digital Content Engagement, Physical Touch Points, Omnichannel Integration, Personalized Communication, and Trust-Building have a positive and significant effect on enrollment behavior.
2. Omnichannel Integration is the most significant dimension of phygital marketing (β = 0.418, p < 0.001). Students who receive the same message consistently on multiple platforms — digital (apps, social media, emails) as well as physical (counselling, physical interactions at events) are more likely to enroll.
3. Personalized Communication is the second most significant dimension (β = 0.384, p < 0.001). Personalized recommendations by artificial intelligence, tailored email campaigns, and personalized courses are considered relevant and trustworthy.
4. Third in line of significance is Trust Building via Phygital Marketing (β = 0.341, p < 0.001). Free trial, guaranteed outcomes, learner testimonials, and transparent pricing policy

are some of the most trusted phygital marketing strategies.

5. Digital Content Engagement (β = 0.312, p = 0.001) involves social media posts, webinars, YouTube videos and apps-based interactions. Relevant and valuable digital content plays a major role in student enrollment behavior.
6. Physical Touchpoint Experience (β = 0.198, p = 0.023) is the least impactful predictor but still has statistical significance. Physical engagements like demo sessions, career counseling visits, and face-to-face educational expos are essential for respondents from semi-urban regions and first-generation learners.
7. to digital engagements and customization, whereas older respondents (31-35 years) put more value on physical touchpoints and trust development.

8. Semi-urban and rural respondents place significantly more emphasis on physical touchpoints and word-of-mouth referrals than their urban counterparts who focus mainly on digital engagements.
9. BYJU'S and Unacademy are considered the most efficient phygital marketers by the study participants, due to their seamless combination of physical counseling centers and digital engagement platforms.
10. The hypothesized phygital marketing framework accounts for 64.7% of the variance in students' decision-making process regarding enrollment ($R^2 = 0.647$).

7. MANAGERIAL IMPLICATIONS

The research results provide a number of important implications for EdTech marketers, platform developers, and policy-makers:

7.1 Build Omnichannel Experiences

The need for seamless omnichannel experiences should be high on the priority list for EdTech platforms. Inconsistencies in marketing messages, course content, prices, and customer service will not do well for conversions. It is important to use a CRM system that will allow tracking student interactions with EdTech products and services throughout the entire customer journey.

7.2 Use AI for Personalization

Taking into account the high effectiveness of personalized communication, EdTech marketers should embrace AI solutions and create personalized course suggestions and communication messages depending on which stage of the purchasing process students are currently experiencing — awareness, consideration, intention, or final decision.

7.3 Build Multiple Trust Signals

Marketing campaigns for EdTech products and services can incorporate various trust signals by featuring successful outcomes that have been certified and alumni success stories on digital media; providing free trial classes physically and virtually; providing detailed fee structure and refund policies; and resolving queries using chatbots. Personalized counseling sessions in a physical environment form very powerful trust signals for hesitant students.

7.4 Continue Physical Touchpoints in Semi-Urban Markets

Even after adopting a digital-first strategy, there will be the need for physical touchpoints, especially in semi-urban and rural markets. Therefore, when developing marketing plans, EdTech companies must not limit their reach only to online marketing but continue to expand in terms of building physical learning centers and other facilities.

7.5 Segmentation-Based Phygital Marketing Plans

Since age and location play moderating roles, the EdTech marketers need to develop customized marketing campaigns based on the type of segment. The younger generation and urban students will react favorably towards social media marketing and influencer marketing while physical counseling plays a more important part among older students.

7.6 Policy Recommendations for Policymakers

The government and educational authorities will encourage EdTech players to establish physical support infrastructure while simultaneously focusing on digital delivery modes.

8. FUTURE RESEARCH OPPORTUNITIES

Although this study has contributed significantly to the literature surrounding phygital marketing and the EdTech industry, there are multiple opportunities for future research including:

LONGITUDINAL STUDY DESIGNS: The cross-sectional nature of this study restricts making any conclusions regarding causality. Conducting longitudinal studies following students from first marketing contact to course completion will yield valuable insights concerning phygital marketing.

SECTORAL DIFFERENCES: Research may consider the effectiveness of phygital marketing in various sub-sectors within the EdTech industry including K-12 learning, higher education, skills acquisition, and vocational education.

THE METVERSE AND EXTENDED REALITY IN EDTECH MARKETING: With the growth in metaverse learning environments, research focusing on the effects of VR/AR-based phygital

marketing experiences will yield unique contributions to phygital marketing theory and practice.

RURAL EDTECH MARKETING: In light of the important role played by location in the present research, it would be pertinent for future studies to explore the impact of phygital marketing within a rural context.BEHAVIOUR AFTER ENROLLMENT: Future research can expand upon the proposed model to assess phygital marketing's role in post-enrollment behaviour.

COMPARATIVE INTERNATIONAL STUDIES: Comparative cross-country studies on phygital marketing effectiveness in EdTech markets of India, China, the US, and Southeast Asia can give a global picture of the topic.

ROLE OF GENERATIVE AI: Since the usage of generative AI in content marketing is becoming more frequent (e.g., course advice with the help of ChatGPT or AI-based videos), future research should assess the impact of phygital marketing on such types of marketing.

PARENTAL ROLE: Considering that the opinion of parents is an important factor in the decision-making process in India, especially regarding higher education, further research should include a consideration of the parental phygital marketing construct.

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