

Marketing, Artificial Intelligence, and Higher Education for Sustainable Global Development: Innovative Research Directions and an Integrated Framework

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ABSTRACT

The current competitive landscape of university education is marked by intense competition among educational institutions, the need to compete in the digital world and to contribute to the achievement of Sustainable Development Goals of the United Nations. The presented paper seeks to link two different streams of literature: the application of artificial intelligence in universities and the strategic marketing practices of such institutions. The paper combines the reviewed body of knowledge on the application of artificial intelligence to the field of marketing (predictive analytics, chatbots, personalization, CRM) and demonstrates how these new technologies affect the processes of recruitment, engagement, and retention of students in the context of higher education sustainability and marketing in general. Five important points can be highlighted in the course of the review. Artificial Intelligence contributes to the efficiency of student recruitment and tailoring of the student experience. But then there's always the other side of the coin – while AI can be very useful, it does pose some challenges to fairness and equal access. Ethical governance of the use of such technologies becomes paramount in this case. In light of these insights, the article proceeds with introducing a framework called M-AI-SDG, which brings together elements of marketing strategy, artificial intelligence capabilities and sustainability outcomes. New avenues for research are outlined as well.

Keywords: Marketing, Artificial Intelligence, Innovative Research, Competitive Landscape, Predictive Analytics.

Introduction

The nature of higher education is changing in ways that have not been witnessed in years. Currently, there are three major developments taking place simultaneously. Firstly, universities are digitizing not only education programs but operations of the institutions in general. Second, the global nature of the world is evolving, where students are mobile, and universities are competing globally. And lastly, universities are being challenged to become active players in terms of sustainable development not because it is desirable but because it is becoming a requirement. The United Nations' Sustainable Development Goals (SDGs), which have been adopted by all United Nations member states back in 2015, have placed new requirements on universities. For the first time in history, higher education has become an integral part of global sustainable development programs. For example, SDG 4 emphasizes the importance of providing equal access to quality education at all levels, including higher education.

However, universities provide much more. They conduct scientific research, develop innovations, and create citizens who are able to cope with sustainability-related challenges (Kilasonia, 2023). Merely incorporating sustainability in a university as an addition will not suffice. Sustainability is meant to be used as a guide for planning, operations, and communication in universities. As such, sustainability must be embedded in all aspects of universities' planning, competition, and communication from the start (Leal Filho et al., 2023).

AI is currently not a buzzword that lurks in the background; it is right at the center of the debate regarding higher education. Colleges and universities have embraced the use of AI technology within five years with its toolkits continually increasing (Crompton & Burke, 2023). There is no shortage of evidence that backs this optimism. AI facilitates personalized learning, which accounts for nearly 39% of the benefits identified by experts in AI (Bond et al., 2024). Apart from that, AI results in better learning outcomes, reduces the workload of educators when it comes to administrative tasks, and provides better understanding of the progress and comprehension of students (Bond et al., 2024). Predictions of scholars were accurate as they expected AI adoption to increase by 43% between 2018 and 2022 with teaching and learning being the leading area (Zawacki-Richter et al., 2019). However, there should be a note made regarding the premature adoption of AI, which left no space for ethical, pedagogical and governance considerations (Cox, 2021).

The third force is the direct result of the marketplace. Competition for students is now an international, digitalized and rapid race. Traditional methods of attracting the right audience, such as mass mailing, regular advertising, and even campus tours have stopped working in modern conditions. Colleges cannot expect a personalized approach and effective communication from these techniques to attract a wide range of new students (Cook, 2026). Therefore, institutions use AI-driven tools such as predictive analytics, chatbots, personalization technologies, sentiment analysis, and automated content generation to make their recruitment efforts more personalized and increase their reputation (Roy & Khalid, 2026). These approaches are no longer an experiment but are proven by various researches to increase the enrollment of new students, reduce dropouts over the summer, and diversify campuses (Cook, 2026).

Although all three areas, namely, AI, marketing, and sustainability, are clearly noticeable in higher education, relevant research remains somewhat fragmented. While there is ample literature on the use of AI in universities in terms of teaching and learning processes, little attention is paid to administration and marketing aspects, in which the deployment of the technologies is most rapid (Zawacki-Richter et al., 2019). Marketing literature related to higher education highlights the emergence of innovative technology in the sphere, although it is yet in its initial stage concerning organizational or ethical implications of the changes (Roy & Khalid, 2026). Finally, research in the field of sustainability pays attention to the implementation of SDGs within university curricula and strategic frameworks (Leal Filho et al., 2023; Tomasella et al., 2024), yet makes no connections with marketing, which forms the image of an institution.

That gap is exactly what this article seeks to address. This is what it intends to accomplish: compile the latest literature on the use of AI in the marketing of higher education institutions; link that literature with the sustainability development obligations of the sector; and develop a novel framework for linking marketing strategy, AI competence, and sustainability-related outcomes. Notably, the article also explores novel avenues for future research. This is how it goes about doing so: Section 2 reviews five central themes – AI and higher education; marketing and higher education; AI-enabled marketing instruments; sustainability development and higher education; and the themes of ethics, equity, and governance. Section 3 describes the methodology of the integrative review. Section 4 provides the synthesis findings, clustered along five major themes. Section 5 explores contradictions, develops the framework, and opens the way for future research. Section 6 summarizes the paper.

Literature Review

- **Artificial Intelligence in Higher Education: State of the Field** Much attention has been paid to outlining AI applications in higher education in numerous reviews. According to the most frequently cited review, researchers mostly study the aspects associated with such topics as student profiling and prediction, intelligent tutoring, assessment, and adaptive learning systems (Zawacki-Richter et al., 2019). However, at the same time, they pay little attention to teachers and administrators, who are supposed to implement everything in practice (Zawacki-Richter et al., 2019). In the meantime, the field of AI in higher education has started broadening its scope.

For instance, a "review of reviews" reveals that the personalization of learning was the one advantage of AI application that schools achieved the most (it constituted almost 39% of all the mentioned advantages). AI was also proved to increase learning results, decrease administrative work, and enable the better understanding of the learning process by educators (Bond et al., 2024). However, these reviews keep focusing on the same problematics again and again. The first one is that almost nobody mentions ethics. Next go the issues of curriculum, infrastructure, and problems connected with implementation due to financial and technological restrictions (Bond et al., 2024).

However, when one focuses on particular studies conducted during the last ten years, it becomes easier to understand. The first one analyzed 35 papers from 2014 to 2024 and found out that artificial intelligence mainly emerges in three domains: adaptive learning systems which provide personalized courses, predictive analytics that helps to identify students at risk, and automation of the grading process. Nevertheless, some barriers exist. Lack of proper competence in faculty and staff, ethical challenges, deficiency in the right infrastructure and managerial support still impede the progress. In addition, such aspects as privacy, equal access, and absence of the criteria for the estimation of the impact of artificial intelligence also become critical obstacles (Mosha et al., 2026). Moreover, universities make use of AI in different spheres, including building management, research, administration, and others, but social and ethical problems vary depending on particular uses (Cox, 2021). One more aspect which was paid little attention to by researchers is related to the marketing and recruitment process when AI meets future students prior to their enrollment in the university. This aspect can be considered one of the key ones (Roy & Khalid, 2026).

- **Marketing in Higher Education: From Mass Communication to Personalization**

Marketing activities in universities have come far too – it is no longer merely an exciting ad campaign or filling the prospect list with contact information. Instead, it has become much more about sustaining financial sustainability of the institution. As soon as the budget decreases, marketing activities become one of the key measures university management takes in order to sustain its functioning. Moreover, once combined with sustainable development goals, marketing activities become much more than promoting the institution among the public. Instead, they represent one of the ways to create value for students, teachers, and other stakeholders of the educational institution (Ly-Le, 2025). However, the main issue here remains attracting and retaining students. In order to solve issues related to attracting and retaining students, universities rely on marketing expertise (Danish et al., 2025). At the moment, the biggest innovation is artificial intelligence that allows universities to personalize the experience of every single student from the moment of being attracted to the university till the moment of recommending it to others. At different stages, predictive analytics, chatbots, and CRM system are used (Danish et al., 2025).

The research corroborates this. The findings of several studies that are based on technology acceptance model, trust-based decision-making, and personalization–privacy paradox (survey of 350 future international students) reveal that the use of artificial intelligence in marketing allows universities to attract applicants. The process becomes more accessible, appealing, and transparent. However, there is one catch – trust plays a crucial role. When the students have doubts regarding their data protection or see some bias in algorithms used, their application becomes questionable (Al-Dmour et al., 2025).

- **AI-Enabled Marketing Technologies**

AI-driven marketing in higher education breaks down into four main areas, and they all tend to overlap a bit.

First, we should talk about predictive analytics and machine learning. Machine learning helps institutions to discover patterns in the process of enrollment or dropout of students. Therefore, they may act beforehand and allocate their resources wisely. The models developed on the basis of institution's data help identify at-risk students and point out factors that make particular students apply to certain programs (Shilbayeh & Abonamah, 2021). Recently, such methods can also predict graduation rates and are almost ready for practical use (Umendu et al., 2026). Even more advanced algorithms, including deep learning ones, warn schools about at-risk students earlier than before (Bhat & Jayaram, 2023). All this allows institutions to make proper plans and to direct their marketing efforts to potential applicants (Shilbayeh & Abonamah, 2021).

There are chatbots and conversational agents as well. These are the bots students deal with the most when resolving their issues regarding enrollment and information. In one study conducted among

280 participants, it turned out that the use of chatbots facilitated advising and sped up the process of enrollment, moreover, a higher number of students took part (Mughal et al., 2025). The system UetBot used in the European University of Tirana automates the processing of policy or scheduling-related queries on its own; thus, the staff is able to concentrate on something else (Dema, 2025). Quick and relevant answers, especially related to registration and scholarships, satisfy the students (Yupa et al., 2024). There are some bots that use large language models to communicate like a human in both web and virtual reality environments (Fox et al., 2024).

Following this would be personalization engines and CRM systems, which will personalize communication and move institutions away from sending generic emails to initiating more personalized communication (Danish et al., 2025). When communications are personalized, students are more likely to listen and take action and apply. As expected, however, personalization has some privacy issues associated with it (Al-Dmour et al., 2025).

Lastly, we have digital channel orchestration. In this approach, institutions coordinate their multi-channel approach using social media monitoring, virtual career coaching, ambassador programs, among others, and all of this is coordinated through analytics to ensure that the messages are not conflicting but consistent across all channels (Bolat & O'Sullivan, 2017). More institutions are embracing online self-services (36% of recently implemented projects) and personalized guidance to connect the students with right opportunities (20%) (Fernández et al., 2023).

- **Higher Education and Sustainable Development**

The contribution of universities is unique in terms of Sustainable Development Goals. In particular, there is SDG 4 that calls for equal access to high-quality education, including higher education. It was a different approach compared to the time of Millennium Development Goals where higher education institutions received no attention (Kilasonia, 2023). However, higher education does not affect SDG 4 alone. Higher education institutions have an impact on such issues as sanitation, environment, innovation, and global partnership as well. For the efforts to become efficient, higher education institutions should incorporate Sustainable Development Goals in their strategy and practice (Leal Filho et al., 2023).

Marketing plays an essential role in this matter in several aspects. First, it is the means of presenting universities' commitment to achieving sustainability and the responsibility of institutions in terms of global citizenship. Presenting SDGs as a key aspect of the university's activity and brand can significantly contribute to better performance (Leal et al., 2021). The second point is the knowledge that marketing provides. Universities are supposed to engage their audience in sustainable behavior by using their marketing skills in order to establish partnerships for SDG 4 and SDG 17 (Tomasella et al., 2024). The third aspect is the possibility to apply social marketing in the process of advancing sustainable development. There are case studies that present the practice of SDG campaigns in universities (Hübscher et al., 2021).

- **AI, Equity, and Inclusive Education**

Many scholars question whether the introduction of AI will contribute to bridging or widening educational inequalities. Unfortunately, the latest research does not seem to offer any encouraging prospects; technology in and of itself cannot solve the problem of unequal education. For instance, MOOCs were expected to revolutionize education, but in practice, they have only reflected the same old inequalities existing between the countries. Education AI does not differ much from them; in most cases, it tends to worsen these educational gaps (Bulathwela et al., 2024). The thing is, implementation of AI technologies requires considerable financial investment and qualified specialists, and hence, only well-resourced schools can take advantage of it, while disadvantaged schools only get even more disadvantaged (Xiao, 2024). It is quite ironic that in most cases, students who need these technologies the most do not receive them (Xiao, 2024).

This is not a cry to abandon efforts, but to create better designs. Inclusion has to become an integral part of educational technology, which is impossible without developing technologies and systems that incorporate people and technology (Bulathwela et al., 2024). There is some good news in this area, namely in places with limited resources: pilot projects of African universities prove that AI can contribute to bridging the gap between students. Virtual classes, open access to course materials, automated teaching, and adaptive learning contribute to making education more accessible to disadvantaged learners if there are proper policies and adequate technological solutions (Angwaomaodoko, 2025). Nevertheless, major

obstacles of achieving equity with the help of AI do not disappear: funding, institutional capacity, and support will determine the winners among those who will benefit from the developments (Bulathwela et al., 2024; Angwaomaodoko, 2025). This point should always be taken into account: researchers warn against using AI as a solution for inequality problems (Bulathwela et al., 2024).

- **Ethics and Governance**

Once you scratch beneath the surface of research on ethics and governance of AI, the same old issue keeps emerging: institutions are simply not adapting fast enough. Most literature focuses on ethical considerations that are hardly acknowledged during the process of deployment of AI applications (Bond et al., 2024). In order to address this issue, some researchers in governance started advocating for human-centered approach such as the United Nations Educational, Scientific and Cultural Organization guideline on the use of AI for education. The guideline is all about human rights, capacity building for sustainable development, and the role of humans over algorithms in decision making (Chan, 2023).

As far as the governance strategies are concerned, there is no doubt regarding the major challenges – they relate to the algorithmic biases, data privacy, academic integrity, and ensuring that all involved parties have their voices heard. As far as potential solutions go, they can be outlined through increased involvement of the stakeholders, implementation of the ethical policies, and policy adaptability (Vaithiyanathan, 2024). At times, institutions establish special AI ethics committees responsible for developing, implementing and monitoring the policies (Bhaskar et al., 2025); at other times, interpretive framework is used to question the actions of the institution in terms of using AI, acknowledging the limitations, and maintaining control over the decisions made (Tuanpusa et al., 2026).

Despite this, the area remains rather novel. Critical literature is replete with the discussions on the fact that the majority of frameworks remain purely conceptual, and many stakeholders view AI as a black box (Lam, 2026).

- **Synthesis and Research Gap**

Two systematic reviews conducted recently have proved that AI, sustainability, and higher education are beginning to intersect in some interesting ways. The first systematic review, which was conducted according to PRISMA guidelines, considers 39 articles published from 2015 to 2024 and identifies three major aspects where AI changes higher education significantly: personalized learning, accessibility of education, and the optimization of resource management. This study also identifies two major barriers to implementing AI in the higher education sector, namely pedagogy and governance (Toha, 2025). The second systematic review includes 213 articles and focuses on seven major areas after a thorough selection of articles: organizational structure, curricula design, preparation of students for global citizenship, lifelong learning, creativity and innovation, pedagogical and learning processes, and communication (Bagherimajd & Khajedad, 2025).

However, throughout all this dialogue, there is one thing that should be mentioned – marketing receives almost no consideration in regard to AI adoption. It is interesting, as marketing is the means of communication between universities and students, parents, and society in general, while the relationship between the two spheres is not studied. Social and technical complexities related to AI use in university marketing, from culture to leadership and governance, have not been studied enough (Roy & Khalid, 2026).

Thus, the current paper aims to cover this gap. It integrates all five approaches and offers research directions by considering marketing, AI, and sustainable development as a coherent system.

Methodology

The research uses an integrative review. In general, integrative reviews are useful when there is a necessity to combine all evidence from different types of works from practice-based works and theoretical works to research-based works. The aim is not to aggregate outcomes or analyze effect sizes but to combine new perspectives and viewpoints. This methodology is in line with what researchers use in the field of AI and sustainability. Researchers have used such techniques as PRISMA-oriented systematic reviews (Toha, 2025) and meta-syntheses (Bagherimajd & Khajedad, 2025).

- **Search Strategy.** I conducted searches through significant academic databases such as Scopus, Web of Science, Google Scholar, and journal publishing sites, using keyword combinations relevant to this paper. For each search, I used at least one keyword from the following three sets: (a) artificial intelligence, machine learning, predictive analytics, chatbot, conversational agent, personalization; (b) higher education, university, admission, recruitment,

enrollment, retention, marketing, branding; and (c) sustainability, sustainable development, Sustainable Development Goals, SDG 4, equity, inclusion, governance. The focus was on literature from 2019 onwards, since there has been increased adoption of AI applications in higher education during this time period (Crompton & Burke, 2023). However, important systematic reviews from 2019–2024 have also been considered (Bond et al., 2024; Zawacki-Richter et al., 2019).

- **Inclusion and Exclusion Criteria.** These were sources that mentioned either (a) artificial intelligence, digital marketing, or technologies using AI in higher education, (b) the role of higher education in sustainability, for instance, equity and access, or integration of the SDGs, or (c) the ethical, governance or socio-technical dimensions of AI in universities. All the types of studies including empirical, conceptual and review studies were included provided that there was sufficient methodology and evidence included in the source. Sources that only talked about K-12 education, applications of AI not associated with education or sustainability not related to higher education or marketing were excluded. Peer-reviewed journal articles and systematic reviews took precedence over other sources.
- **Analytical Approach.** Each source was coded against a framework developed from the literature: marketing efficiency (recruitment efficiency, personalization, engagement, conversion), artificial intelligence efficiency (predictive analysis, conversational agents, personalization engines, customer relationship management, and channel orchestration), and sustainable development fit. A three-step procedure was followed to analyze data through: open coding of findings; categorizing these codes into descriptive themes; and integrating these themes to develop propositions (Toha, 2025). Evidence supporting the same position was identified, although conflicting evidence was retained, along with context for interpretation. All claims were substantiated by the underlying study's level of robustness and methodology.
- **Framework Development.** Drawing on previous literature that starts with synthesis and goes on to conceptual models (Bagherimajd & Khajedad, 2025; Toha, 2025), I created an integration of the themes into a framework. This was an iterative process where I used the coded themes to create framework elements, crosschecked against opposing evidence, and honed each element until it was able to be tied back to the literature. The M-AI-SDG framework is in Section 5.

Results

Five key themes emerged from the synthesis, capturing the core intersections of marketing, artificial intelligence, and sustainability within higher education.

- **Theme 1: AI Enhances Marketing Effectiveness Across the Student Journey**

Artificial Intelligence is revolutionizing the way colleges and universities approach marketing and increasing efficiency at all stages of the student life cycle. Those institutions that apply AI technologies from the start benefit from it, getting more enrollments, reducing summer melt and creating more diverse student population. This is achieved through the implementation of personalized communication, advanced forecasting, and individualized campaigns (Cook, 2026). In general, this technology is described in the framework of the well-known marketing funnel from awareness and engagement to sealing the deal, retaining students and even converting them into ambassadors of their institution. The process uses predictive analytics, chatbots, and CRM technologies among others (Danish et al., 2025). Besides answering queries, the conversational bots can be used for advising, accelerating enrollment and stimulating students' participation (Mughal et al., 2025). Considering international recruitment, the matter becomes even more evident since the use of Artificial Intelligence allows institutions to increase accessibility and transparency of the process and provide personalized experiences that influence the decision-making of students. Nonetheless, one aspect remains crucial for obtaining all the advantages – students should trust AI technologies (Al-Dmour et al., 2025).

- **Theme 2: AI Optimizes Administrative Efficiency and Resource Allocation**

Everyone recognizes how AI improves efficiency, particularly in the educational setting. Instructors allocate less time to administrative duties and concentrate more on their learners (Bond et al., 2024). Schools and universities are catching up and building self-service technologies as well as automation of processes. This accounts for over a third of all digital changes, with another share (20%) being devoted to the identification of individual abilities and providing valuable recommendations to students (Fernández et al., 2023).

As chatbots answer trivial queries, instructors do not need to respond multiple times and can concentrate on more sophisticated issues that cannot be addressed automatically (Dema, 2025). Another area of application is predictive modeling as it allows for proper management of enrolment and churn as well as the tracking of students' performance (Bhat & Jayaram, 2023; Shilbayeh & Abonamah, 2021). Recent studies also demonstrate the ability of machine learning algorithms to identify the risk of learners leaving university before the end of the term. Thus, one study conducted in 2026 revealed a 87.4% accuracy of the best model (Umendu et al., 2026). Based on the analysis of literature, it appears obvious that ensuring efficient allocation of resources is one of the top three impacts).

- **Theme 3: Sustainability Objectives Become Embedded in Marketing Strategy**

When institutions tie marketing with sustainable development, they can achieve certain significant and tangible results. As evidenced by the recent literature, marketing in its sustainability context brings universities an improvement of their reputation, greater engagement with stakeholders, and better differentiation. Universities do this using such practices as omnichannel communications, ambassador programs, and incorporation of the United Nations Sustainable Development Goals (SDGs) into their curricula. Positioning university as a sustainability leader is not only a strategy but also an effective marketing strategy. The SDGs must be integrated into university's strategy and many institutions are positioning themselves as leaders of sustainable development (Leal Filho et al., 2023). Marketing as such encourages individuals to make sustainable decisions and universities need to ensure that the development of good partnerships around SDG 4 (quality education) and SDG 17 (partnerships for the goals). This way of thinking changes sustainability from an academic issue to a branding one (Tomasella et al., 2024)

- **Theme 4: Equity and Access Are Conditional Outcomes, Not Automatic Benefits**

However, regarding equity, the synthesis highlights many caveats associated with the role of AI. Of course, there is an opportunity for artificial intelligence to promote education equality with such features as virtual learning, free access to learning materials, and personalized instruction tools. As was proved by some pilot projects in Africa, the use of AI can lead to positive results (Angwaomadoko, 2025). Nevertheless, one should understand that the mentioned benefits appear only if there are good policies and appropriate infrastructure. When analyzing the global situation, scholars point out that almost all studies indicate that AI systems are very expensive and require both advanced technology and expertise. Thus, schools and regions with sufficient resources get the advantage in the first place, making the existing inequality even worse (Bulathwela et al., 2024; Xiao, 2024). In such a way, the main determinants of success include funding, institutional strength, and continuous support. Scholars warn that AI is not a solution for educational equity (Trinh et al., 2026). If speaking about marketing, there is another aspect to consider – AI-driven recruiting targets mostly digitally connected rich students if not intentionally planned differently.

- **Theme 5: Ethics and Governance Remain the Binding Constraint**

Ethical considerations remain the most discussed issue regarding the application of AI within universities (Bond et al., 2024). Most developed models tend to return to the same key notions: humans remain in charge, transparency is mandatory, discrimination is unacceptable, and any system needs to be auditable (Chan, 2023). The problem is that making these principles actionable is very difficult. Universities are frequently found struggling in order to transform high-level notions into specific policies or governance that can aid decision-making, discussion of controversial issues, and development of regulations (Tuanpusa et al., 2026). There have been many attempts from different universities to tackle these problems: some universities tend to rely on top-down policy introduced by the senior administration (Chan, 2023). Other universities create multistakeholder groups that can help to address such controversial topics as algorithmic bias, privacy, and academic integrity (Vaithyanathan, 2024). There is also another type of institution that has AI ethics committees (Bhaskar et al., 2025), or an approach where things are introduced gradually and the main focus is on educating all individuals on AI (Lam, 2026). Coming to the topic of marketing, one has to admit that there is a particular dilemma when personalization is what appeals to customers but at the same time raises many privacy concerns. The more personalized the product is, the more issues with privacy there are (Al-Dmour et al., 2025).

- **Cross-Cutting Finding**

All five issues are interconnected. To make marketing effective, one needs proper and equitable design. Equitable design depends on proper governance. Proper governance works only when it

correlates with sustainability, and it is recognized only when there is a proper communication through marketing (Leal Filho et al., 2023). If one concentrates only on one goal, such as increasing conversions, decreasing the cost of marketing campaigns, or completing all sustainability goals, then one misses a greater picture and even fails in accomplishing the set goals. It is because of this that the integration into a single framework makes much sense, which is covered below.

Discussion

• An Integrated Framework: M-AI-SDG

With the synthesis of all these, the M-AI-SDG framework emerges as a framework wherein marketing strategy, artificial intelligence capabilities, and sustainable development outputs become one in harmony with each other. This is how it all comes together: The marketing strategy determines how the institution will position itself and plot the student journey starting from when they become aware of the institution until they become advocates for it. The AI capabilities like predictive analytics, chatbots, personalization engines, CRM systems, and channel management provide the marketing team with the means of scaling their operations to a larger degree. However, this is not everything there is to this framework. Its aims, which include things like equity, access, resourceful practices, and governance are not just the end game but the very standards that it needs to adhere to. At the core of the whole thing, we find governance taking ethics into practice through policies.

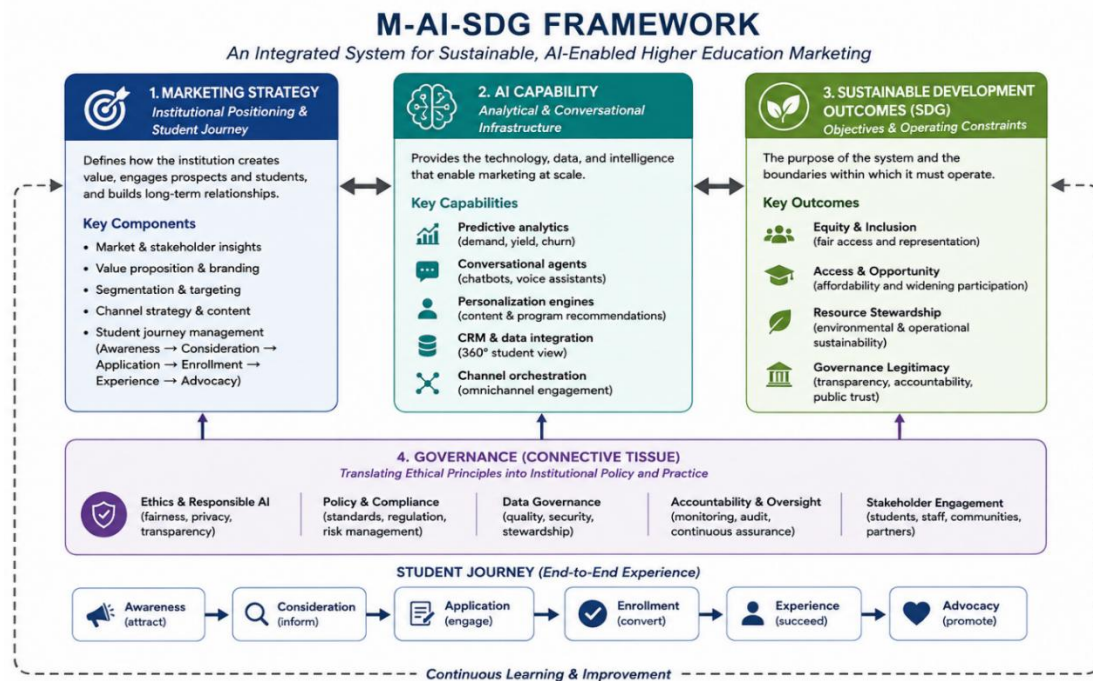


Figure 1: Conceptual Research Framework

There are three features of this framework which are particularly interesting. Firstly, it is recursive. Not only are outcomes produced but they impact the next stage of strategy. That means that if some issues of equity arise, or governance is poor, or new efficiencies can be gained, then they will all go into the next iteration of marketing. Secondly, this process is not only technical but also social. AI can only provide value when it is combined with people's competences, organizational culture, effective leadership, and governance (Roy & Khalid, 2026). Thirdly, this framework is normative. Sustainable development is not an incidental aspect of marketing but an integral part of its goals. In other words, the purpose of marketing is not only to sell something but also to generate value differently.

• Tensions and Trade-offs

There are three key tensions which will affect how this scenario plays out in reality. The first of these is the tension between personalization and privacy. While AI technologies are behind the increased

levels of engagement, they also collect a massive amount of personal information. This may lead to the rise of algorithmic biases which ultimately depend on the degree of students' trust to the system (Al-Dmour et al., 2025). Secondly, it is the tension between efficiency and equity. While AI can help to improve the conversion rates, these models usually do not cover applicants who are difficult to access or are not comfortable using the Internet – effectively recreating an old story of privilege for those who have more resources (Bulathwela et al., 2024; Xiao, 2024). Lastly, there is the tension between acceleration and governance. While the adoption of the technology takes off, institutions simply cannot control or even understand how it works yet. Mostly, people still treat AI as a black box, while the research stays at the conceptual stage, and gradual implementation is needed (Lam, 2026).

• **Innovative Research Directions**

The synthesis points out five ways the field can move past its current fragmentation.

First, longitudinal effectiveness research is needed. Today, knowledge about AI-enabled marketing outcomes mostly comes from cross-sectional research or case studies (Cook, 2026). The cohorts must be followed through several admission cycles. Otherwise, it will never be possible to learn if the increases in enrollment, yield, and diversity persist (Roy & Khalid, 2026).

Second, comparative and context-specific research is necessary. The countries of the global South get little attention in the existing literature on the topic, and equity considerations are quite different at institutions with plenty of resources and those that are resource-strapped (Angwaomaodoko, 2025; Xiao, 2024). Comparative research into various institutional types, systems, and development contexts will bring much clarity regarding the role of infrastructure and policy (Roy & Khalid, 2026).

Third, applicant-based inquiries. At present, little research considers the views of applicants themselves on the entire marketing and recruitment process (Mosha et al., 2026). Moreover, there are no standardized means of measuring their experiences (Mosha et al., 2026). It is necessary to conduct qualitative studies based on real-life accounts of prospective students on their experience of AI-powered recruitment and the points when the trust breaks down.

Fourth, governance translation research. Perhaps the key challenge in the domain in question is the lack of alignment between high-level aspirations in terms of ethics and practices at universities (Tuanpusa et al., 2026). Researchers may want to investigate the processes of implementing "human-centered AI" within universities' marketing departments (Chan, 2023). It is necessary to look at the ways of establishing ethics committees (Bhaskar et al., 2025) or conducting audits (Vaithiyanathan, 2024).

The fifth topic should be sustainability-oriented researches. There are not so many scientific works on how the relationship between marketing and Sustainable Development Goals is actually measured. There should be an analysis of the whole process from strategy and artificial intelligence applications to actual achievements in terms of equity, access, and resource management (Bagherimajid & Khajedad, 2025; Toha, 2025).

• **Implications for Practice and Policy**

As an institutional leader, avoid viewing the adoption of AI in marketing as yet another investment in technology. It is a project where you integrate people and technology right from its conceptualization (Roy & Khalid, 2026). Start by designing your recruitment mechanisms to incorporate equitable measures such as inclusive recruitment platforms and multilingual support, rather than doing that as a quick fix whenever there is some issue (Angwaomaodoko, 2025; Bulathwela et al., 2024). In order to scale any AI activities, get your governance sorted out first. This is where you should have all the policies concerning data protection, transparency, and accountability in place (Chan, 2023; Vaithiyanathan, 2024).

As a policymaker, the SDGs mandate calls for your support to resource-deprived institutions. Otherwise, AI will continue to favor those that are well-resourced (Xiao, 2024).

For individuals who teach marketing, the point cannot be any clearer than that. One must embed the lessons of sustainability and AI literacy into the curriculum. Only then can future generations be prepared to help the institution map its way toward sustainability (Tomasella et al., 2024).

Conclusion

The purpose of this article was to unite two concepts – the use of AI by universities and marketing strategies, linking these concepts with sustainable development in the university context. As a result of the literature review conducted for five disciplines, five major themes were revealed.

First of all, the use of AI greatly enhances the effectiveness of marketing throughout the whole student lifecycle, from grabbing his or her attention, aiding the decision-making process, to creating an advocate (Cook, 2026; Danish et al., 2026). Moreover, the use of AI simplifies administrative processes and helps the universities better manage their resources, which allows for more time and more accurate planning (Bond et al., 2024; Fernández et al., 2023; Umendu et al., 2026).

Should an educational institution seek sustainability in their marketing strategy, AI can come to their aid—and you will be able to see the results not just financially but also in terms of your reputation (Hanaysha & Alhyasat, 2025). Everything is not equal, however: AI only benefits from the existence of proper infrastructure and policy, otherwise, it only widens the gaps already existing (Angwaomaodoko, 2025; Xiao, 2024).

This is the true crux of the matter: ethics and governance can either be the glue that is holding things together or the force that is keeping them from moving ahead. At the moment, universities are trying desperately to implement the use of AI, barely having time to develop appropriate governance structures or practices (Tuanpusa et al., 2026; Lam, 2026; Bond et al., 2024). In order to help remedy the situation, this paper proposes the framework of M-AI-SDGs, which brings marketing strategy, AI capabilities, and sustainable development effects into a self-reinforcing system defined by technical and social governance norms. There are also five potential research avenues highlighted in this paper: long-term effects, comparisons, applicant perspectives, governance implementations, and the integration of sustainability. This framework is not a mere overview but an attempt at furthering the dialogue of previous literature on the topic (Bagherimajd & Khajedad, 2025; Toha, 2025). Testing it out in the real world is the next step.

And here is what should matter the most: this review calls for the establishment of a new standard. In view of the current efforts on the part of the universities all over the world to adjust their strategy in accordance with the Sustainable Development Goals (Leal Filho et al., 2023; Kilasonia 2023), it cannot be ignored anymore that marketing is a critical area, through which institutions attract their future students, and now that AI is involved in this process, it is a way of showing whether values are being upheld or not.

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