Website:https://worldsiencepub.com/index.php/Imc Volume:5,Issue 02,September-2026

IMPROVING THE METHODOLOGY OF HIGHER EDUCATION INSTITUTION MARKETING THROUGH CONTENT OPTIMIZATION FOR GENERATIVE AI SYSTEMS (GEO)

Ablatdinov Sultanbek PhD, Acting Assoc. Prof.
Department of Economics and Management
Tashkent State University of Economicss
ablatdinov@tsue.uz

Abstract. This study examines the specific features of improving the marketing of higher education institutions in the context of the development of generative artificial intelligence. Based on an analysis of the academic literature, the transition from SEO to Generative Engine Optimization (GEO) is explored, with particular attention given to the specific characteristics and key barriers to implementing GEO in higher education marketing. The study substantiates the need to develop a GEO methodology to enhance the information visibility and effectiveness of marketing strategies of higher education institutions.

Keywords: higher education, artificial intelligence, GEO, SEO, digital marketing, marketing strategy.

INTRODUCTION

Higher education institutions (HEIs) operate in a dynamic environment characterized by increasing competition for student recruitment, funding, and reputation enhancement within the global education landscape. Over the past two decades, HEI marketing strategies have undergone significant transformation, evolving from traditional printed catalogs and advertising to digital marketing and search engine optimization (SEO).

Between 2022 and 2024, a major shift occurred in the information-seeking behavior of prospective students. Generative artificial intelligence systems, including ChatGPT, Claude, Gemini, and others, have become important tools for information search. Research indicates that 64% of students use generative AI to search for information about educational institutions, while traditional Google search is becoming less dominant (Statista, 2024). This represents a fundamentally new challenge for the theory and practice of HEI marketing.

The concept of Generative Engine Optimization (GEO) emerged among marketing practitioners as a response to this new reality. However, the academic literature lacks systematic research focused on developing a GEO methodology specifically for the higher education context. This study aims to address this gap by synthesizing knowledge from the fields of higher education marketing, artificial intelligence, and digital communications.

METHODS

Source Search Strategy. The literature review was conducted based on a systematic analysis of academic publications, practical guidelines, and reports published between 2010 and 2024. The review was conducted using the following academic and professional databases: Google Scholar, JSTOR, ResearchGate, ScienceDirect, Scopus, and Web of Science.

Inclusion criteria included publications in English and Russian; studies addressing higher education marketing; research on generative AI systems; practical guidelines on SEO and GEO; and studies of digital communications in higher education.

Exclusion criteria included publications published before 2010; studies unrelated to higher education or marketing; and materials with insufficient scientific validation.

RESULTS

1. Evolution of Higher Education Marketing. Higher education marketing has undergone four main stages of development. During the pre-digital era (before 2005), marketing was largely limited to printed materials. The early digital marketing stage (2005–2015) saw the adoption of institutional

© 2026 International Conference on Artificial Intelligence and Applications . All Rights Reserved.

websites and social media (Kumar & Polonsky, 2016). During the SEO-dominant stage (2015–2022), marketers focused on optimizing content for search engines (Evans, 2007; Malaga, 2010). Currently, the sector is undergoing a transformation into the era of generative AI (2022–2024).

2. Characteristics of Generative AI Systems and Their Impact on Marketing. Generative AI systems based on large language models (LLMs) operate on the principles of transformer architecture. Key characteristics relevant to marketing include contextual understanding, the synthesis of information from multiple sources, personalization of responses based on conversational context, and probabilistic content generation. Research indicates that LLMs can generate content comparable in quality to human-generated content (Noy & Zhang, 2023) while significantly accelerating marketing content creation processes.

3. Transition from SEO to GEO: Conceptual Differences. Search Engine Optimization (SEO) was developed to optimize content for the specific algorithms of Google and other search engines. Generative AI systems, however, operate in fundamentally different ways. Generative Engine Optimization (GEO) focuses on the accurate representation of information in AI-generated responses, source authority, content optimization for AI comprehension, and the management of brand narratives.

4. GEO in the Context of Higher Education Marketing. Higher education marketing has several distinctive characteristics, including multiple target audiences (students, parents, teachers, and employers), a lengthy decision-making cycle, trust as a central factor, and the complexity of educational offerings. GEO can provide higher education institutions with several potential benefits, including greater control over information narratives, student recruitment through accurate information in AI-generated responses, and increased visibility in AI-generated search results.

5. Challenges and Barriers to GEO Adoption in Higher Education Institutions. The implementation of GEO faces technological challenges, including algorithmic opacity and rapid technological development; organizational challenges, such as limited expertise, the absence of established methodologies, and organizational inertia; and practical challenges, including a lack of appropriate tools, difficulties in measuring effectiveness, and the complexity of educational content. Despite these barriers, higher education marketers are actively seeking solutions and require a scientifically grounded approach.

DISCUSSION

The identified gap between practice and theory, namely the absence of a systematic methodology, is of critical importance. The literature review demonstrates a fundamental distinction between SEO and GEO, while the specific characteristics of higher education marketing require a tailored approach. At present, appropriate tools and methodologies for GEO implementation remain underdeveloped, and higher education marketers are actively seeking effective solutions.

From a theoretical perspective, this study is expected to contribute to the development of marketing theory by integrating generative AI systems as a new medium of marketing communication. From a practical perspective, the proposed methodology should provide higher education institutions with clear principles for optimizing content for AI systems, a framework for organizing marketing activities, tools for measuring the effectiveness of GEO strategies, and examples of best practices.

DISCUSSION

Improving the methodology of higher education institution marketing based on GEO represents a critically important and scientifically promising area of research. The absence of a systematic methodology constitutes both a challenge for higher education institutions seeking effective solutions and an opportunity for researchers to develop such a methodology. This dissertation aims to address this research gap by proposing a scientifically grounded and practically applicable approach to adapting the marketing strategies of higher education institutions in the era of generative AI systems.

© 2026 International Conference on Artificial Intelligence and Applications . All Rights Reserved.

REFERENCES

1. Aggarwal, P., Murahari, V., Rajpurohit, T., Kalyan, A., Narasimhan, K., & Deshpande, A. (2024, August). GEO: Generative engine optimization. In Proceedings of the 30th ACM SIGKDD conference on knowledge discovery and data mining (pp. 5-16).
2. Arora N., Chakraborty I., Nishimura Y. AI–human hybrids for marketing research: Leveraging large language models (LLMs) as collaborators //Journal of Marketing. – 2025. – Т. 89. – №. 2. – С. 43-70.
3. Banh L., Strobel G. Generative artificial intelligence //Electronic markets. – 2023. – Т. 33. – №. 1. – С. 63.
4. Bormane S., Blaus E. Artificial intelligence in the context of digital marketing communication //Frontiers in Communication. – 2024. – Т. 9. – С. 1411226.
5. Capriotti P., Carretón-Ballester C., Losada-Díaz J. C. Analysing the influence of Universities' content strategy on the level of engagement on social media //Communication & Society. – 2024. – Т. 37. – №. 1. – С. 41-60.
6. Devlin J. et al. Bert: Pre-training of deep bidirectional transformers for language understanding //Proceedings of the 2019 conference of the North American chapter of the association for computational linguistics: human language technologies, volume 1 (long and short papers). – 2019. – С. 4171-4186.
7. Gołąb-Andrzejak E. The impact of generative AI and ChatGPT on creating digital advertising campaigns //Cybernetics and Systems. – 2025. – Т. 56. – №. 8. – С. 1130-1144.

© 2026 International Conference on Artificial Intelligence and Applications . All Rights Reserved.