

REVIEW ARTICLE

Alumni engagement in higher education institutions: A comprehensive systematic literature review (SLR)

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ABSTRACT

Under the guidance of Keele's suggested methodology, this systematic literature review (SLR) explores the application of alumni engagement in higher education institutions. The study, which was organized into phases for planning, reviewing, conducting, and reporting, sought to provide a thorough analysis of current trends, the theory and measurement of alumni engagement, and challenges to their application. Scopus and Web of Science databases and search terms were used to find 141 papers, of which 34 primary studies were chosen for study. 16 thematic clusters were identified by content and bibliometric analysis, underscoring the importance of alumni ecosystem and student career development in helping to comprehend alumni behavior and improve strategic relationship management procedures. It has become clear that promoting financial sustainability, encouraging lifelong loyalty, and improving graduate employability all depend heavily on strategic alumni engagement. In order to enhance institutional resilience and overall university reputation, the review highlights the significance of multidimensional perspectives and personalized communication in educational environments. Future studies should look into novel digital techniques to engaging diverse stakeholders, evaluate the impact of non-monetary contributions over an extended period of time, and analyze the roles of emerging technologies like AI. Despite the benefits of methodology, certain drawbacks are recognized, including possible biases in the literature selection process and an under-representation of non-Western views. By resolving these issues and including many disciplinary viewpoints, the study's robustness may be improved, and the connection between alumni engagement and higher education management can be better understood.

Keywords: alumni engagement; higher education institution; alumni ecosystem; student career development; social exchange; relationship marketing; systematic literature review

1. Introduction

In the context of 21st-century globalization and the knowledge economy, Higher Education Institutions (HEIs) face unprecedented challenges, including declining public financial support, intensified competition for student enrollment, and growing societal concerns about the return on investment (ROI) of education. Within this complex ecosystem, alumni are no longer merely witnesses to institutional history or passive sources of donations; rather, they have evolved into strategically significant stakeholders who play a critical

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role in institutional development. Freeman's stakeholder theory provides an analytical lens through which to reconsider the role of alumni, emphasizing that organizations must balance and address the interests of multiple groups (also including alumni) to achieve long-term sustainability^[1]. Recent research extends this perspective by framing alumni as active "co-creators" who vitalize the university not just through funding, but by performing critical functions such as providing strategic resources and acting as "connectors" who mediate relationships between the university and industry stakeholders^[2].

Traditionally, the higher education management literature has narrowly conceptualized alumni relations as an auxiliary fundraising function, focusing primarily on alumni's financial contribution capacity. However, recent scholarly work and industry practice indicate that such a transactional view no longer captures the dynamic nature of contemporary alumni relations. As millennial and Generation Z alumni have become the dominant groups, they increasingly seek value co-creation, career development support, and emotional identification with their alma mater, rather than merely serving as financial contributors. This evolution is characterized by complex processual dynamics. For instance, El-Awad et al. conceptualize early alumni engagement as a fluid process of "giving and taking," manifesting in diverse forms depending on the graduates' career trajectories (e.g., explorative, instrumental, and emotional)^[3]. Furthermore, emerging empirical evidence suggests that in increasingly marketized education systems, this engagement is often driven by "transactional reciprocity," where support is contingent upon rational evaluations of private gains and tangible educational outcomes rather than unconditional loyalty^[4]. Consequently, the concept of "alumni engagement" has emerged, defined as a sustained, reciprocal, and multidimensional relationship between alumni and their alma mater, which includes volunteerism, experiential activities, digital interactions, and philanthropic giving.

To better understand this paradigm shift, scholars have widely applied Social Exchange Theory (SET) and Relationship Marketing (RM). SET posits that alumni engagement is fundamentally a social exchange process, in which alumni evaluate their investments (e.g., time, money) relative to perceived returns (e.g., reputation, social networks, emotional fulfillment) when making engagement decisions^[5]. RM further argues that HEIs should manage alumni relationships similarly to lifelong customers by cultivating trust and commitment, thereby fostering loyalty and enabling a transition from short-term transactions to long-term relational ties^[6].

Within this context, evidence is defined as the systematic synthesis of scientific studies examining alumni engagement strategies, motivations, and outcomes. Unlike traditional expert-driven narrative reviews, a Systematic Literature Review (SLR) employs structured, transparent, and replicable procedures to search, evaluate, and synthesize relevant studies, thereby minimizing bias and providing an objective overview of the current state of research on alumni engagement. Such an approach not only helps clarify conceptual boundaries within academia but also offers higher education administrators' evidence-based guidance for practice.

This study aims to review literature published between 2015 and 2025 to assess the status and application of alumni engagement within higher education management. This period witnessed accelerated digital transformation, the disruptive impact of the pandemic on traditional engagement models and heightened societal demands for inclusivity prompted by social justice, all of which contributed to a rapid expansion of research and diversification of themes in this field. This study primarily focuses on empirical literature published between 2015 and 2025, while seminal theoretical works published earlier were also included to establish the conceptual framework. By systematically analyzing these studies, this review seeks

to reveal how alumni engagement functions as a strategic asset that enables HEIs to strengthen governance, secure resources, and enhance reputation amid an increasingly turbulent environment.

2. Materials and methods

This study follows the guidelines for systematic literature reviews proposed by Keele and adopts the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flowchart for the screening and reporting of literature^[7]. The review process is divided into three major stages: (i) planning the review, (ii) conducting the review, and (iii) reporting the review. This structured approach ensures methodological rigor, thereby enhancing the credibility and practical value of the findings.

2.1. Research aim and questions

The primary aim of this SLR is to provide a comprehensive overview of the current state, developmental trends, and emerging challenges of alumni engagement in higher education management from the perspective of stakeholder theory, particularly within the frameworks of Social Exchange Theory and Relationship Marketing. To achieve this aim, the study addresses the following three core research questions (RQs):

RQ1: What major challenges and emerging opportunities do HEIs face when implementing alumni engagement strategies in an era of digital transformation and globalization?

Rationale: By addressing RQ1, the review identifies barriers such as resource constraints, data privacy concerns, and generational differences, while also exploring opportunities related to artificial intelligence, lifelong learning, and other emerging trends.

RQ2: How have the theoretical foundations and conceptual models of alumni engagement evolved within the field of higher education management?

Rationale: Addressing RQ2 helps elucidate the shift from a narrowly defined philanthropic model to more complex socio-psychological and managerial frameworks, and explains how these theories understand alumni engagement.

RQ3: How has the measurement system for alumni engagement transitioned from a focus on “donation rates” to “multidimensional engagement,” and what are the strategic implications for institutions?

Rationale: This question explores the new metrics proposed by organizations, and examines how data-driven decision-making is reshaping institutional resource allocation.

To ensure broad coverage and high-quality evidence, this study developed a detailed search strategy. The primary online databases include Scopus, Web of Science (WoS), and Google Scholar. To locate relevant publications in the literature search, the search phrase “Alumni Engagement” was used. And a set of inclusion and exclusion criteria was developed to ensure that only papers of the highest level were included in this study. The inclusion and exclusion criteria for searching are provided in **Table 1**. The initial screening result that was acquired from the databases is shown in **Table 2**.

Table 1. Inclusion and exclusion criteria.

Criterion	Inclusion	Exclusion
Topic, Abstract, Keywords	Alumni engagement	
Population	Alumni-related	
Date	2015.1-2025.11	<2015

Criterion	Inclusion	Exclusion
Data collection source	Both original and secondary research were considered	
Language	English	Other languages
Publication Type	Peer-reviewed journal, book chapter, conference papers, dissertations	Preprints, grey literature, and editorials
Access Status	Open Access Content	

Table 1. (Continued)

Note: To promote the gathering of papers focusing on the alumni engagement over the past fifteen years, the "Data" inclusion criterion was set to 2015.1-2025.11.

Table 2. The search result.

	Scopus	Web of Science
Search keywords	Article title, Abstract, Keywords ("alumni engagement")	
Amount	92	50
Total	142	

2.2. Conducting the review

After establishing the search strategy, the study proceeded to the conducting phase. Initially, Search were performed across the selected databases, yielding 141 records. Duplicate entries were subsequently removed using reference management tools. **Appendix A** lists all included papers.

Identification. Original records were obtained from databases such as Scopus, Web of Science (WoS), and supplemented with searches in Google Scholar.

Screening. Titles and abstracts were reviewed to exclude obviously irrelevant studies. For instance, studies focus solely on alumni career tracking without engagement. This stage retained 96 records.

Eligibility. The remaining articles underwent full-text review against predefined inclusion and exclusion criteria. The assessment focused on whether the study had a clear theoretical framework, rigorous methodology, and findings relevant to higher education management. For example, papers merely describing the logistics of an alumni event without any data analysis were excluded.

Included. Ultimately, 34 high-quality core articles were selected for in-depth analysis in this review.

This process adhered strictly to the PRISMA flowchart, ensuring transparency and traceability in the selection of literature. The following **Figure 1** illustrates the whole article selection procedure.

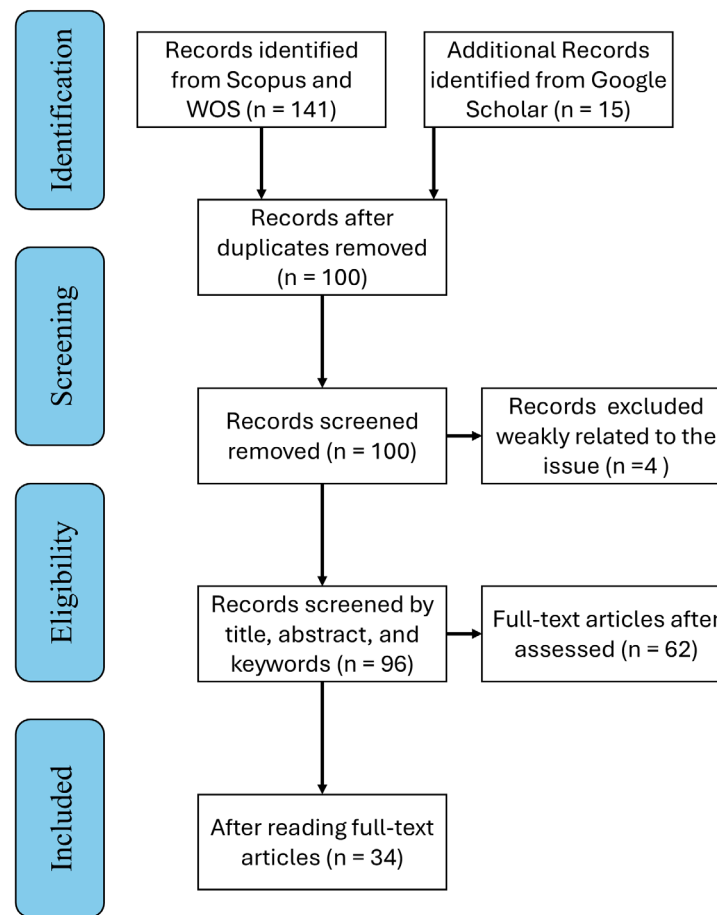


Figure 1. Selection of papers in the PRISMA flow diagram.

2.3. Report the review

We began by examining the annual distribution of publications and the journals in which they appeared. We then conducted a content analysis that combined the interpretive strengths of a human researcher, capable of recognizing nuances often overlooked, with the computational capacity of software tools designed to process and evaluate large volumes of text. As an initial step, we employed Leximancer as an automated content-analysis tool to systematically scan and analyze the textual materials.

Leximancer applies a Bayesian learning technique that enables large bodies of text to be segmented into an extensive network of relationships and categories^[8]. To facilitate accurate automatic processing, all documents were converted from Word to plain text, and extraneous content such as chapter titles, table captions, journal names, author information, and affiliations were removed. The cleaned files were then uploaded into Leximancer for analysis. Using this software, we identified the primary concepts emerging from the dataset, which were subsequently interpreted and elaborated upon from the researcher's perspective. Leximancer generates "concept maps", which could visualize representations of concept relationships and group ideas into themes based on shared meanings^[9].

In addition to content analysis, we also summarized and reviewed the theories, measurements, driving factors, and consequences of alumni engagement, striving to piece together a complete research map of alumni engagement.

3. Results

3.1. Field development based on numbers

Figure 2 illustrates the annual frequency of publications on alumni engagement in higher education from 2015 to 2025. The data reveals a non-linear growth trajectory characterized by three distinct phases. The initial phase (2015–2017) represents a period of dormancy, with a consistent output of only one publication per year, indicating that the topic was considered a niche or administrative concern rather than a mainstream research focus. This was followed by a fluctuation phase (2018–2023), exhibiting a "W-shaped" pattern. Notably, a spike in 2018 ($n=5$) and a resurgence in 2020 ($n=4$) likely reflect the academic response to shifting engagement models during the onset of the COVID-19 pandemic. The most significant development occurred in the final phase (2024–2025), where the field experienced exponential growth. Publications rose sharply to six in 2024 and reached a peak of eight in 2025, suggesting that alumni engagement has now emerged as a critical strategic priority in higher education management research.

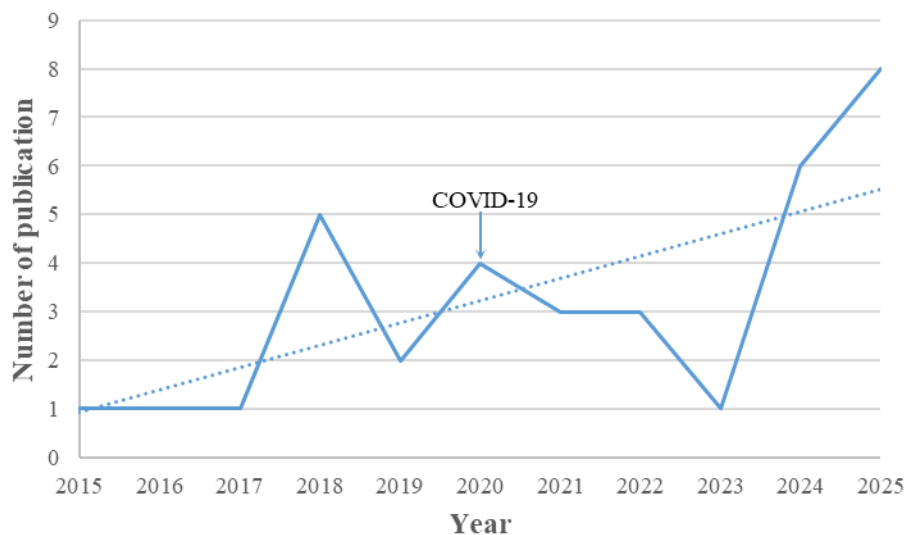


Figure 2. Annual number of publications (2015–2025). A linear trend line is shown, with the COVID-19 period annotated for context.

Four papers were classified as theoretical, eleven as qualitative, fourteen as quantitative, and five as mixed approaches, according to **Figure 3**. The distribution of research demonstrates a variation of methods intended to provide a thorough understanding of the alumni engagement. With a focus on both theoretical foundations and practical strategies for enhancing institutional advancement, this methodological variety provides an in-depth study of alumni engagement dynamics in higher education. The study's methodological diversity is indicative of the various requirements and viewpoints that exist within the field of alumni relations research. This diversity enables scholars to investigate both basic concepts and real-world applications, offering a thorough grasp of how alumni engagement strategies affect institutional sustainability.

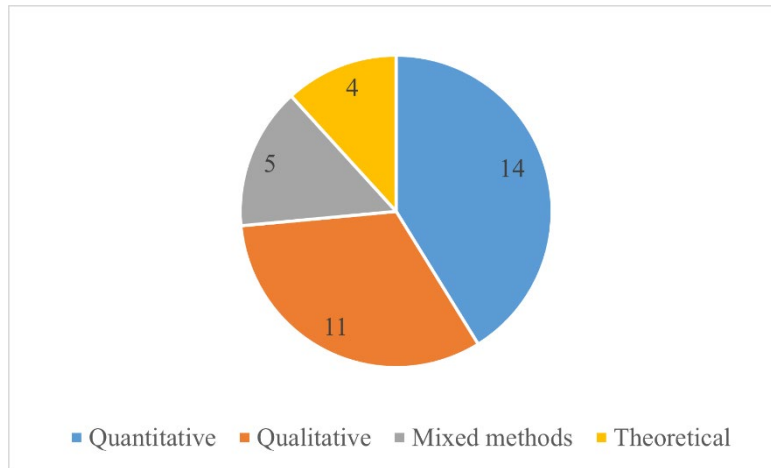


Figure 3. Distribution of articles by method.

Subsequent investigation of the geographic origin of the included studies is illustrated in **Figure 4**. The majority of the research was conducted in North America (14), followed by Europe and Asia (9 and 7 respectively). Furthermore, research conducted in Africa and Oceania was more limited, with 2 publications each. This distribution can be the result of multiple significant factors. Research on alumni engagement in higher education has been concentrated in the North American region due to the region's established culture of philanthropy and the strategic necessity of private funding in its higher education system. Studies conducted in Europe and Asia demonstrate the areas' growing commitment to enhancing institutional reputation and graduate employability through strategic relationship management. These variations in geographic distribution are a reflection of regional variations in higher education funding models as well as the different stages of maturity in the adoption of alumni engagement practices globally.

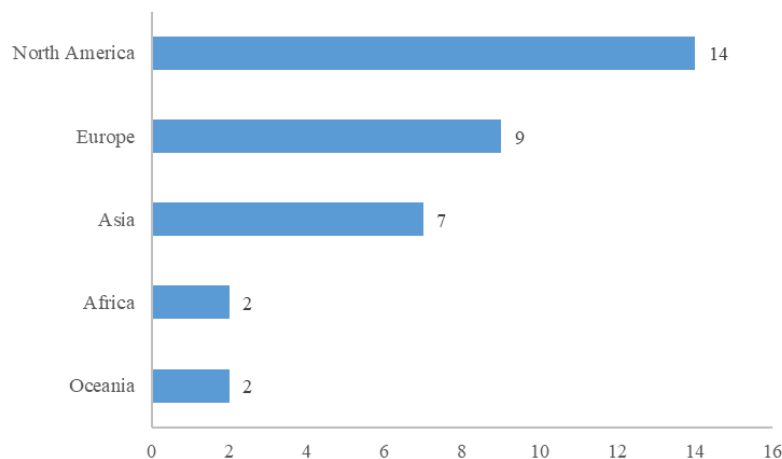


Figure 4. Number of regional of studies.

3.2. Theme analysis results

After using Leximancer for analyzing 34 publications, we discovered 16 themes with the configuration (theme size 30%; concepts 100%; rotation 0°) as shown in **Figure 5**. The analysis identified the following themes: alumni, students, education, program, social, work, need, positive, research, school, community, giving, model, marketing, system, trust. The topics are ranked in descending order according to the number of matches identified during the text analysis, as presented in **Table 3**.

Additionally, using Leximancer, we generated a "concept map" presented in **Figure 6**. The map consists of concepts, shown in black text within colored circles representing their corresponding themes. Both the concepts and the overarching themes together form the structure of the map. Theme significance is conveyed in two ways: size and color. The size of topic indicates the number of ideas incorporated. And the color acts as a "heat map," where brighter colors reflect more frequent occurrences of the theme in the analyzed text^[8,9].

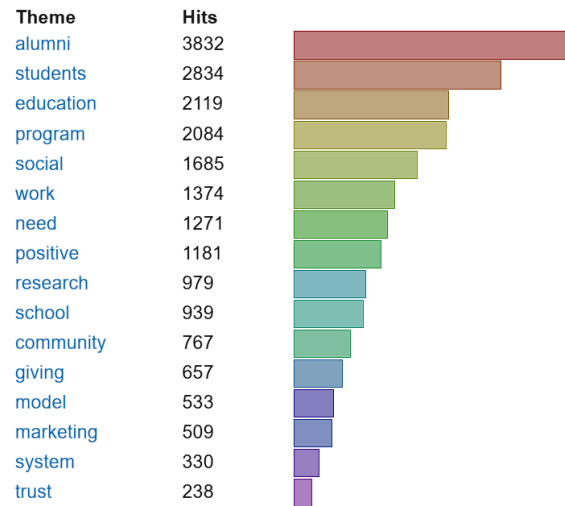


Figure 5. Identified themes.

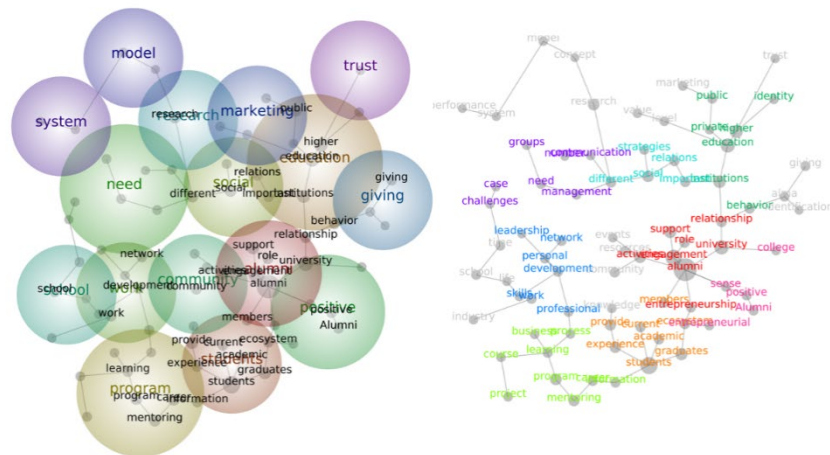


Figure 6. Leximancer concept map.

Table 3. Concepts included in the themes.

Theme	Hits	Connectivity	Concepts
alumni	3832	34835	alumni, engagement, university, support, activities, relationship, role, entrepreneurship
students	2834	21896	students, graduates, experience, provide, ecosystem, academic, members, current
education	2119	17537	education, higher, institutions, behavior, public, identity, private
program	2084	14269	program, mentoring, career, learning, information, project, course, process, business

Theme	Hits	Connectivity	Concepts
social	1685	9465	social, different, relations, important, strategies
work	1374	9260	work, development, network, professional, skills, personal, leadership
need	1271	6531	need, groups, management, communication, case, challenges, number
positive	1181	6151	positive, Alumni, sense, college, entrepreneurial
community	767	5027	community, resources, events, knowledge
school	939	4403	school, time, industry, life
research	979	3972	research, value
giving	657	3185	giving, alma, identification
marketing	509	2371	marketing, level
model	533	1696	model, concept
system	330	1334	system, performance
trust	238	884	trust

Table 3. (Continued)

3.3. Results of content analysis

The concept of alumni engagement has provided valuable insights into the reciprocal interactions that occur between graduates and higher education institutions. It has also developed into a helpful framework for understanding the workings of educational institutions, particularly in relation to enhancing graduate employability, institutional advancement, and strategic governance. These articles from a variety of scholarly publications made an effort to summarize the complicated developments in relationship management frameworks and offer insight into their use and implications in educational settings and management. Following careful review and evaluation of the most current and relevant developments, as indicated in **Table 4**, an emphasis was found on the following areas.

Table 4. Key development of the application.

Key application	References
Alumni Ecosystem and Entrepreneurship (2)	El-Awad et al. (2024); Politis et al. (2024) ^{[3],[2]}
Higher Education Management (5)	Shen & Sha (2020) ^[10] ; Wang et al. (2025) ^[11] ; Roy & Misra (2024) ^[12] ; Nasution et al. (2025) ^[13] ; Drezner & Pizmony-Levy (2021) ^[14]
Public Trust (1)	Drezner et al. (2020) ^[15]
Students Career Development (2)	Howe (2018) ^[16] ; Weggemans et al. (2018) ^[17]
Social Identity (1)	Drezner (2017) ^[18]
Community Leadership (4)	Ahmed et al. (2025) ^[19] ; Rodriguez (2024) ^[20] ; Washington & Mondisa (2021) ^[21] ; Dollinger (2019) ^[22]
Education Marketing (1)	Malhotra et al. (2023) ^[23]

3.4. Theory of alumni engagement

Numerous studies have examined alumni engagement through traditional approaches in public and educational management theories (e.g., organizational identity theory, stakeholder theory, social exchange theory, relationship marketing theory).

3.4.1. Organizational Identification Theory (OIT)

Organizational Identification Theory, proposed by Mael and Ashforth, explains the psychological process through which individuals define themselves based on their membership in an organization^[24]. When members strongly identify with an organization, they internalize its values and perceive its successes and failures as their own. Within the alumni context, organizational identification helps to explain why graduates maintain emotional attachment, pride, and a sense of belonging toward their alma mater. Alumni who perceive high institutional value are more likely to identify with the university, and this identification subsequently motivates them to participate in institutional activities and demonstrate behavioral engagement. Over time, such engagement fosters enduring alumni loyalty expressed through advocacy, volunteerism, and continued support. In this study, OIT serves as the core theoretical foundation, as it provides a psychological explanation of how emotional and cognitive identification evolves into sustained behavioral commitment.

3.4.2. Stakeholder theory

Stakeholder Theory, introduced by Freeman^[1], provides another perspective for understanding alumni engagement. It views alumni as essential stakeholders whose interests and well-being are integral to the institution's success and long-term development. According to this theory, effective alumni engagement depends on the institution's ability to recognize alumni contributions, communicate transparently, and establish equitable and mutually beneficial relationships. When universities treat alumni as valued partners and actively involve them in institutional initiatives, alumni tend to reciprocate through greater participation and continued loyalty. Therefore, Stakeholder Theory emphasizes the reciprocal and participatory nature of the alumni-institution relationship, highlighting the importance of institutional responsibility in sustaining alumni engagement.

3.4.3. Social Exchange Theory (SET)

Social Exchange Theory, articulated by Blau^[5], provides a behavioral explanation for why alumni engage and remain committed to their alma mater. The theory posits that social relationships are maintained through reciprocal exchanges that produce mutual benefits. In the alumni context, perceived value functions as a crucial antecedent of engagement. When alumni believe that their alma mater continues to provide tangible or intangible benefits, such as career opportunities, professional networks, or emotional fulfillment, they are more likely to reciprocate by engaging in institutional activities and demonstrating loyalty. Conversely, when the perceived value diminishes, the likelihood of continued engagement decreases. Thus, Social Exchange Theory explains how perceived value operates as a motivational force that strengthens alumni engagement and loyalty through reciprocity.

3.4.4. Relationship marketing theory (RMT)

Relationship Marketing Theory, developed by Morgan and Hunt^[6], emphasizes that the quality of long-term relationships depends on three central elements: trust, commitment, and satisfaction. Applied to the alumni context, this theory suggests that institutions must continuously invest in maintaining positive and meaningful relationships with their graduates. Sustained communication, trust-building, and emotional connection are critical in transforming short-term interactions into enduring relationships characterized by long-term loyalty. Moreover, leadership style plays a vital role in this process. Effective, transformational leadership enhances alumni trust and commitment, thereby amplifying the positive influence of engagement on loyalty. Relationship Marketing Theory therefore contributes to understanding how relational quality strengthens the engagement-loyalty linkage.

An integrative theoretical perspective combining these four frameworks provides a multidimensional understanding of alumni engagement. Organizational Identification Theory explains the psychological attachment process that drives alumni identification. Stakeholder Theory emphasizes the institutional role in maintaining mutually beneficial relationships. Social Exchange Theory clarifies how perceived value fosters engagement through reciprocal exchanges, and Relationship Marketing Theory highlights the relational quality that sustains loyalty. Collectively, these perspectives suggest that perceived value enhances alumni identification, which promotes engagement and ultimately leads to alumni loyalty. Leadership style is expected to moderate the relationship between engagement and loyalty, further strengthening the link between behavioral participation and long-term commitment. Notably, while SET highlights the factors that encourage sustained long-term involvement, OIT explains the emotional and attitudinal components that help maintain such engagement. Together, these frameworks provide valuable insights for practitioners and researchers in alumni relations, offering a theoretical foundation for designing effective engagement strategies and programs.

3.5. Aspects of alumni engagement

Researchers generally conceptualize alumni engagement as a multidimensional phenomenon including behavioral, emotional, and social aspects^[25,26]. These dimensions together illustrate the complex and dynamic nature of alumni–institution relationships, highlighting how alumni interact, feel, and connect with their alma mater over time. Understanding these aspects allows higher education institutions to design more effective engagement strategies that enhance alumni affinity and foster long-term loyalty.

3.5.1. Behavioral engagement

Behavioral engagement represents the most visible and measurable dimension of alumni engagement. It refers to alumni's tangible actions that demonstrate their ongoing relationship with the institution, such as attending reunions, volunteering for institutional activities, mentoring students, and providing financial donations^[27,28]. These actions not only signify a continuing connection with the alma mater but also indicate the willingness of alumni to contribute their time, resources, and expertise for institutional development.

According to Newman and Petrosko^[29], behavioral engagement serves as a critical predictor of alumni giving, as active participation in university events strengthens relational commitment and enhances the perceived reciprocity between alumni and their alma mater. Moreover, institutions that provide diverse and meaningful opportunities for alumni involvement (such as professional networking, advisory boards, and service initiatives) are more likely to transform episodic interactions into sustained behavioral engagement^[30].

3.5.2. Emotional engagement

Emotional engagement captures the affective and psychological bond alumni hold toward their alma mater. It encompasses feelings of pride, nostalgia, belonging, and gratitude that arise from meaningful past experiences during their academic years^[31,32]. These emotional ties form the core of alumni identity and influence the extent to which graduates perceive themselves as integral members of the institutional community.

Prior research has shown that emotional engagement significantly predicts alumni advocacy and philanthropic intentions^[33]. When alumni develop a strong affective connection with their university, they are more likely to express loyalty through positive word-of-mouth, recommending the institution to others, and contributing financially or through service. Furthermore, emotional attachment often mediates the relationship between alumni experiences and long-term loyalty^[34]. In this way, emotional engagement not

only reflects alumni's personal sentiments but also functions as a psychological mechanism that drives supportive behaviors.

In summary, behavioral engagement reflects the tangible expressions of alumni commitment, emotional engagement embodies the affective connection that motivates ongoing support, and social engagement captures the relational structures that sustain long-term affiliation. Collectively, these dimensions provide a comprehensive framework for examining how alumni maintain enduring relationships with their alma mater and contribute to institutional advancement.

3.5.3. Social engagement

Social engagement refers to the interactional and relational component of alumni involvement, emphasizing the networks and social capital that connect alumni to each other and to the institution^[35]. Through alumni associations, social media groups, professional gatherings, and class reunions, alumni maintain ongoing relationships that reinforce collective identity and mutual support. These social interactions generate a sense of belonging and shared purpose, which in turn promotes the sustainability of alumni networks and enhances institutional reputation.

Weerts argued that social engagement not only benefits individual alumni through professional and emotional support but also contributes to the institution's social resources by fostering a community that actively supports its goals^[36]. The development of strong alumni networks facilitates mentoring, fundraising, and recruitment activities, reinforcing the symbiotic relationship between alumni and the institution. Consequently, social engagement serves as both a relational and strategic asset in higher education advancement.

3.6. Measurement of alumni engagement

As noted above, alumni engagement has multiple dimensions, and different studies have emphasized different aspects; therefore, no generally accepted measurement approach has yet been established. This review summarizes the measurement approaches employed in previous studies according to the different dimensions of alumni engagement.

3.6.1. Behavioral engagement

Drezner and Pizmony-Levy suggested that alumni engagement includes monetary giving and spending time as well as energy by alumni taking part in actions related to the institution^[14]. Consequently, they measured four different alumni engagement activities. (a) Participate in activities organized by the graduate school; (b) Volunteer for the graduate school; (c) Help current students at the graduate school; and (d) Follow news and information about the graduate school.

Politis et al. indicated that alumni engagement has two functional roles: ecosystem provider and ecosystem connector^[2]. And alumni engagement was measured by answers to the question: 'Please indicate to what extent you are engaged with the entrepreneurship education program?' using the following five items (a) As a guest lecturer; (b) As a mentor; (c) By showcasing my company for the students as a live case; (d) As a network connection to potential customers and (e) As a network connection to potential investors.

3.6.2. Emotional engagement

Shen and Sha suggested that alumni emotional engagement can be measured alumni's positive emotional state toward the academic unit, including their feelings of enthusiasm, interest, energy, and pride^[10]. And they proposed a five-item scale to measure emotional engagement: (a) interested in the school;

(b) attentive to the communication from the school; (c) excited to hear from the school; (d) enthusiastic about what the school does; (e) proud of what the school does.

3.6.3. Social engagement

Shen and Sha also indicated that social engagement can be examined through alumni's communicative involvement with the academic unit^[9]. A four-item scale was proposed: (a) Attended an alumni event hosted by the school. (b) Communicated with a professor to share my feedback about the program. (c) Communicated with the School administrators to share my feedback about the program. (d) Communicated with a school staff to share my feedback about the program.

3.7. Drivers and consequences of alumni engagement

Alumni engagement has gained increasing scholarly attention as higher education institutions seek to strengthen long-term relationships with their graduates. It is now understood as a multidimensional construct including behavioral, emotional, and cognitive components that collectively reflect the depth of alumni–institution relationships^[3,10]. Research on alumni engagement generally revolves around two key questions: what drives alumni to engage, and what outcomes such engagement produces.

3.7.1. Drivers of alumni engagement

Alumni engagement has been conceptualized as a multidimensional construct encompassing emotional, cognitive, and behavioral components^[33,37]. Prior research has identified several key drivers influencing the degree to which alumni maintain a relationship with their alma mater.

First, relational and affective factors play a central role. Studies grounded in relationship marketing theory suggest that perceived trust, commitment, and satisfaction with the institution during the study period significantly shape alumni's later emotional attachment^[35,38]. Emotional engagement, reflected in feelings of pride, nostalgia, and identification with the university, has been shown to enhance willingness to support institutional initiatives^[39].

Second, cognitive factors involve alumni's intellectual connection and perceived relevance of the institution to their personal and professional identity. According to organizational identity theory, alumni who perceive a strong alignment between their own values and those of their alma mater are more cognitively engaged, as they internalize the institution's identity as part of their self-concept^[24]. Furthermore, universities that actively communicate achievements, academic excellence, and social impact foster cognitive engagement by reinforcing alumni perceived value of their educational experience^[40].

Third, behavioral antecedents (e.g., such as prior participation in campus events, involvement in student organizations, or relationships with faculty) predict post-graduation engagement. Engagement tends to persist when alumni experience continuity in social networks and perceive ongoing opportunities for meaningful interaction^[28]. Additionally, institutional communication strategies and digital engagement platforms have emerged as modern predictors of behavioral engagement, facilitating participation in volunteering, mentoring, and philanthropic activities^[33].

3.7.2. Consequences of alumni engagement

The consequences of alumni engagement extend to both individual and institutional outcomes.

At the individual level, alumni engagement reinforces a sense of belonging, professional identity, and psychological well-being. Engaged alumni often report stronger career satisfaction and social capital due to their continued affiliation with the institution and its network^[35]. Moreover, engagement promotes reciprocal identity maintenance, wherein alumni express institutional loyalty as a form of self-affirmation^[33].

At the institutional level, engaged alumni contribute tangibly and intangibly to the university. Tangible contributions include philanthropic giving, event participation, and volunteering^[13,18]. Intangible outcomes encompass positive word-of-mouth, reputational enhancement, and advocacy, which strengthen the institution's brand and social legitimacy^[33].

Ultimately, these outcomes converge on the development of alumni loyalty, which represents the enduring commitment and willingness of alumni to support their alma mater both behaviorally and attitudinally. Alumni loyalty not only manifests through repeated participation and donations but also through advocacy and identification with the institution's values and mission. In this sense, alumni engagement serves as both a precursor and reinforcement mechanism of alumni loyalty, transforming emotional attachment and social connection into sustained institutional support.

4. Discussion

The reviewed literature illustrates the wide range of implications and applications of alumni engagement in higher education settings and institutional management. Due to the critical roles that "Education Marketing" and "Students Career Development" play in institutional governance, financial sustainability, reputation building, and graduate employability, these topics are the subject of much research. Due to the wide range of roles alumni engagement (*e.g.*, including donors, volunteers, mentors, industry partners, and brand ambassadors) comprehensive alumni engagement is essential. Understanding alumni's perspectives and evolving needs informs strategic decision-making processes and enhances the effectiveness of educational advancement. Moreover, theoretical frameworks like social Identity and relationship marketing help in examining how engaged alumni influence governance structures, curriculum development, and resource acquisition mechanisms within higher education institutions. This research underscores the importance of aligning university management practices with alumni's interests to foster positive outcomes in institutional development.

Therefore, the field of higher education management has benefited from the strategic focus on alumni engagement since it offers a helpful framework for analyzing and addressing the financial and social facets of university systems^[3]. By considering the perspectives, interests, and relationships of diverse alumni cohorts, researchers, administrators, and practitioners can enhance advancement processes, promote lifelong loyalty, and eventually contribute to the continuous improvement of educational quality and institutional relevance^[41]. It was emphasized how important it is to apply alumni engagement as a lens to understand the complexities of institutional sustainability and to suggest meaningful changes that benefit all parties involved.

4.1. Research challenge

A growing amount of research indicates that one of the most important influences on institutional advancement, curriculum relevance, and strategic governance is the integration of alumni engagement strategies into higher education management. Apart from the operational and resource challenges encountered by administrators and advanced professionals in the field, an abundance of research on diverse institutional contexts and alumni relationship models is available for reference. A substantial body of work from a variety of theoretical backgrounds and viewpoints describes the benefits and challenges of studying alumni engagement approaches in the field of educational administration and offers suggestions for future research directions based on findings from previous empirical research.

4.1.1. Resource constraints and widening disparities

A prominent tension identified in the literature concerns the unequal distribution of resources^[42]. Elite private universities often possess large alumni-relations teams and sophisticated Customer Relationship

Management (CRM) systems, enabling high-touch and personalized engagement. In contrast, most public institutions and universities in developing countries face limited budgets and staffing shortages. This resource gap creates a “Matthew Effect,” whereby well-resourced institutions continue to strengthen their alumni networks, while resource-constrained institutions struggle to initiate an effective engagement cycle.

4.1.2. Complexity in measuring impact

Although researchers have advocated shifting from a single “donation rate” metric toward multi-dimensional indicators, significant attribution challenges remain in quantifying the long-term impact of non-financial engagement. The literature notes that it is difficult to demonstrate conclusively that specific alumni engagement activities (e.g., mentoring students) directly lead to improvements in long-term institutional performance or subsequent donation behavior, due to complex issues of attribution, contribution, and comparisons with alternative explanations^[10]. Moreover, existing measurement frameworks often struggle to capture alumni contributions at the micro level (e.g., such as reputation-building on social media or informal career advice) resulting in an incomplete assessment of the overall return on investment.

4.1.3. Organizational silos and resource constraints

Structural issues within universities significantly hinder the integration of alumni engagement. Studies show that departmental silos, especially the disconnect between Academic Affairs, Student Affairs, and Alumni Relations, fragment the alumni experience. For example, the career services office may hold extensive data on alumni employment trajectories but does not share this information with the advancement office, resulting in missed opportunities to leverage alumni as mentors. Building on this, the literature emphasizes that such fragmentation ultimately weakens institutional capacity for strategic engagement^[43]. When data, responsibilities, and communication channels remain isolated, universities are unable to form a unified understanding of alumni needs and contributions. As a consequence, engagement efforts become reactive rather than proactive, and alumni receive inconsistent messages throughout their interactions with the institution.

4.2. Future direction

4.2.1. The impact of artificial intelligence and digital ethics

As HEIs undergo rapid digital transformation, future research must move beyond the operational benefits of technology to its systemic and ethical implications. There is a critical need to develop systems approaches, such as causal loop diagrams, to map the complex dynamics of AI transformation within HEIs and its influence on value creation^[44]. Specifically, research should investigate the long-term effects of AI integration on alumni ethics competencies and the effectiveness of various AI-driven engagement platforms in maintaining authentic relationships. Furthermore, research should explore how HEIs can leverage AI not just for administrative efficiency, but to foster deep, personalized alumni connections that align with evolving job market demands.

4.2.2. Longitudinal assessment of diversity, equity, and inclusion (DEI)

While DEI has become a strategic priority, there is a scarcity of empirical evidence regarding the long-term efficacy of these initiatives^[45]. Future studies should incorporate longitudinal designs and standardized assessment metrics to build a comprehensive understanding of how DEI policies influence alumni sentiment and engagement over time. It is particularly important to examine the causal links between specific interventions (e.g., mentorship programs for underrepresented groups) and subsequent alumni loyalty and donation behaviors. Additionally, research should broaden its scope to include the lived experiences of international students and diverse alumni populations to inform more inclusive policy-making.

4.2.3. The geopolitical dimension of alumni relations remains under-researched

Future inquiry should focus on "knowledge diplomacy" and the role of international alumni as instruments of soft power. Researchers should track international alumni further into their careers to determine whether the "goodwill" generated during their studies sustains over time and translates into tangible diplomatic or economic benefits for the host country. Moreover, cross-cultural studies are necessary to understand how motivations for philanthropic giving vary across different regions, moving beyond the dominant Western-centric paradigms of alumni donation.

4.2.4. Lifelong learning and micro-credentials

As the model of higher education shifts towards continuous education, the intersection of alumni engagement and lifelong learning warrants deeper exploration^[46]. Future research should assess the impact of micro-credentials and upskilling pathways on graduate employability and institutional loyalty, particularly for non-traditional and disadvantaged learner groups. Investigating how emerging technologies influence leadership training and how alumni co-create curriculum value through their professional experiences will be vital for keeping educational programs relevant.

5. Conclusion

The literature reviewed in this study confirms that alumni engagement has evolved from a peripheral administrative function into a core strategic pillar supporting the survival and growth of higher education institutions. A synthesis of studies published between 2015 and 2025 shows that successful alumni engagement is no longer a one-way act of "asking," but a form of reciprocal social exchange. Institutions secure alumni loyalty, reputational endorsement, and resource contributions by continuously offering career support, lifelong learning opportunities, and a sense of emotional belonging.

The application of stakeholder theory is well supported in this context. Alumni are not merely "former clients" but "permanent partners." The growing adoption of multi-dimensional assessment frameworks such as the CASE model indicates a maturation of management practices in this field, which acknowledges that volunteers, mentors, and social-media ambassadors are as valuable as direct donors^[40].

However, the field is at a critical crossroads. The pandemic-driven acceleration of digital transformation has expanded the technological capacity for large-scale engagement, yet it has also widened the gap for resource-constrained institutions. Demographic shifts further require institutions to abandon nostalgia-driven traditional approaches and embrace value co-creation models. If institutions fail to meet the personalized and career-oriented engagement expectations of the digital-native generation, their alumni networks risk becoming dormant databases.

In sum, higher education administrators should treat alumni engagement as a systemic undertaking: strategically, by embedding it within institutional-level planning; operationally, by breaking down departmental silos and integrating data and resources; and culturally, by cultivating a "lifelong community" mindset in which every student understands from the moment of entry that they are part of an enduring community.

6. Limitations

Despite adhering to a systematic review protocol, this study still has several limitations. First, because it relies primarily on major academic databases such as Scopus and Web of Science, it may have missed some practice-oriented "gray literature," including internal evaluation reports produced by universities that are not published in peer-reviewed journals. Second, the geographic distribution of the literature reveals a clear

Western-centric pattern, with studies from North America and Europe dominating the field. This raises concerns about the generalizability of the findings to institutions in China or other developing countries, where philanthropic cultures and higher education systems differ markedly. Third, many of the included studies rely on self-reported data from alumni, which may introduce “survivorship bias”, that is, individuals with more positive feelings toward their alma mater are more likely to participate in surveys. Finally, given the rapid pace of advancements in artificial intelligence and digital technologies, some of the review’s conclusions regarding technological applications may become outdated in the coming years, underscoring the need for continued monitoring and updating by researchers.

Author contributions

Conceptualization, C.M. and B.S.A.; methodology, C.M.; software, C.M.; validation, B.S.A. and J.A.; formal analysis, C.M.; investigation, C.M.; resources, C.M.; data curation, C.M.; writing—original draft preparation, C.M.; writing—review and editing, B.S.A. and J.A.; visualization, C.M.; supervision, B.S.A. and J.A.; project administration, B.S.A. and J.A. All authors have read and agreed to the published version of the manuscript.

Conflict of interest

The authors declare no conflict of interest.

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Appendix A

List of studies review

Author	Years	Title	Source	Study design	Country	Key findings
Alnawas, I.; Phillips, C. ^[47]	2015	Alumni Orientation: Development of the Construct	Journal of Nonprofit and Public Sector Marketing	Mixed methods	Europe	Developed and validated a 48-item measurement scale for Alumni Orientation (AO) across nine components
Drezner, N.D. ^[18]	2017	Alumni engagement in higher education: A matter of marketing and leveraging social identities	Competition in Higher Education Branding and Marketing	Theoretical	North America	Integrated marketing literature with alumni engagement strategies to enhance relationship building and fundraising
Miller, J.J.; Duron, J.F.; Donohue-Dioh, J.; Geiger, J.M. ^[48]	2018	Conceptualizing effective legal representation for Foster youth: A group concept mapping study	Children and Youth Services Review	Mixed methods	North America	Utilized Group Concept Mapping to reveal the need for a holistic approach to legal representation emphasizing youth/alumni engagement
Drezner, N.D. ^[49]	2018	Philanthropic Mirroring: Exploring Identity-Based Fundraising in Higher Education	Journal of Higher Education	Quantitative	North America	Links social identity and social distance theories to alumni giving, establishing that identity congruence drives philanthropic engagement
Chen, M.-M. ^[50]	2018	Exploring Alumni's Intention to Engage in Nonmonetary Activities: A Cross-Generational Comparison Study	Journal of Hospitality and Tourism Education	Quantitative	Europe	Found high intentions for local chapter membership and reunions, but engagement levels varied significantly by generation
Weggemans, M.M.; van der Schaaf, M.; Kluijtmans, M.; Hafler, J.P.; Rosenblum, N.D.; Prakken, B.J. ^[17]	2018	Preventing translational scientists from extinction: The long-term impact of a personalized training program in translational medicine on the careers of translational scientists	Frontiers in Medicine	Qualitative	Europe	Evaluated the impact of the Eureka certificate course on alumni's career choices and engagement in translational medicine
Howe, S. ^[16]	2018	Cultivating the capstone ecosystem to educate the engineer of 2020	International Journal of Engineering Education	Qualitative	North America	Proposes a multi-level capstone design ecosystem framework that integrates the alumni community to enhance student career readiness
Dollinger, M.;	2019	University alumni	Journal of Higher	Quantitative	Oceania	Identified benefits of

Author	Years	Title	Source	Study design	Country	Key findings
Arkoudis, S.; Marangell, S. [22]		mentoring programs: a win-win?	Education Policy and Management			alumni mentoring for engagement but noted specific challenges in mentoring postgraduate students
Straujuma, A.; Gaile-Sarkane, E.; Ozoliņš, M. [51]	2019	Alumni segmenting for fostering innovation and entrepreneurship in universities	Proceedings of The 23rd World Multi-Conference on Systemics, Cybernetics and Informatic	Qualitative	Europe	Framed alumni as lifetime customers, emphasizing that knowledge management and segmentation are key to driving co-creation and organizational advancement
Shen, H.; Sha, B.-L. [10]	2020	Conceptualizing and operationalizing alumni engagement: When conversational voice matters more than openness and assurances of legitimacy	Public Relations Review	Quantitative	North America	Identified and validated three dimensions of alumni engagement: instrumental, communicative, and affective.
Unangst, L. [52]	2020	International Alumni Engagement: Operations, Leadership, and Policy at U.S Research Universities	Journal of Higher Education Policy and Leadership Studies	Qualitative	Europe	Revealed divergent paradigms in international alumni affairs, including lack of diversity data, variable programmatic functions, and inconsistent staff support
Reid, S.; Muenzen, J.; Rezvanian, R. [53]	2020	Value add: A finance case study on how to enhance student learning experience through student managed investment fund and engaged alumni network	Journal of International Education in Business	Theoretical	North America	Demonstrated how Student-Managed Investment Funds (SMIFs) serve as a vehicle for effective alumni mentoring and experiential learning
Drezner, N.D.; Pizmony-Levy, O.; Anderson-Long, M. [15]	2020	In "alma mater" we trust? exploring attitudes toward institutions and alumnigiving	Teachers College Record	Mixed methods	North America	Found that alumni trust is a strong predictor of giving behaviors and attitudes, independent of socio-demographic characteristics.
Washington, V.; Mondisa, J.-L. [21]	2021	A need for engagement opportunities and personal connections: Understanding the social community outcomes of engineering undergraduates in a mentoring program	Journal of Engineering Education	Mixed methods	North America	Found that program alumni engagement positively impacts current participants' social community outcomes, recommending sustained alumni involvement for student support
Drezner, N.D.; Pizmony-Levy, O. [14]	2021	I Belong, Therefore, I Give? The Impact of Sense of Belonging	Nonprofit and Voluntary Sector Quarterly	Quantitative	North America	Established that a strong Sense of Belonging

Author	Years	Title	Source	Study design	Country	Key findings
		on Graduate Student Alumni Engagement				significantly predicts higher alumni giving, pro-philanthropic attitudes, and volunteering behaviors
Cownie, F.; Gallo, M. ^[54]	2021	Alumni gratitude and academics: implications for engagement	Journal of Further and Higher Education	Qualitative	Europe	Found that alumni gratitude is primarily directed at academic staff but is often unexpressed due to social awkwardness, manifesting instead as supportive behaviors
Khan, M.A.; Ashraf, R.; Baazeem, T.A.S. ^[55]	2022	A cross-national investigation of psychological factors of donor behavior: the case of university endowment funds	Journal of Applied Research in Higher Education	Quantitative	North America	Identified cross-cultural differences in donor motivation: prestige predicts giving in the USA but is insignificant in KSA, while identification drives behavior in both
Amani, D. ^[56]	2022	Internal branding and students' behavioral intention to become active member of university alumni associations: the role of students' sense of belonging in Tanzania	Cogent Social Sciences	Quantitative	Africa	Found that internal branding influences students' intention to become active alumni, mediated by their sense of belonging
Larsson, C.F.; Marshall, B.; Ritchie, B. ^[57]	2022	The alumni project: Fostering student-alumni engagement in the curriculum	Journal of Education for Business	Mixed methods	North America	Identified four key student benefits from alumni interviews: improved interview skills, career discernment, practical application of coursework, and learning retention
Malhotra, R.; Massoudi, M.; Jindal, R. ^[23]	2023	An alumni-based collaborative model to strengthen academia and industry partnership: The current challenges and strengths	Education and Information Technologies	Theoretical	Asia	Identified alumni as key facilitators in bridging the industry-academia gap, utilizing their influence to promote innovation and student internships
Politis, D.; Aaboen, L.; Eide, A.E.; Haneberg, D.H. ^[2]	2024	Re-viewing entrepreneurial universities through alumni engagement	Small Business Economics	Quantitative	Europe	Developed a framework based on stakeholder theory, identifying social, behavioral, and affective drivers as key accelerators of alumni engagement
Charles, C.E.; Variyan, G.;	2024	The curriculum of privilege: elite	Australian Educational	Qualitative	Oceania	Proposed the concept of a "curriculum of

Author	Years	Title	Source	Study design	Country	Key findings
McKnight, L. ^[58]		private boys' school alumni's engagements with gender justice	Researcher			privilege," explaining how elite school alumni's engagement with gender justice is shaped by schooling and lifelong privileged experiences
Walker, H.L.; Clausen, E.C. ^[59]	2024	Intrinsic Benefits of a Chemical Engineering Alumni Student Mentoring Program	ASEE Annual Conference and Exposition, Conference Proceedings	Qualitative	North America	Highlighted mentoring as a key engagement pathway for younger alumni, fostering non-monetary contributions like recruitment, classroom teaching, and peer networking
Rodriguez, J. ^[20]	2024	Alumni Engagement and Mentoring Integrated in the Chemical Engineering Curriculum	ASEE Annual Conference and Exposition, Conference Proceedings	Qualitative	North America	Integrated a "Legacy Project" into the Chemical Engineering Capstone curriculum, leveraging alumni mentoring to support career transition and assess ABET communication outcomes
Roy, S.; Misra, S. ^[12]	2024	Impact of integrated marketing communication strategies on choice of higher education institutions	Innovative Marketing	Quantitative	Aisa	Found that Integrated Marketing Communications (IMC) strategies significantly influence HEI choice, with alumni engagement identified as a top predictor
El-Awad, Z.; Gabrielsson, J.; Poček, J.; Politis, D. ^[3]	2024	Unpacking the early alumni engagement of entrepreneurship graduates	Journal of Small Business Management	Qualitative	Europe	Explored the processual dynamics of early alumni engagement among entrepreneurship graduates, identifying how it drives technology transfer and knowledge-intensive entrepreneurship
Bunn, T.L.; Thompson, R.; Ashworth, M.; Fletcher, E. ^[60]	2025	Engagement and retention in a motivational, discovery, and transitional track based substance use disorder recovery program: evaluation, facilitators and barriers	Substance Abuse: Treatment, Prevention, and Policy	Quantitative	North America	Identified gaining employment and regular case management as the strongest predictors of program completion, which leads to active alumni engagement
Ahmed, M.K.; El Massaoudi, C.A.;	2025	Using a community-based cultural	BMC Public Health	Qualitative	Africa	Highlighted the effectiveness of

Author	Years	Title	Source	Study design	Country	Key findings
Biri, L.; Mezzaoui, Y.E.; Mazoz, B.; Andrews, L.R.; Herne, T.; Coots, S.; Rubinstein, R.A.; Lane, S.D. ^[19]		approach to promote life skills and leadership for social determinants of health in adolescents from disadvantaged communities in Casablanca, Morocco: a Sidi Moumen community case study				"simultaneous strategies" (combining language, sports, and music) in cultivating self-awareness and leadership competencies among disadvantaged youth
Lamsali, H.; Abu Bakar, L.J.; Mahat, N.I.; Ahmad Kamaruddin, S.A.; Mokhtar, S.S.M.; Abdul Ghani, A.B.A. ^[61]	2025	Alumni Rating Index and Monitoring Dashboard Technology to Improve University's Performance and Service Quality	Journal of Advanced Research in Applied Sciences and Engineering Technology	Quantitative	Asia	Utilized a 12-dimension index to reveal a disparity in alumni satisfaction: high ratings for educational resources and social involvement, but significantly lower scores for student well-being and financial aid
Nasution, J.; Jannah, N.; Nasution, M.I.P.; Aslamiah, N. ^[13]	2025	Philanthropic Fundraising in Higher Education: Alumni Engagement, Brand Equity, and Social Impact	Pertanika Journal of Social Sciences and Humanities	Theoretical	Asia	Proposed a fundraising model integrating three components—alumni, universities, and philanthropic organizations—positioning alumni philanthropy as a foundational solution to education costs
Burgess, K.E.; Maughan, P. ^[62]	2025	Enhancing student experience and career knowledge through alumni engagement: Case study of a sport and exercise science course	Journal of Hospitality, Leisure, Sport and Tourism Education	Qualitative	Europe	Demonstrated that alumni integration significantly drives career planning, with most students stating that alumni career journey documents encouraged them to think about their future
Maureen Nelloh, L.A.M.; Hartoyo, H.; Sumarwan, U.; Wirakartakusumah, A. ^[63]	2025	Alumni loyalty dimensions for sustaining a business school in Indonesia	Multidisciplinary Reviews	Quantitative	Asia	Identified "cross-buying" (continuing to purchase/use services) as the strongest indicator of alumni loyalty, surpassing positive word-of-mouth and engagement
Wang, Z.; Wang, H.; Liu, Z. ^[11]	2025	Construction of an Intelligent Alumni Network Platform and Research on Alumni Interaction	International Journal of High Speed Electronics and Systems	Quantitative	Asia	Introduced the Intelligent Network Synergy (INS) strategy within an Adaptive Modularity Network (AMN) to optimize resource

Author	Years	Title	Source	Study design	Country	Key findings
Liang, X. ^[4]	2025	Private gains, organization identification and alumni support: a comparative study between private university and public university	Higher Education	Quantitative	Asia	utilization and data exchange in alumni communities Uncovered a distinct dichotomy: public alumni support is driven by identification, whereas private alumni exhibit a "customer-oriented mindset" less responsive to affective engagement

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