Digital Marketing Communications Strategies and Social Media within a Competitive Educational Landscape: Experiences from Europe

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Abstract: Digital marketing research has become relevant in the European educational space because of heightened competition among universities and a fast-paced digital transformation of the educational process. The purpose of this article is to analyze digital marketing communication strategies that European educational institutions apply amid cut-throat competition and measure the effectiveness of those strategies according to the level of digital literacy of the local populations. The research methodology consists of open statistical data analysis and classification of communication strategies, plus an inquiry into the primacy of adoption of digital technologies into marketing campaigns run by European educational institutions. Altogether, the study shows a predominant trend of the deployment of omnichannel strategies, personalized advertising, video marketing, influencer marketing, and automated CRM systems to attract students and retain their loyalty. The findings confirm the notion that in western countries with high digital literacy the marketing executor would be an automated system, whereas the simpler marketing tools would predominate in Southern and Eastern Europe. Within the article are discussed some issues for European educational institutions working in the field of digital marketing, which relate notably to the adaptation of strategies to appeal to different target audiences and the introduction of innovative technologies into the educational process. The suggested solutions to optimize digital marketing campaigns call for personalizing campaigns, social networks, gamification, and greater opportunities with AI. Practically, this work aids the formulation of effective communication strategies, which may help boost the competitiveness of European universities. Further research should therefore focus on estimating the long-term influence of digital marketing in relation to the development of the educational institutes and attracting international students.

Keywords: digital marketing, social media, communication strategies, visual content archetypes, brand, manipulative influence, educational environment.

Introduction

Current digital transformation in the modern European education market is changing the entire traditional paradigm of engaging students and managing learning. According to Pucciarelli and Kaplan [1], increasing competition in the global knowledge market forces educational institutions to adopt new communication strategies to meet realities of the new market, transforming established modes of brand management and marketing. The authors emphasize that modern education is gradually moving from the status of a public good to a competitive sector, where institutions operate as quasi-companies, applying business strategies to attract students and ensure the

sustainability of their development. Under the influence of global technological changes, universities are forced to revise their marketing strategies, implementing new digital tools to attract applicants and increase interaction with current students. Universities in the UK, Germany and the Netherlands are actively using omnichannel communication strategies. They include the integration of social media, personalized advertising and CRM systems to optimize marketing campaigns. Oxford University uses specialized platforms based on artificial intelligence to analyze the behavior of website visitors. This allows it to automatically adapt content to the needs of potential students. The growing competition between educational institutions increases the importance of analytical methods in developing effective marketing strategies. The study by Mialkovska et al. [2] emphasizes that a successful communication strategy in the digital era should be based on the integrated use of traditional and digital channels, combining targeted advertising, video content, chatbots and personalized email newsletters to achieve maximum efficiency of interaction with the audience.

The level of digital literacy of the population of the European Union is one of the key factors influencing the effectiveness of marketing strategies in the field of education. The high digital skills of the population in Nordic countries (Sweden, Denmark, and Finland) enable universities to implement automated communication systems, artificial intelligence, and big data analytics in interactions with students actively. Here, a state program for the digitalization of education has been implemented for some time in Finland in order to speed up the entry of innovative technologies into the educational process. In Southern and Eastern Europe-the case is different, with Spain, Italy, and Bulgaria being two levels below that with regard to digital literacy of its population in adapting marketing strategies to a less tech-savvy audience. In such settings, more traditional methods of digital communication like emails, webinars, and explanatory videos work. According to Dwityas et al. [3], tailoring marketing strategies to the digital literacy of the audience triggers user engagement and impacts positively on educational marketing by customizing interactions to the varying degrees of skills and digital preferences of the target audience.

The CRM evolution towards automation and programmatic advertising is rapidly transforming how marketing communication functions within the education sector. In Europe, universities have begun leveraging the tools to personalize student interaction and marketing campaign effectiveness. In the Netherlands, universities have powered chatbots with either automated intelligence to analyze questions by potential students and produce some responses on a somewhat individualized basis. In Denmark, programmatic advertising allows educational institutions to use behavioral analytics to target ads automatically. Gamification in educational marketing is being put to good use by French universities, as they have created exciting online courses and VR tours of the campus, attracting students from all corners of the globe. Rizaldi and Hidayat [4] add that modern digital marketing communications not only allow for the automation of audience engagement but also increase brand trust toward educational brands through personalized communication strategies.

Literature Review

Digital marketing has a fundamental role in modern educational institutions' communication strategies for student attraction, effective audience interaction, and brand building. Owing to rapid digitization and increasing competition amongst educational institutions, more and more researchers have started analyzing digital marketing communication strategies and their effectiveness. In particular, Dwityas et al. [3] and Rizaldi and Hidayat [4] find that the effectiveness of digital marketing is dependent upon channel selection and content targeting. This was discussed by Ghaisani and Afifi [5] in the context of digital strategies for cultural tourism, which have parallels in the education sector whereby student engagement involves establishing long-term relationships and creating unique experiences. Xaviera Wardhani [6] explored creative content on social media with videos, podcasts, and interactive structures raising user engagement significantly. Personalization for the digital marketing of educational institutions has been one of the most widely debated issues among academics.

Mialkovska et al. [7, 8] study modern approaches to educational management and underline the relevance of digital transformation for this area. Ayuh et al. [9] investigate the application of marketing strategies in branding tourist destinations that can easily be applied in the education sector for image-building purposes for universities. Yunita and Dunan [10] analyzed digital marketing in the real estate industry during the COVID-19 era, stressing the importance of online communications and adaptive strategies for maintaining the effectiveness of marketing campaigns.

Suryaningsih and Ningtias [11] establish the effective use of public personalities in advertising. Such a practice can similarly be adapted to educational marketing through educational influencer partnerships. Automation of marketing processes will be one of the crucial determinants conducive to effective implementation of the digital communication strategies. Alimudin and Dharmawati [12] appraise the impact of artificial intelligence on marketing communication, especially with regard to the issues of automated collection of data and content personalization. Waluyo [13] discusses

the changes to marketing strategies after the pandemic, pointing to the significance of interactivity and analytical tools. Rusdana et al. [14] look into the digital marketing strategies for small and medium enterprises, which could be useful in the education field. Soedarsono et al. [15] highlight the role of Instagram in digital marketing campaigns, emphasizing visually based content efficacy.

Generating content is still one of the tools in digital marketing. Rozaq et al. [16] analyzes how entrepreneurs learn digital marketing, useful for universities in creating marketing-oriented courses. Marketing strategy improvements have been analyzed by Wibawa [17]; he stresses adapting communications to the digital environment. Said et al. [18] focus on semiotic analysis in developing marketing strategies. The issue matters for universities in building effective advertising campaigns. An integrated marketing approach to brand awareness has been stressed by Budi Utomo et al. [19]. Big data analytics and its application in marketing strategies of educational institutions is another key aspect of the ongoing research. Rajkumar et al. [20] emphasize the importance of digital technologies in students' decision-making in choosing an educational institution. Hapsara et al. [21] evaluate how marketing strategies used for cosmetic products could be adapted for the educational sector. Mirani [22] analyzes digital marketing strategies from a business perspective, mentioning the importance of integrating traditional and digital communication tools. Hasim and Hapsari [23] discuss attracting influencers to marketing communication, which is potentially contributory to the product of educational institutions.

According to a survey conducted globally in 2019, Facebook occupies the first position as a social media platform for educational marketing; 93 percent of the schools surveyed in the world use this social network for the purpose of marketing. Instagram, Twitter, and YouTube are also famous channels, where over 50 percent of schools stated that they have utilized these channels in the past 12 months [24].

Bungai et al. [25] underline that an efficient digital marketing strategy in educational management contributes to increasing the visibility of educational institutions and enrolling new students through a personalized approach to communications and the implementation of analytical tools to assess campaign effectiveness. According to Huang [26], an international education strategy must be managed by utilizing artificial intelligence and neural networks for analyzing trends in the global education market, allowing universities the flexibility to change marketing strategies with respect to the changing environment of competition. Mondal [27] remarks that the very paradigm of educational management through digital innovation is sharpening the quality of educational services through problem-based learning methods, thereby creating a relatively more flexible program that addresses the needs of the contemporary labor market.

Thus, the literature review demonstrates how digital marketing communication strategies are becoming an essential tool for improving the competitiveness of educational institutions. Research confirms that the integration of social networks, personalized content, big data analytics and automated marketing solutions allows for more effective student engagement, building long-term relationships with them and improving the quality of educational services. The use of artificial intelligence, CRM systems, video marketing and programmatic advertising are key trends that will determine the further development of marketing strategies in the field of education.

Research objectives

The aim of the article is to identify the effectiveness of digital marketing communication strategies used by European educational institutions in a highly competitive environment. The main task is to determine their impact on student engagement and the formation of the international image of universities. The study is aimed at identifying the main trends in the application of digital technologies: artificial intelligence, programmatic advertising, social media marketing, personalized advertising and video marketing, in order to develop effective strategies for interacting with the target audience. Special emphasis is placed on the differentiation of marketing approaches depending on the level of digital literacy of the population, geographical features and socio-demographic characteristics of students. The article examines the role of digital transformation in higher education, in particular, communication automation, gamification of the educational process and the use of big data analytics to improve marketing campaigns. The results obtained will allow educational institutions to adapt their digital communication strategies to modern challenges, optimize student engagement processes and increase competitiveness in the international market of educational services.

Materials and Methods

The research procedure was based on a comprehensive approach, which involved several consecutive stages of analysis. First, the collection of relevant statistical data and secondary information from official sources was carried out: Eurostat, SwissCore, The Business Research Company, European Digital Learning Network ETS (DLEARN)

and other analytical resources. This was followed by the process of systematizing the information obtained with further grouping by key topics: the level of digital skills in EU countries, the impact of education on digital competence, the development of digital marketing in the education sector and strategic communications in a highly competitive environment. After the described stage, a comparative analysis of digital strategies in different European countries was carried out, taking into account socio-economic and regional characteristics, which was carried out in order to identify general trends and differences in approaches to digital marketing.

The study sample covered the countries of the European Union, in particular European states that have a high level of integration into the digital educational space. The main focus was on countries with different levels of digital literacy and the introduction of digital technologies into the education sector – the Netherlands, Finland, Germany, France, Spain, Poland, Denmark, Estonia, Romania, Bulgaria and others. The chosen selection availed the opportunity to thoroughly analyze how digital communication strategies influence education development within different digital maturity levels. Demographic, social, and economic aspects were examined in relation to how they affect the availability of digital education, such as age distribution of populations and levels of government support at digitization. The research tools comprised statistical analysis of open data, content analysis of digital marketing strategies, and comparative analysis of the various countries within the EU on their digital initiatives.

The data concerning the various levels of digital literacy as well as implementation of digital technologies in higher education were clustered to form a structured general picture on trends and conclusions on the effectiveness of various strategies. Additional method of analysis of communication strategy involved their valuation in utilizing some key digital technologies: omnichannel communication, influencer marketing, gamification, CRM systems, AI analytics, and programmatic advertising. The proposed methodology thus ensured an exhaustive and multidimensional treatment of digital communication strategies in the current intense educational milieu. The application of statistical methods, comparative analysis, and real practice study produced well-substantiated results, allowing recommendations for effective digital marketing practices in education in Europe.

Results

The global digital education market is experiencing rapid growth, driven by rising internet penetration, mobile adoption, and the growing demand for distance learning. The market is expected to reach $38 billion by 2025 and exceed $119 billion by 2029 [28]. The main drivers of this growth are the personalization of learning through artificial intelligence algorithms and the development of online platforms such as Coursera, Udemy, and Duolingo. In Europe, there is a particular focus on the introduction of cloud technologies into educational processes, which will enable educational institutions to optimize resources and provide more accessible education for all categories of the population.

The level of basic digital skills among the population of the European Union remains uneven (see Figure 1), which significantly influences digital marketing strategies. Studies show that the highest levels of digital literacy are observed in countries such as the Netherlands and Finland, where more than 80% of the population has basic digital skills. In countries of Southern and Eastern Europe, in particular in Romania and Bulgaria, this indicator is significantly lower [29, 30]. Marketing strategies in countries with a high level of digital literacy can be built on sophisticated and interactive technologies: personalized advertising campaigns, automated chatbots and artificial intelligence. In less digitalized regions, it is necessary to focus on more accessible and understandable formats – e-mails, simple video instructions and explanatory webinars.

In addition to the geographical factor, the age and social characteristics of the audience play an important role in shaping digital strategies. Young people aged 16–24 demonstrate a higher level of digital skills, so there are opportunities to use social networks, gamification and interactive content as key marketing communication tools [29, 30]. On the other hand, older generations, especially people aged 65–74, are less active users of digital platforms. Adaptive training programs, more traditional methods of e-marketing, the use of hybrid strategies that combine offline and online tools will be effective for this group. The level of digital literacy of the population directly affects the choice of marketing channels and approaches to interacting with the audience.

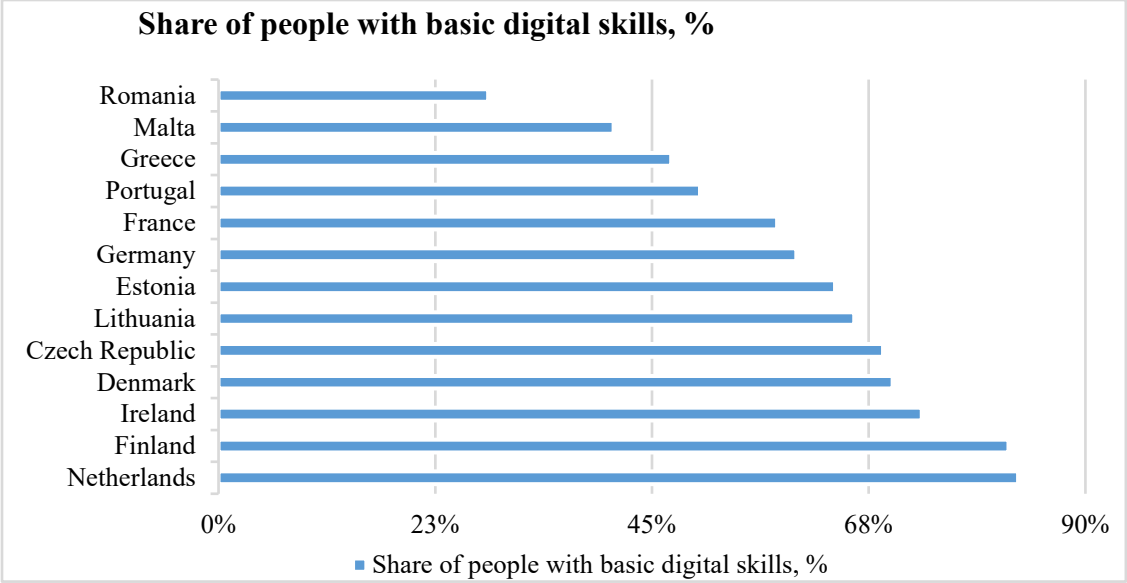

Figure 1. Level of basic digital skills among the EU population in 2023, %
Source: [29, 30]

Digital transformation encompasses all areas of social life, including business, government, and the education sector. Businesses in Europe are actively investing in artificial intelligence technologies, cloud services, and automated marketing systems that allow them to increase the efficiency of working with customers. Many European companies are switching to omnichannel communication strategies. They include the integration of social networks, mobile applications, and analytical platforms to personalize the user experience [31]. The use of such approaches contributes to increased consumer engagement and effective data collection to optimize business processes.

Public administration is undergoing a phase of active digitalization, particularly in the area of public services. European countries are expanding the use of electronic platforms for citizens' interaction with public institutions, introducing digital identification systems, e-voting and automated application services [29, 30]. High digital literacy of the population is a key factor for the successful implementation of these initiatives. In the Scandinavian countries, most administrative services are already available online, while in the countries of Southern and Eastern Europe, the digital transformation of public services is still ongoing.

The education sector is undergoing significant changes under the influence of digital technologies, and these changes are inextricably linked to the level of education of the population. Studies confirm that individuals with higher education have significantly better digital skills compared to those who have not received even basic education (see Figure 2) [29, 30]. Therefore, there is a need to implement digital learning platforms, distance learning and personalized curricula focused on the development of digital competence in all age groups.

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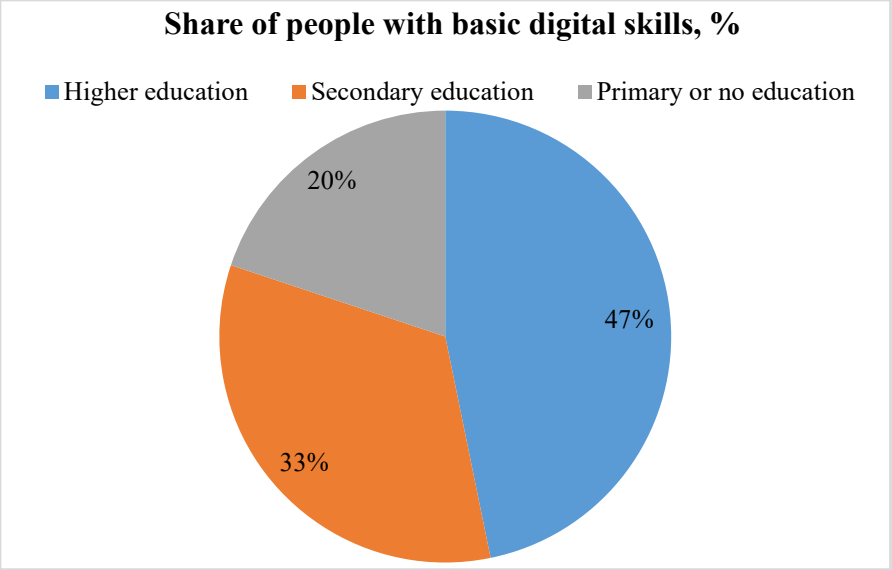

Figure 2. Impact of education level on digital skills in the EU, 2023
Source: [29, 30, 32]

The level of digital literacy and the level of education of the population significantly affect the implementation of digital strategies in marketing, business, public administration and education. A high level of digital competence allows companies and public institutions to implement innovative solutions, adapting them to the needs of modern society. However, in countries with a lower level of digital skills, it is necessary to focus on educational programs, increasing the availability of digital resources and forming effective communication strategies.

The modern education market in Europe today is one that is very competitive. The universities, online platforms and curriculums can really make it a cut-throat environment. Moreover, with the increasingly digitalized world around education, higher educational institutions are creating a more visible presence on digital marketing and social media to reach students, build brands, and achieve engagement. Universities and educational organizations implement all-digital strategies for the communication process, use personalized approaches, data analytics, and technologies. Digital marketing in European higher education still relies mainly on content marketing, personalized advertising, video marketing, and automated CRM systems. Such strategies give the highest possible effectiveness in recruiting students and maintaining long-term relationships with them and alumni.

Social networking sites are very important in this context since platforms such as Facebook, LinkedIn, TikTok, and Instagram reach wider audiences and enable real-time interaction. The trend is equally towards using artificial intelligence and automated platforms for improving targeting in advertising and personalizing communications. The reach intoprogrammatic advertising, chatbots, and analytical tools will enable unmatched tactical advertising campaigns that universities will create for the segmented audience. Educational institutions improve their marketing performance and increase the effectiveness of educational programs using digital tools (Table 1).

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Table 1. Digital marketing communication strategies in the European educational environment

Communication strategy	Technologies used	The main characteristic
Content marketing	SEO optimization, blogs, YouTube, podcasts	Creating useful content to engage your audience
Social Media Marketing (SMM)	Facebook Ads, Instagram Reels, TikTok, LinkedIn Marketing	Using social media to promote educational services
Email marketing	CRM systems (HubSpot, Mailchimp), automated mailings	Personalized communication with students and alumni
Influencer marketing	Collaboration with educational bloggers, TikTok ambassadors	Using thought leaders to increase trust in an educational institution
Video marketing and webinars	YouTube, Zoom, interactive lectures	Presentation of educational programs and interaction with potential students
Artificial intelligence in advertising	Google Ads, AI audience analysis, chatbots	Communication automation and content personalization
Omnichannel communication	CRM, email, social media integration	Consistent communication across all digital platforms
Interactive marketing	VR tours, gamification, interactive tests	Engaging students through interactive technologies
Programmatic advertising	DSP platforms (Google DV360, The Trade Desk)	Automated advertising purchasing process
Retargeting and remarketing	Facebook Pixel, Google Remarketing Ads	Returning users who previously interacted with content

Source: compiled by the authors

The use of digital marketing in education allows universities to increase student engagement and build an international image and expand the geography of recruitment. In the UK, leading universities such as Oxford and Cambridge are actively using personalized content marketing strategies via LinkedIn and YouTube, creating high-quality video tours of campuses, interviews with graduates and a series of educational podcasts. In Germany, educational institutions are implementing interactive video marketing with the possibility of simulations of the educational process, as a result of which potential students can get a realistic idea of the quality of education. Universities in France and Spain are focusing on influencer marketing, attracting popular TikTok ambassadors and educational bloggers who talk about studies and career opportunities after graduating from a particular institution.

Automated marketing tools are becoming increasingly important in European educational institutions. In the Netherlands, universities are widely using artificial intelligence to personalize interactions with students, using AI-assisted chatbots on their websites to quickly provide information about study programs. Programmatic advertising has become an important part of the strategy to attract international students in Denmark, where automated platforms analyze user behavior and customize personalized ads for target audience segments. In Sweden, CRM systems such as HubSpot and Marketo help universities manage student communications, automate email marketing, and maintain a high level of engagement across multi-channel digital platforms.

Europe's highly competitive education environment requires flexibility and a systemic approach to digital marketing. In Finland, the government's program to support the digital transformation of education encourages universities to implement omnichannel strategies that combine social networks, mobile applications, and email newsletters into a single communication system. Estonian gamification in marketing for educational services is developing fast: universities are developing interactive platforms that allow applicants to "try on" student life before actually enrolling. Schools in Poland use digital marketing in extending the capability of VR campus tours while applying big data analytics to decipher the needs of prospective students better. Europe showcases a total approach towards digital communication in education, thus enabling effective adaptation to changes and pulling in students from anywhere in the world.

Discussion

The results of our study prove that digital marketing definitely creates a building block for educational institutions, which in return heightens students' engagement and enhances their communication strategy toward the universities. This finding concurs with the research undertaken by Ubachs and Henderikx [33], which asserts that the quality assurance system for digital education within Europe affects directly the effectiveness of marketing strategies used by educational institutions. Griffiths et al. [34] stress the need to incorporate alternative digital certificates and open education as tools for further enhancing the attractiveness of educational platforms to students.

Hence, our hypothesis is validated, as universities using online marketing would definitely have an edge in building their brands and attracting students through personalized interaction strategies. Moreira Teixeira et al. [35], meanwhile, comment on the future set of trends in teaching and implementation of digital strategies, in agreement with our findings related to the omnichannel approach functionality in marketing communications. Likewise, Sidekerskienė and Damaševičius [36] analyze the use of gamification in STEM education, which conforms to their findings on interactive marketing being one more tool to engage students through digital platforms.

Nevertheless, Ferrante et al. [37] prove that digital asymmetries across policy for education in various regions throw a huge challenge for universities developing a universal strategy for marketing. Another important dimension of digital marketing in education is the great educative reforms in the current day, to which all institutions have had to adapt. Barandovski et al. [38] speak of the necessity of long-running reforms so as to sustain quality in education, which resonates with our findings concerning flexible and dynamic marketing strategies. In this light, Andronic [39] treats the subject concerning the challenges of financing digital education in primary schools across Europe and the attendant inadequacies that hinder a wide-scale implementation of digital marketing communications. García-Vandewalle García et al. [40] address the issue of digital competency of educators, which constitutes an important consideration when developing effective marketing strategies since teachers could often be seen as ambassadors of the university brand.

At last, the research findings from our study backed up the findings from Organ et al. [41], who conducted an analysis on the DIFUCH Erasmus-plus project for digital-learning use in higher education. Their findings highlighted how the digital transformation of the educational environment requires a holistic approach, including a more extensive application of marketing strategies and sharing in the rapidly changing digital trends. This is, of course, in line with our findings, which show that universities using programmatic advertising, automated CRM systems, and personalized communication have a competitive edge regarding attracting students. Digital marketing in education is still the central means through which universities adapt to new conditions, therefore increasing their effectiveness and competitiveness.

Conclusion

It was confirmed that indeed the skills of EU population in digital literacy significantly influence the digital marketing strategies within the environment of education. These high level digital literate countries like Netherlands, Finland and Denmark actively adopting personalized AI solutions alongside omnichannel communication platforms and automated marketing systems as strategies to attract students. On the contrary, countries with little digital competencies like Romania and Bulgaria, use more affordable and simplified communication modes like emails, webinars and viewing videos. Higher Education has shown a positive correlation with digital skills which implies that as education level increases, better digital competence is achieved by an individual.

The change in Europe's education to digitality is in progress while critical trends show that artificial intelligence, big data analytics, programmatic advertising, and gamification are now applied to educational marketing. Interactive learning online, student virtual tours, and computerized management systems contribute to student involvement in higher education institutions which can enhance their competition in the environment. Creating total communication strategies including social media, influencer marketing, and personalized education campaigns has become fresher. Effectiveness will determine how digital strategies in education are in the European market by the extent to which a population is computer literate, what technologies these people have access to, and how flexible universities would be in responding to the changes brought by the digital age.

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