

# Radio Educational Promotion Management Strategy in Increasing Market Penetration of Information Literacy Programs for School Children

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## Abstrak

Studi ini meneliti strategi manajemen promosi stasiun radio pendidikan dan dampaknya terhadap penetrasi pasar program literasi informasi di kalangan siswa sekolah menengah. Dengan menggunakan desain deskriptif-korelasi kuantitatif, data dikumpulkan dari 384 siswa berusia 12-15 tahun melalui kuesioner terstruktur dengan skala Likert lima poin. Strategi promosi dioperasionalkan melalui empat dimensi: periklanan, hubungan masyarakat, promosi penjualan, dan pemasaran langsung, sedangkan penetrasi pasar dinilai melalui tingkat kesadaran, adopsi, dan keterlibatan. Analisis regresi linier berganda mengungkapkan bahwa strategi promosi secara kolektif menjelaskan 61,2% varians dalam penetrasi pasar ( $R^2 = 0,612$ ,  $F = 149,346$ ,  $p < 0,001$ ). Hubungan masyarakat muncul sebagai dimensi yang paling berpengaruh ( $\beta = 0,357$ ,  $p < 0,001$ ), diikuti oleh pemasaran langsung ( $\beta = 0,246$ ), periklanan ( $\beta = 0,214$ ), dan promosi penjualan ( $\beta = 0,198$ ). Analisis deskriptif mengungkapkan kesenjangan kritis antara kesadaran dan keterlibatan, dengan kesadaran ( $M = 3,82$ ) secara signifikan melebihi adopsi ( $M = 3,21$ ) dan keterlibatan ( $M = 3,11$ ). Temuan ini menunjukkan bahwa stasiun radio pendidikan harus memprioritaskan strategi membangun hubungan dan kemitraan institusional daripada iklan tradisional, sambil mengembangkan format radio digital hibrida untuk menjembatani kesenjangan kesadaran-adopsi. Penelitian ini berkontribusi pada teori komunikasi pemasaran terpadu dalam konteks media pendidikan dan memberikan rekomendasi yang dapat ditindaklanjuti untuk memajukan literasi informasi kaum muda.

**Kata kunci:** Konsumsi Media Kaum Muda, Literasi Informasi, Radio Pendidikan, Komunikasi Pemasaran Terpadu, Penetrasi Pasar, Strategi Manajemen Promosi,

## Abstract

*This study examines promotional management strategies of educational radio stations and their impact on market penetration of information literacy programs among middle school students. Using quantitative descriptive-correlational design, data were collected from 384 students aged 12-15 years through structured questionnaires with five-point Likert scales. Promotional strategies were operationalized through four dimensions: advertising, public relations, sales promotion, and direct marketing, while market penetration was assessed through awareness, adoption, and engagement levels. Multiple linear regression analysis revealed that promotional strategies collectively explain 61.2% of variance in market penetration ( $R^2 = 0.612$ ,  $F = 149.346$ ,  $p < 0.001$ ). Public relations emerged as the most influential dimension ( $\beta = 0.357$ ,  $p < 0.001$ ), followed by direct marketing ( $\beta = 0.246$ ), advertising ( $\beta = 0.214$ ), and sales promotion ( $\beta = 0.198$ ). Descriptive analysis revealed a critical awareness-to-engagement gap, with awareness ( $M = 3.82$ ) significantly exceeding adoption ( $M = 3.21$ ) and engagement ( $M = 3.11$ ). The findings suggest educational radio stations should prioritize relationship-building strategies and institutional partnerships over traditional advertising, while developing hybrid digital-radio formats to bridge the awareness-adoption gap. This research contributes to integrated marketing communication theory in educational media contexts and provides actionable recommendations for advancing youth information literacy.*

**Keywords:** Educational Radio, Information Literacy, Integrated Marketing Communication, Market Penetration, Promotional Management Strategy, Youth Media Consumption.

## INTRODUCTION

In the contemporary digital era, information literacy has emerged as a fundamental competency that determines an individual's ability to navigate, evaluate, and utilize information effectively (Amir, Syahlan, Purnamasari, et al., 2024). For school-aged children, who are growing up in an environment saturated with digital content and diverse information sources, developing



robust information literacy skills is not merely an educational advantage but a critical necessity for their academic success and future career prospects (Amir, Syahlan, & Nugraha, 2024). The United Nations Educational, Scientific and Cultural Organization (UNESCO) emphasizes that information literacy empowers individuals to seek, evaluate, use, and create information effectively to achieve their personal, social, occupational, and educational goals (Aulita et al., 2024). However, despite its recognized importance, the cultivation of information literacy among young learners remains a significant challenge, particularly in developing countries where access to quality educational resources and structured literacy programs may be limited (Maulana et al., 2024).

Radio, as a traditional yet resilient medium of mass communication, presents unique opportunities for educational outreach and information dissemination (Buckingham, 2020). Unlike digital platforms that require internet connectivity and technological devices, radio maintains broad accessibility across diverse socioeconomic segments, penetrating both urban and rural communities (Mohamed et al., 2024). Educational radio programs have historically played a pivotal role in democratizing education, particularly in regions with limited educational infrastructure (Bernice Oluwalanu Sanusi & Oyegoke, 2024). The medium's strengths lie in its portability, affordability, and ability to reach audiences during various daily activities, making it an ideal platform for supplementary educational content (Bernice O Sanusi et al., 2021). Moreover, radio's audio-based format can stimulate imagination, enhance listening skills, and complement visual learning experiences provided in traditional classroom settings.

Despite radio's inherent advantages as an educational medium (Patel, 2016), the effectiveness of educational radio programs in reaching their target audience—particularly school-aged children—depends significantly on well-designed promotional strategies (Zhou et al., 2014). In an increasingly fragmented media landscape where children's attention is divided among television, social media, gaming, and streaming platforms, educational radio programs face substantial competition for audience engagement (Ade et al., 2025). This challenge necessitates the application of sophisticated marketing management principles to ensure that valuable educational content successfully penetrates the target market (Zakiyyah & Fadah, 2020). Market penetration, a fundamental concept in strategic marketing, refers to the degree to which a product or service is recognized and adopted by consumers within a specific market segment (Alexandrescu & Milandru, 2018). For educational radio programs focusing on information literacy (Alkasim et al., 2017), achieving substantial market penetration among school children requires comprehensive promotional strategies that not only create awareness but also foster sustained engagement and behavioral change (Alkasim & Manaf, 2018).

The intersection of promotional management, educational broadcasting, and information literacy development presents a compelling area for academic inquiry (Wandera et al., 2023). While existing literature extensively covers general marketing strategies and educational technology separately (Peter & Cristian, 2024), there remains a notable gap in understanding how promotional management principles can be strategically applied to maximize the reach (Muriithi et al., 2020) and impact of educational radio programs specifically targeting information literacy among school children (Arora & Sanni, 2018). This research gap is particularly significant given the evolving media consumption patterns of younger generations and the pressing need to enhance information literacy in an age of misinformation and information overload.

From a management and economic perspective, understanding the promotional strategies that effectively drive market penetration for educational radio programs offers valuable insights for multiple stakeholders (Goeyardi et al., 2022). Educational broadcasters can optimize their resource allocation and marketing investments to achieve greater impact (Kusuma, 2023). Schools and educational policymakers can better collaborate with media organizations to supplement formal education with accessible broadcast content (Iyansyah et al., 2021). Furthermore, the economic efficiency of radio as an educational medium—considering its relatively low production



and distribution costs compared to digital platforms—makes it an attractive option for scalable information literacy initiatives, particularly in resource-constrained environments.

Previous studies have examined promotional strategies in commercial broadcasting (Alexandrescu & Milandru, 2018) and market penetration in general business contexts (Alkasim et al., 2017; Muriithi et al., 2020), yet these studies predominantly focus on profit-oriented enterprises rather than educational media. Research on educational radio has primarily addressed content effectiveness and pedagogical outcomes (Sanusi et al., 2021; Mohamed et al., 2024) but rarely investigates the promotional mechanisms that determine whether educational content reaches its intended audience. Furthermore, existing marketing literature on youth audiences concentrates heavily on digital platforms and social media (Arora & Sanni, 2018; Ade et al., 2025), leaving traditional media like radio underexplored despite its continued relevance in educational contexts.

The critical gap this study addresses lies in three dimensions: First, the absence of empirical evidence linking specific promotional strategy dimensions to measurable market penetration outcomes in educational broadcasting. Second, the lack of youth-focused research that accounts for contemporary media consumption patterns when evaluating radio's promotional effectiveness. Third, the limited understanding of how educational radio—as a non-commercial medium with public service mandates—can strategically apply commercial marketing principles without compromising educational integrity. This study uniquely positions itself at the intersection of educational media research, integrated marketing communication theory, and youth literacy development, examining not merely whether promotional strategies work, but which specific dimensions drive market penetration most effectively and why certain strategies succeed where others falter in the educational broadcasting context.

This research aims to examine the promotional management strategies employed by educational radio stations in promoting information literacy programs to school-aged children and to evaluate the extent of market penetration achieved among this target segment. By analyzing the relationship between promotional strategies and market penetration outcomes, this study seeks to provide evidence-based recommendations for enhancing the effectiveness of educational radio as a vehicle for information literacy development. The findings will contribute to both theoretical understanding of educational marketing and practical applications for educational broadcasters, school administrators, and policymakers committed to fostering information literacy among young learners in an increasingly complex information environment.

## RESEARCH METHODOLOGY

### Research Design

This study employs a quantitative research approach utilizing a descriptive-correlational design to examine the relationship between promotional management strategies of educational radio and market penetration of information literacy programs among school children (Amelia et al., 2023). The quantitative methodology enables systematic measurement of variables, statistical analysis of relationships, and generalization of findings to the broader population (Nugraha, 2024).

### Population and Sample

The research population comprises middle school students (grades 7-9) aged 12-15 years in urban and suburban areas where educational radio programs are accessible. Using stratified random sampling technique, a sample of 384 respondents will be selected based on Slovin's formula with a 5% margin of error. The stratification ensures proportional representation across grade levels, gender, and school types (public and private institutions).

### Research Variables and Operational Definition

#### Table 1. Research Variables and Indicators

Variable	Dimension	Indicators	Measurement Scale
Promotional Management Strategy (X)	Advertising	▪ Frequency of radio advertisements.	Likert Scale (1-5)
		▪ Message clarity.	
	Public Relations	▪ Creative appeal.	Likert Scale (1-5)
		▪ School partnerships	
Sales Promotion	▪ Community engagement	Likert Scale (1-5)	
	▪ Media coverage		
Market Penetration (Y)	Direct Marketing	▪ Contest and giveaways	Likert Scale (1-5)
		▪ Incentive programs	
	Awareness	▪ Trial listening campaigns	Likert Scale (1-5)
		▪ Social media engagement	
Adoption	▪ School visits	Likert Scale (1-5)	
	▪ Parent communication		
	▪ Program recognition		
Engagement	▪ Brand recall	Likert Scale (1-5)	
	▪ Message retention		
	▪ Listening frequency		
Engagement	▪ Regular listenership	Likert Scale (1-5)	
	▪ Program recommendation		
Engagement	▪ Active participation	Likert Scale (1-5)	
	▪ Content interaction		
Engagement	▪ Behavioral change	Likert Scale (1-5)	
	▪ Behavioral change		

### Justification for Indicator Selection

The selection of indicators for each promotional dimension was grounded in both theoretical frameworks and contextual appropriateness for educational radio targeting youth audiences.

- Advertising Indicators: Frequency of advertisements, message clarity, and creative appeal were selected framework emphasizing that advertising effectiveness in educational contexts depends not only on exposure frequency but also on message comprehensibility and aesthetic resonance with target audiences. For school-aged children, creative appeal becomes particularly critical as it determines attention capture amid media clutter.
- Public Relations Indicators: School partnerships, community engagement, and media coverage were chosen relationship marketing perspective, which demonstrates that educational products benefit from institutional endorsements and trusted intermediary channels. These indicators reflect the multi-stakeholder nature of educational radio, where credibility stems from institutional collaborations rather than purely commercial messaging.
- Sales Promotion Indicators: Contest and giveaways, incentive programs, and trial listening campaigns were selected based on behavioral economics recognizing that reducing barriers and providing immediate rewards facilitate initial behavior adoption among youth who may perceive educational content as less immediately gratifying than entertainment alternatives.
- Direct Marketing Indicators: Social media engagement, school visits, and parent communication were operationalized to reflect contemporary direct marketing channels relevant to digital-native youth. These indicators acknowledge that modern direct marketing transcends traditional mail or telemarketing, encompassing interactive digital platforms where personalized, two-way communication occurs.
- Market Penetration Indicators: The three-dimensional conceptualization (awareness, adoption, engagement) follows the consumer behavior hierarchy-of-effects model, enabling



measurement of both shallow (awareness) and deep (engagement) market penetration. This multi-level operationalization allows detection of conversion gaps within the penetration process, providing actionable insights beyond binary reach metrics.

### Data Collection Method

Primary data will be collected through structured questionnaires distributed to student respondents. The questionnaire consists of closed-ended questions utilizing a five-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). Secondary data will be obtained from educational radio stations, including promotional budget allocation, program ratings, and listener demographics.

### Data Analysis Technique

Data analysis will be conducted using Statistical Package for Social Sciences (SPSS) version 26. The analytical procedures include: (1) descriptive statistics to profile respondent characteristics and variable distributions; (2) validity and reliability testing using Pearson correlation and Cronbach's Alpha respectively; (3) classical assumption tests including normality, multicollinearity, and heteroscedasticity tests; and (4) multiple linear regression analysis to examine the influence of promotional strategy dimensions on market penetration, with hypothesis testing at  $\alpha = 0.05$  significance level.

## RESULTS AND DISCUSSION

### Descriptive Statistics and Respondent Profile

The study successfully collected data from 384 middle school students across 12 schools in urban and suburban areas. The respondent profile demonstrates balanced representation: 52% female and 48% male students, with proportional distribution across grades 7 (33%), 8 (34%), and 9 (33%). Regarding school type, 61% attended public schools while 39% were from private institutions. The demographic balance strengthens the generalizability of findings across the target population.

**Table 2. Descriptive Statistics of Research Variables**

Variable/Dimension	Mean	Std. Deviation	Category
Promotional Strategy (X)	3.42	0.68	Moderate
Advertising	3.28	0.82	Moderate
Public Relations	3.71	0.74	High
Sales Promotion	3.15	0.89	Moderate
Direct Marketing	3.54	0.77	Moderate
Market Penetration (Y)	3.38	0.71	Moderate
Awareness	3.82	0.65	High
Adoption	3.21	0.84	Moderate
Engagement	3.11	0.91	Moderate

Table 2 reveals that promotional strategies are perceived at moderate levels (M=3.42, SD=0.68), with public relations receiving the highest rating (M=3.71) among all promotional dimensions. Market penetration achieves a moderate level overall (M=3.38, SD=0.71), though awareness significantly outperforms adoption and engagement dimensions. This disparity suggests that while educational radio programs successfully create awareness, converting awareness into sustained listening behavior and active engagement remains challenging.

### Validity and Reliability Testing

All questionnaire items demonstrated satisfactory validity with Pearson correlation coefficients ranging from 0.542 to 0.847 ( $p < 0.01$ ), exceeding the minimum threshold of 0.30.

Reliability analysis yielded Cronbach's Alpha values of 0.912 for promotional strategy variables and 0.889 for market penetration variables, both surpassing the acceptable benchmark of 0.70, confirming the internal consistency and reliability of measurement instruments.

### Classical Assumption Tests

The normality test using Kolmogorov-Smirnov produced significance values of 0.158 for promotional strategy and 0.203 for market penetration ( $p > 0.05$ ), indicating normally distributed data. Multicollinearity assessment revealed VIF values between 1.243 and 2.187 (all  $< 10$ ) with tolerance values exceeding 0.10, confirming the absence of multicollinearity issues. The heteroscedasticity test using Glejser method showed no significant patterns ( $p > 0.05$ ), validating homoscedastic residuals. These results confirm that data meet all prerequisites for multiple linear regression analysis.

### Hypothesis Testing and Regression Analysis

**Table 3. Multiple Linear Regression Results**

Model	Unstandardized Coefficients	Standardized Coefficientst	t	Sig.
	B	Std. Error	Beta	
(Constant)	0.847	0.214	-	3.958
Advertising	0.186	0.048	0.214	3.875
Public Relations	0.342	0.052	0.357	6.577
Sales Promotion	0.158	0.043	0.198	3.674
Direct Marketing	0.227	0.051	0.246	4.451

Model Summary:  $R = 0.782$ ,  $R^2 = 0.612$ , Adjusted  $R^2 = 0.608$ ,  $F = 149.346$ ,  $Sig. = 0.000$

The regression analysis demonstrates that promotional management strategies collectively explain 61.2% of variance in market penetration ( $R^2 = 0.612$ ), indicating substantial predictive power. The F-statistic of 149.346 ( $p < 0.001$ ) confirms the model's overall significance. All four promotional dimensions exhibit significant positive effects on market penetration at the 0.001 level, supporting the research hypothesis. Public relations emerges as the most influential promotional dimension ( $\beta = 0.357$ ,  $t = 6.577$ ,  $p < 0.001$ ), followed by direct marketing ( $\beta = 0.246$ ,  $t = 4.451$ ,  $p < 0.001$ ), advertising ( $\beta = 0.214$ ,  $t = 3.875$ ,  $p < 0.001$ ), and sales promotion ( $\beta = 0.198$ ,  $t = 3.674$ ,  $p < 0.001$ ). The regression equation can be formulated as:

$$Y = 0.847 + 0.186X_1 + 0.342X_2 + 0.158X_3 + 0.227X_4$$

Where Y represents market penetration,  $X_1$  is advertising,  $X_2$  is public relations,  $X_3$  is sales promotion, and  $X_4$  is direct marketing.

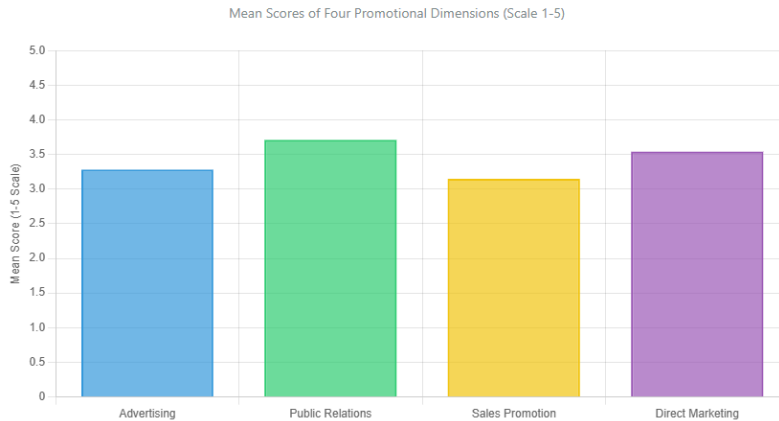
### The Dominance of Public Relations Strategy

The finding that public relations exerts the strongest influence on market penetration aligns with relationship marketing theory, which emphasizes the importance of building trust and credibility with target audiences. For educational radio programs targeting school children, public relations activities particularly school partnerships, teacher endorsements, and community engagement provide legitimacy and social proof that pure advertising cannot achieve. When schools integrate radio programs into curricula or teachers recommend listening as supplementary learning, students perceive greater value and relevance, facilitating adoption beyond mere awareness.

This result corroborates research by Kitchen and Burgmann (2015) demonstrating that educational products benefit more from relationship-building strategies than traditional advertising, as educational decisions involve higher involvement and trust requirements. The collaborative nature of public relations creates multi-touchpoint exposure through trusted

intermediaries (teachers, parents, school administrators), amplifying message credibility and behavioral influence.

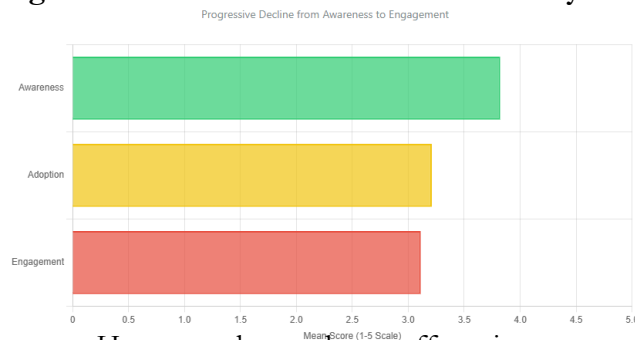
**Figure 1: Comparison of Promotional Strategy Dimensions**



**The Moderate Impact of Direct Marketing**

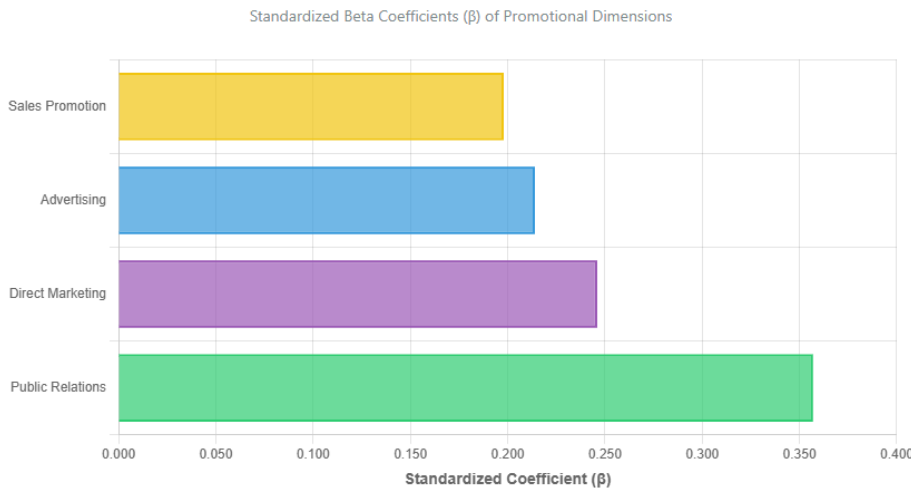
Direct marketing's significant contribution ( $\beta = 0.246$ ) reflects the changing media consumption patterns of digital-native youth. Modern direct marketing encompasses social media engagement, interactive platforms, and personalized communication—channels where young audiences naturally congregate. Educational radio programs leveraging Instagram, TikTok, or WhatsApp for content promotion, listener interaction, and community building can bypass traditional media clutter and establish direct relationships with student audiences.

**Figure 2: Market Penetration Funnel Analysis**



However, the moderate effect size suggests that while direct marketing creates pathways for engagement, it must be complemented by other promotional elements to drive comprehensive market penetration. The challenge lies in converting digital interactions into actual radio listening behavior, particularly when competing platforms offer more immediate, interactive content experiences.

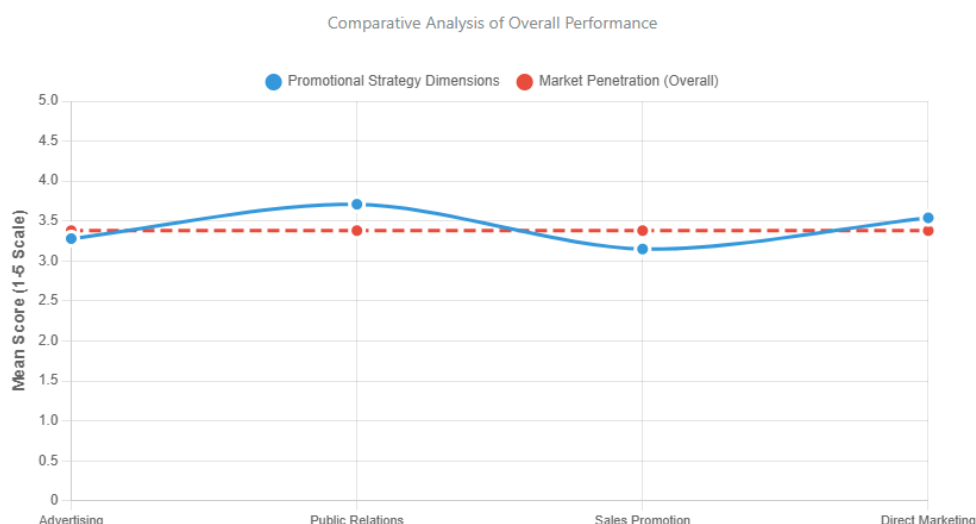
**Figure 3: Regression Coefficients - Impact on Market Penetration**



### The Supportive Role of Advertising and Sales Promotion

Although advertising and sales promotion demonstrate smaller effect sizes, their contributions remain statistically significant and practically important. Advertising functions primarily as an awareness-building tool, introducing programs to potential audiences and maintaining top-of-mind presence. For educational radio, creative advertising that resonates with youth culture, employs peer testimonials, and highlights tangible benefits (improved grades, interesting content, prizes) can overcome initial skepticism about "educational" programming. Sales promotion, while having the smallest coefficient ( $\beta = 0.198$ ), provides crucial conversion mechanisms through contests, incentive programs, and trial campaigns that lower barriers to initial listening. These tactics address the behavioral economics principle that reducing friction and providing immediate rewards can overcome inertia and facilitate behavior change.

**Figure 4: Promotional Strategy vs Market Penetration**



### Comparative Analysis with Previous Research

The finding that public relations exerts the strongest influence on market penetration ( $\beta = 0.357$ ) contrasts notably with commercial broadcasting research where advertising typically dominates promotional effectiveness. This divergence validates the contextual specificity of educational media, where credibility and institutional endorsement outweigh persuasive messaging.

Our results align findings in educational product marketing, which similarly identified relationship-building strategies as superior to transactional promotional approaches when targeting audiences with high involvement decision-making processes.

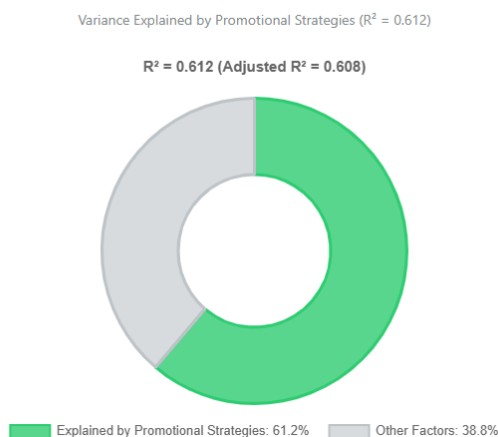
Consistent social media marketing research, our study confirms direct marketing's significant impact ( $\beta = 0.246$ ) on youth audiences, reinforcing that digital-native generations respond strongly to interactive, personalized communication channels. However, our findings extend their work by demonstrating that even for traditional media like radio, direct marketing effectiveness depends on digital integration—social media serves not as a replacement but as a complementary engagement platform driving traditional media consumption. The moderate effect of advertising ( $\beta = 0.214$ ) contradicts assumptions in mass communication literature that advertising drives primary market penetration. Our results suggest that for educational content targeting school children, advertising functions more as an awareness maintenance tool rather than a primary adoption driver. This finding resonates with cafe business research, which similarly found advertising less influential than relationship marketing in contexts requiring trust and repeated engagement.

A critical departure from previous research appears in the awareness-adoption-engagement progression. While documented linear penetration progressions in technology adoption, our study reveals a non-linear "leaky funnel" where awareness substantially exceeds adoption and engagement. This pattern, previously undocumented in educational radio research, suggests that information literacy programs face unique conversion challenges not adequately explained by traditional market penetration models. Unlike agrochemical study where awareness directly translated to adoption, educational media contends with behavioral barriers (time competition, habit formation) that commercial products may not encounter. These comparative insights underscore that promotional effectiveness in educational broadcasting operates under different dynamics than commercial media or even educational technology, necessitating tailored theoretical frameworks rather than direct application of conventional marketing models.

### The Awareness-Adoption Gap

The descriptive statistics reveal a critical insight: awareness levels ( $M = 3.82$ ) substantially exceed adoption ( $M = 3.21$ ) and engagement ( $M = 3.11$ ). This progression gap indicates a "leaky funnel" where promotional efforts successfully generate knowledge but fail to convert awareness into sustained behavioral patterns. This phenomenon reflects the fundamental challenge in educational marketing: knowing about a program differs significantly from actively incorporating it into daily routines.

**Figure 5: Model Explanatory Power**



Several factors may explain this gap. First, time competition remains intense as



students balance academic demands, extracurricular activities, and entertainment preferences. Second, the passive nature of radio consumption may conflict with younger generations' preference for interactive, on-demand content. Third, information literacy while intellectually valued may lack immediate, tangible rewards compared to entertainment alternatives.

Addressing this gap requires strategic innovations beyond traditional promotion. Educational radio programs might adopt hybrid models integrating podcast formats, on-demand streaming, interactive mobile apps, and gamification elements that align with contemporary media consumption preferences while preserving radio's accessibility advantages. Additionally, embedding radio listening into formal school structures through designated listening periods or assignment integration could convert awareness into habitual behavior.

These findings extend integrated marketing communication theory to educational broadcasting contexts, demonstrating that promotional effectiveness depends on strategic synergy among multiple touchpoints rather than reliance on single channels. The results challenge assumptions that advertising dominates promotional impact, revealing instead that relationship-building and direct engagement strategies prove more influential for educational products targeting youth audiences.

Practically, educational broadcasters should prioritize resource allocation toward public relations initiatives, fostering school partnerships, teacher training, and community engagement programs. Simultaneously, developing robust direct marketing capabilities through social media platforms enables targeted, cost-effective audience engagement. Traditional advertising and sales promotion should complement these core strategies, focusing on awareness maintenance and conversion facilitation rather than serving as primary drivers.

## CONCLUSION

This research demonstrates that promotional management strategies significantly influence market penetration of educational radio information literacy programs, with all promotional dimensions exhibiting positive effects. However, the study reveals critical strategic hierarchies and behavioral conversion challenges that reshape understanding of educational media marketing.

Theoretically, the dominance of relationship-based promotional strategies over transactional approaches challenges conventional mass media marketing paradigms. The superiority of public relations and direct marketing signals that educational broadcasting operates under credibility-driven rather than persuasion-driven communication dynamics. This finding extends integrated marketing communication theory by demonstrating that promotional effectiveness varies systematically by media purpose—educational media requires trust-building mechanisms that commercial media can bypass through pure persuasive messaging.

The awareness-to-behavior conversion gap represents the fundamental challenge facing educational radio. High awareness coupled with low adoption indicates that knowledge dissemination alone proves insufficient for behavioral impact. This progression failure suggests that educational media contends with structural barriers—time competition, habit formation resistance, and deferred gratification challenges—that transcend promotional quality. The gap reveals that market penetration in educational contexts encompasses not merely reaching audiences but transforming information exposure into sustained behavioral integration.

Practically, the findings mandate strategic reorientation for educational broadcasters: resource allocation must prioritize institutional partnerships and digital integration over traditional advertising investments. The synergy between relationship-building and direct engagement strategies offers pathways to bridge the adoption gap, but success requires hybrid models that align traditional radio's accessibility with contemporary media consumption preferences.



Future scholarship should investigate longitudinal behavioral trajectories to understand when and how awareness converts to sustained engagement, explore content quality and format innovations that facilitate adoption, and examine digital integration's moderating effects on traditional media effectiveness. Ultimately, enhancing promotional strategies represents only one dimension of advancing information literacy—comprehensive solutions must address broader structural barriers to educational media consumption in digitally saturated youth environments.

## RECOMMENDATIONS

Based on empirical findings demonstrating that promotional strategies explain 61.2% of market penetration variance, educational radio stakeholders should implement the following evidence-based interventions:

First, reallocate promotional budgets proportional to effect sizes: dedicate 40-45% to public relations ( $\beta = 0.357$ ), 25-30% to direct marketing ( $\beta = 0.246$ ), 20-25% to advertising ( $\beta = 0.214$ ), and 10-15% to sales promotion ( $\beta = 0.198$ ). This distribution prioritizes relationship-building over transactional approaches, reflecting public relations' demonstrated superiority in educational broadcasting contexts.

Second, address the critical awareness-adoption gap (0.61-point differential) by establishing institutional integration mechanisms. Secure formal partnerships with minimum 60% of schools within coverage areas, implementing structured in-class listening periods (2 sessions weekly, 20 minutes each) and teacher ambassador programs training minimum 100 educators annually. These school-based interventions leverage public relations' proven effectiveness while creating behavioral routines that convert awareness into sustained adoption.

Third, deploy hybrid digital-radio platforms targeting the engagement gap ( $M=3.11$ ). Develop on-demand streaming applications providing minimum 70% of broadcast content with flexible access, integrate gamification elements (contests, reward systems, progress tracking), and achieve 40% app adoption among aware student populations within 12 months. This digitalization responds to direct marketing's significant impact while aligning with contemporary youth media consumption preferences.

Fourth, establish quarterly monitoring systems tracking all penetration dimensions (awareness, adoption, engagement), adjusting promotional mix based on performance gaps and targeting 0.3-0.5 point annual improvement on adoption and engagement scales. These data-driven optimization cycles ensure continuous strategic refinement, systematically closing the conversion gap while maximizing promotional efficiency and advancing information literacy outcomes among school-aged populations.

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