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Editorial:
The Transformative Impact of AI on Higher Education

AI has emerged as a major transformative force in higher education. The Gen AI and various AI-based tools have been changing the program and course design, the content of the courses, and teaching and assessment methods. In a similar way, AI technologies have been reshaping the way we design, conduct, report and disseminate research. Finally, AI technologies affect the format and nature of community services. Despite the agility added by AI to teaching, research, and community services, it is important to state the supportive nature of the current AI technologies. Conceiving the right place for AI is important in building system readiness to integrate AI into higher education. AI is not the sole transformative change force that higher education organizations have encountered over the last three decades. However, it is important to note that in the previous cases, the academic leaders and higher education organizations were able to conceive a change plan and implement it with a top-down approach. In the current atmosphere of change created by AI, the pace, scale, and linearity, three characteristics of change are incomparable to the previous ones. AI directly started to impact teaching, research, and community practices. In other words, it is majorly characterized as a bottom-up process. The academics, students, and administrative staff members directly encountered AI technologies. Nevertheless, the task of incorporating these technologies cannot be given to academics, administrative staff, and students. Academic leaders have an important task in setting a climate conducive to an effective end ethical incorporation of AI technologies into teaching, research, and community services.

In this issue of HEGP, we present five articles that give an idea about the change capacity of different higher education organizations in different country contexts. First, Tokay and Polat investigated how the foundation universities' rectors in Türkiye position their institutions in the broader higher education ecology of Türkiye. Adopting the document analysis technique, the authors retrieved and analyzed the messages of the rectors at foundation universities in Istanbul. The discourse analysis of the rectors' messages suggests that the universities try to distinguish themselves from their competitors with their strategies to attract students. In contrast, positioning the university based on a product user is not common because of the complexity of this approach. In the second article, Makinde and Okoye studied the predictive value of information literacy skills and attitudes towards electronic resources for the use of electronic resources by health sciences postgraduates in Nigeria. They concluded that enhanced and sustained positive attitudes and continuous information literacy skills development programs in higher education institutions are needed to further encourage the use of electronic resources by health sciences postgraduates. In the third article, Durmuş Şenyapar and Bayındır examined the effects of the quality assurance systems on the new-generation universities in Türkiye. The authors indicated that quality assurance systems bring compliance with international standards, increase student satisfaction, and strengthen institutional reputation. In the fourth article of the issue, Ito examined how the school motto is understood and permeated by the full-time staff of Christian schools in Japan. The study suggests that the effectiveness of the message conveyed by the motto of schools depends on the thinking and actions of the person in charge who sends out messages regarding the school motto. In the final article of the issue, Gökten Bayrak conducted a systematic review on the well-being of graduate students. The author reported that work-life imbalance, high academic pressures, faculty-student relationships, socialization within academic communities, and limited social support act as stressors and sources of weak well-being among graduate students.
We hope that the articles in this issue of HEGP will inspire its readers.

Yasar Kondakci
Editor

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How Do Rectors of Foundation Universities in Istanbul Position Their Institutions? A Discourse Analysis of Rector Messages Regarding Mission and Vision

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Abstract

The main purpose of this research is to determine how the Rectors of foundation universities in Istanbul position their universities and to determine which positioning strategies are used by analysing the Rector messages. Rectors' messages on the websites of foundation universities were analysed using discourse analysis. The data of this study were analyzed using discourse analysis, which examines how language is used to construct meaning and convey institutional positioning. Discourse analysis focuses on understanding the underlying implications and social contexts of the rector messages, exploring how language reflects and shapes the universities' mission, vision, and positioning strategies. The study consists of Rector messages selected from Istanbul foundation universities. The findings of the study show that foundation universities in Istanbul mostly position themselves according to the attribute as a result of clearly defining their goals. For this purpose, universities that clearly express their goals both influence the students who are their target group and distinguish themselves from other competitors. Universities that clearly articulate their goals can both attract their target audience, students, and differentiate themselves from competitors. However, the strategy of positioning by product user, which involves defining a product or service based on the specific characteristics, needs, or behaviors of its intended users, is the least commonly used approach in the higher education sector. This is likely because positioning by product user requires a deep understanding of the diverse and evolving preferences of potential students, which can be difficult to pinpoint given the broad and varied nature of university applicants. Universities may perceive this strategy as risky, as it demands precise market segmentation and may alienate other potential students who do not fit the specific user profile being targeted. Therefore, many universities may prefer more general positioning strategies that appeal to a broader audience to minimize perceived risks and maximize their appeal to a wider range of prospective students.

Keywords: Foundation universities, Discourse analysis, Positioning strategies

Introduction

In today's fiercely competitive marketplace, organizations should take a careful strategy when presenting their products or services to their customers. It is largely up to the organization to determine how the product or service is perceived by customers. Positioning is one of the most frequently used strategies to help consumers to distinguish and prefer a product or service from others. Positioning strategies, which are effective in both goods and services sectors, are very important in the marketing efforts of organizations. Factors such as population growth and social diversification have led to the emergence of the concept of "positioning". The concept of positioning initially gained importance in the goods market, but over time it has become effective in the service sector as well. Service organizations, including universities, place significant emphasis on their research activities in their marketing strategies (Hemsley-Brown & Oplatka, 2006). While the current analysis focuses on the mission and vision statements of universities, it overlooks the critical role of research. Universities contribute to knowledge creation and innovation through their research endeavors, which are also a vital component of their

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positioning (Mazzarol & Soutar, 2008). Research activities not only enhance the academic reputation of the institution but also attract potential students, faculty, and funding opportunities, making them an essential element of strategic communication and marketing efforts (Ivy, 2001). Therefore, to provide a more comprehensive understanding of how universities market themselves, it is important to also consider how they highlight and incorporate their research functions in their strategic communications. Service organizations such as universities also give an important place to this concept in their marketing strategies. Positioning means placing products in a certain position in the minds of customers. However, it is still a new phenomenon for universities, which are not used to the competitive environment, to develop strategies and communicate in this field (Karaçor, 2009).

According to Bingham and Raffield (1990), positioning is the total of perceptions that reveal the difference of an organization's outputs compared to other competitors. According to Maggard (1976), positioning is the differentiation of the organization according to the qualities and price of the organization's outputs because of competition between organizations. Kotler and Keller (2009) expands on the existing definitions of positioning by describing it as “a strategic plan designed to establish a lasting impression in the minds of the target group”. For positioning to be done correctly, organizations must first create a positive image in the minds of the target group. For this reason, it is necessary to determine the target group well and determine what they put forward differently from their competitors. For universities to create a lasting impression in the minds of their target groups, they need to effectively communicate their mission, vision, and unique value propositions through various channels, whether through written materials, oral presentations, or other promotional efforts. In this way, they can gain the trust of the target group. Rector messages are frequently seen to have a big impact on the people who are intended to hear them, including as professors, alumni, present and potential students, and other stakeholders (Goss, 2002). These claims have the power to influence how people view and anticipate the university. Many aspects need to be taken into account in order to quantify and better comprehend this impact. First and foremost, it's critical to determine who actively participates in responding to director messages, for example, by way of direct feedback, interactions on social media, or website visits (Morris & Baddoo, 2007). Furthermore, the timing and context of these messages are critical; messages sent at significant times, such the start of a new academic year or significant university events, may be more pertinent (Smith, 2010). Evaluating how these messages affect audience perceptions and behaviors is part of assessing the impact.

Universities can establish credibility and trust with their target audience, which includes potential students, parents, faculty, and funding agencies, by integrating research activities into their marketing efforts. Universities can prove their dedication to knowledge production, innovation, and societal contribution—all important elements that stakeholders take into account when selecting an institution—by demonstrating their research strengths. When the institution produces research that demonstrates high-quality instruction, faculty competence, and active involvement with contemporary concerns, it further strengthens the trust of the target population. Therefore, emphasizing research skills in strategic communications can improve the university's standing and increase stakeholder trust.

In other words, universities must effectively market their organizations verbally and in writing if they hope to leave a lasting impact on the members of their target audience. They can win the target group's trust in this way. In this way, Rector's written words have a big effect on the intended audience. Each Rector's message should be designed in harmony with other communication strategies and published in appropriate media (Avraham & Ketter, 2012).

Positioning strategies are an important topic in the marketing literature. Blankson and Kalafatis (2004) made a comprehensive review on positioning strategies in their study. The classifications of positioning strategies are given in Table 1.

Table 1. Classification of positioning strategies

Researchers	Positioning Strategies	Sector
Aaker and Shansby (1982)	(1)Attributes; (2)price/quality; (3)competition; (4)application; (5)product user; (6)product class	None
Crawford (1985)	(1)Features; (2)benefits (direct/indirect); (3) surrogates	Many sectors including goods and services
Easingwood and Mahajan (1989)	(1)Reputation capabilities of organization; (2) argumentation of product offering; (3) people advantage; (4)more attractive package offering; (5)superior product through technology; (6)accessibility; (7) extra attention given to individual requirements through customization; (8) satisfaction of more user needs within sector	Financial services
Arnott (1992)	(1)Sensory; (2)price; (3)usage; (4)user; (5) association/comparison; (6)communications (7)people; (8)process; (9)access; (10) experience; (11)assurance; (12) reliability; (13)empathy; (14) innovation; (15) technology; (16)social accountability	Financial services
Kalra & Goodstein (1998)	(1)Value-orientation; (2)comparisonwith premium player; (3)uniqueattribute; (4) meaningless attribute; (5)endorsement by product-relevant celebrities; (6)premium versus premium brand comparison	Durable consumer goods
Hooley et al. (1998)	(1)Low price/high price; (2)premium quality/ basic quality; (3) innovation imitation; (4) superior service/ limited service; (5) differentiated benefits/undifferentiated features; (6) tailored offering/standard offering.	None
Kalafatis et al. (2000)	(1)Pricing; (2)easy to do business; (3)personal contact; (4)product performance; (5) range of offerings; (6)presence; (7)safety; (8) leadership; (9)distinct identity; (10)status; (11)country identity;(12)differentiation;(13) attractiveness	Commodity products
Kim and Mauborgne (2000)	(1)Customer productivity; (2)simplicity; (3) convenience; (4) risk reduction; (5) funand image; (6)environmental friendliness	None
Romaniuk (2001)	(1)Price; (2) relationship/services benefit; (3) security benefit;(4)user type;(5)accessibility benefit; (6)perceived quality	Financial services
Punj and Moon (2002)	(1)Product market definition; (2)market/ company structure; (3)market share condition; (4)product category's lifecycle stage; (5) consumer knowledge	None
Morgan et al. (2003)	(1)Production process orientation; (2) marketing capabilities; (3)quality orientation; (4)price-cost leadership; (5) products cope and development; (6) differentiation focus	Industrial Manufacturing Firms
Blankson and Kalafatis (2004)	(1)Top of the range; (2)service; (3)value for money; (4) reliability; (5)attractiveness; (6) country of origin(7) the brand name; (8) selectivity	10 Sectors including goods and services
Burton and Easingwood (2006)	(1)Customer productivity; (2)simplicity; (3) convenience; (4) risk(functional, socialand psychological); (5)environmental friendliness; (6)hedonicbenefit (image, emotional benefit)	Service sectors
Florek and Janiszewska (2007)	(1) concentrated; (2) exclusive; (3) interrelated and (4) uniform positioning	None
Diwan and Bodla (2011)	(1) Visual artistic; (2) contemporary features; (3) basic features; (4) security measure; (5) brand image, (6) dealer network and services; (7) promotional campaign; (8) cost and finance	Automotive

As seen in Table 1, the classifications of positioning strategies differ according to the sector in which they are located. Positioning strategies can be classified according to management or customer perspective. However, the research design (theoretical or experimental) and the sectors in which they are located also play an important role in this classification. From a conceptual point of view, positioning strategies may not be appropriate for a particular industry and may not cover all positive characteristics of potential customers. Experimental positioning strategies are shaped by the unique characteristics of the industry. Some of the empirical positioning strategies are general in nature, with the aim of collecting data across various sectors (Blankson & Kalafatis, 2004; Crawford, 1985). Others aim to create a new strategy in a specific sector; for example, automotive sector (Diwan & Bodla, 2011), financial sector (Arnott, 1992; Easingwood & Mahajan, 1989; Romaniuk, 2001), commodity products (Kalafatis et al., 2000), durable consumer goods sector (Kalra & Goodstein, 1998) and industrial manufacturing firms (Morgan et al., 2003). As shown in Table 1, there are differences between strategies that are general or specific to a sector.

There are established strategies in service sectors, especially in the financial sector (Arnott, 1992; Easingwood & Mahajan, 1989; Romaniuk, 2001). Although the financial sector is close to the higher education service in terms of the characteristics of the service sector, the guidance of students' minds and their active participation in the educational process are important factors that distinguish the higher education service from the financial sector (Lovelock, 1983). Higher education differs significantly from the financial sector despite sharing some traits with it, such as the supply of intangible services and an emphasis on establishing trust and long-term relationships with clients. Encouraging students' intellectual growth and involving them actively in the learning process are crucial elements of higher education. Higher education services aim to enhance students' critical thinking, creativity, and problem-solving skills; these services are transformative and developmental, in contrast to the financial sector, where services are usually transactional and focused on financial management or investment. Higher education services are distinguished from the financial industry by their distinct focus on knowledge development, human growth, and active involvement (Grönroos, 2007).

In addition, the perception of risk and the characteristics that enable service delivery lead to differences in these two sectors. For example, the campus environment of a university and the qualities related to the city where it is located can make an institution more favorable (Arambewela et al., 2006; Kethüda, 2017). While these characteristics may influence the preference for higher education services, there appears to be a lack of positioning strategies that explicitly incorporate these factors.

The six-dimensional positioning strategies developed by Aaker and Shansby (1982) are a widely accepted classification in the literature. This six-dimensional positioning strategy helps to develop an effective positioning for organizations that want to achieve long-term success. This sub-positioning strategy is named as attribute, application, product user, product class, price/quality and competitive positioning strategy. Aaker and Shansby (1982) argue that positioning strategies play a major role in determining the market position of a product or service. To illustrate this, they describe several positioning strategies developed by researchers, which are explained below.

Positioning strategy by attribute: One of the most frequently used positioning strategies, positioning by attribute focusing on how the target group benefits from the product offered by the organization (Sutherland & Sylvester, 2000). A product or brand is associated with certain features, qualities or advantages. For example, in educational institutions, Rensselaer Institute of Technology positions itself with technological creativity, Brown University with an open-minded approach, and Columbia College of Chicago with innovations in the arts (Lowry & Owens, 2001).

In the strategy of positioning by attribute, emphasizing the unique qualities of brands is intended to connect with target groups. According to Aaker and Shansby (1982), organizations need to effectively manage the process of identifying and emphasizing the benefits that appeal to their target group in order to establish a strong market position (pp. 57-58). In terms of higher education organizations, they need to see what their competitors cannot see. For this reason, the needs of the organization's outputs should be identified, related to the benefit of the target group and compared with the outputs of competitors.

However, positioning efforts based on multiple attributes can lead to a complex and ambiguous brand image. It is observed that products are sometimes tried to be positioned according to many attributes at the same time. In this context, organizations need to manage the process well while determining the benefit of the target group. The use of slogan-motto by organizations positioning according to the feature or quality causes a positive image on the target group.

Positioning strategy by price-quality: This positioning strategy involves pricing products according to their quality level. In this context, not only quality but also cost is involved in an organization. Aaker and Shansby (1982) state, 'The cost of services, products, and goods is evaluated based on their features and quality' (pp. 57-58). Organizations evaluate themselves and position themselves according to their price and quality. High-quality products are usually sold at higher prices and prestigious communication strategies are used to convey this quality to consumers. For example, calling the University of Michigan the "Harvard of the Midwest" helps the university to be perceived as a high-quality education and a prestigious organization (Harrison-Walker, 2009: 107). Sears Holding Store, on the other hand, tries to maintain its low price and high value position and follows a careful strategy so that its efforts to create a positive image in the fashion industry do not harm its "value" position (Worthy, 1992).

In terms of higher education organizations, when a foundation university employs a positioning strategy based on the price-quality relationship, it aims to balance tuition fees with the quality of education it provides. This approach is supported by higher education literature, which suggests that universities often use such strategies to position themselves effectively in the market (Litten, 1980). For example, a foundation university adopting a high price-high quality strategy is positioned in the upper segment by offering its students high-quality academic staff, modern campus facilities, international exchange programs, and extensive internship opportunities. This positioning strategy is well-documented in the literature, which highlights how universities use high fees and high quality as a way to distinguish themselves and attract students seeking premium educational experiences (Maringe & Gibbs, 2009; Mazzarol & Soutar, 2002; Litten, 1980; Chapman & Pyvis, 2006). The medium price-medium quality strategy, on the other hand, appeals to a wide range of students by offering a good education at a reasonable price and stands out with its price-performance balance. The low price-high quality strategy aims to make high-quality education more accessible by offering top-notch educational resources at more affordable prices. This approach can align with principles of equity and accessibility in education. For instance, ABC foundation university provides state-of-the-art laboratories, exceptional academic staff, and international collaborations without charging high tuition fees. However, this strategy can complicate traditional perceptions, where high fees are often associated with high-quality, suggesting that a low price might be perceived as a compromise on quality (Kotler & Fox, 1995; Mazzarol & Soutar, 2002).

Positioning strategy by competition: This positioning strategy is defined as a strategy that organizations use to show themselves superior as a result of comparing themselves with other organizations (Aaker & Shansby, 1982). In other words, organizations reveal their best sides in order to influence the target group. For this purpose, they constantly compare themselves with other organizations. For example Harrison-Walker (2009) notes that Avis, while promoting itself as 'No. 2' in the car rental industry and acknowledging Hertz's leadership, 'makes more efforts to increase customer satisfaction' (p. 107).
Competitive positioning is usually done by comparing a brand to its competitors in terms of price/quality or features. For example, Pontiac has positioned some of its vehicles by comparing them to premium foreign vehicles in terms of pricing and fuel efficiency (Stephens, 2023).

Competitive positioning strategy allows brands to make themselves more respected by comparing themselves to their competitors and helps to convey a clearer message to the target group. In the case of higher education organizations, they often engage in comparative positioning strategies to enhance their perceived prestige. For example, universities may highlight their higher ranking in national or international league tables, emphasize unique academic programs, or showcase partnerships with renowned institutions to distinguish themselves from their competitors. Additionally, they may draw attention to their faculty's credentials, research output, and state-of-the-art facilities in comparison to other institutions to strengthen their reputation and appeal to prospective students and stakeholders (Hemsley-Brown & Oplatka, 2006).

Most positioning strategies use competition as an explicit or implicit baseline. This positioning approach is important for two key reasons. First, competing firms often position themselves based on specific attributes or a price/quality comparison, which can create complex differentiation challenges in product evaluation (Aaker & Shansby, 1982). To address this, organizations frequently compare themselves with competitors to clarify their unique market position and facilitate the positioning process (Kotler & Keller, 2016). Comparative advertising where a competitor is explicitly mentioned and compared based on one or more attributes can be an effective strategy to establish a distinct position in the market relative to competitors (Ries & Trout, 2001).

Positioning strategy by application: With this positioning strategy, the superiority of an organization or brand in a certain area of use is revealed. For this purpose, positioning is made for where, how and how the data of the organization are used (Aaker, 1996). For example, Cornell University positions itself as a university preferred by leaders in the field of hotel management (Enz, 2011).

The strategy of positioning by use conveys a message of quality and expertise in a specific field of use to the target group (Lowry & Owens, 2001: 33). In higher education organizations that adopt a positioning strategy based on the future success of their graduates, it is important to track and assess the career outcomes of their alumni. This involves having an effective graduate tracking system to monitor the professional achievements and status of graduates in the job market. By doing so, the institution can evaluate the value of its education and adjust its positioning strategy accordingly.

Positioning by product user: In this positioning strategy, the connection of the organization's data with the user profile is associated (Aaker & Shannsby, 1982; Harrison-wolker, 2009). In other words, the symbols of the culture of the target group's need to be positioned correctly (Büyükkeklik, 2004). For example, St. Leo College and Heritage College focus on specific user groups and reflect the cultural values of that group (Lowry & Owens, 2001: 40). While St. Leo College is positioned as a weekend college in Florida, catering to working individuals who have not completed their university education, Heritage College serves a multicultural population deprived of education, especially Native Americans living in the Yakima Valley (Litten, 1980).

According to Sevier (2002), "organizations that prefer positioning strategies according to the user reveal their different aspects compared to their competitors" (p. 28). In both examples, organizations clarify their markets and positions by focusing on a specific user group.

In this context, for higher education organizations, the relationship between the products offered by the organizations and the target group is determined. For this reason, organizations using the strategy of positioning according to the user take into account the individual needs of the target group in order to better reflect their culture.

Positioning strategy by product class: In this positioning strategy, consumers' perceptions are shaped by emphasizing a product's place in a particular category. Some organizations position products that do not belong to them as belonging to the market (Harrison-Wolker, 2009:107). According to Aaker and Shansby (1982), 'Maxim's freeze-dried coffee is presented as an alternative to instant coffee and regular coffee,' while '7-Up marketed itself as a soft drink with a "fresh taste" and later changed consumer perception by positioning itself in the cola category' (p. 57-58). Although University of Phoenix positions itself as a member of the university community, it is actually a for-profit distance education company (Kinser, 2006).

In the strategy of positioning by product category, although it enables brands to reach target groups by showing them as belonging to a certain category, it causes distrust in the long run when there is a lack of transparency (Harrison-Walker, 2009: 107). In terms of higher education organizations, it is seen that organizations reveal the different aspects of their outputs compared to other organizations. In this context, it can be said that organizations using this positioning position their outputs as belonging to the market category and mention the features of the organizations that make them stand out. In addition, the opening of universities by well-known companies in the market is a positioning strategy according to the product class.

These classifications above explain the strategies used by institutions to position themselves in the most appropriate way for their target groups. In the context of Türkiye's higher education landscape, understanding these positioning strategies becomes increasingly relevant. According to the Council of Higher Education (Yüksek Öğretim Kurulu (YOK)) (CoHE, 2023) 2022-2023 data, there are 208 Higher Education Institutions in Türkiye, of which 128 are State and 80 are foundation universities.

Of these 80 foundation universities, 44 are located in Istanbul. Each University has a Rector appointed by the President and Rectors play an important role in determining the image of universities. Rectors can create a positive or negative image on the target group, students, through written and verbal messages. A positive image in the minds of the target group may indicate that the right positioning strategies are used (Polat, 2011). For foundation universities to gain competitive advantage, reach the target group, strengthen their brand image and ensure financial sustainability, they need to use positioning strategies correctly. Within the scope of this research, a discourse analysis will be conducted on positioning strategies by examining the messages of the Rectors of foundation universities in Istanbul. For an organization to compete better with its competitors and be successful in the changing and chaotic global market environment in which it operates, it must be able to make positioning strategies correctly. Organizations that position their universities correctly can better differentiate themselves from their competitors.

The purpose of this research is to determine how the Rectors of foundation universities in Istanbul position their universities and to determine which positioning strategies are used by analyzing the Rector messages.

Method

Research Design

In this study, the messages of the Rectors of foundation universities in Istanbul were analyzed through discourse analysis. Discourse analysis is a method used in social sciences and questions what the phenomena and concepts in the social world we live in mean to people. In this context, authentic oral and written texts are analyzed in their own contexts. With discourse analysis, the details of spoken and written texts are investigated by focusing on how and why words are said rather than their meanings (Dijk, 1997). In this study, the messages of the Rectors of foundation universities were analyzed and how the Rectors positioned their universities was evaluated in detail.

Research Documents

The documents of this study consist of the Rector's messages on the websites of foundation universities in Istanbul, 2024. Table 2 below shows the information about the documents of the research as code, gender and date of establishment. Rector messages published on the official websites of universities are the participants of this study. Rector messages are important communication tools that express the mission, vision, values and strategic goals of universities. The analysis of these messages is crucial to understand how universities position themselves, what values they emphasize and what image they want to present to the society. However, the names of universities and rectors were kept confidential due to impartiality and ethical standards. This method avoids bias towards a specific institution or person and protects the safety of the research participants (rectors) by shifting the focus of the research to general trends and strategies rather than individual leaders or institutions.

Data Collection

The data of this study consists of the messages of the Rector of the foundation universities in Istanbul. According to the 2022-2023 data of the Council of Higher Education, since there are 44 foundation universities in Istanbul, the websites of each university were examined to reach all universe, but 14 of them could not be reached. Among the reasons for this are that the websites of the institutions are not up-to-date or there are messages from the Dean instead of the Rector. As a result of the examination, a total of 30 Rector's messages were reached. Written texts were used in this study as a means of data collection in order to produce findings based on discourse analysis. Texts that address the research topics and are pertinent to the study's core theme were chosen with attention. The data source includes the rector messages written on the websites of foundation universities. These texts were selected an eight-step process for conducting discourse analysis in the context of information systems (IS) research (Bondarouk and Ruel, 2004).

As can be seen in Table 2, 8 of the 30 Rectors are women and 22 are men. In this case, there are mostly male rectors in foundation universities in Istanbul. When the foundation universities in Istanbul are examined, it is seen that they were established between 1993-2018. In this case, it has been observed that the history of the first foundation university established in Istanbul dates back to 31 years, while the newest foundation university has a history of 6 years.

Data Analysis

The collected data were analyzed using a Bondarouk and Ruel's (2004) eight-stage discourse analysis method was then applied. These stages are identifying a theory, operationalization, sampling, conducting interviews, transcription, member check, analysis, and debriefing. Social constructionism and institutional identity theories serve as the foundation for the discourse analysis theoretical framework in this work. The idea of social constructionism looks at how organizations create and display themselves in social settings. The main focus of institutional identity theory is on how universities show themselves to society, the ideals they uphold, and how they position themselves.

Table 2. Information about the documents of the research

Code	Date of establishment of university
RM1	1997
RM2	2011
RM3	2003
RM4	1996
RM5	1997
RM6	2010
RM7	1998
RM8	2008
RM9	2016
RM10	1996
RM11	2016
RM12	2007
RM13	2016
RM14	1996
RM15	1993
RM16	2011
RM17	1999
RM18	1997
RM19	2010
RM20	1997
RM21	2008
RM22	2012
RM23	2016

RM24	2010
RM25	1996
RM26	2007
RM27	2018
RM28	2015
RM29	2018
RM30	2006

The notions of "institutional identity" and "strategic communication" were broken down into distinct parts in the discourse analysis, including mission, vision, values, and strategic goals. To be used in the analysis of rector communications, these components were codified, and for every component, a specific category was created. For instance, the university's self-assigned role and place in society were looked at under the "mission" category. Rector statements that are posted on the websites of Istanbul's foundation universities make up the study's sample. Based on data from the Higher Education Council for 2022–2023 there are forty-four foundation universities in Istanbul. However, 14 institutions' websites were inaccessible for various reasons, including not being updated or featuring statements from deans rather than rectors. Consequently, thirty rector messages in all were gathered for examination. Instead of conducting interviews for this study, an analysis of previously published textual materials (Rector messages) was done. In terms of how colleges position themselves, the principles they highlight, and the image they project to society, the statements were scrutinized to guarantee diversity and consistency. There was no direct participant control procedure used in this investigation. To avoid any bias and ethical transgressions, the names of the rectors and universities were kept private in compliance with ethical norms. The thirty messages from rectors were gathered, and they were examined using the predetermined theoretical framework. The books were broken down into codes, such as mission, vision, values, and strategic goals, and each code's meaning was deciphered. During this process, key themes about the positioning of universities and the most important aspects of strategic communication were identified.

For this purpose, criteria were determined according to the six-dimensional positioning strategies developed by Aaker and Shansby (1982), which are widely accepted in the literature. This framework was selected above others because it provides a comprehensive approach that takes into account many aspects of positioning that are pertinent to universities, such as how they set themselves apart from the competition in terms of features, perks, and competitive environment. Although other frameworks were taken into consideration, they were judged less appropriate because of their restricted scope or limited suitability for the various positioning techniques that have been observed in the education sector. As the dataset utilized in the research was pre-written, there was no need for transcribing. Nonetheless, linguistic elements (such as emphasis, repetitions, and confusing expressions) that were included in the messages' original texts were meticulously noted and utilized during the analysis process. For this purpose, the criteria for positioning strategies are included in Table 3 below.

Credibility

Inclusion and exclusion criteria were taken into account while selecting the study group of the research. For this purpose, all foundation universities in Istanbul were included in this study. However, due to the rapid increase in competition as a result of globalization, state universities in Istanbul were excluded from this study. It is aimed to confirm the authenticity of the Rector's messages on the corporate websites of the foundation universities in Istanbul by accessing them.

Table 3. Criteria for positioning strategies

Criterion	Description	Reference
Positioning foundation universities by attributes	Determining the needs of the outputs of the organization.	Aaker & Shansby (1982)
	Associating the needs of the organization's outputs with the benefit of the target group.	Aaker & Shansby (1982)
	Associating the outputs of the organization with the outputs of its competitors.	Aaker & Shansby (1982)
Positioning foundation universities by price-quality	Positioning the outputs of the organization according to the relationship between high price and high quality.	Kotler & Keller (2016)
Positioning foundation universities by competition	Specifying the different aspects of the organization's outputs from competing organizations.	Aaker & Shansby (1982)
	Comparison of organizational outputs with outputs of competing organizations.	Kotler & Keller (2016)
Positioning of foundation universities by application	Status of graduates in business life.	Gronroos (2007)
	Organizations to have an alumni tracking system.	Gronroos (2007)
Positioning foundation universities by product user	Associating the output of the organization with the user base.	Aaker & Shansby (1982)
	Mentioning the symbols of the user's culture.	Aaker & Shansby (1982)
Positioning of foundation universities by product class	Positioning the outputs of organizations as belonging to the market category.	Kotler & Keller (2016)

Credibility is defined as the researcher's consistency in the processes of collecting, analyzing and interpreting data (Yıldırım & Şimşek, 2013: 292). In other words, ensuring credibility increases confidence in the study. In order to increase the credibility of this study, the data were transferred from the websites of the institutions as they were and expert opinions were consulted.

Confirmability

A confirmability criterion should be provided to ensure the accuracy and consistency of the findings obtained. For this reason, it is necessary to take into account the opinions and thoughts of experts. Confirmability is the verification of the findings of the research by the data collected and the conditions studied. For this, the researcher should clearly and in detail state the methods and technical stages of the research (Houser, 2015). In order to enhance the confirmability of this research, feedback was obtained from two experts in Educational Administration: a senior academic with extensive experience in the field and a PhD student actively conducting research in the same area. Their insights provided an additional layer of validation and ensured that the findings align with current academic perspectives (Bondarouk and Ruel, 2004). After receiving expert opinions, the Rector's messages obtained from the websites of Foundation Universities were turned into a file. Their messages were examined in detail and the places considered important were underlined. Subsequently, based on the definitions made by Aaker and Shansby (1982) regarding the positioning strategies they developed, the criteria for each positioning strategy were determined and presented to the Expert. After obtaining expert approval, the data for positioning strategies are explained in table 4 in the form of criteria and codes.

Transferability

The provision of comprehensive accounts of the research context and participants bolstered transferability by enabling others to evaluate the findings' relevance in various contexts (Lincoln & Guba, 1985). In order to address transferability, this study includes extensive information regarding the data sources and gathering techniques. After looking through the websites of 44 universities, the study was able to examine messages from the Rectors of Foundation Universities in Istanbul, totaling thirty messages. Though thirty messages remain, a substantial fraction of the universe is represented, even though fourteen universities are inaccessible because of out-of-date websites or letters from deans. The findings' relevance to other comparable contexts or university settings can be evaluated by outlining the data gathering procedure and the justifications for data removal.

Dependability

A thorough record of the research procedure, including the choices and techniques used, was maintained to guarantee reliability. Lincoln and Guba (1985) noted that regular peer debriefings were held to guarantee conformity with study aims and that an audit trail was kept to enable others to examine the procedure. The study's dependability is guaranteed by a careful and organized method to data collecting and reporting. The study accessed and examined the Rector's messages from the websites of Istanbul's Foundation Universities in accordance with a well-defined process. An audit trail was kept, which recorded the steps taken to determine communications that were accessible as well as the rationale behind leaving out specific colleges. To guarantee accuracy and consistency in the data collection procedure, reviews were carried out on a regular basis. The thorough documentation enables replication in comparable circumstances and offers a strong foundation for the validity of the findings.

Findings

How foundation universities in Istanbul position themselves has been examined in depth with discourse analysis. For this purpose, the positioning strategies developed by Aaker and Shansby (1982:57), such as feature, product used, competition, user, category and price-quality, are presented in table 4 below. The criteria for these strategies have been determined for each positioning strategy. In this context, it has been classified by evaluating how the Rectors position the universities in their messages.

As can be seen in Table 4, the findings regarding the six-dimensional positioning strategy developed by Aaker and Shansby (1982:57) were determined by examining the Rector's messages. In this context, how the foundation universities in Istanbul position their universities in the Rector's messages was evaluated according to the criteria in each strategy. According to the expressions in the messages of the rectors, an "x" was placed for those who met the criteria and a "-" was placed for those who did not meet the criteria. As can be seen from Table 4, it was seen that the characteristics within the criteria were met in all of the Rector's messages.

When Table 4 is examined, it is understood that foundation universities mostly position themselves according to their characteristics. It can be said that universities that clearly express their goals can be more effective on the target community. However, as a result of the rapidly increasing competition among foundation universities, positioning according to competition also has an important role. However, it has been observed that foundation universities position themselves according to the least number of users. It can be said that universities prioritize their attributes over competitive or user-centered positioning; however, more information is required to make more certain judgments. This involves a thorough examination of promotional materials, input from instructors and students, and comparison shopping with other educational establishments. Quantitative methods like surveys and long-term research would also be very helpful in gaining understanding of how well positioning techniques work and how they affect different results. A more thorough and accurate evaluation of the colleges' positioning strategies can be attained by adding these other components.

1) Positioning foundation universities by attributes

According to the messages of the Rectors working in the foundation universities in Istanbul, the universities are mostly positioned according to quality. In this context, it can be said that the needs of the students, who are mostly the target group, are determined, the target group is related according to the benefit, and the outputs of the organization are compared with the outputs of their competitors. Determining the mission and vision is at the forefront in the Rector's messages, which are positioned according to their characteristics. For this purpose, it has been observed that goal-setting words such as targeting, planning and training are frequently used.

In his RM3 message, one of the Rector's messages, he expresses the mission of the school in detail and positions it according to the feature as follows.

> *"With an understanding of education that supports the multifaceted and interdisciplinary development of students; We raise individuals who adapt quickly to the age and professional life, who can lead, who have a scientific perspective, who are interested in art and sports, who are socially developed, who respect social and universal values, who are sensitive to the environment, who have problem-solving skills, and who adopt lifelong learning as a principle." (RM3)*

From the rector's messages, RM7, RM16 and RM 29 use the target identifying words when positioning themselves according to the attributes are as follows.

> *"With its deep-rooted history, unique qualifications, pioneering education models, strong technological infrastructure and R&D activities, it aims to train scientists who will produce added value for our country and the world and to bring them together with the world." (RM7)*

> *"... We aim to raise individuals with high self-confidence and self-confidence in their fields, and to bring Turkish language and culture to the place it deserves." (RM16)*

> *"... With the vision of the university senior management from the field of health, we aim to raise our students as the leaders of the future. They are educated and prepared for the future as individuals who are at peace with themselves and their environment, have a leading personality, produce knowledge, solve problems, question and analyze." (RM29)*

Table 4. Findings on positioning strategy

Positioning strategies	RM1	RM2	RM3	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	RM	Total
Attributes																															**21**
Determining the needs of the outputs of the organization	X	X	X		X		X	X	-	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	
Associating the needs of the organization's outputs with the benefit of the target group	X	X	X		X		X	X	-	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	
Associating the outputs of the organization with the outputs of competing organizations	X	X	X		X		X	X	-	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	
Application																															**9**
Monitoring the status of graduates who are outputs of the organization in business life					X				-	X	X	X	X	X	X		X						X								
Competition																															**14**
Specifying the different aspects of the organization's outputs from competing organizations							X	X	-					X			X	X	X			X				X	X	X		X	
Comparison of organizational outputs with outputs of rival organizations							X	X	-					X			X	X	X			X				X	X	X		X	
Product user																															**6**
Associating the output of the organization with the user base						X			-					X	X	X	X				X										
Mentioning the symbols of the user's culture						X			-					X	X	X	X				X										
Product class																															**9**
Positioning the outputs of organizations as belonging to the market category				X				X	-					X	X						X			X	X					X	
Talking about the features of organizations that make them stand out				X				X	-					X	X						X			X	X					X	
Price/quality																															**8**
Positioning the organizatio outputs according to the hi price high quality relations									-					X						X		X									

As we conclude, it is clear that the rectors are deeply committed to developing future leaders who are not only well qualified academically but also socially conscious and flexible enough to meet the ever-evolving demands of the workplace. By prioritizing technical innovations, research and development, and multidisciplinary education, these universities establish themselves as essential players in the advancement of both national and global society.

2) Positioning of foundation universities by application
According to the messages of the Rectors working in the foundation universities in Istanbul, it has been observed that the positioning according to category and usage in universities is made with the same frequency. In this context, it can be said that organizations attach importance to making a difference while presenting their products to the market and are interested in the future positions of the outputs of the organization. It can be said that universities, which position themselves according to usage, examine the status of graduates in business life and have a good monitoring system. In this context, visions for the future are the keywords used in this positioning strategy.

In their messages, RM10, RM13 and RM14 talk about future goals not only for the inputs of the organization but also for the business life of the graduates, who are the outputs of the organization. The Rector's messages using positioning strategies according to usage are explained below.

> *"We bring business life to our university with the career events we organize to bring our students and graduates to the business world. In addition, in addition to the internship periods, we ensure that our students graduate from our university as individuals with experience by working in the fields of practice within our university." (RM10)*

> *"... Together with the steps we will take to ensure that you graduate with experience and ability as well as a valid diploma in the business world and leave unforgettable memories when you look back..." (RM13)*

> *"... to prepare graduates well for business life and the professional world in terms of intellectual, humanistic and cultural aspects." (RM14)*

As we conclude, it is evident that foundation universities emphasize practical, hands-on experience for students in order to position themselves as intermediaries between academics and the professional world. They hope to provide graduates with the knowledge and experience needed to thrive in the corporate world through career fairs, internships, and practical experiences conducted on campus. Their dedication to equipping students for both career success and lifetime achievement is evident in their emphasis on experiential learning in addition to academic advancement.

3) Positioning foundation universities by competition
According to the messages of the Rectors working in the foundation universities in Istanbul, the universities are positioned according to the competition the most. In this context, when the Rector's messages are examined, it can be said that their organizations are mostly in competition with each other and compare themselves with the outputs of other organizations. In other words, it can be said that the outputs of the organizations of the universities that position themselves according to the competition reveal different aspects from their competitors and compare them with the outputs of rival organizations. This positioning strategy has similar characteristics to the uniform positioning strategy. In both strategies, emphasizing the best features of the institutions also reveals the positioning strategy according to the competition.

From the Rector's messages, RM1, RM8, RM14, RM17, RM18 and RM21 are given below where they position themselves in relation to the competition.

> *" ... Our university prepares our young people for global competition." (RM1)*

> *"... To take the place we deserve in the global competitive environment can only be qualified education and training..." (RM8)*

> *"It is always the goal of self-improvement, contributing to the world academy, and constantly being in developments. It has created an important, valuable and unique place for itself in Türkiye's higher education community." (RM14)*

> *"... They are trained as graduates who can compete with all their contemporaries in the world." (RM17)*

> *"... To be an "Entrepreneurial, Innovative and Competitive University", to work for a better campus with our decision-making mechanisms, to redefine institutionalization..." (RM18)*

> *"... In today's conditions, academic formation is no longer a sufficient condition, although it is a necessary condition for competition." (RM21)*

The statements from the rectors emphasize the strategic focus on innovation, entrepreneurship, and ongoing improvement that their universities have with regard to global competition. Universities with missions in line with global standards and the necessity to stay relevant in a cutthroat academic environment are universities like RM1, RM8, RM17, and RM18. These universities place a high priority on training students to compete internationally. On the other hand, RM14 highlights the institution's well-established place in Turkey's higher education system and its contribution to the international academic community. The emphasis on innovation and competition may also be related to the periods of founding of the universities, with the latter concentrating on retaining their impact and the former trying to stand out from the crowd. Furthermore, the rectors' gender may have an impact on their leadership philosophies and areas of strategic concentration, especially in relation to diversity and entrepreneurship. Overall, these universities match their missions with more general trends in higher education with the overall goal of producing graduates prepared for success on the national and worldwide stage.

4) Positioning of foundation Universities by product user

Among the positioning strategies, positioning according to the user is the least done positioning strategy among the Rector's messages. It can be said that the reason for this is the idea that not all of them may be affected by this positioning strategy, since the personal aspects of the target group are at the forefront in the positioning made according to the user. In other words, the reasons why students, who are the target group, come together for a common purpose are affected by the cultural characteristics they adopt. Therefore, foundation universities, which position themselves according to the user, generally emphasize social activities, student clubs and activities that will strengthen the bonds between students in their messages.

In their messages, the Rector explained that they position themselves in relation to the user, emphasizing orientation days, committees, social settings, and activities that bring students together for a common goal.

> *"I kindly ask you to participate in the activities where you will have the opportunity to meet with student clubs and student support units of our University and be informed about the "University Orientation Days" Program, which will be held in the first week of the new semester." (RM6)*

> *"... We have established a Student Satisfaction Commission in order to increase student satisfaction and to control it closely." (RM13)*

> *"... The voices of everyone who has contributed, who have listened to lectures or lectured in their classrooms, who have spent the morning in their library, and who have participated*

in heated conversations in their courtyards, have remained and will remain at the Gate of Science as a pleasant voice." (RM15)

"... In order to meet the needs of those who want to learn Turkish, it makes great efforts to use new materials in education in accordance with the scientific developments in the current field of education. (RM16)

"... With our Career Center and Dean of Students Office within our university, within the scope of the "Preparation for Business Life Program", our students are offered "Career and Life Course", "Happy Life Program" and "Entrepreneurship Course." (RM17)

As we conclude, it is clear that the rectors of RM6, RM13, RM15, RM16, and RM17 stress the significance of creating a welcoming and stimulating campus community. They highlight activities like committees for student satisfaction, orientation days, and other efforts to improve student happiness and integration. These universities show a dedication to building a lively and inclusive academic community by emphasizing events that foster student interaction and assist their professional and personal growth. Their initiatives are part of a larger initiative to guarantee that students have a happy and supportive university experience in addition to helping them get ready for their future employment.

5) Positioning of foundation Universities by product class

In positioning strategies related to the product class, it is seen that institutions position themselves according to the areas they are experts in. Therefore, it can be said that organizations that position themselves according to the product category highlight the areas in which they are experts, and the organizations position their outputs as if they belong to the market category. In addition, they must have a deep-rooted history as well as a corporate identity.

RM11, RM12, RM14 and RM30 emphasised in their messages that they positioned themselves according to the product category by highlighting their strong background, good standards and areas of expertise.

"... As a university, we set out with the vision of bringing a new perspective to the Turkish higher education system. Big... As the face of the community reflected in higher education, we set out with the mission imposed on us by our glorious heritage." (RM11)

"The seven main objectives determined as a result of the meetings held with horizontal and vertical participation for the first time at our university, as well as the 23 targets and 132 metrics defined in line with these objectives, constitute the roadmap for the next 5 years." (RM12)

"From the very beginning, aiming to be a good world university at international standards..." (RM14)

"... Our university, which has branded medical education with the quality of Florence Nightingale, has trained 684 physicians and 141 specialist physicians so far as Türkiye's first health university in the field of health sciences." (RM30)

As we conclude, it is clear that these rectors are dedicated to establishing challenging objectives and upholding a vision that embodies a respect for their institutional history as well as a willingness to innovate. While RM12 presents a methodical strategy with precise goals and indicators for the following five years, RM11 talks about a revolutionary vision meant to redefine higher education in Türkiye. A major emphasis on excellence in medical education is highlighted in RM30, whereas RM14 underscores the goal of achieving international standards. When taken as a whole, these declarations highlight a calculated decision to increase their universities' influence and reputation on a worldwide scale by means of meticulous preparation and a commitment to provide top-notch instruction.

6) Positioning of Foundation Universities by price-quality

According to the messages of the Rectors working in the foundation universities in Istanbul, they emphasize the areas in which they are experts in a certain field in the foundation universities that position themselves according to the price-quality strategy. In this positioning strategy, which is similar to uniform positioning strategies, institutions position themselves by emphasizing their best features. In other words, it can be said that the outputs of the organization are positioned according to the relationship between high price and high quality.

RM12, RM14, RM17, RM22 and RM 30 have positioned themselves according to the price-quality strategy by mentioning the firsts in their messages. Below are the messages of the rectors who position themselves in this strategy.

> *“... Seven main objectives determined as a result of the meetings held with horizontal and vertical participation for the first time in our university..." (RM12)*

> *"We are also proud to be the only university in Türkiye that has received its accreditation as a result of 10 years of work." (RM14)*

> *“... The International Student Exchange Network (ISEP), in which our university is included for the first time in Türkiye, allows our students to study at nearly 200 universities in 25 different countries." (RM17)*

> *“... In 2014, we became the first university in the world to implement Flipped Learning in all its programs." (RM22)*

> *“... the founder of Florence Nightingale Hospital, who was the first to bring cardiovascular surgery to Türkiye..." (RM30)*

As we conclude, it is clear that these rectors are committed to elevating their colleges to the forefront of innovation and global education. While RM14 recognizes the university's remarkable accomplishment of gaining accreditation after ten years of work, RM12 emphasizes an organized strategy with seven major objectives and benchmarks defined by inclusive engagement. The International Student Exchange Program (ISEP), which allows students to study abroad at nearly 200 universities in 25 countries, is one way that RM17 highlights its university's global reach. RM22 takes pride in stating that they were the first in the world to adopt Flipped Learning, demonstrating their dedication to innovating in teaching techniques. Furthermore, by highlighting the historical significance of Florence Nightingale Hospital's founder in improving cardiovascular surgery in Turkey, RM30 highlights a tradition of excellence in medical education. The aforementioned remarks demonstrate a comprehensive approach to augment the worldwide influence of their establishments via inventiveness, global integration, and a profound reverence for scholarly and historical accomplishments.

Conclusion

The rapid increase in globalization increases the competition in educational organizations as in every organization. This situation brings with it the originality among the organizations. Otherwise, when each organization does something similar to each other, they will not be able to reveal their different aspects from their competitors. Therefore, the fact that universities make a correct positioning for them to stand out also significantly affects the students, who are the target group. In other words, it is necessary to determine which strategy is most appropriate according to the goals of the institutions and the needs of their target groups.

With this research, it was examined how the rectors of foundation universities in Istanbul/Türkiye positioned their universities. In this context, the Rector's messages on the corporate websites of foundation universities were analysed by discourse analysis method. According to CoHE (2023) data, there are 44 foundation universities in Istanbul. In this research, 30 out of 44 foundation universities were reached because of issues such as outdated or inaccessible websites, as well as the presence of messages from Deans instead of Rectors. According to the Rector's messages examined, it was determined according to which criteria the foundation universities positioned themselves.

In this study, the six-dimensional positioning strategy developed by Aaker and Shansby (1982:57) and the positioning strategies used by the rectors in their messages were determined. These are named as attribute, application, product user, product class, price/quality and competition. These themed positioning strategies are similar to the studies in the literature in many ways.

These are campus life experience, internationalization, quality in teaching, excellence, academic work done by the school, graduate expectations, location, and price. When the Rector's messages in this study were examined, it was determined that the positioning strategies determined by Kethüda (2021) were like campus life experience, excellence, graduate expectations and price, and Aaker and Shansby's (1982:57) positioning strategies according to product class, application and price/quality.

Lowry and Owens (2001) stated that in terms of the quality education provided by universities; Judson et al. (2006) and Duarte et al. (2010) in terms of students' better understanding of university life such as dormitory facilities, campus facilities, social activities or scholarship opportunities provided by the school; Baker et al. (1996) found that a quality organization, job opportunities provided to graduates with organizational outputs, and educational recognition of the school; Kemp et al. (1998), on the other hand, in addition to these factors, in terms of price and the location of the school; Megan et al. (2011) describe the school's statements about careers and culturally integration; Harsha and Shah (2011), on the other hand, have included in their research that the school has a deep-rooted history and can position itself by revealing the prestige of the school or the aspects of the school that it is an expert in the field of education.

Çatı et al. (2016) found that, in general, foundation universities tend to focus on physical facilities and social and sports activities, rather than concentrating on academic achievement, which is more prominently emphasized by state universities. In addition, both foundation universities and state universities have allocated a large place in the introduction video to the fields of physical facilities and social and sports activities. It has been observed that scholarship and dormitory opportunities, as well as applied education and job opportunities, are more prominent in foundation universities.

One of the positioning strategies, the financial dimension, is like tuition and quality education. When the quality of educational institutions is evaluated in terms of price/quality, it is understood that a quality education should be provided not only financially but also in a quality education in schools. As a result, Aaker and Shansby's (1982) "price/quality" positioning strategy is like high price, high quality, and excellence in teaching. Furthermore, the basis of the positioning strategies "value for money" as defined by Blankson and Kalafatis (2004), "price" as defined by Romaniuk (2001), "price-cost leadership" as defined by Morgan et al. (2003), and "cost and finance" as defined by Diwan and Bodla (2011) are the same. In this research, it was seen that 8 out of 30 Rectors positioned their messages according to price/quality. It has been observed that the universities that are positioned according to price/quality mostly have a deep-rooted history.

Another finding obtained is that 21 out of 30 messages have a positioning strategy according to their characteristics. In this case, when the messages of the Rector in Foundation Universities are examined, they often mentioned their goals for the school in order to impress the students, who are the target group. In this context, the future goals of Foundation Universities are emphasized in the messages of the Rectors. As a result of increasing competition, some Foundation Universities have difficulties in maintaining quality and financial sustainability. Another finding obtained from the research showed that 14 out of 30 messages were positioned according to the competition. In this case, the importance of resource management and strategic planning emerges. For this reason, the positioning strategies of Foundation Universities should be in line with the goals of increasing the quality and accessibility in education.

The positioning strategies of foundation universities are very important in terms of both national and international competition. For this reason, foundation universities have a specific mission and vision to differentiate themselves. The correct use of positioning strategies helps universities attract more students. It enhances their ability to provide high-quality academic and social education and elevates their brand value. For this reason, the positioning strategies of foundation universities are important in terms of national and international competition. These universities have specific mission and vision to differentiate and gain an advantage in the market. If used correctly, positioning strategies can attract more students to universities. These strategies can enhance universities' reputation by improving their ability to provide high-quality academic and social education and by elevating their brand value. For this reason, the correct selection and implementation of the positioning strategies of foundation universities is an important component affecting the success of organizations.

Correctly made positioning strategies also positively affect the image of university organizations. In this context, the Rector's messages, which are one of the channels showing the positioning strategies used by foundation universities in Türkiye, were examined by discourse analysis methods.

As a result, universities that make the right positioning can easily influence the students who are their target group than their other competitors, and graduate students who have organizational outputs represent their universities better in the future with the positioning they have adopted in their education life. Although positioning strategies are classified by different names by many researchers, the strategies have similar aspects. These similarities can be expressed as follows. Positioning, considering the characteristics of a particular group or subset, can be used as a positioning strategy for a specific group (Florek & Janiszewska, 2007: 111). An example of this category is the positioning of students studying in a particular field according to their expectations. Meeting the specific needs of the target group is the focus of this approach. In this respect, it can be said that it is similar to the positioning strategy according to attributes.

According to the various characteristics of the target group, a positioning strategy for different groups includes various positionings. For example, different approaches can be used to communicate with students of different age groups. The needs of specific subgroups are the focus of this approach. Positioning according to the common characteristics of the different targeted groups is known as the associated positioning strategy. This strategy allows an organization to position itself by focusing on its areas of expertise or strengths in a particular area. Therefore, it can be said that it is similar to positioning relative to the user. In other words, the different characteristics of the target group are considered by the positioning strategy according to different groups and shape the marketing and communication strategies. For example, the needs and preferences that differ according to age groups are very important in determining the communication strategies of institutions. A more classic and reliable image may come to the fore when appealing to the mature age group, but a dynamic and innovative approach may be preferred when addressing young students. In keeping with the diversity of the target group, this approach offers customized solutions for each group. However, the associated positioning strategy highlights a company's strengths or expertise in a particular area. This strategy aims to build stronger connections with customers by shaping our company's highlights according to a specific target group.
In the light of the findings obtained from the research, future research on the positioning strategies of foundation universities may provide important information to increase the competitiveness of these universities and maintain their long-term success. Some suggestions for research in these areas are given below.

This research is limited to the messages of the Rector of the foundation universities in Istanbul. Based on this, a more comprehensive study can be made on how state and foundation universities position themselves. According to the findings of the research, according to the data obtained, the least used positioning strategy is the positioning strategy according to the user. In other words, it has been observed that 6 out of 30 universities have a positioning strategy according to the user. Research can be done on this. Another suggestion for researchers is to examine the effects of universities that use all or at least one of the positioning strategies on the target group.

References

Aaker, D.A. & G. Shansby (1982). *Positioning Your Product. Business Horizons*, 25, 56-62.

Aaker, D. A. (1996). Resisting temptations to change a brand position/execution: The power of consistency over time. *Journal of Brand Management*, *3*, 251-258.

Arambewela, R., Hall, J., & Zuhair, S. (2006). Postgraduate international students from Asia: Factors influencing satisfaction. *Journal of Marketing for Higher Education*, *15*(2), 105-127.

Arlı, E. (2012). Konumlandırma Stratejilerinin İşletme Performansı ile İlişkisi: Liman İşletmeciliğinde Bir Uygulama. *Yönetim ve Ekonomi Dergisi*, 19(2), 99-121.

Arnott, D. C. (1992). *Bases of financial services positioning in the personal pension, life assurance, and personal equity plan sectors*. The University of Manchester (United Kingdom).

Avraham, E., & Ketter, E. (2012). *Media strategies for marketing places in crisis*. Routledge.

Baltacı, A. (2019). Nitel Araştırma Süreci: Nitel Bir Araştırma Nasıl Yapılır? *Ahi Evran Üniversitesi Sosyal Bilimler Enstitüsü Dergisi,* 5(2), 368-388. https://doi.org/10.31592/aeusbed.598299.

Baker, M., Creedy, J. & Johnson, D. (1996). *Financing and effects of internationalisation in higher education: An Australian country study.* Accessed: (5 April, 2024): http://www.voced.edu.au/content/ngv33631

Bingham, F. G., & Raffield, B. T. (1990). Business to business marketing management. *(No Title)*.

Bondarouk, T., & Ruel, H. (2004). Discourse analysis: making complex methodology simple. *ECIS 2004 Proceedings*, 1.

Büyükkeklik, A. (2004). *Ürün Konumlandırma ve Algılama Haritaları, Niğde'de Bireysel Bankacılık Hizmetleri Üzerine Bir Uygulama* [Product Positioning and Perception Maps, An Application on Retail Banking Services in Niğde]. (Unpublished master dissertation) 21-26.

Blankson, C., & Kalafatis, S. P. (2004). The development and validation of a scale measuring consumer/customer-derived generic typology of positioning strategies. *Journal of marketing management*, *20*(1-2), 5-43.

CoHE (2023). Accessed (April 7, 2024): YÖK Yükseköğretimde Yeni İstatistikler (yok.gov.tr).

Çatı, K., Kethüda, Ö., & Bilgin, Y. (2016). Üniversitelerin konumlandırma stratejileri: İstanbul'daki üniversiteler üzerine bir inceleme [Positioning strategies of universities: A study on universities in Istanbul]. *Eğitim ve Bilim*, 41(185).

Chapman, A., & Pyvis, D. (2006). Dilemmas in the formation of student identity in offshore higher education: a case study in Hong Kong. *Educational Review*, *58*(3), 291-302.

Diwan, S. P., & Bodla, B. S. (2011). Development of empirically based customer-derived positioning typology in the automobile industry. *Journal of Strategic Marketing*, *19*(6), 531-550.

Duarte, P., Alves, H. B. & Raposo, M. B. (2010). Understanding university image: A structural equation model approach. International Review on Public and Non-Profit Marketing, 7, 21-36. doi:10.1007/s12208-009-0042-9.

Easingwood, C. J., & Mahajan, V. (1989). Positioning of financial services for competitive advantage. *Journal of Product Innovation Management: An international publication of the product development & management association*, *6*(3), 207-219.

Enz, C. A. (2011). *The Cornell School of Hotel Administration on Hospitality: Cutting Edge Thinking and Practice.* John Wiley & Sons.

Florek, M., & Janiszewska, K. (2007). Aplication of brand positioning concept to place branding. *Destination Branding and Marketing. New Advances and Challenges for Practice*, 100-116.

Goss, R. (2002). *Effective Communication Strategies for Institutions of Higher Education*. University Press.

Grönroos, C. (2007). *Service Management and Marketing: Customer Management in Service Competition* (3rd ed.). John Wiley & Sons.

Harrison-Walker, L. (2001). *The Impact of Communication on University Reputation: A Comparative Study*. Journal of College Student Development, 42(5), 522-530.

Harrison-Walker, L. J., (2009). "Strategic Positioning in Higher Education", Academy of Educational Leadership Journal, 13:1, 103-111.

Hemsley-Brown, J., & Oplatka, I. (2006). *Universities in a Competitive Global Marketplace: A Systematic Review of the Literature on Higher Education Marketing*. International Journal of Public Sector Management, 19(4), 316-338.

Houser, J. (2016). *Nursing research: Reading, using and creating evidence: Reading, using and creating evidence*. Jones & Bartlett Learning.

Ivy, J. (2001). *Higher Education Institution Image: A Correspondence Analysis Approach*. International Journal of Educational Management, 15(6), 276-282.

Judson, K. M., Gorchels, L. ve Aurand, T. W. (2006). Building a university brand from within: A comparison of coaches' perspectives of internal branding. Journal of Marketing for Higher Education, 16(1), 97-114. doi:10.1300/J050v16n0105.

Kalafatis, S. P., Tsogas, M. H., & Blankson, C. (2000). Positioning strategies in business markets. *Journal of Business & Industrial Marketing*, *15*(6), 416-437.

Kalra, A., & Goodstein, R. C. (1998). The impact of advertising positioning strategies on consumer price sensitivity. *Journal of marketing research*, *35*(2), 210-224.

Karaçor, S. (2009). Pazarlama İletişiminde Marka Yaratma Odaklı Konumlandırma Stratejileri [Brand Building Focused Positioning Strategies in Marketing Communications] *asodosya, Ankara Sanayi Odası*, 27-39.

Kemp, S., Madden, G., & Simpson, M. (1998). Emerging Australian education markets: A discrete choice model of Taiwanese and Indonesian student intended study destination. *Education Economics*, *6*(2), 159-169.

Kethüda, Ö. (2021). Positioning strategies and rankings in the HE: congruence and contradictions, Journal of Marketing for Higher Education, DOI: 10.1080/08841241.2021.1892899.

Kinser, K. (2006). *From Main Street to Wall Street: The Transformation of For-Profit Higher Education.* ASHE Higher Education Report, 31(5). San Francisco: Jossey-Bass.

Kotter, P., & Keller, K. L. (2009). Marketing Management (13. pressing.). NJ: Pearson Prentice Hall.

Lincoln, Y.S. & Guba, E.G. (1985). *Naturalistic Inquiry*. California: SAGE

Litten, L. H. (1980). "Marketing Higher Education: An Overview." *Journal of Higher Education*, 51(5), 485-502.

Lowry, J. R., Owens, B. D., (2001). "Developing a Positioning Strategy for a University", Services Marketing Quarterly, 22:4, 27-41.

Maggard, J. P. (1976). Positioning Revisited: Is positioning something old, new, or borrowed? *Journal of Marketing*, *40*(1), 63-66.

Maringe, F., & Gibbs, P. (2008). Marketing higher education: Theory and practice. McGraw-Hill Education (UK).

Mazzarol, T., & Soutar, G. N. (2002). “Push-pull” factors influencing international student destination choice. *International journal of educational management*, *16*(2), 82-90.

Mazzarol, T., & Soutar, G. N. (2008). *The Global Market for Higher Education: Sustainable Competitive Strategies for the New Millennium*. Edward Elgar Publishing.

Megan, K. M., Rachel, G., & Musa, P. (2011). Utilizing brand audit to develop university brand: A case study. Proceedings of ASBBS, 18, 964-975.

Morgan, R. E., Strong, C. A., & McGuinness, T. (2003). Product-market positioning and prospector strategy: An analysis of strategic patterns from the resource-based perspective. *European Journal of Marketing*, *37*(10), 1409-1439.

Morris, M., & Baddoo, N. (2007). *Communicating Institutional Value: The Role of Leadership Messages*. Journal of Higher Education Marketing, 18(3), 45-59.

Polat, S. (2011). Üniversite Öğrencilerinin Örgütsel İmaj Algıları ile Akademik Başarıları Arasındaki İlişki Düzeyi. Kuram ve Uygulamada Eğitim Bilimleri, 11(1), 249-262.

Romaniuk, J. (2001). Brand positioning in financial services: A longitudinal test to find the best brand position. *Journal of Financial Services Marketing*, *6*, 111-121.

Sevier, R.A., (2002). “University Branding: 4 Keys to Success”, University Business, 27-28.

Sutherland, M. (2020). *Advertising and the mind of the consumer: what works, what doesn't and why*. Routledge.

Shah, S., & Harsha, P. P. (2011). Importance of human resource management in achieving customer relations. *Annals Management Research*, *1*(2), 7-13.

Smith, L. (2010). *Strategic Timing in Institutional Communications: Implications for Stakeholder Engagement*. Higher Education Review, 32(4), 76-89.

Stephens, V. L. (2023). Mediating the World Class Imperative: US Automotive Journalism, the Big Three, and the Globalized Automotive Industry of the 1980s. *Automotive History*, 76.

Van Dijk, T. A. (Ed.). (1997). *Discourse as structure and process* (Vol. 1). Sage.

Worthy, J. C. (1992). The more Things Change, the more they Stay the Same: The Original Sears, Roebuck and Co. Studies. *Journal of Management Inquiry*, *1*(1), 14-38.

Yıldırım, A., & Şimşek, H. (2013). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri*. Genişletilmiş 9. Baskı, Seçkin Yayıncılık.

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How do Attitudes towards Electronic Resources Use and Information Literacy Skills Predict the Use of Electronic Resources by Health Sciences Postgraduates in Nigeria?

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Abstract

This study attempts to investigate how information literacy skills and attitudes towards electronic resources use predict the use of electronic resources by health sciences postgraduates in Nigeria. A survey research design using the quantitative approach was employed in the study. Further, a two-stage sampling technique [purposive and non-proportional quota] was used to select a sample of 304 health sciences postgraduates. A structured questionnaire was used to collect data. Descriptive (frequency count and percentage) and inferential statistics (Pearson Product Moment Correlation and standard/hierarchical multiple regression) were used to analyse the study data. The hierarchical multiple regression model was used to ascertain the significance of the predictors of the use of electronic resources. The major finding was that the best fitting model for predicting the use of electronic resources would be the linear combination of the constant, information literacy skills and attitudes towards electronic resources use. The study suggests enhanced and sustained positive attitudes and continuous information literacy skills development programmes in higher institutions to further encourage the use of electronic resources by health sciences postgraduates.

Keywords: Attitudes towards e-resources use, Health sciences postgraduates, Information literacy skills, Use of e-resources, Nigeria

Introduction and Background Literature

Electronic resources [also known as e-resources or electronic information resources (EIR)] are digital information and materials accessed and used via numerous devices, including computers, e-readers, smartphones, and tablets (Acheampong et al., 2020; Chimah & Udo, 2015). They include e-books, e-journals, multimedia materials, online databases, and other forms of digital content that have become accepted because of their accessibility, cost-effectiveness, eco-friendliness, and efficiency features (Ajayi et al., 2023; Akuffo & Budu, 2019; Kelefa et al., 2017, Shoaib et al., 2022). Another level of acceptance of e-resources is an institutional commitment to ensure the provision and dissemination of information to students that e-resources conveniently provide (Hong & Jo, 2017; Makinde et al., 2022). E-resources have become indispensable research tools that complement the print collection of long-established academic libraries (Adeniran & Onuoha, 2018; Hashim et al., 2022). In support of the aforementioned, Mohammed (2015) maintained that it is challenging for present-day libraries to completely satisfy customers' needs by employing exclusively conventional information resources considering the currency, depth and quality of diverse customers' information needs. In recent decades, digitalised information resources have been engaged to render library services to different clientele in developed and developing nations (Shoaib et al., 2022). This has made the influence of e-resources to be felt in education, research, and healthcare. Health sciences encapsulate various academic disciplines, plus STEM fields which centre on health, or healthcare, as primary parts of their focus of attention

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(Haruna & Hu, 2018). There are great benefits in employing e-resources by health sciences postgraduates as health sciences postgraduate education progressively heightens with a yearning to enhance human and animal health through scientific research.

Disparate studies have observed postgraduate students' inability to use e-resources including health sciences postgraduates (Adeniran & Onuoha, 2018; Adeleke & Emeahara, 2016; Barfi & Afful-Arthur, 2018; Mathew et al., 2021). In understanding health sciences postgraduates' use of e-resources, this study considered the constructs of information literacy skills and attitudes towards e-resources use. The ineffective use of many e-resources could be due to individual factors connected to users [such as information literacy skills and attitudes] (Ahmed, 2013). Information literacy requires that a person recognises when information is needed, and can find, scrutinise, utilise and then use information ethically to address identified problems or make decisions (Makinde et al., 2023). A reference point in the aforesaid definition is 'ability' which refers to possessed related skills to get information. Information literacy competence also demonstrates the ability of any user to identify information needs, search for relevant resources to meet those needs and analyse, evaluate, synthesise and communicate the resultant knowledge (Tella, 2015). The Association of College and Research Libraries [ACRL] (2016) also describes information literacy skills as the set of integrated abilities encompassing the reflective discovery of information and the use of information in creating new knowledge and participating ethically in communities of learning. Information literacy skills enable learners to access and evaluate information in response to identified needs, define key terms and topics, locate information and present information in the appropriate context (Yevelson-Shorsher & Bronstein, 2018). The possession of skills related to information literacy is essential for the facilitation and generation of new knowledge, further research, and the development of universities and society (Makinde et al. 2023). Concerning attitude, Vargas-Sanchez et al. (2016) describe it as how a person views and evaluates something to respond positively or negatively towards a particular idea, object, person, or situation. Attitude is also an evidence-based practice of positive or negative evaluation of behaviour (Fishman et al., 2021). It is a psychological state of the mind that affects the way a person thinks about situations eventually determining behaviour (Leonard, 2019).

In the use of e-resources by postgraduate students of the Faculties of Arts, Education, Sciences and Social Sciences, computer literacy was observed to have a very strong, positive and significant relationship with usage (Abubakar & Adetimirin, 2015). Similarly, the ICT literacy and ICT skills [being critical aspects of information literacy skills] of postgraduates significantly influenced the use of e-resources with a positive correlation between ICT literacy and ICT skills and the use of e-resources (Suleiman & Enna, 2022). Comparably, information literacy and IT skills of general postgraduates were statistically significant determinants of library use – assisting students in the positive use of library materials – this could affect e-resources use (Mathew et al., 2021). There also exists a significant relationship among general postgraduates concerning information evaluation capability, knowledge of e-resources, search skills and their e-resources use (Ugwulebo & Okuonghae, 2021). However, regarding science postgraduates, a low, significant and positive correlation between information literacy skills and e-resources use was highlighted (Adeniran & Onuoha, 2018). On the contrary, postgraduates excluding those in management sciences demonstrated that computer literacy skills did not affect e-resources use (Ajegbomogun et al., 2022). The above-mentioned studies concern postgraduates of diverse fields apart from the health sciences. These studies demonstrate that the construct [information literacy skills] and similar constructs such as computer literacy skills, ICT literacy and ICT skills have differing effects on e-resources use by postgraduates of diverse fields and institutions. It is hardly surprising that in an earlier postgraduate study by Ndubuisi and Udo in 2013, they stressed the adoption and enhancement of information literacy training programmes to improve searching skills and general use of e-resources.

Since some health sciences postgraduates may belong to other professions such as lecturers, researchers and technologists, among others, certain studies become relevant to understanding the findings of this paper. Information literacy skills were found to have a strong, positive and significant influence on e-resources use by lecturers in diverse disciplines (Ajayi et al., 2023; Ndagi & Madu, 2018). Regarding science faculty, ICT literacy skills significantly influenced e-resources use (Akwaowo et al., 2021;

Ogunsanya & Buraimo, 2020). Librarians also reported that there was a significant relationship between basic computer competencies, information retrieval competencies, Web 2.0 competencies and the use of emerging technologies (Omehia et al., 2021). These emerging technologies could be in the form of e-resources. Relatedly, scientists and technologists at a research institute [with master's and doctoral qualifications] indicated a lack of information literacy skills as an impediment to accessing e-resources (Acheampong et al., 2020). Diverse research papers, both Nigerian and transnational studies involving health sciences postgraduates have uncovered that the level of the use of e-resources is connected to search technique skills, experience, information literacy competencies, student background (science or non-science), and educational qualification (Adeleke & Emeahara, 2016; Kaur, 2018; Ruzegea & Msonde, 2021; Wang & Bai, 2016). In addition, regarding health sciences postgraduates, a low, positive, and significant relationship between information literacy skills and the use of e-resources has also been identified (Adeleke & Emeahara, 2016). As well, a high and encouraging attitude has been observed in health sciences postgraduates concerning the use of e-resources (Jbeen et al., 2022; Okunoye, 2018). The above-reviewed related literature reveals a gap pointing to insufficient studies on health sciences postgraduates relating to the study constructs and indicators.

Many African studies including that of Nigeria showed that postgraduates do not use e-resources as often anticipated by university management, despite the huge financing of making them available (Adeleke, 2021; Ankrah & Atuase, 2018; Fingillah, 2023; Joshua & King, 2020; Mollel & Mwantimwa, 2019; Olajide & Omolehin, 2021; Oseghale, 2023; Shaibu & Mohammed, 2017). Consequently, it is unsurprising that knowledge discovery is currently an issue confronting many postgraduates including health sciences postgraduates (Batallas-González & Garzozi, 2021; Kalanat, 2022; Sharma, 2022). Imsong and Kharbudon (2016) observed that in using e-resources, students lacked skills in evaluating and locating information, which impeded effective use. Akuffo and Budu (2019) noted that some of the constraints to e-resources use were search and retrieval problems. Ankrah and Atuase (2018) also reported that about two-thirds of their studied postgraduates mentioned that insufficient search skills hindered them from accessing e-resources. Deficient information literacy skills were also found as elements responsible for low e-resources use by Mtega et al. (2014). The studies of Akuffo and Budu (2019), Ankrah and Atuase (2018), Mtega et al. (2014) and Imsong and Kharbudon (2016) have pointed to information literacy skills through their indicators as influencing e-resources use. Additionally, Tandi Lwoga and Sukums (2018) uncovered that information literacy competence as a factor predicted self-reported use of e-resources among health sciences faculty, some of these faculty could be postgraduates. Could the results of these existing studies be proven to be valid regarding health sciences postgraduates for the current study response and explanatory variables?

Statement of the Problem

Many of the earlier mentioned studies focused on general postgraduates and health sciences faculty and not specifically health sciences postgraduates. Some studies have also covered health sciences undergraduate students—such as Bashorun et al. (2021)—dwelling on the factor of information literacy competence, and Osinulu (2020)—focusing on the factor of awareness—as they affect the use of e-resources. However, health sciences postgraduates may exhibit a different perspective regarding the prediction of information literacy skills and attitudes towards e-resources use concerning the use of e-resources in Nigeria. Moreover, demographic characteristics and the indicators of information literacy skills and attitudes have also been scantily studied on how they predict the use of e-resources by health sciences postgraduates in Nigeria.

In light of the above, the insufficient research conducted in this aspect has left a research gap judging from the above-mentioned extant literature on the use of e-resources among health sciences postgraduates, particularly in Nigeria, regarding the response and explanatory variables. Health sciences postgraduates remain the driving force and future of the Nigerian health care system and sector, and, therefore, deserve extra attention concerning information provision factors. This will inform and review academic library policies and practices aimed at improving health sciences postgraduates' academic and research quality. It will also justify the financing of e-resources by university management.

Research Questions

To achieve the purpose of the study, the following research questions were raised:

1. How well do the two measures of information literacy skills and attitudes towards e-resources use predict the use of e-resources by health sciences postgraduates in public universities in southwest Nigeria? How much variance in the use of e-resources scores can be explained by scores on these two scales?
2. Which is the best predictor of the use of e-resources – information literacy skills or attitudes towards e-resources use?
3. Which of the indicators of attitudes towards e-resources use has an individual significant influence on the use of e-resources by health sciences postgraduates in public universities in southwest Nigeria?
4. Which of the indicators of information literacy skills has an individual significant influence on the use of e-resources by health sciences postgraduates in public universities in southwest Nigeria?
5. If we control for the possible effect of gender and programme of study, is our set of variables (information literacy skills, attitudes towards e-resources use) still able to predict a significant amount of the variance in the use of e-resources?

Conceptual Model

The conceptual model (Figure 1) is designed by the researchers based on the understanding of the study models and theory [as seen in the method section] and the literature reviewed assisting to comprehend the gap the study seeks to fill. The model describes the relationship between the variables – information literacy skills, attitude towards the use of electronic resources, and the use of electronic resources by health sciences postgraduates. First, it is assumed in this study that the health sciences postgraduates who could identify, search, locate, retrieve, and evaluate information would use electronic resources satisfactorily. Second, the study presumes that health sciences postgraduates who have the appropriate affective, behavioural and cognitive attitudes would use electronic resources better. The study also assumes that health sciences postgraduates who jointly possess and apply sufficient information literacy skills and exhibit the right attitudes towards the use of electronic resources to accomplish tasks will make use of electronic resources. In other words, the use of electronic resources is dependent on information literacy skills and attitude towards the use of electronic resources.

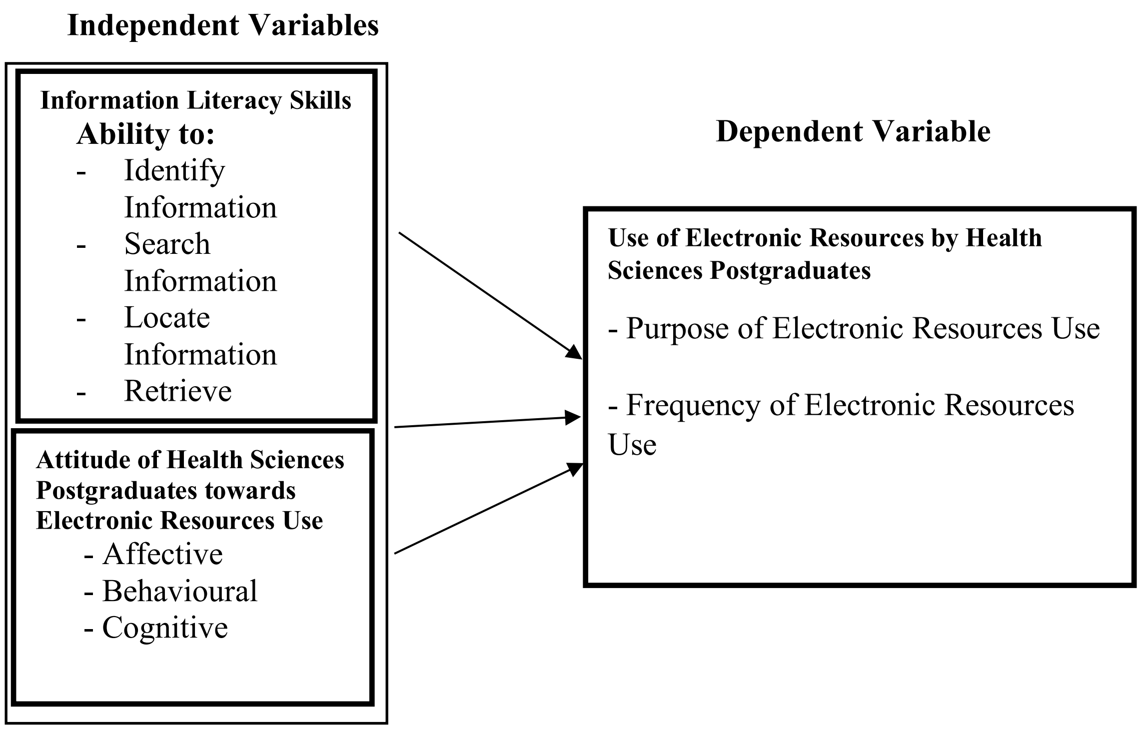

Figure 1. Conceptual Model for Attitudes Towards Electronic Resources Use, Information Literacy Skills, and Use Of Electronic Resources by Health Sciences Postgraduates

Method

Theoretical Perspective

In understanding the use of e-resources by health sciences postgraduates, this study adapted the Use and Gratification Theory (UGT). The theory was conceived in the early 1940's by Blumler and Katz (Blumler & Katz, 1974). The UGT deals with understanding why people use certain types of media, what needs they have to use them, and what gratifications they get from using them. Despite criticisms, modern thought suggests that the UGT is on the path of revitalisation due to the current communication technology (Sellers, 2020; Xu et al., 2023). The UGT is relevant to this study because it emphasises the usage of media such as e-resources connected to how useful they are and the satisfaction (gratification) that users get from them. The vital assumptions of the UGT also point forward to its adoption in this study, that is, its concern with user goal [e-resources use is goal-oriented]. Further, e-resources are selected because they will satisfy the specific requirements of users and they are always in competition with other types of searching and retrieval media. The UGT helped in the formulation of questions on the purposes of use of electronic resources (Alhabash & Ma, 2017; Blumler & Katz, 1974; Ho & See-To, 2018; Phua et al., 2017). These purposes can be found in the larger study questionnaire as indicated in the footnotes.

Eisenberg and Berkowitz in 1990 came up with the Big Six information skills model (Big6) expanding information literacy knowledge and skills. This study adapted the elements of the Big6 [as indicators of information literacy] including task definition, information-seeking strategy, location and access, use of information, synthesis, and evaluation to determine the information literacy skills of health sciences postgraduates. This model as applied in this study provided important contexts for studying information literacy skills as exhibited in human behaviour. In addition, the model elucidated the nature of the problem to be solved regarding information literacy. The model assists people in solving problems or making decisions using available information described in a six-stage model that incorporates skills in a systematic approach to information problem-solving (Chou et al., 2023; Eisenberg & Berkowitz, 1990; Karim, 2020). The Big6 in addition to the works of ACRL (2016), Eisenberg (2008), and Eisenberg et al. (2004) contributed in the preparation of questions that helped in assessing the information literacy skills of health sciences postgraduates.

In comprehending attitudes towards electronic resources use by health sciences postgraduates (one of the independent variables), the study embraced Ostrom's (1969) model of attitudes (ABC model). This model, from the social psychology domain, adopted the three-component framework of attitudes denoted as A (affect), B (behaviour), and C (cognition). Studies such as Balogun (2016), Hitt et al. (2017), Luthans et al. (2021) and Scandura (2017) have also adopted this model incorporating three components – affective, behavioural, and cognitive. These aforementioned studies as well as the works of Ajzen and Fishbein (2005), Breckler (1984), and DeVellis (2012) assisted in the formulation of questions on the attitudes of health sciences postgraduates. The affective component of attitudes measures how people feel using e-resources (Vargas et al., 2016; Rocklage & Fazio, 2018). It is the attitude that has to do with emotions, feelings and moods, particularly to a person in question and others. The second is the behavioural component. It expresses intentions or actions towards a particular object based on cognitive and affective reactions. The last component of attitudes is the cognitive aspect, which is a part of attitude related to a person's general knowledge. It is connected to beliefs, ideas and thoughts. The cognitive aspect of attitudes weighs an e-resource's applicable qualities or usefulness. In the social sciences and humanities, scholars consider affect and cognition as important factors in human information behaviour (O'Brien et al., 2017). The adoption of the ABC model of attitudes allowed the researchers to investigate how respondents felt, thought and interacted with the attitude object, which in this case is e-resources use.

Respondents

This study employed a survey research design with a quantitative approach. The unit of analysis was based on the health sciences postgraduates who utilised e-resources for their various undertakings. The questionnaire was administered in six public universities [three federal universities and three state universities] in the southwest region of Nigeria. The two-stage sample of 355 was covered for this study [employing purposive and non-proportional quota sampling techniques] out of a population of 1,233 health sciences postgraduates. The purposive sampling technique helped select public universities with health sciences faculties and those with five common departments (anatomy, nursing, medical rehabilitation, physiology and public health). Secondly, the non-proportional quota sampling using 40% was used to select respondents from the departments. Eventually, 304 respondents [from both master and doctoral programmes] (n=304; 174 females and 130 males) completed analysable copies of the questionnaire. Each respondent returned a signed informed consent. We expected that our sample would be representative since six public universities were appropriately selected in different states and cities in the region. Public universities in Nigeria share similar characteristics in terms of funding and resource allocation/availability (Ogunode et al., 2022; Ogunode et al., 2023).

Data Collection

The data collection tool employed in the study was a structured questionnaire. It was utilised because data collected through a structured questionnaire are not difficult to compile for instant statistical analysis and are comparatively unlikely to go through respondent bias (Cheung, 2014).

Instrument Development

The self-reported structured questionnaire consisted of five sections: (1) demographic characteristics; (2) purpose of e-resources use by health sciences postgraduates (adapted from Blumler & Katz, 1974); (3) frequency of e-resources use by health sciences postgraduates (adapted from Blumler & Katz, 1974); (4) information literacy skills (adapted from ACRL, 2016; Eisenberg, 2008; Eisenberg & Berkowitz, 1990; Eisenberg et al., 2004); and (5) attitudes towards e-resources use by health science postgraduates (adapted from Ajzen & Fishbein, 2005; Breckler, 1984; DeVellis, 2012; Ostrom, 1969).

The first section collected demographic information about the respondents including faculty, department, programme of study and gender. Faculty and department were open-ended questions and programme of study (master or PhD) and gender (male or female) were binary scale questions. The second section elicited questions on the use of e-resources by health sciences postgraduates – this was based on the frequency and purpose of use. The frequency of use was based on a 5-point Likert scale (Daily, Weekly, Monthly, Less Often and Never) while the purpose of use was based on a 4-point Likert scale (Strongly Agree, Agree, Disagree and Strongly Disagree). The third section measured information literacy skills. The items in this section were personally developed from the existing works of ACRL (2016), Eisenberg (2008), Eisenberg and Berkowitz (1990), and Eisenberg et al. (2004). To measure the construct of information literacy skills appropriately it was split into six indicators namely information identification skills, information searching skills, location of information skills, retrieval skills, evaluation of information skills, and use of information skills. All these indicators had their subscales and they were measured by a 4-point Likert-type scale of Very True of Me, True of Me, Not True of Me and Very Untrue of Me. The fourth section of the structured questionnaire contained questions on attitudes towards e-resources use. The items in this section were also personally developed from the extant works of Ajzen and Fishbein (2005), Breckler (1984), DeVellis (2012), and Ostrom (1969). This was also measured in line with three indicators of affective, behavioural and cognitive with all of them having their subscales. A 4-point Likert-type scale of Strongly Agree, Agree, Disagree and Strongly Disagree was also used.

Validity and Reliability

The quality of the questionnaire draft was assessed in two ways. Firstly, copies were given to senior academics for their expert opinions and input. Their corrections as inputs were made. Secondly, Cronbach's alpha statistical test was employed to test the instrument reliability. This involved a pilot study before the main data collection. The questionnaire was administered to 30 health sciences postgraduates of the University of Ilorin – a public university in north-central Nigeria's geopolitical zone. This population was not part of the selected respondents. The result of the statistical reliability test is presented in Table 1. The pre-testing results indicated the significance of alpha value ranging from .75 to .85. Overall, it was .80 for the use of e-resources, 0.97 for information literacy skills and 0.79 for attitudes towards e-resources use.

The pilot study as a trial run of our study did not only help with confirming the reliability, but it also aided in substantiating the construct validity. To achieve construct validity, the researchers ensured that indicators and measurements were meticulously developed based on relevant current knowledge of the study constructs. The questionnaire (can be checked in the URL of the footnotes) included only pertinent questions that measured the known indicators of attitudes towards the use of electronic resources, information literacy skills, and the use of electronic resources.

Table 1. Criteria for positioning strategies

Variable	No of Items	Cronbach's Alpha Value
Use of e-resources	**38**	**0.80**
Purpose of e-resources use	7	0.81
Frequency of e-resources use	31	0.79
Information literacy skills	**30**	**0.97**
Identify Information	5	0.79
Search Information	5	0.85
Locate Information	5	0.83
Retrieve Information	5	0.75
Evaluate Information	5	0.78
Use Information	5	0.85
Attitudes	**15**	**0.79**
Affective	5	0.75
Behavioural	5	0.82
Cognitive	5	0.80

Data Analysis
The data collected for the research were coded and analysed using descriptive statistics and inferential statistics employing the Statistical Package for the Social Sciences (version 24). The data were analysed at the 0.05 level of significance since it is a behavioural science study. Demographic analysis was done using frequency count and percentage [descriptive analysis]. Further, the analysis of the variables for the research questions was done using Pearson Product Moment Correlation (PPMC) and standard and hierarchical multiple regression [inferential statistics] because of the linear relationships of the variables.

Ethical Approval
Before data collection, ethical approval was taken from the research and ethics committee of the researchers' university. Approvals were also taken from all constituted authorities of the studied universities to conduct the research. The study was carried out between December 2022 and June 2023.

Findings

Demographic Characteristics Results
The demographic characteristics of the study sample showed that the majority of the respondents (134, 44.1%) were from the Department of Public Health while the least respondents were from the Medical Rehabilitation Department (23, 7.6%). Approximately 57% of the respondents – constituting the majority - were females. The highest number of respondents (209, 68.8%) pursued a master's degree qualification.

Information Literacy Skills and Attitudes towards E-resources Use Predicting the Use of E-resources
Employing the standard multiple regression analysis, the statistically significant relationships among the independent variables (information literacy skills and attitudes towards e-resources) and the dependent variable (use of e-resources) are presented in Table 2. The data in Table 2 showed that there was a positive and strong statistically significant relationship between information literacy skills and the use of e-resources by health sciences postgraduates in public universities in southwest Nigeria (r = .769,

n = 304, p < .05). However, there was no correlation in the lower part of Table 2 because a correlation matrix is symmetrical and half of the correlation coefficients shown in the matrix are redundant and may be unnecessary.

Table 2 also reveals that the correlation coefficient between the variables of attitudes towards e-resources use and the use of e-resources was significant and there existed a positive but moderate relationship between the variables (r = .418, n = 304, p < .05). This implied a positive but moderate statistically significant relationship between attitudes towards e-resources use and the use of e-resources by health science postgraduates in public universities in southwest Nigeria. The scales of both information literacy skills and attitudes towards e-resources use correlate substantially with the use of e-resources (r = .769 and .418 respectively). The correlation between each of the independent variables was not too high allowing for all variables to be retained.

Table 2. Correlation between the independent variables and the dependent variable

Variable		Use of Electronic Resources	Information Literacy Skills	Attitude
Pearson Correlation	Use of electronic resources	1.000	.769	.418
	Information literacy skills	.769	1.000	303
	Attitude	.418	303	1.000
Sig. (1-tailed)	Use of electronic resources		.000	.000
	Information literacy skills	.000		
	Attitudes	.000	.000	
n	Use of electronic resources	303	303	297
	Information literacy skills	303	301	303
	Attitude	297	301	301

Variance in the Use of E-resources Explained by Information Literacy Skills and Attitudes towards E-resources Use Scores

The extent to which the two measures of information literacy skills and attitudes towards e-resources use predicted the use of e-resources by health sciences postgraduates in public universities in southwest Nigeria and the variance in the use of e-resources scores being explained by scores on the two scales of the independent variables are presented in Table 3. Looking at the model summary (Table 3), the value of R Square talked about how much of the variance in the dependent variable (use of e-resources) was explained by the model (which included the variables of information literacy skills and attitudes towards e-resources). In this case, the value was .143. This meant that our model (which included information literacy skills and attitudes towards e-resources) explained 14.3% of the variance in the use of e-resources.

Table 3. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.378[a]	.143	.137	1.98

[a.] Model Predictors (Constant) Information Literacy Skills, Attitudes to E-resources Use

[b.] Dependent Variable: Use of E-resources

Best Predictor of the Use of E-resources

The best predictor of the use of e-resources out of the two independent variables (information literacy skills and attitudes towards e-resources) is presented in Table 4. From Table 4, the largest Beta coefficient was .313, which is for attitudes towards e-resources use. This meant that this independent variable was the best predictor of the use of e-resources (dependent variable). Therefore, the attitudes towards e-resources use made the strongest unique contribution to explaining the dependent variable when the variance explained by all other variables in the model is controlled for. The Beta value for information literacy skills was lower (.120), indicating that it made less of a contribution.

Table 4. Coefficients summary of information literacy skills and attitudes to e-resources use by health sciences postgraduates

Model		**Unstandardized Coefficients B**	**Std. Error**	**Standardized Coefficients Beta**	**t**	**Sig.**
1	Constant	14.227	1.678		8.479	0.00
	Information literacy skills	.026	.013	.120	2.045	.042
	Attitudes	.160	.030	.313	5.351	0.00

[a.] Dependent Variable: Use of e-resources

To assess the statistical significance of the result, it is necessary to look at Table 5 labelled ANOVA. The model in this study reached statistical significance (Sig. = .000; this means p is less than 0.05).

Table 5. ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	197.920	2	98.960	25.132	.000[b]
	Residual	1185.238	301	3.938		
	Total	1383.158	303			

[c.] Predictors (Constant) Information Literacy Skills, Attitudes to E-resources Use
[b.] Dependent Variable: Use of e-resources

Indicators of Attitudes towards E-resources Use having an Individual Significant Influence on the Use of E-resources

The indicators of attitudes towards e-resources use that had an individual significant influence on the use of e-resources by health sciences postgraduates in public universities in southwest Nigeria are presented in Table 6. The results showed that only two indicators of attitudes - affective attitude ($\beta = 0.281$; $p < 0.000$) and cognitive attitude ($\beta = 0.214$; $p < 0.000$) - being less than 0.05 - had an individual significant influence on the use of e-resources by health sciences postgraduates in public universities in the southwest, Nigeria.

Table 6. Coefficients summary of attitudes towards e-resources use indicators and use of e-resources

Model		**Unstandardized Coefficients B**	**Std. Error**	**Standardized Coefficients Beta**	**T**	**Sig.**
1	**(Constant)**	**3.952**	**1.549**		**9.005**	**.000**
	Affective	.378	.081	.281	4.657	.000
	Behavioural	-.007	.055	-.008	-.134	.894
	Cognitive	.261	.072	.214	3.599	.000

Indicators of Information Literacy Skills having an Individual Significant Influence on the Use of E-resources

The indicators of information literacy skills that had an individual significant influence on the use of e-resources by health sciences postgraduates of public universities in southwest Nigeria are presented in Table 7. The results indicated that only two indicators of information literacy skills - information searching skills ($\beta = 0.186$; Sig. = 0.021) and use of information ($\beta = 0.156$; Sig. = 0.026) - being less than 0.05 - had an individual significant influence on the use of e-resources by health sciences postgraduates in public universities in southwest, Nigeria.

Table 7. Coefficients summary of information literacy skills indicators and use of electronic resources

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1	**(Constant)**	**19.576**	**1.488**		**13.154**	**.000**
	Information Identification Skills	.085	.087	.075	.985	.325
	Information Searching Skills	.169	.073	.186	2.322	.021
	Location of Information	-.030	.069	-.034	-.445	.657
	Retrieval Skills	-.023	.081	-.020	-.279	.781
	Evaluation of Information	-.028	.064	-.032	-.436	.663
	Use of Information	.175	.078	.156	2.242	.026

Possible Effect of Gender and Programme of Study Control on Variance in E-resource Use

The ability of the model (which includes information literacy skills and attitudes to e-resources use) to predict the use of e-resources scores, after controlling for a number of additional variables (gender, programme of study) is presented in Table 8. All characteristics in our study were divided into two sets. These were individually analysed using hierarchical multiple regression analysis. Since a conventional multiple linear regression analysis assumes that all cases are independent of each other, a different kind of analysis is required when dealing with nested data. This was why we applied hierarchical multiple regression for research question five. Hierarchical linear modelling allowed us to model nested data more appropriately than a regular or standard multiple linear regression. This involved entering the variables in blocks or steps in a predetermined order (not allowing the computer to choose). In the model summary tables, there are two models listed (Tables 8, 9 and 10). Model l included the first block of variables that were entered (gender and programme of study). Model 2 included all the variables that were entered in both blocks (gender, programme of study, information literacy skills, and attitudes to e-resources use).

Hierarchical multiple regression analysis was used to assess the ability of two control measures (information literacy skills, and attitudes to e-resources use) to predict the use of e-resources, after controlling for the influence of gender and programme of study. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. Gender and programme of study were entered in Step 1, explaining 9% of the variance in the use of e-resources. After entry of the information literacy skills scale and attitudes towards e-resources use scale at Step 2 the total variance explained by the model as a whole was 54.6%, $F(4,301) = 12.28$, $p < .05$. The two control measures explained an additional 49% of the variance in use of e-resources, after controlling for gender and programme of study, R squared change = .49, F change $(2, 301) = 159.73$, $p < .05$.

Table 8. Hierarchical multiple regression model summary

Model	R Change	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F
1	172	.091	.086	4.78	.091	8.463	2	302	.000
2	436	.546	.541	3.36	.489	159.732	2	301	.000

Table 9. ANOVA results

Model		Sum of Squares	df.	Mean Square	F	Sig.
1	Regression	620.032	2	41.384	2.863	.000
	Residual	763.126	302	2.132		
	Total	1383.158	304			
2	Regression	276.952	4	72.452	12.284	.000
	Residual	1106.206	300	3.814		
	Total	1383.158	304			

Table 10. Model coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**t**	**Sig.**
Model 1					
(Constant)	29.096	.796	-----	27.302	.000
Programme of study	-.497	-.150	-.204	-3.712	.000
Gender	-.042	.034	-.031	-1.126	-162
Model 2					
(Constant)	42.922	1.269	-----	34.012	.000
Programme of study	-.157	.106	-.064	-1.201	.182
Gender	-.032	.018	-.056	-1.124	.324
Information literacy skills	-.638	.073	-.347	-8.374	.000
Attitudes to e-resources	-.159	.033	-.268	5.263	.000

From Table 10, the β coefficients for the constant and four predictors of the use of e-resources were as follows; Constant β=42.922, t=34.012, p=.000: significant; Programme of study, β=-.157, t=-1.201, p=.182: not significant; Gender, β=-.032, t=-1.124, p=.324: not significant; Information literacy skills, β=-.638, t=-8.374, p=.000: highly significant; Attitudes to e-resources use, β=-.159, t=5.263, p=.000: highly significant.

In the final model, only two control measures were statistically significant, with the information literacy skills scale recording a higher beta value (beta = -.35, p< .05) than the attitudes to e-resources scale (beta = -.27, p< .05). The best fitting model for predicting use of e-resources from the above analysis would be the linear combination of the constant, information literacy skills and attitudes towards e-resources use.

The Model

Y(Use of e-resources) = β_0+β_1(Information literacy skills)+β_2(Attitudes towards e-resources use

Where, β_0, β_1 and β_2 are respectively 42.922, -.638 and -.159.

Discussion

Predicting the Use of E-resources by Health Sciences Postgraduates – PPMC and Multiple Linear Regression Outcomes

The use of e-resources explanatory variables considered in this study was information literacy skills and attitudes towards e-resources use [together with their different indicators]. The results of the regular or standard multiple linear regression analysis demonstrate that, of these variables, attitudes towards e-resources use - limited here to affective, behavioural and cognitive - was the best predictor of the use of e-resources (dependent variable). Nonetheless, information literacy skills were lower compared to attitudes towards e-resources use, indicating that it makes less of a contribution to the use of e-resources use. Because attitude is an indication of the user's perspective and assessment regarding positive or negative responses concerning an idea or object (Vargas-Sanchez et al., 2016) and also affects the psychological mindset of the user determining behavioural disposition towards a case (Fishman et al., 2021; Leonard, 2019) as well as the explanatory variable (attitudes towards e-resources use) being the best predictor of e-resources use by health sciences postgraduates, the impact of these findings become all too evident. In this study, we have demonstrated the significance of acceptance, affirmation, certainty, characterised presence and constructive quality that suitable attitudes can bring to the use of e-resources. The study further illustrated that out of three indicators of attitudes towards e-resources use, affective attitude and cognitive attitude had an individual significant influence on the use of e-resources by health sciences postgraduates. The self-reported optimistic data on the affective component of attitudes point to how respondents feel using e-resources - it depicts the high-level emotions, feelings and moods that they attach to the use of e-resources. Furthermore, the results on the relevance of the cognitive aspect of attitudes indicate that postgraduates have a pragmatic general knowledge about the use of e-resources. Due to this cognition, they are most likely going to be capable of weighing the applicable qualities and usefulness of e-resources - positively affecting usage. This is consistent with previous research that the use of e-resources is associated with the attitudes of the users towards the object (Jbeen et al., 2022; Kaur, 2018; Okunoye, 2018). Users in these studies demonstrated that their use of e-resources including e-databases and e-books are connected to some reliable qualities such as ease of finding information and the assistance given by e-resources in completing tasks encouraging positive attitudes regarding e-resources utilisation. Our results appear to be a contradiction with Wang and Bai (2016). Wang and Bai studied postgraduates who reported low attitudes towards the use of e-books negatively affecting e-books adoption and acceptance due to the period of e-book evolution. The study of Wang and Bai compared to our study apparently points to further investigation to understand the difference that the nature of expansion or diversification and provision of e-resources and the user-friendliness of e-resources interfaces bring to the use of e-resources.

Happening at the same time in the study as seen from the analyses, the scales of both information literacy skills and attitudes towards e-resources use correlate substantially with the use of e-resources judging from statistically significant relationship and correlation coefficient values. The results from this study show that the respondents affirm individual factors related to users such as information literacy skills and attitudes towards e-resources use affecting the use of e-resources (Ahmed, 2013). This discovery becomes important in this study irrespective of whatever contributions the explanatory variables (information literacy skills and attitudes towards e-resources use) impart on the response variable (use of e-resources).

Overall, the contribution of information literacy skills and attitudes towards e-resources use considered in this study was about 14 per cent of the variance in the use of e-resources based on standard multiple regression. This means that information literacy skills and attitudes towards e-resources use account for a seventh of the variance in the use of e-resources. From the multiple regression analysis, information literacy skills contributed the least in terms of predicting the use of e-resources. However, two of the indicators of this construct had an individual significant influence on the use of e-resources. This is a result that cannot be ignored as the information searching skills and the use of information by this category of postgraduate students play an important role in the use of e-resources helping students to further develop their information literacy skills. These results are consistent with other similar studies (e.g., Adeleke & Emeahara, 2016; Akuffo & Budu, 2019; Ankrah & Atuase, 2018; Imsong & Kharbudon, 2016; Ruzegea & Msonde, 2021; Ugwulebo & Okuonghae, 2021). These studies reiterate the urgency that should be attached to search technique skills and the use of information that the knowledge and experience about e-resources can bring as critical aspects of information literacy skills. This study also reemphasises the good and earlier-in-time recommendation of Ndubuisi and Udo (2013) concerning the implementation of an information literacy instruction strategy for postgraduates targeted at enhancing searching skills to boost the use of e-resources.

Hierarchical Multiple Regression Analysis Outcome

Hierarchical multiple regression analysis after controlling for the possible effect of gender and programme of study found that there were two dominant predictors of the use of e-resources among health sciences postgraduates of public universities in southwest Nigeria. They were information literacy skills and attitudes to e-resources use. This result is consistent with some separate studies in extant research where the explanatory variables of the current study though not jointly studied in these studies proved to have affected the enhanced use of e-resources by postgraduate students. They include studies such as Acheampong et al. (2020), Adeleke and Emeahara (2016), Ruzegea and Msonde (2021) and Tandi Lwoga and Sukums (2018) related to information literacy skills and use of e-resources and Kaur (2018) and Okunoye (2018) connected to attitudes and use of e-resources. Additionally, these studies are associated with science-based respondents including health-related disciplines. Assuredly, the combined study of information literacy skills and attitudes towards e-resources use in connection to the use of e-resources by health sciences postgraduates is one of our study's contributions to the field of library and information science and related disciplines. Thus, first, it is required that these students be assisted to have improved positive attitudes and the augmentation of information literacy skills, in so doing, their use of e-resources will be enhanced. Second, many lecturers, librarians, researchers and policymakers could have the impression that the programme of study and gender may further affect information literacy skills and attitudes towards e-resources use as they predict the use of e-resources. This study has proved otherwise. Consequently, irrespective of the programme of study and gender, unbiased provision must be made by stakeholders regarding provisions for the explanatory variables to improve the use of e-resources by the students.

This study makes an empirical contribution by advancing the research of information literacy skills, attitudes towards the use of e-resources and the use of e-resources among health science postgraduates. Only a few related studies have been published so far on this category of postgraduate students (e.g., Adeleke & Emeahara, 2016; Ruzegea & Msonde, 2021). Comparably, the present study brings to light the few things that are known and further reveals new associations between the independent variables and the dependent variable regarding health sciences postgraduates. The study also provides practical implications. As the health sciences postgraduates demonstrate quite an appreciable attitude towards the use of e-resources and significant information literacy skills, the study offers a positive signal regarding the interest of postgraduates in the use of e-resources and a worthwhile opportunity to maintain the instruction and teaching of information literacy skills in academic libraries and library schools. Furthermore, the study implies that there is a high probability that health sciences postgraduate research will be enhanced as more e-resources will be engaged for research. This makes the high spending on e-resources acquisition in many universities to be justified (Adeleke, 2021; Ankrah & Atuase, 2018; Fingillah, 2023; Hong & Jo, 2017; Joshua & King, 2020; Mollel & Mwantimwa, 2019; Olajide & Omolehin, 2021; Shaibu & Mohammed, 2017; Shoaib et al., 2022).

Limitations and Future Studies

Despite all the efforts made to undertake painstaking research, certain limitations to this study could not be addressed due to resource and time constraints. The first limitation of the study is that the generalisability of the results is limited by the small sample size. Second, is that respondents were not randomly selected. Finally, although the current study utilised a quantitative approach, however, as all surveys employing only a questionnaire would do, generalisation to all health sciences postgraduates in other regions apart from southwest Nigeria, other regions' public and private universities and all climes may not be applicable. Nonetheless, the sample size is representative of the population of the studied context, considering a stance such as Krejcie and Morgan (1970) on the sample size for research activities. However, this study would provoke further studies. Since the study is on public universities, it will be good to also conduct a similar research in private universities to compare results assisting with a better generalisation to health sciences postgraduates in Nigeria. Therefore, future studies should be purely qualitative employing the use of other instruments such as an interview guide and focus group. This could add a rich dimension to the study.

Since our results show that only two indicators of information literacy skills (information searching skills and use of information) have a significant influence on the use of e-resources, increasing the sample size of health sciences postgraduates might enhance the power of the analysis to detect relationships between the study variables. Furthermore, attitudes towards e-resources use should be exhaustively studied because it is the best predictor of the use of e-resources as uncovered in this study. Ascertaining the construct of attitude towards e-resources use will have far-reaching effects on how health sciences postgraduates communicate and collaborate, and how daily tasks and responsibilities are performed.

Conclusion

In conclusion, we emphasise the importance of enhanced and sustained positive attitudes towards e-resources use and continuous information literacy skills development programmes in higher institutions to further encourage the use of e-resources by health sciences postgraduates - this is regardless of the fact that they are postgraduate students. There cannot be an assumption in this matter that since they are a mature set of students, then their positive attitudes and information literacy skills can be considered of high levels - maintaining a high pace of the explanatory variables is sacrosanct for increased use of e-resources by health sciences postgraduates. In this digital age, this study also reiterates the standpoint of Mohammed (2015) and Shoaib et al. (2022) concerning the employment of e-resources to render effective library services to satisfy the information needs of many of these postgraduates who may be digital natives. This will enable them to utilise more e-resources in their academic activities, particularly research. This will in turn solve the problem of scientific knowledge discovery that is a present challenge to health science postgraduates (Kalanat, 2022).

Recommendations

The study recommends the following:

- Sustained institutional programmes to further raise and maintain information literacy skills awareness/application and boost postgraduates' attitudes towards electronic resources use must be implemented since they are statistically significant in determining electronic resource use. Results from the inferential analyses [regression results] reveal the importance of information literacy skills and attitudes towards e-resources use in the use of electronic resources. These programmes must cut across all levels of health sciences postgraduates irrespective of gender and programme of study.
- Regarding the organised programmes, affective and cognitive attitudes must be deliberately addressed for continuous advancement of the students since attitudes towards e-resources use makes the strongest unique contribution to electronic resource use. This can come by the way of the development of well-directed curriculum and policies for students to inculcate these variables.
- Institutions must step-up to further enhance health sciences postgraduates' skills in information searching and the use of information. These skills are identified as having significant influence on electronic resources use. To advance postgraduate research, students must be able to search, obtain and use information appropriately. Institutions through interactive workshops, seminars, lectures and small group/one-to-one support must create information literacy assistance to meet the information search and use needs of health sciences postgraduates. Training can also involve helping students build skills in identifying and accessing appropriate sources, execute constructive information management, and the use of digital tools and technologies.

References

Abubakar, D., & Adetimirin, A. (2015). Influence of computer literacy on postgraduates' use of e-resources in Nigerian university libraries. Library Philosophy and Practice (e-journal), Article 1207. http://digitalcommons.unl.edu/libphilprac/1207.

Acheampong, L. D., Mingle, N. A., Kofi, P. S. O., & Bekoe, S. (2020). Investigating awareness and usage of electronic resources by research scientists in Ghana. DESIDOC Journal of Library & Information Technology, 40(4), 204-210.

ACRL. (2016). Framework for information literacy for higher education. Available at: https://www.ala.org/acrl/standards/ilframework (accessed 12 March 2024).

Adeleke, A. A. (2021). Redeemer's University Library usage: services, rights, and opportunities. Speech presented at Redeemer's University Staff Retreat held at Redeemer's University, Ede, Osun State, January, 2021.

Adeleke, D. S., & Emeahara, E. N. (2016). Relationship between information literacy and use of electronic information resources by postgraduate students of the University of Ibadan. Library Philosophy and Practice (e-journal), Article 1381. http://digitalcommons.unl.edu/libphilprac/1381.

Adeniran, P. O., & Onuoha, U. D. (2018). Influence of information literacy skills on postgraduate students' use of electronic resources in private university libraries in South-West, Nigeria. Communications and Network, 10, 164-179.

Ahmed, S. (2013). Use of electronic resources by the faculty members in diverse public universities in Bangladesh. The Electronic Library, 31(3), 290–312.

Ajayi, J. L., Haliso, Y., & Unegbu, V. E. (2023). Information literacy skills as predictor of electronic information resources use by lecturers in select private universities in South-West, Nigeria. Information Impact: Journal of Information and Knowledge Management 14(1), 40-53.

Ajegbomogun, F. O., Achigbue, E, & Diyaolu, B. O. (2022). Computer literacy skills and institutional factors as determinants of electronic resources use by postgraduates in a Nigerian University. Ghana Library Journal 27(1), 104-115.

Akuffo, M. N., & Budu, S. (2019). Use of electronic resources by students in a premier postgraduate theological university in Ghana. South African Journal of Information Management, 21(1), a1026. https://doi.org/10.4102/sajim.v21i1.1026.

Akwaowo, R. (2021). Effective ICT skills and use of electronic information resources by lecturers in Captain Elechi Amadi Polytechnic, Port Harcourt, Nigeria. Available at: https://ssrn.com/abstract=3900065 or http://dx.doi.org/10.2139/ssrn.3900065 (accessed 7 March 2024).

Alhabash, S., & Ma, M. (2017). A tale of four platforms: Motivations and uses of Facebook, Twitter, Instagram, and Snapchat among college students? Social Media + Society, 3(1), a205630511769154. http://doi.org/10.1177/2056305117691544.

Ankrah, E., & Atuase, D. (2018). The use of electronic resources postgraduate students of the University of Cape Coast. Library Philosophy and Practice (e-journal), Article 1632. https://digitalcommons.unl.edu/libphilprac/1632.

Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. The handbook of attitudes. Red. D. Albarracin, BT Johnson & MP Zanna. Mahwah: Erlbaum, pp.173-221.

Balogun, T. A. (2016). Crisis of identity: A linguistic study of the attitude of the younger generation of Africans in the diaspora. Ife Journal of the Humanities and Social Studies, 3(1), 1-23.

Barfi, K. A., & Afful-Arthur, P. (2018). Accessibility and postgraduate students use of electronic resources in University of Cape Coast. Research Journal of Library and Information Science, 2, (1), 9-14.

Bashorun, M. T., Bashorun, R. B., & Akinbowale, A. T. (2021). Evaluating information literacy competence in the use of electronic resources among Medical Students in University of Ilorin, Nigeria. University of Dar es Salaam Library Journal, 16(1), 131-148.

Batallas-González, D., & Garzozi, R. (2021, March). The research culture and the development of research ability in students of the faculty of social and health sciences of the Península Santa Elena State University, Ecuador, during the period 2018–2019. In 2021 9th International Conference on Information and Education Technology (ICIET) (pp. 362-368). IEEE.

Blumler, J. G., & Katz, E. (1974). The uses of mass communications: Current perspectives on gratifications research. Sage Annual Reviews of Communication Research Volume III.

Breckler, S. J. (1984). Empirical validation of affect, behavior, and cognition as distinct components of attitude. Journal of Personality and Social Psychology, 47(6), 1191.

Cheung, A. K. L. (2014). Structured questionnaires. In: Michalos, A.C. (eds) Encyclopedia of Quality of Life and Well-Being Research. Springer, Dordrecht. https://doi.org/10.1007/978-94-007-0753-5_2888.

Chimah, J. N., & Udo, N. (2015). Categories, availability, and awareness of electronic information resources by postgraduate library users in South-East Nigerian federal universities. International Journal of Library Science, 4(1), 7–12.

Chou, C. M., Shen, T. C., Shen, T. C., & Shen, C. H. (2023). The impact of CIE education integrated with the BIG 6 teaching strategy on students' innovative motivation, creativity, metacognition, and self-perceived employability. Thinking Skills and Creativity, 48, 101287.

DeVellis, R. E. (2012). Scale development: Theory and applications. Sage Publications Inc.

Eisenberg, M. B. (2008). Information literacy: Essential skills for the information age. DESIDOC Journal of Library & Information Technology, 28(2), 39–47.

Eisenberg, M. B., & Berkowitz, R. E. (1990). Information problem-solving: The big six skills approach to library and information skills instruction. Ablex Publication Corporation.

Eisenberg, M., Lowe, C., & Spitzer, K. (2004). Information literacy: Essential skills for the information age. Libraries Unlimited.

Fingillah, S. A. (2023). Status and availability of e-resources in Kebbi State University of Science and Technology, Aliero (KSUSTA). Journal of Library Services and Technologies, 5(2), 45-52.

Fishman, J., Yang, C., & Mandell, D. (2021). Attitude theory and measurement implementation science: A secondary review of empirical studies and opportunities for adjustment. Implementation Science, 16, 1-10.

Haruna, H., & Hu, X. (2018). International trends in designing electronic health information literacy for health sciences students: A systematic review of the literature. The Journal of Academic Librarianship, 44(2), 300-312.

Hashim, H., Shuhidan, S. M., Anwar, N., & Heriyanto, H. (2022). Postgraduate students' utilization of web-based library and information services during Covid-19 pandemic. Environment-Behaviour Proceedings Journal, 7(SI10), 261-267.

Hitt, M. A., Miller, C. C., Colella, A., & Triana, M. (2017). Organizational behavior. John Wiley & Sons.

Ho, K. K., & See-To, E. W. (2018). The impact of the uses and gratifications of tourist at-traction fan page. Internet Research, 28(3), 587–603. http://doi.org/10.1108/intr-04-2017-0175.

Hong, J., & Jo, I. (2017). Undergraduate students use of online information in world geography: Source types and selection criteria. Review of International Geographical Education Online, 7(2), 171-189.

Imsong, L., & Kharbudon, I. M. (2016). Usage of electronic-resources in academic libraries and role of information literacy. INFLIBNET Centre, Gandhinagar, 31-35.

Jbeen, A., Ur Rehman, S., & Mahmood, K. (2022). Awareness, use and attitudes of students towards e-books: differences based on gender, discipline and degree level. Global Knowledge, Memory and Communication, 71(6/7), 449-467.

Joshua, D., & King, L. (2020). The Utilization of e-resources at Modibbo Adama University of Technology (MAUTech), Yola, Adamawa State, Nigeria. International Journal of Knowledge Content Development & Technology, 10(1), 47-70.

Karim, F. A. (2020). Placing information skills in context: As a tool in developing teachersâ€™ writing competency and promoting deeper learning. Journal of Social Transformation and Regional Development, 2(3), 44-55.

Kaur, G. (2018). Attitude and satisfaction of users regarding electronic information resources in the libraries of research institute of Jalandhar. International Research: Journal of Library and Information Science, 8(1), 114-126.

Kalanat, N. (2022). An overview of actionable knowledge discovery techniques. Journal of Intelligent Information Systems, 58, 591-611.

Kelefa, M., Emmanuel, E., & Esther, N. S. (2017). Utilisation of electronic resources to support teaching and research in higher learning institutions, Tanzania. University of Dar es Salaam Library Journal, 12(2), 98-123.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. Educational and Psychological Measurement, 30, 607-610.

Leonard, K. (2019). Behavior vs. attitude in employees. Available at: https://smallbusiness.chron.com/behavior-vsattitude-employees-37187.html (accessed 2 March 2024).

Luthans, F., Luthans, B. C., & Luthans, K. W. (2021). Organizational behavior: An evidence-based approach. Information Age Publishing.

Makinde, O. B., Hamzat, S. A., & Koiki-Owoyele, A. (2023). Assessment of information literacy, attitude towards research and research competence of library and information science undergraduates in Nigerian universities. Information Development. http://doi.org/10.1177/02666669231168406.

Makinde, O., Makinde, B., & Hamzat, S. (2022). Demographic factors and electronic resources/services use: Evidence from Adeleke University. Journal of Balkan Libraries Union, 9(1), 46-57. http://doi.org/10.16918/jblu.1092738.

Mathew, A. C., Ibrahim, F. L., & Aliyu, Y. (2021). Relationship among postgraduate students' information literacy, information technology skills and library use in selected universities in North East zone, Nigeria. Al-hikmah Journal of Education, 8(1),193-197.

Mohammed, Y. A. (2015). Utilisation of print and electronic information resources and services by undergraduate students of university libraries in Niger State [Unpublished PhD thesis]. Ahmadu Bello University.

Mollel, M. M., & Mwantimwa, K. (2019). Users' acceptance of e-resources usage at the Institute of Finance Management, Tanzania. International Journal of Education and Development using Information and Communication Technology, 15(4), 5-21.

Mtega, W. P., Dulle, F., & Malekani, A. W. (2014). The usage of e-resources among agricultural researchers and extension staff in Tanzania. Library and Information Research, 38(119), 47–66.

Ndagi, S. S., & Madu, E. C. (2018). Effect of information literacy skills on use of electronic library resources by lecturers in universities in North Central Nigeria. International Journal of Applied Technologies in Library and Information Management, 4(3), 1-10.

Ndubuisi, C. J., & Udo, N. (2013). Empirical study of motivation, challenges and strategies in the use of electronic information resources by postgraduate library users in South-east Nigerian federal universities. International Journal of Library and Information Science, 5(11), 468-473.

O'Brien, H. L., Dickinson, R., & Askin, N. (2017). A scoping review of individual differences in information seeking behavior and retrieval research between 2000 and 2015. Library & Information Science Research, 39(3), 244-254.

Ogunode, N. J., Ohunene, L. A., & Olatunde-Aiyedun, T. G. (2022). A review of factors responsible for high rate of financial corruption in public universities in Nigeria. Central Asian Journal of Social Sciences and History, 3(7), 30-44.

Ogunode, N. J., Onyekachi, M. C., & Ayoko, V. O. (2023). Investment in university education in Nigeria: Obstacles and possible solutions. Central Asian Journal of Innovations on Tourism Management and Finance, 4(2), 59-66.

Ogunsanya, A. O., & Buraimo, O. (2020). ICT literacy skill and electronic resources utilization among academic Staffs of Olabisi Onabanjo University. KIU Journal of Social Sciences, 6(3), 321-330.

Okunoye, O. O. (2020). Awareness, access and attitude of postgraduate students towards use of electronic databases in two academic libraries in south-west Nigeria. Journal of Applied Information Science and Technology, 13(1), 257-264.

Olajide, O., & Omolehin, R. J. (2021). Library digital resource utilization in Federal University Oye-Ekiti (FUOYE), Ekiti State, Nigeria. Library Philosophy and Practice (e-journal), Article 5994. https://digitalcommons.unl.edu/libphilprac/5994.

Omehia, A., Okwu, E., & Nsirim, O. (2021). Librarians' ICT competencies and utilization of emerging technologies in academic libraries in Rivers State, Nigeria. Library Philosophy and Practice (e-journal), Article 5410. https://digitalcommons.unl.edu/libphilprac/5410.

Oseghale, O. (2023). Digital information literacy skills and use of electronic resources by humanities graduate students at Kenneth Dike Library, University of Ibadan, Nigeria. Digital Library Perspectives, 39(2), 181-204. https://doi.org/10.1108/DLP-09-2022-0071.

Osinulu, L. F. (2020). Awareness and Use of Electronic Information Resources by Students of College of Health Sciences in Olabisi Onabanjo University, Nigeria. Information Impact: Journal of Information and Knowledge Management, 11(3), 1-11. http://doi.org/10.4314/iijikm.v11i3.1.

Ostrom, T. M. (1969). The relationship between the affective, behavioral, and cognitive components of attitude. Journal of Experimental Social Psychology, 5(1), 12-30.

Phua, J., Jin, S. V., & Kim, J. J. (2017). Gratifications of using Facebook, Twitter, Instagram, or Snapchat to follow brands: The moderating effect of social comparison, trust, tie strength, and network homophily on brand identification, brand engagement, brand commitment, and membership intention. Telematics and Informatics, 34(1), 412–424. http://doi.org/10.1016/j.tele.2016.06.004 .

Rocklage, M. D., & Fazio, R. H. (2018). Attitude accessibility as a function of emotionality. Personality and Social Psychology Bulletin, 44(4), 508–520.

Ruzegea, M., & Msonde, S. (2021). University students' e-resource usage: Predictors, problems and practical implications. International Journal of Education and Development using Information and Communication Technology, 17(2), 104-119.

Scandura, T. A. (2017). Essentials of organizational behavior: An evidence-based approach. Sage Publications.

Sellers, N. M. (2020). Describing users' personal virtual assistant usage by applying UGT 2.0 [Unpublished doctoral dissertation]. The Florida State University.

Shaibu, A. S., & Mohammed, M. K. (2017). Computer self-efficacy and use of electronic resources by students in Nigerian university libraries. Journal of Applied Information Science and Technology, 10, 91-99.

Sharma, S. (2022). Nursing research and statistics-e-book. Elsevier Health Sciences.

Suleiman, A. A., & Enna, G. A. (2022). Extent and relationship of ICT literacy, skills, and challenges on use of e-resources, among postgraduate students, in federal universities in Nigeria. International Journal of Scientific Research and Engineering Development, 5(6), 210-223.

Tandi Lwoga, E., & Sukums, F. (2018). Health sciences faculty usage behaviour of electronic resources and their information literacy practices. Global Knowledge, Memory and Communication, 67(1/2), 2-18.

Tella, A. (2015). Information literacy and lifelong learning: A review of literature. In: Keengwe JS (eds) Promoting Active Learning through the Integration of Mobile and Ubiquitous Technologies. USA: IGI Global, pp. 223 – 234.

Ugwulebo, J. E., & Okuonghae, O. (2021). Information literacy skills and utilisation of electronic information resources by postgraduate students in Nigeria. Library Philosophy and Practice (e-journal), Article 6265. https://digitalcommons.unl.edu/libphilprac/6265.

Vargas-Sanchez, A., Plaza-Mejra, M., & Porras-Bueno, N. (2016). Attitude, encyclopedia of tourism. Springer International Publishing.

Wang, S., & Bai, X. (2016). University students awareness, usage and attitude towards e-books: Experience from China. The Journal of Academic Librarianship, 42(3), 247-258.

Xu, X. Y., Tayyab, S. M. U., Jia, Q., & Huang, A. H. (2023). A multi-model approach for the extension of the use and gratification theory in video game streaming. Information Technology & People. Advance online publication. https://doi.org/10.1108/ITP-08-2021-0628.

Yevelson-Shorsher, A., & Bronstein, J. (2018). Three perspectives on information literacy in academia: Talking to librarians, faculty, and students. College & Research Libraries, 79(4), 535.

Footnotes

The link to the questionnaire of this study can be obtained at https://www.dropbox.com/scl/fi/q0qhm2kvgyjgdo3g5u1pr/Information-Literacy-Skills-and-Attitude-of-Health-Sciences-Postgraduate-Students-as-Determinants-of-Use-of-Electronic-Resources-Questionnaire-ILSAHSPSDUERQ.docx?rlkey=bv7mqfcpqagc0x8rjlqnwxjpz&dl=0.

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Quality Assurance in Higher Education in the 21st Century: Strategies and Practices for New Generation Universities

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Abstract

This study aims to examine the components of quality assurance systems in higher education and the effects of these systems on new-generation universities. Through literature review and synthesis of findings, the essential components of quality assurance systems, their role in modern universities, and the effects of these systems on performance have been comprehensively analyzed. In the study, the structural elements, operational mechanisms, and accreditation processes of quality assurance systems have been detailed, and the effects of these processes on the academic and administrative performances of new-generation universities have been evaluated. In addition, quality assurance strategies have been suggested that align with the characteristic features of new-generation universities, such as technology-oriented education models, flexible curriculum structures, and industry collaborations. In addition, within the scope of the research, it emphasizes the contributions of quality assurance systems in compliance with international standards, increasing student satisfaction and strengthening institutional reputation. It is aimed at making significant contributions to the literature by offering new perspectives in the field of quality assurance to higher education institutions in Turkey.

Keywords: Quality assurance, Sustainability, Accreditation, Strategic planning, Turkish higher education, New generation universities

Introduction

The 21st century brings opportunities and challenges for higher education institutions, driven by technological advancements, globalization, and evolving labor market dynamics that press universities to adapt their educational approaches (Yin, 2024). In Turkey, these pressures have given rise to new-generation universities that stand apart from traditional institutions by focusing on interdisciplinary, technology-centered education and close collaboration with industry to equip students for a complex and uncertain future (Kır, 2020). New-generation universities in Turkey, as elsewhere, prioritize flexible, student-centered learning environments that align with digital transformation trends, aiming to cultivate digital skills, critical thinking, and adaptability among students. Maintaining and enhancing education quality amidst rapid changes presents unique challenges for these universities. Quality assurance systems are crucial in maintaining educational standards, promoting continuous improvement, and enhancing institutional accountability (Aithal et al., 2024). In Turkey, these systems are essential for increasing student satisfaction and bolstering international competitiveness. However, new-generation universities often struggle to fully align with traditional quality assurance frameworks due to their innovative structures and flexible educational models, which sometimes fall outside conventional standards. In addition, Turkey's unique higher education context, with a growing demand for skilled professionals, digitally conscious students, and specific regulatory requirements, intensifies the challenges of implementing these systems effectively (Carayannis & Morawska-Jancelewicz, 2022;

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Castro Benavides et al., 2020). Internationally, the issues faced by Turkish new-generation universities resonate in higher education research. Rapid technological developments and evolving industry needs, common across global higher education, underscore the need for quality assurance systems to evolve. This creates a critical need for these institutions to adopt tailored approaches to quality assurance that accommodate innovative education models and keep pace with technological and societal changes (Mohamed Hashim et al., 2022). As both Turkish and international examples reveal, addressing these challenges requires reimagining quality assurance systems, demonstrating the importance of flexibility and adaptation in educational quality standards (Büyükgüzel et al., 2023; Liu et al., 2023). To address these challenges, Turkish new-generation universities must adapt existing quality assurance frameworks and pioneer innovative approaches that align with their unique educational missions. This requires embracing a contextual understanding of quality assurance that accommodates rapid technological shifts, diverse student needs, and industry expectations. Some approaches could serve as valuable case studies within the broader field of higher education research, illustrating how quality assurance systems can be reimagined to support dynamic, interdisciplinary, and technology-driven educational models worldwide. As such, the experience of Turkish new-generation universities could inform global strategies for quality assurance, positioning them as leaders in redefining standards for the future of higher education.

The evolution of new-generation universities in Turkish higher education reflects broader global trends while also addressing unique national challenges. Contextually, Turkey's higher education system has expanded rapidly in recent decades, driven by increasing student enrollment, regional development goals, and a demand for skilled professionals. This expansion has brought challenges, such as maintaining quality amidst growth, aligning institutional goals with rapidly changing labor market demands, and navigating regulatory complexities (Carayannis & Morawska-Jancelewicz, 2022). New-generation universities, with their emphasis on technology-driven education, flexible learning environments, and industry collaborations, aim to address these challenges. However, they often encounter difficulties in fully aligning with traditional quality assurance frameworks, which may not account for their innovative structures and interdisciplinary approaches (Lapteva & Efimov, 2016).

For example, ensuring the quality of interdisciplinary programs and project-based learning initiatives in these institutions requires tailored quality assurance mechanisms, as these elements often fall outside conventional evaluation criteria. Additionally, Turkey's geographic and cultural positioning as a bridge between Europe and Asia adds unique dimensions to its higher education system, offering opportunities for international collaboration and creating challenges in meeting diverse expectations (Gaston & Ochoa, 2023). These issues are not confined to Turkey; they resonate with the experiences of higher education systems globally, particularly in emerging economies, where rapid expansion and innovation coexist with the need for robust quality assurance.

By addressing these contextual challenges, Turkish new-generation universities provide a valuable case for international higher education research. They exemplify how institutions can adapt to technological, societal, and economic shifts while navigating unique local conditions. Lessons from Turkey's experiences can inform global strategies for integrating innovation into quality assurance systems, fostering relevance for the international academic community.

Purpose of the Study and Research Questions

The primary purpose of this study is to define the components of quality assurance systems in higher education and evaluate their effects on new-generation universities in Turkey. New-generation universities have modern features such as technology-oriented education models, innovation, internationalization, and flexible learning structures. The study aims to increase the quality of higher education and support the success of new-generation universities by analyzing the contributions of quality assurance systems to the overall performance of these universities. The research aims to find comprehensive answers to the following questions:

1. What are the essential components of quality assurance systems in Turkish higher education? This question examines the structural elements of quality assurance systems, their operating

mechanisms, and the vital elements that constitute these systems in Turkey. Additionally, it explores the relationships between the components and their effects on the overall system.
2. How do quality assurance systems affect the performance of new-generation universities in Turkey? This question evaluates the impact of quality assurance systems on Turkish new-generation universities' academic, administrative, and institutional performance, focusing on components such as student success, institutional efficiency, research outputs, and international competitiveness.

Within the framework of these research questions, the study aims to comprehensively analyze quality assurance systems in higher education and develop practical quality assurance approaches for new-generation universities. The results guide higher education institutions, policymakers, and administrators and significantly contribute to academic literature.

Conceptual Framework

Quality assurance is a systematic approach to ensure that higher education institutions' education, research, and community service activities comply with specific standards and continuously improve them. This concept involves institutions regularly evaluating and auditing their internal processes by external stakeholders (Zuhairi et al., 2020). The essential components of quality assurance include institutional self-assessment, external assessment, accreditation, and continuous improvement processes. These components interact with each other and aim to increase the overall quality level of the institution (Taşcı & Lapçın, 2023).

Today, globalization and technological developments require higher education institutions to operate more competitively. In this context, quality assurance systems are critical in ensuring institutions comply with international standards, increasing student satisfaction, and strengthening institutional reputation. In addition, quality assurance increases institutional efficiency by encouraging the efficient use of resources and helps higher education institutions better fulfill their social responsibilities (Aydoğdu, 2023; Gaston & Ochoa, 2023).
Unlike traditional higher education models, new-generation universities adopt technology-focused, flexible, and innovative educational approaches (Lapteva et al., 2016). These universities stand out with their structures that can adapt to rapidly changing world conditions, encourage interdisciplinary studies, and work closely with industry. The main features of new-generation universities include intensive use of digital technologies, flexible curriculum structures, project-based learning approaches, and integration with global networks (Tien et al., 2022). New-generation universities in Turkey represent a transformative approach to higher education. Unlike traditional universities, which often emphasize classical disciplines and conventional teaching methods, new-generation universities focus on interdisciplinary and technology-driven education models. They prioritize flexible learning structures, innovation, and strong collaborations with industry to prepare students for the rapidly evolving global workforce. These institutions also align closely with digital transformation trends, integrating advanced technologies and fostering critical thinking and entrepreneurship skills among students. Traditional universities, in contrast, maintain more structured, discipline-focused curricula with less emphasis on adaptability and technological integration.

With their innovative structures and functions, new-generation universities are developing research and education models that go beyond the boundaries of traditional academic disciplines. These institutions emphasize entrepreneurship, innovation, and critical thinking skills to prepare students for the business world of the future (Jackson & Rowe, 2023). They also support the continuous development of graduates by offering lifelong learning opportunities (Rodriguez-Salvador & Castillo-Valdez, 2023). These features allow the development of research and education models that go beyond the boundaries of traditional academic disciplines. New-generation universities are pioneers in transforming academic knowledge into practical applications by actively producing solutions to social problems.

Foundations of quality assurance include various approaches and processes that ensure effective and efficient management of higher education institutions. These foundations provide a framework that targets institutions' continuous development and improvement (Poliakova, 2018). Strategic planning is an essential theoretical foundation of quality assurance. This approach enables institutions to determine their long-term goals, allocate the resources required to achieve them, and regularly evaluate their performance. Strategic planning helps institutions adapt to changing conditions and use resources most effectively (Zaid et al., 2020).

Accreditation processes are another essential theoretical basis for quality assurance. These processes are external evaluation mechanisms that evaluate and approve the compliance of higher education institutions with specific standards. Accreditation ensures that the quality of institutions' educational programs, learning outcomes, and institutional management processes are evaluated by independent organizations (Duarte & Vardasca, 2023; Gaston & Ochoa, 2023; Şendur Atabek, 2023). Internal and external evaluation mechanisms are essential elements that increase the effectiveness of quality assurance. Internal evaluation allows institutions to review their performance and identify areas for improvement systematically. External evaluation, on the other hand, includes processes conducted by independent experts that objectively evaluate the institution's performance. Using these two mechanisms together allows institutions to better understand their strengths and weaknesses and make necessary improvements (Ruben et al., 2023; Saroyan & Frenay, 2023).

Continuous improvement processes are a theoretical foundation reflecting quality assurance's dynamic and evolutionary nature. This approach requires institutions to monitor, evaluate, and improve performance continuously. Models such as the Deming Cycle (Plan-Do-Check-Act) are widely used to implement continuous improvement processes (Sayah & Khaleel, 2022). These processes enable institutions to adapt to changing conditions quickly and continuously raise their quality standards. These theoretical foundations, including Strategic Planning (Zaid et al., 2020), Accreditation Processes (Duarte & Vardasca, 2023), Internal and External Evaluation Mechanisms (Ruben et al., 2023), and Continuous Improvement Processes (Sayah & Khaleel, 2022), ensure that quality assurance in higher education is addressed with a holistic approach. Strategic planning enables institutions to determine long-term goals and align resources effectively. Accreditation processes serve as external validation mechanisms, evaluating compliance with established quality standards. Internal and external evaluation mechanisms systematically assess institutional performance and identify areas for improvement. Finally, continuous improvement processes, such as the Plan-Do-Check-Act cycle, foster ongoing adaptation and enhancement, helping institutions achieve sustainable success.

Method of the Study

This study adopts a literature review and synthesis methodology to examine the impact of quality assurance systems in higher education on new-generation universities. The primary sources are existing academic literature on quality assurance systems and studies addressing the performance and unique characteristics of new-generation universities. The literature review focuses on research detailing the core components of quality assurance, such as institutional self-assessment, external assessment, accreditation, and continuous improvement, and evaluates the transformative impact of these systems on higher education institutions.

Literature Selection and Filtering

Specific criteria were applied for selecting, filtering, and analyzing the literature to ensure a structured and transparent research process. Relevant sources were identified using keywords related to "quality assurance systems," "new-generation universities," "higher education," and specific aspects like "technology-oriented education models," "innovation," "internationalization," and "flexible learning structures." The selection criteria prioritized studies published within the past decade to capture the most recent developments, focusing on peer-reviewed articles, institutional reports, and widely recognized academic sources. Exclusion criteria involved studies that did not explicitly address quality assurance or higher education frameworks.

Synthesis and Analysis

The selected literature was systematically reviewed to identify recurring themes, trends, and gaps. A thematic synthesis approach was applied, grouping findings into major themes: institutional self-assessment, external evaluation, accreditation, and continuous improvement processes. The analysis emphasized the interaction of these components with the innovative structures of new-generation universities, focusing on key performance indicators such as student success, research outputs, institutional efficiency, and international competitiveness.

Narrative Creation

A narrative synthesis strategy was adopted to integrate findings into a coherent discussion. The narrative aligns thematic insights with the study's research questions and contextualizes the findings within the Turkish higher education landscape. This method highlights the unique challenges faced by new-generation universities in Turkey, such as aligning interdisciplinary education and digital transformation with traditional quality assurance frameworks while also drawing comparisons with international practices. Specific strategies, such as tailoring quality assurance mechanisms to innovative educational models, were emphasized to address these challenges.

Contextualization for Turkey and Beyond

The study further contextualizes its findings to provide strategic recommendations tailored to Turkish higher education institutions while demonstrating their relevance to the international research community. The insights are designed to inform global strategies for integrating innovation into quality assurance practices, emphasizing the need for flexible systems to accommodate diverse institutional models and technological advancements.

Through this structured and transparent methodological approach, the study aims to provide actionable insights for improving institutional practices and contribute to the broader discourse on quality assurance in higher education.

Findings

Quality assurance systems in higher education are a comprehensive framework designed to ensure continuous improvement of institutions' education, training, research, and social contribution activities and compliance with specific standards (Javed & Alenezi, 2023). The effectiveness of these systems is based on various essential components that interact with each other. New-generation universities increasingly attach importance to quality assurance systems to adapt to rapidly changing global education dynamics and gain competitive advantage. The essential components of quality assurance systems in higher education are determined to ensure the sustainability of a university's academic and administrative processes following quality standards. These systems include both internal and external evaluation processes. The essential components of quality assurance systems in higher education and the effects of their components on university performance can be listed under the following main headings.

Components of Quality Assurance Systems

1.Internal Quality Assurance: Internal Quality Assurance (IQA) refers to an institution's overarching framework and processes to ensure continuous monitoring, evaluation, and enhancement of its activities. IQA encompasses establishing quality offices, coordinators, and commissions that systematically oversee quality policies, feedback mechanisms, and improvement cycles (Lucander & Christenson, 2020). It involves creating a culture of continuous quality enhancement within the institution by integrating quality standards into all operational areas, from teaching and research to administrative support and governance. The ultimate goal of IQA is to embed quality assurance as a core institutional value and ensure that all processes align with the institution's mission and strategic objectives.

2.Evaluation Mechanisms: Internal Evaluation (IE), on the other hand, is a component of IQA and refers specifically to the systematic review and assessment of institutional performance against predefined standards and objectives (Jingura & Kamusoko, 2019). IE includes self-assessment reports, internal audits, and performance monitoring based on key indicators (Javed & Alenezi, 2023; Kadhila & Iipumbu, 2019). These evaluations allow institutions to identify strengths and weaknesses, track progress over time, and make data-driven decisions for improvement. While IE is a critical tool within IQA, it focuses more narrowly on performance measurement and accountability, whereas IQA operates as a broader system. By clearly distinguishing between IQA and IE, institutions can understand these processes' complementary roles in achieving continuous quality enhancement. IQA establishes the framework and culture for quality, while IE provides the tools and methods to evaluate and improve specific areas of institutional performance. On the other hand, external evaluation involves processes conducted by independent experts or accreditation bodies that objectively evaluate the institution's performance. Both types of assessment allow institutions to identify their strengths and weaknesses and make necessary improvements (Rohman et al., 2023).

3.Institutional Accreditation: Evaluations and accreditation processes conducted by independent accreditation bodies are an essential component of quality assurance. These processes measure the compliance of institutions with national and international standards. Institutional accreditation evaluates a university's overall compliance and sustainability with quality standards (López et al., 2022). It covers a holistic evaluation of the institution's various aspects (education, research, management, student services, etc.). External evaluation and accreditation processes document universities' compliance with national and international standards (Spowart & Turner, 2022). In other words, institutional accreditation ensures the recognition of the university at national and international levels, increases its reliability and reputation, and encourages international collaborations. Accreditation processes strengthen the university's internal quality assurance systems and ensure regular review of all processes. Institutional accreditation increases institutional efficiency and improves the university's performance by supporting strategic planning and quality improvement processes (Jiménez-Bucarey et al., 2021). This accreditation strengthens the university's relationships with its stakeholders and encourages stakeholder participation; thus, its role as a contributor to society is reinforced (Romanowski, 2022).

4.Program Accreditation: Program accreditation documents the quality and compliance of a particular educational program with national or international standards. This process covers many components, including program design, content, teaching methods, measurement and evaluation, and faculty qualifications (Suresh Kumar, 2017). Accreditation processes usually include self-assessment, site visits, and regular reporting (Amaral & Norcini, 2023).

Program accreditation ensures the quality of education students receive and makes graduates more competitive in business (Gora et al., 2019). Accredited programs increase the attractiveness of students and faculty and improve the university's overall reputation. While accreditation ensures that institutions comply with international standards, it also incentivizes continuous improvement (Andreani et al., 2020). The feedback and suggestions collected during the accreditation process encourage the constant updating and improvement of programs, thus increasing the quality of education and training (Almurayh et al., 2022). Accreditation of programs also opens doors for international student and academic collaborations and increases the global recognition of the university.

5.Quality Assurance Policy and Strategy: A quality policy and strategy aligned with the institution's mission, vision, and strategic goals reflects the institutional commitment to quality. The policy and strategy guide the university's overall performance and ensure that all stakeholders focus on the same goals (Medne et al., 2020). The institution's commitment to continuously improving quality aligned with its mission, vision, and strategic goals enhances its reputation and supports institutional sustainability.

6.Strategic Planning: Strategic planning means determining the long-term goals of a university and developing the strategies and action plans required to achieve these goals (Di Nauta et al., 2020). This process ensures that the institution is directed toward the future and aligned with its mission, vision, and values. Strategic planning allows the institution to analyze its current situation, foresee future opportunities and threats, and use its resources effectively and efficiently, increasing institutional performance (Di Nauta et al., 2020). It supports the sustainable growth and development of the university by focusing on long-term goals (Makki et al., 2023). Strategic planning guides the university's progress in key areas such as education, research, community service, and internationalization. Regular monitoring and evaluation to achieve goals reinforces the culture of continuous improvement and increases the university's competitiveness (M. Ghoneim Sywelem & Mohamed Elsayed Makhlouf, 2023).

7.Quality of Learning and Teaching: The increase in the quality of education and research is one of the most apparent effects of quality assurance systems. Planning, implementation, and evaluation processes for education and training activities must follow quality standards, including program design, curriculum development, teaching methods, and measurement-evaluation processes. Investments in the quality of learning and teaching in new-generation universities increase student success and satisfaction. Clear definitions of learning outcomes, alignment of current and student-centered curricula with industry needs, innovative teaching methods, and strong measurement-evaluation processes enable graduates to be more competitive in the business world and increase the capacity to attract students (Hailikari et al., 2022).

8.Research, Development, and Entrepreneurship: It includes the management of research and innovation processes within the framework of quality assurance, academic freedom, and ethical rules (Cheah et al., 2023). Research infrastructure, funding processes, and publication quality are also evaluated in this component. The quality of research and development activities directly affects the scientific contributions and innovation capacities of universities, encourages interdisciplinary collaboration, and ensures the elevation of research ethical standards (Horta & Santos, 2020, Fomba et al., 2023; Kayyali, 2023; Shattuck, 2023). High-quality research outputs enable the university to rise in national and international rankings, increase funding opportunities, and strengthen its academic reputation (Li & Yin, 2023; Miotto et al., 2020).

9.Quality of Administrative and Support Services: This covers the quality of the university's administrative processes, student and staff services, Information technologies infrastructure, financial management, and other support services. The quality of these services directly affects the university experience of students and staff (Jackson et al., 2023). Effective administrative processes and quality support services increase satisfaction, operational efficiency, and student success rates.

10.Data Management and Evidence-Based Decision Making: The effectiveness of data collection, analysis, and reporting systems used to monitor the institution's performance is critical. Evidence-based decision-making is an essential element of quality improvement processes. Data management and evidence-based decision-making allow universities to evaluate their performance with objective measures and make strategic decisions based on data (Jayanti & Sarja, 2019). This enables more efficient use of resources, accelerates performance improvement processes, and facilitates the achievement of strategic goals.

11.Stakeholder Participation and Feedback: Systematic collection and evaluation of the opinions and feedback of stakeholders such as students, academic and administrative staff, alumni, the business world, and society lie at the core of quality processes. Active participation of stakeholders in the process and evaluation of regular feedback strengthens the university's ties with the social and business world (My Nguyen et al., 2021). This ensures that programs are more up-to-date and needs-oriented, facilitates the adaptation of graduates to the business world, and improves the institution's perception of society. Quality assurance systems encourage the active participation of students in decision-making processes. This strengthens students' sense of institutional belonging and contributes to their personal and professional development. With this participatory approach, new-generation universities position students as individuals receiving education and stakeholders shaping the institution's future (Haverila et al., 2021).

Student feedback is a cornerstone of quality assurance systems, offering critical insights into the effectiveness of education and training processes (Haverila et al., 2021). Measuring student satisfaction involves gathering their opinions on the quality of education, institutional services, and overall university experience. Methods such as satisfaction surveys, focus group interviews, and regular meetings with student representatives provide platforms for students to share their perspectives (Jiménez-Bucarey et al., 2021). This feedback enables new-generation universities to continuously improve the learning experience, adapt teaching methods, and refine educational programs to align with students' evolving needs and expectations (Jackson & Tomlinson, 2022). Moreover, a student-centered approach informed by systematic feedback collection fosters responsiveness to students' diverse needs, enhancing their satisfaction and success (Jayanti & Sarja, 2019; Wong & Chapman, 2023; Yıldırım & Çatı, 2023). By actively integrating students' views into institutional processes, universities strengthen the connection between educational quality and learner outcomes, promoting a culture of continuous improvement.

12.Institutional Sustainability: Quality assurance systems are another vital impact on new-generation universities (Vykydal et al., 2020). These systems enable institutions to systematically monitor and improve their financial, academic, and operational processes (Lundberg & Öberg, 2021). New-generation universities can use resources more effectively, strengthen risk management, and achieve their long-term strategic goals through quality assurance systems. In addition, these systems increase institutions' transparency and accountability and strengthen stakeholders' trust (My Nguyen et al., 2021). This strengthens the ties of new-generation universities with society and industry and increases their institutional reputation. Sustainability also covers the performance of new-generation universities in environmental and social responsibility areas (Hernandez-Diaz et al., 2020). Quality assurance systems help institutions increase their social impact by encouraging continuous improvement of practices in these areas (Albloushi et al., 2023; Marrucci et al., 2024).

The components and effects of quality assurance systems in higher education are closely intertwined, each contributing to specific institutional outcomes. As outlined in Table 1, components such as Internal Quality Assurance (IQA), Strategic Planning, and Accreditation Processes establish the structural and operational framework necessary for continuous quality enhancement. These mechanisms collectively improve institutional efficiency, enhance student success, and strengthen international competitiveness. For example, data management and evidence-based decision-making enable strategic resource allocation, while stakeholder participation fosters programs tailored to societal and industry needs. By distinguishing between components and effects, the table provides a clear hierarchy of how quality assurance systems function and their transformative impact on higher education institutions.

Table 1. Components vs. effects of quality assurance systems

Component	Effect
Internal Quality Assurance (IQA)	Embeds a culture of continuous quality improvement throughout the institution.
Internal and External Evaluation Mechanisms	Identifies strengths and weaknesses, enabling data-driven decisions for improvement.
Accreditation Processes	Enhances institutional reputation and ensures compliance with national and international standards.
Continuous Improvement Processes	Supports iterative adaptation to changing conditions, ensuring long-term success.
Strategic Planning	Aligns institutional resources and goals, increasing performance and sustainability.
Data Management and Evidence-Based Decision Making	Improves resource efficiency and strategic alignment through informed decisions.
Stakeholder Participation and Feedback	Strengthens ties with the social and business world and ensures programs meet stakeholder needs.
Quality Assurance Policy and Strategy	Ensures alignment with institutional mission and vision, enhancing overall performance.
Quality of Learning and Teaching	Increases student success, satisfaction, and graduate competitiveness in the workforce.
Research, Development, and Entrepreneurship	Promotes interdisciplinary collaboration, elevates research ethics, and boosts institutional innovation capacity.

Component	Effect
Quality of Administrative and Support Services	Improves operational efficiency and enhances the university experience for students and staff.
Institutional and Program Accreditation	Ensures global recognition, encourages international collaborations and improves educational quality.

Quality assurance systems and their components guide higher education institutions to maintain and develop their quality standards, contribute to the continuous improvement of institutional performance, and make significant contributions in areas such as strengthening participation and ensuring institutional sustainability (Javed & Alenezi, 2023). They play essential roles in areas such as increasing the quality of education and research of new-generation universities, strengthening student satisfaction and participation, and ensuring institutional sustainability. They create a transformative power in higher education by combining new-generation universities' dynamic structure and innovative approaches. The interaction that will shape the future education models strengthens the role of higher education in social and economic development and increases global competitiveness (Stukalo & Lytvyn, 2021).

As shown in Fig.1. (Al-Zoubi et al., 2023; Batoon, 2022; Gamage et al., 2020; Pedro & Kumar, 2020), quality assurance systems in new-generation universities significantly impact student success, institutional efficiency, research outcomes, and international competitiveness. These systems enhance educational quality by boosting student achievement, integrating technology, and promoting innovative teaching methods. Institutional efficiency is also improved, as quality assurance encourages resource optimization, leading to cost reductions and increased operational effectiveness. In research, quality assurance raises the standards of research processes and fosters participation in national and international research initiatives. Furthermore, compliance with international accreditation standards strengthens these institutions' global presence, supporting integration into international education and research networks and enhancing their competitiveness on a global scale.

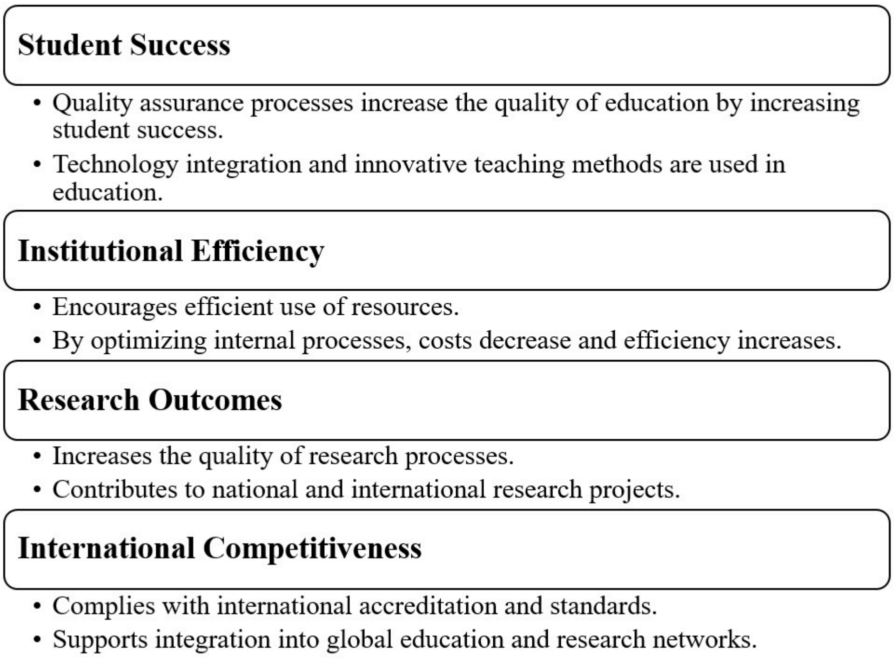

Figure 1. Effects of Quality Assurance Systems in New Generation Universities

Innovative approaches in strategic quality assurance practices are very important for new-generation universities. These approaches include quality management systems focused on flexibility and agility, establishing a culture of continuous improvement, and effective use of data analytics (Asif & Raouf, 2013). Some universities are developing internal quality assessment systems to complement traditional accreditation processes. These systems are built on fast feedback loops and agile management principles, allowing universities to adapt to changing conditions quickly (Mattos et al., 2023). In addition, integrating advanced technologies such as artificial intelligence and machine learning into quality assurance processes allows the development of data-driven decision-making mechanisms (Bondzi–Simpson & Agomor, 2021; Rybinski, 2022; Sharvashidze et al., 2023).

As shown in Fig.2. (de Wit & Altbach, 2021; Guo et al., 2020; Mulenga, 2020; Rosienkiewicz et al., 2024), new-generation universities are characterized by a strong emphasis on technology-focused education, flexible curriculum structures, project-based learning, and integration with global networks, all supported by robust quality assurance systems. These systems play a critical role in embedding technology into educational processes and evaluating its effectiveness, ensuring that digital tools enhance learning outcomes. The curriculum is continuously reviewed and improved to maintain its flexibility, meeting the evolving needs of students and industries alike. Project-based learning is also incorporated, allowing students to gain hands-on experience through real-world applications. Moreover, quality assurance systems facilitate international collaborations, enabling universities to connect with global networks and contribute to an interconnected educational landscape.

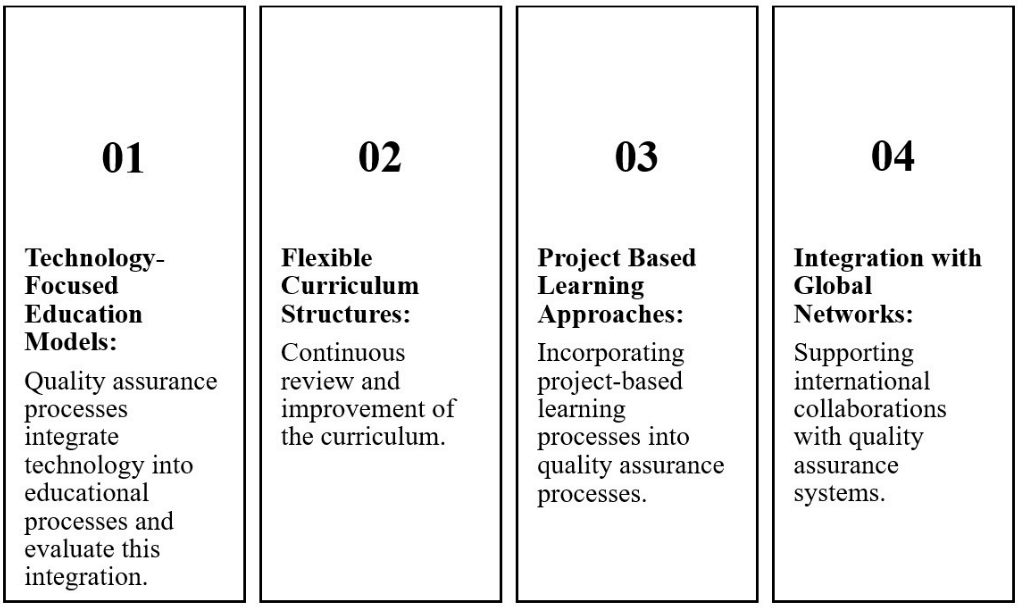

Figure 2. Characteristics of New Generation Universities and Quality Assurance Systems

An essential dimension of strategic quality assurance practices for new-generation universities is the establishment of strong collaborations with industry and society. These collaborations ensure that educational programs align with industry needs, research projects produce solutions to societal problems, and students gain practical experience (Suparno et al., 2023; Manotungvorapun & Gerdsri, 2021). By establishing joint laboratories with industry partners, R&D activities focus on real-world problems (Gerdsri & Manotungvorapun, 2022). Such collaborations increase the effectiveness of universities' quality assurance systems while strengthening their social impact (Cirella & Murphy, 2022). In addition, projects carried out with non-governmental organizations help develop students' sense of social responsibility and increase universities' social contribution (Nsanzumuhire & Groot, 2020; Tseng et al., 2020).

Technological integration and digitalization have become indispensable parts of strategic quality assurance practices for new-generation universities. In this context, universities are increasing efficiency and raising quality standards by transferring their education-training processes, research activities, and administrative transactions to digital platforms (Rahhali et al., 2021). Online learning management systems allow real-time monitoring of student performance and the provision of personalized learning experiences (Vivek & Ramkumar, 2021).

Cloud-based research management systems facilitate international collaborations, while big data analytics tools enable detailed institutional performance evaluation (Al-Jumaili et al., 2023). In addition, innovative applications such as blockchain technology increase the security and transparency of academic documents (Bednarski, 2024; Rella et al., 2024; Rosak-Szyrocka, 2024).

Strategic quality assurance practices for new-generation universities go beyond traditional approaches and adopt an innovative, collaborative, and technology-oriented approach (Moscardini et al., 2022). Successful practices in Turkey and the world, creative approaches, industry and society collaborations, technological integration, and digitalization help these universities raise their quality standards and increase their social impact (Chankseliani et al., 2021). These strategic practices ensure that new-generation universities are ready for future challenges and achieve sustainable success (Schofer et al., 2021).

The findings highlight that while new-generation universities are transforming the higher education landscape with innovative and technology-driven models, they also face distinct challenges that require targeted strategies. These challenges include aligning interdisciplinary programs with traditional quality assurance frameworks, integrating advanced technologies, fostering meaningful industry collaborations, and achieving international competitiveness. To address these issues effectively, strategic approaches must be tailored to these institutions' dynamic and flexible nature. Table 2 summarizes new-generation universities' key challenges and proposes strategies to overcome them, ensuring their continued growth and success.

Table 2. Challenges and strategies in new-generation universities

Challenge	Proposed Strategy
Alignment of interdisciplinary programs with quality assurance frameworks	Develop tailored evaluation criteria and frameworks that address the unique nature of multidisciplinary studies.
Rapid technological advancements and digital transformation	Integrate advanced technologies such as artificial intelligence and big data analytics into quality assurance processes.
Establishing meaningful industry collaborations	Build joint laboratories, create shared research initiatives, and align educational outcomes with industry needs.
Adapting quality assurance processes to innovative educational models	Implement flexible quality management systems and agile frameworks to accommodate nontraditional approaches like project-based learning.
Ensuring international competitiveness and recognition	Pursue international accreditation and establish partnerships with global educational and research networks.
Meeting diverse student expectations in dynamic learning environments	Design student-centered curricula and continuously update programs to reflect evolving societal and industry needs.
Balancing institutional sustainability with academic and social responsibilities	Apply comprehensive quality assurance systems that include financial sustainability and environmental responsibility measures.

These strategies reflect the need for tailored, flexible approaches to address the dynamic nature of new-generation universities. By implementing these strategies, institutions can better align their innovative practices with robust quality assurance systems. Adaptability and innovation in quality assurance practices ensure that new-generation universities remain at the forefront of academic and societal advancement.

Conclusion and Recommendations

Summary of Key Findings

This study examined the essential components of quality assurance systems in higher education and their impact on the performance of new-generation universities, with a particular focus on the Turkish context. The analysis identified vital components such as internal quality assurance, external evaluations, accreditation processes, strategic planning, and continuous improvement mechanisms. These systems significantly enhanced institutional efficiency, student success, and global competitiveness. The research also highlighted the unique challenges faced by new-generation universities, including aligning interdisciplinary programs with traditional quality frameworks, integrating advanced technologies, and fostering industry collaborations.

Implications and Significance

The findings underscore the transformative potential of tailored quality assurance systems for addressing the specific needs of new-generation universities. By adopting flexible and innovative approaches, these systems can help institutions maintain academic excellence, achieve sustainable development, and strengthen their international presence. This study contributes to the literature by offering a nuanced understanding of the interplay between quality assurance practices and the dynamic structures of new-generation universities, providing a valuable framework for policymakers and academic leaders globally.

Recommendations

1. Enhance Technological Integration: Institutions should incorporate advanced technologies such as AI, big data analytics, and digital platforms into quality assurance systems to improve efficiency and decision-making.
2. Promote Industry Collaboration: Universities should strengthen partnerships with industries to align curricula and research with market needs and provide students with practical training opportunities.
3. Focus on Internationalization: Policymakers and institutions should prioritize obtaining international accreditations and establishing global partnerships to enhance competitiveness and attract international students and faculty.
4. Develop Flexible Quality Assurance Models: To reflect the unique nature of new-generation universities, tailored evaluation frameworks that accommodate interdisciplinary programs and innovative teaching methods should be adopted.
5. Strengthen Stakeholder Engagement: Universities should actively involve students, faculty, and external stakeholders in quality assurance processes to ensure that practices meet the needs of all participants and societal demands.

Limitations

While the study provides a robust analysis of quality assurance systems, its reliance on a qualitative literature review limits the empirical validation of findings. The research focuses primarily on the Turkish higher education system, which may restrict the generalizability of its conclusions to other contexts. Additionally, the study does not include primary data from stakeholders such as students, faculty, or administrators, which could enrich the insights provided.

Future Research Directions

Future studies should explore the implementation effectiveness of quality assurance systems in diverse higher education contexts, using quantitative and mixed-method approaches. Investigating the direct impact of these systems on innovation capacity, graduate employability, and institutional sustainability would provide deeper insights. Comparative studies across different countries and cultural settings could also illuminate best practices for aligning quality assurance with global standards while accommodating local nuances.

Practical Implications

The study offers actionable strategies for enhancing quality assurance practices for higher education institutions. Institutions should integrate advanced technologies into their quality frameworks, adopt flexible evaluation methods for interdisciplinary programs, and establish stronger collaborations with industry to align educational outcomes with societal needs. Policymakers should prioritize international accreditation and support capacity-building initiatives to enable universities to compete globally.

In a rapidly evolving academic and technological landscape, the role of quality assurance systems is more critical than ever. Higher education institutions must embrace innovation and adaptability to meet the challenges of the 21st century. By fostering a culture of continuous improvement and leveraging the insights provided in this study, universities can position themselves as leaders in shaping the future of education. Policymakers, administrators, and educators are called upon to implement these strategies collaboratively, ensuring that quality assurance systems safeguard educational standards and drive transformative change across the higher education sector.

References

Aithal, P. S., Prabhu, S., & Aithal, S. (2024). Future of Higher Education through Technology Prediction and Forecasting (SSRN Scholarly Paper 4901474). Social Science Research Network. https://doi.org/10.2139/ssrn.4901474.

Albloushi, B., Alharmoodi, A., Jabeen, F., Mehmood, K., & Farouk, S. (2023). Total quality management practices and corporate sustainable development in manufacturing companies: the mediating role of green innovation. Management Research Review, 46(1). https://doi.org/10.1108/MRR-03-2021-0194.

Al-Jumaili, A. H. A., Muniyandi, R. C., Hasan, M. K., Paw, J. K. S., & Singh, M. J. (2023). Big Data Analytics Using Cloud Computing Based Frameworks for Power Management Systems: Status, Constraints, and Future Recommendations. In Sensors (Vol. 23, Issue 6). https://doi.org/10.3390/s23062952.

Al-Zoubi, Z., Qablan, A., Issa, H. B., Bataineh, O., & Al Kaabi, A. M. (2023). The Degree of Implementation of Total Quality Management in Universities and Its Relationship to the Level of Community Service from the Perspectives of Faculty Members. Sustainability, 15(3), Article 3. https://doi.org/10.3390/su15032404.

Almurayh, A., Saeed, S., Aldhafferi, N., Alqahtani, A., & Saqib, M. (2022). Sustainable Education Quality Improvement Using Academic Accreditation: Findings from a University in Saudi Arabia. Sustainability (Switzerland), 14(24). https://doi.org/10.3390/su142416968.

Altbach, P. G., & De Wit, H. (2018). The challenge to higher education internationalization. Studies in Higher Education, 42(5), 887–900.

Amaral, E., & Norcini, J. (2023). Quality assurance in health professions education: Role of accreditation and licensure. Medical Education, 57(1). https://doi.org/10.1111/medu.14880.

Andreani, M., Russo, D., Salini, S., & Turri, M. (2020). Shadows over accreditation in higher education: some quantitative evidence. Higher Education, 79(4). https://doi.org/10.1007/s10734-019-00432-1.

Asif, M., & Raouf, A. (2013). Setting the course for quality assurance in higher education. Quality and Quantity, 47(4). https://doi.org/10.1007/s11135-011-9639-2.

Aydoğdu, M. (2023). Kalite Güvencesi Sistemi: Trakya Üniversitesi İyi Uygulama Örnekleri. Kalite ve Strateji Yönetimi Dergisi, 3(1). https://doi.org/10.56682/ksydergi.1243209.

Batoon, N. P. (2022). Assessment of Quality Assurance Implementation: Valuation and Impact of the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACCUP) Accreditation. CEMJP, 30(4), Article 4.

Bednarski, M. (2024). Digitalization of the university and its stakes–digital materalities, organology and academic practices. Educational Philosophy and Theory, 56(7). https://doi.org/10.1080/00131857.2024.2320193.

Bondzi–Simpson, P. E., & Agomor, K. S. (2021). Financing Public Universities in Ghana Through Strategic Agility: Lessons from Ghana Institute of Management and Public Administration (GIMPA). Global Journal of Flexible Systems Management, 22(1). https://doi.org/10.1007/s40171-020-00254-6.

Büyükgüzel, K., Keleş, V., & Çelik, C. (2023). Bölgesel Kalkınmadan Uluslararasılaşmaya Doğru Üniversite Uygulama ve Araştırma Merkezlerinin Genel Durumu: Araştırma ve Yenilik Stratejilerinde Kalite Güvence Sisteminin Geliştirilmesi. Üniversite Araştırmaları Dergisi, 6(3). https://doi.org/10.32329/uad.1335796.

Carayannis, E. G., & Morawska-Jancelewicz, J. (2022). The Futures of Europe: Society 5.0 and Industry 5.0 as Driving Forces of Future Universities. Journal of the Knowledge Economy, 13(4). https://doi.org/10.1007/s13132-021-00854-2.

Castro Benavides, L. M., Tamayo Arias, J. A., Arango Serna, M. D., Branch Bedoya, J. W., & Burgos, D. (2020). Digital Transformation in Higher Education Institutions: A Systematic Literature Review. In Sensors (Basel, Switzerland) (Vol. 20, Issue 11). https://doi.org/10.3390/s20113291.

Chankseliani, M., Qoraboyev, I., & Gimranova, D. (2021). Higher education contributing to local, national, and global development: new empirical and conceptual insights. Higher Education, 81(1). https://doi.org/10.1007/s10734-020-00565-8.

Cheah, L. F., Cheng, M. Y., & Hen, K. W. (2023). The effect of quality management practices on academics' innovative performance in Malaysian higher education institutions. Studies in Higher Education, 48(4). https://doi.org/10.1080/03075079.2022.2160702.

Cirella, S., & Murphy, S. (2022). Exploring intermediary practices of collaboration in university–industry innovation: A practice theory approach. Creativity and Innovation Management, 31(2). https://doi.org/10.1111/caim.12491.

de Wit, H., & Altbach, P. G. (2021). Internationalization in higher education: Global trends and recommendations for its future. Policy Reviews in Higher Education, 5(1), 28–46. https://doi.org/10.1080/23322969.2020.1820898.

Di Nauta, P., Iannuzzi, E., Milone, M., & Nigro, C. (2020). The impact of the sustainability principles on the strategic planning and reporting of universities. An exploratory study on a qualified Italian sample. Sustainability (Switzerland), 12(18). https://doi.org/10.3390/su12187269.

Duarte, N., & Vardasca, R. (2023). Literature Review of Accreditation Systems in Higher Education. In Education Sciences (Vol. 13, Issue 6). https://doi.org/10.3390/educsci13060582.

Gamage, K. A. A., Pradeep, R. G. G. R., Najdanovic-Visak, V., & Gunawardhana, N. (2020). Academic Standards and Quality Assurance: The Impact of COVID-19 on University Degree Programs. Sustainability, 12(23), Article 23. https://doi.org/10.3390/su122310032.

Gaston, P. L., & Ochoa, E. M. (2023). Higher Education Accreditation: How It's Changing, Why It Must. In Higher Education Accreditation: How It's Changing, Why It Must. https://doi.org/10.4324/9781003445074.

Gerdsri, N., & Manotungvorapun, N. (2022). Systemizing the Management of University-Industry Collaboration: Assessment and Roadmapping. IEEE Transactions on Engineering Management, 69(1). https://doi.org/10.1109/TEM.2021.3077447.

Gora, A. A., Ştefan, S. C., Popa, Ş. C., & Albu, C. F. (2019). Students' perspective on quality assurance in higher education in the context of sustainability: A PLS-SEM approach. Sustainability (Switzerland), 11(17). https://doi.org/10.3390/su11174793.

Guo, P., Saab, N., Post, L. S., & Admiraal, W. (2020). A review of project-based learning in higher education: Student outcomes and measures. International Journal of Educational Research, 102, 101586. https://doi.org/10.1016/j.ijer.2020.101586.

Hailikari, T., Virtanen, V., Vesalainen, M., & Postareff, L. (2022). Student perspectives on how different elements of constructive alignment support active learning. Active Learning in Higher Education, 23(3). https://doi.org/10.1177/1469787421989160.

Haverila, M., Haverila, K., McLaughlin, C., & Arora, M. (2021). Towards a comprehensive student satisfaction model. International Journal of Management Education, 19(3). https://doi.org/10.1016/j.ijme.2021.100558.

Hazelkorn, E. (2019). Global rankings and the geopolitics of higher education: Understanding the influence and impact of rankings on higher education, policy, and society. Routledge.

Hernandez-Diaz, P. M., Polanco, J. A., & Castaño, S. M. (2020). Do sustainability practices influence university quality? A Colombian case study. International Journal of Sustainability in Higher Education, 21(7). https://doi.org/10.1108/IJSHE-03-2020-0087.

Horta, H., & Santos, J. M. (2020). Organisational factors and academic research agendas: an analysis of academics in the social sciences. Studies in Higher Education, 45(12). https://doi.org/10.1080/03075079.2019.1612351.

Jackson, D., Riebe, L., Meek, S., Ogilvie, M., Kuilboer, A., Murphy, L., Collins, N., Lynch, K., & Brock, M. (2023). Using an industry-aligned capabilities framework to effectively assess student performance in non-accredited work-integrated learning contexts. Teaching in Higher Education, 28(4). https://doi.org/10.1080/13562517.2020.1863348.

Jackson, D., & Rowe, A. (2023). Impact of work-integrated learning and co-curricular activities on graduate labour force outcomes. Studies in Higher Education, 48(3). https://doi.org/10.1080/03075079.2022.2145465.

Jackson, D., & Tomlinson, M. (2022). The relative importance of work experience, extra-curricular and university-based activities on student employability. Higher Education Research and Development, 41(4). https://doi.org/10.1080/07294360.2021.1901663.

Javed, Y., & Alenezi, M. (2023). A Case Study on Sustainable Quality Assurance in Higher Education. Sustainability (Switzerland), 15(10). https://doi.org/10.3390/su15108136.

Jayanti, N. K. D. A., & Sarja, N. L. A. K. Y. (2019). IT as a Tools: Quality Assurance System in Higher Education. 2019 1st International Conference on Cybernetics and Intelligent System, ICORIS 2019. https://doi.org/10.1109/ICORIS.2019.8874890.

Jiménez-Bucarey, C., Acevedo-Duque, Á., Müller-Pérez, S., Aguilar-Gallardo, L., Mora-Moscoso, M., & Vargas, E. C. (2021). Student's satisfaction of the quality of online learning in higher education: An empirical study. Sustainability (Switzerland), 13(21). https://doi.org/10.3390/su132111960.

Jingura, R. M., & Kamusoko, R. (2019). A competency framework for internal quality assurance in higher education. International Journal of Management in Education, 13(2). https://doi.org/10.1504/IJMIE.2019.098186.

Kadhila, N., & Iipumbu, N. (2019). Strengthening internal quality assurance as a lever for enhancing student learning experiences and academic success: lessons from Namibia. Quality in Higher Education, 25(1). https://doi.org/10.1080/13538322.2019.1597424.

Kır, Ş. (2020). Dijital dönüşüm sürecinde yükseköğretim kurumları ve öğretim elemanlarının gelişen rolleri. In Açıköğretim Uygulamaları ve Araştırmaları Dergisi, 6(3).

Lapteva, A. V., Efimov, V. S., Лаптева, А. В., & Ефимов, В. С. (2016). New Generation of Universities. University 4.0. https://elib.sfu-kras.ru/handle/2311/29969.

Li, H., & Yin, Z. (2023). Influence of publication on university ranking: Citation, collaboration, and level of interdisciplinary research. Journal of Librarianship and Information Science, 55(3). https://doi.org/10.1177/09610006221106178.

Liu, H. C., Liu, R., Gu, X., & Yang, M. (2023). From total quality management to Quality 4.0: A systematic literature review and future research agenda. In Frontiers of Engineering Management (Vol. 10, Issue 2). https://doi.org/10.1007/s42524-022-0243-z.

López, D. A., Espinoza, O., Rojas, M. J., & Crovetto, M. (2022). External evaluation of university quality in Chile: an overview. In Quality Assurance in Education (Vol. 30, Issue 3). https://doi.org/10.1108/QAE-08-2021-0141.

Lucander, H., & Christersson, C. (2020). Engagement for quality development in higher education: a process for quality assurance of assessment. Quality in Higher Education, 26(2). https://doi.org/10.1080/13538322.2020.1761008.

Lundberg, H., & Öberg, C. (2021). Teachers, researchers, but not innovators? Rethinking university-industry collaboration. Journal of Business and Industrial Marketing, 36(13). https://doi.org/10.1108/JBIM-03-2020-0126.

M. Ghoneim Sywelem, M., & Mohamed Elsayed Makhlouf, A. (2023). Common Challenges of Strategic Planning for Higher Education in Egypt. American Journal of Educational Research, 11(6). https://doi.org/10.12691/education-11-6-12.

Makki, A. A., Alqahtani, A. Y., Abdulaal, R. M. S., & Madbouly, A. I. (2023). A Novel Strategic Approach to Evaluating Higher Education Quality Standards in University Colleges Using Multi-Criteria Decision-Making. Education Sciences, 13(6). https://doi.org/10.3390/educsci13060577.

Manotungvorapun, N., & Gerdsri, N. (2021). University-industry collaboration: Assessing the matching quality between companies and academic partners. IEEE Transactions on Engineering Management, 68(5). https://doi.org/10.1109/TEM.2019.2910154.

Marrucci, L., Daddi, T., & Iraldo, F. (2024). Creating environmental performance indicators to assess corporate sustainability and reward employees. Ecological Indicators, 158. https://doi.org/10.1016/j.ecolind.2023.111489.

Mattos, L. K. de, Flach, L., Costa, A. M., & Moré, R. P. O. (2023). Effectiveness and Sustainability Indicators in Higher Education Management. Sustainability (Switzerland), 15(1). https://doi.org/10.3390/su15010298.

Medne, A., Lapina, I., & Zeps, A. (2020). Sustainability of a university's quality system: adaptation of the EFQM excellence model. International Journal of Quality and Service Sciences, 12(1). https://doi.org/10.1108/IJQSS-09-2019-0108.

Miotto, G., Del-Castillo-Feito, C., & Blanco-González, A. (2020). Reputation and legitimacy: Key factors for Higher Education Institutions' sustained competitive advantage. Journal of Business Research, 112. https://doi.org/10.1016/j.jbusres.2019.11.076.

Mohamed Hashim, M. A., Tlemsani, I., & Matthews, R. (2022). Higher education strategy in digital transformation. Education and Information Technologies, 27(3), 3171–3195. https://doi.org/10.1007/s10639-021-10739-1.

Moscardini, A. O., Strachan, R., & Vlasova, T. (2022). The role of universities in modern society. Studies in Higher Education, 47(4). https://doi.org/10.1080/03075079.2020.1807493.

Mulenga, I. M. (2020). Rethinking Quality Assurance in Curriculum Development and Implementation for Higher Education in Africa. East African Journal of Education and Social Sciences, 1(3), Article 3. https://doi.org/10.46606/eajess2020v01i03.0039.

My Nguyen, L. T., Tran, T., van Pham, T., Nguyen, T. T., Thu Le, H. T., Phuong Trinh, T. T., & Nghiem, T. T. (2021). Factors affecting successful quality assurance implementation in Vietnamese higher education: A qualitative study. Qualitative Report, 26(2). https://doi.org/10.46743/2160-3715/2021.4564.

Nsanzumuhire, S. U., & Groot, W. (2020). Context perspective on University-Industry Collaboration processes: A systematic review of literature. Journal of Cleaner Production, 258. https://doi.org/10.1016/j.jclepro.2020.120861.

Pedro, N. S., & Kumar, S. (2020). Institutional Support for Online Teaching in Quality Assurance Frameworks. Online Learning, 24(3), 50–66.

Poliakova, H. A. (2018). Conceptual Foundations and Technology of The Formation of The Internal Quality Assurance System in The Higher Education Institution. Adaptive Management: Theory and Practice. Series Pedagogics, 5(9), Article 9. https://amtp.org.ua/index.php/journal/article/view/73.

Rahhali, M., Oughdir, L., & Jedidi, Y. (2021). E-Learning Recommendation System for Big Data Based on Cloud Computing. International Journal of Emerging Technologies in Learning, 16(21). https://doi.org/10.3991/ijet.v16i21.25191.

Rella, A., Rubino, M., Raimo, N., & Vitolla, F. (2024). Does the digitalization of municipalities affect the efficiency of universities? An Italian case study using DEA and Malmquist index approaches. Technology in Society, 77. https://doi.org/10.1016/j.techsoc.2024.102506.

Rodriguez-Salvador, M., & Castillo-Valdez, P. F. (2023). Promoting Collaborative Learning in Students Soon to Graduate through a Teaching–Learning Model. Education Sciences, 13(10). https://doi.org/10.3390/educsci13100995.

Rohman, F., Noermijati, N., Mugiono, M., & Soelton, M. (2023). The role of quality assurance in improving the distribution of organizational performance. Uncertain Supply Chain Management, 11(1). https://doi.org/10.5267/j.uscm.2022.10.003.

Romanowski, M. H. (2022). The idolatry of accreditation in higher education: enhancing our understanding. Quality in Higher Education, 28(2). https://doi.org/10.1080/13538322.2021.1948460.

Rosak-Szyrocka, J. (2024). The Era of Digitalization in Education where do Universities 4.0 Go? Management Systems in Production Engineering, 32(1). https://doi.org/10.2478/mspe-2024-0006.

Rosienkiewicz, M., Helman, J., Cholewa, M., Molasy, M., Górecka, A., Kohen-Vacs, D., Winokur, M., Amador Nelke, S., Levi, A., Gómez-González, J. F., Bourgain, M., Sagar, A., Berselli, G., & Benis, A. (2024). Enhancing Technology-Focused Entrepreneurship in Higher Education Institutions Ecosystem: Implementing Innovation Models in International Projects. Education Sciences, 14(7), Article 7. https://doi.org/10.3390/educsci14070797.

Ruben, B. D., De Lisi, R., & Gigliotti, R. A. (2023). A Guide for Leaders In Higher Education: Concepts, Competencies, and Tools. In A Guide for Leaders in Higher Education: Concepts, Competencies, and Tools. https://doi.org/10.4324/9781003442769.

Rybinski, K. (2022). Assessing how QAA accreditation reflects student experience. Higher Education Research and Development, 41(3). https://doi.org/10.1080/07294360.2021.1872058.

Saroyan, A., & Frenay, M. (2023). Building Teaching Capacities in Higher Education: A Comprehensive International Model. In Building Teaching Capacities in Higher Education: A Comprehensive International Model. https://doi.org/10.4324/9781003443346.

Sayah, H., & Khaleel, A. (2022). The Application of Accreditation Standards Institutional Iraqi in Iraqi Universities Using Deming Cycle (Pdsa)" an Applied Study in The Colleges of Sumer University -Iraq". Proceedings on Engineering Sciences, 4. https://doi.org/10.24874/PES04.01.004.

Schofer, E., Ramirez, F. O., & Meyer, J. W. (2021). The Societal Consequences of Higher Education. Sociology of Education, 94(1). https://doi.org/10.1177/0038040720942912.

Şendur Atabek, G. (2023). Türkiye'de İletişim Eğitimi Alanında Akreditasyon Süreci. Akdeniz Üniversitesi İletişim Fakültesi Dergisi, 42. https://doi.org/10.31123/akil.1322584.

Sharvashidze, G., Grdzelidze, I., Sikharulidze, D., & Gabrichidze, T. (2023). Data-driven analysis for evidence-based decision making at universities: benchmarking, software tools and weighted indicators in quality assurance–analytical framework of Tbilisi State University. Quality in Higher Education, 29(1). https://doi.org/10.1080/13538322.2022.2122107.

Spowart, L., & Turner, R. (2022). Institutional Accreditation and the Professionalisation of Teaching in the HE Sector. In Higher Education - New Approaches to Accreditation, Digitalization, and Globalization in the Age of Covid. https://doi.org/10.5772/intechopen.99805.

Stukalo, N., & Lytvyn, M. (2021). Towards sustainable development through higher education quality assurance. Education Sciences, 11(11). https://doi.org/10.3390/educsci11110664.

Suparno, Sri Pudjiarti, E., & Joyo Supeno, B. (2023). Collaborative Synergy: Leveraging Competitive Advantage in University-Industry Innovation. Interciencia. https://doi.org/10.59671/bfsog.

Suresh Kumar, P. M. (2017). Academic Audit and Quality Assurance in Higher Education. International Journal of Management, Technology, and Social Sciences. https://doi.org/10.47992/ijmts.2581.6012.0025.

Taşcı, D., & Lapçın, H. T. (2023). Yükseköğretimde Kalite Güvencesi Sistemi: Kurumsal Akreditasyon Raporları Üzerinden Bir Değerlendirme. Eskişehir Osmangazi Üniversitesi Sosyal Bilimler Dergisi, 24(1). https://doi.org/10.17494/ogusbd.1185953.

Teichler, U. (2020). Higher education and the world of work: A conceptual framework. European Journal of Education, 55(1), 3–17.

Tien, N. H., Duc, L. D. M., Ngoc, N. M., & Hieu, V. M. (2022). Impact of Accreditation Policy on Quality Assurance Activities of Public and Private Universities in Vietnam. International Journal of Public Sector Performance Management, 1(1). https://doi.org/10.1504/ijpspm.2022.10052573.

Tseng, F. C., Huang, M. H., & Chen, D. Z. (2020). Factors of university–industry collaboration affecting university innovation performance. Journal of Technology Transfer, 45(2). https://doi.org/10.1007/s10961-018-9656-6.

Vivek, C. M., & Ramkumar, P. (2021). Evaluation of course outcome attainment of engineering course with traditional, blended and flipped classroom approaches. Education and Information Technologies, 26(2). https://doi.org/10.1007/s10639-020-10353-7.

Vykydal, D., Folta, M., & Nenadál, J. (2020). A study of quality assessment in higher education within the context of sustainable development: A case study from Czech Republic. Sustainability (Switzerland), 12(11). https://doi.org/10.3390/su12114769.

Wong, W. H., & Chapman, E. (2023). Student satisfaction and interaction in higher education. Higher Education, 85(5). https://doi.org/10.1007/s10734-022-00874-0.

Yıldırım, Z., & Çatı, K. (2023). Hizmet Kalitesinin Öğrenci Memnuniyetine Olan Etkisinde Kurum İmajının Aracılık Rolü. Munzur Üniversitesi Sosyal Bilimler Dergisi, 12(2). https://doi.org/10.61337/tusbd.1338237.

Yin, L. (2024). Educational Administration in Chinese Universities in the Context of Globalization. Frontiers in Economics and Management, 5(2), 57–62. https://doi.org/10.6981/FEM.202402_5(2).0008.

Zaid, A., Arqawi, S., Abu Mwais, R., Al Shobaki, M., & Abu-Naser, S. (2020). The Impact of Total Quality Management and Perceived Service Quality on Patient Satisfaction and Behavior Intention in Palestinian Healthcare Organizations. Technology Reports of Kansai University, 62, 221–232.

Zuhairi, A., Raymundo, M. R. D. R., & Mir, K. (2020). Implementing quality assurance system for open and distance learning in three Asian open universities: Philippines, Indonesia and Pakistan. Asian Association of Open Universities Journal, 15(3), 297–320. https://doi.org/10.1108/AAOUJ-05-2020-0034.

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Investigating the Degree of Penetration of the School Motto in Christian Schools in Japan

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Abstract

This study examines how the school motto is understood and permeated by the full-time staff of Christian schools in Japan by surveying 159 full-time staff members. It highlights that the school motto has always been a prerequisite for establishing nationwide training sessions to improve the qualifications of administrative staff working in Christian schools. The response rate was 98.1% (N = 156). An analysis of the responses revealed that less than 10% of the respondents gave affirmative answers to all questionnaire items regarding the school motto. The results suggested that the influence of the messages on the organisation depends on the thinking and actions of the person in charge who sends out messages regarding the school motto. Concrete discussions about the organisation's future with young alumni will improve the quality of the staff who protect and promote the 'school motto' and generate constructive discussions for the future reform of school corporation governance.

Keywords: School motto, Christian school, School corporation, Japan

Introduction

This study examines the degree of penetration of school mottos among full-time employees of private Christian schools in Japan (hereafter referred to as Christian schools). First, we summarise the relationship between school mottos and Christian schools. Next, based on the activities of the Association of Christian Schools in Japan (ACSJ) in recent years, we highlight that the school motto has always been a prerequisite for establishing nationwide training sessions to improve the qualifications of administrative staff working in Christian schools and for requests regarding school corporation governance reform submitted to the Ministry of Education, Culture, Sports, Science, and Technology (MEXT). We then discuss the need for a survey of full-time staff working in Christian schools to determine how the school motto has penetrated their daily work. Based on the survey results, actions should be taken to improve the qualifications of the administrative staff in Christian schools, and the need to utilise the school motto in the decision-making processes of school corporations should be discussed.

School Motto and Christian Schools as Private Schools in Japan

Why were private schools established in Japan? The reason is to realise a mission backed by a strong orientation toward Enlightenment (Amano, 2009) and to promote education focused on human development (Kimura, 2017). One concrete clue is the school motto or the spirit of its foundations. Kimura (2010) points out that the school motto is the spiritual foundation of a private school established

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with the private funds of its founders and supporters and can encourage conscious reflection by future faculty members. The school motto is the historical source of private schools and the reason for their existence from the past to the present. Therefore, the school motto is a fundamental principle that private schools should always return and can be a criterion for organisational decisions. According to Nakajima (2019), several Christian schools are trying to return to their school motto, that is, to reflect on the thoughts of Christian missionaries and supporters who founded Christian schools and reaffirm the raison d' être and role of such schools.

Historically, the Christian Church has founded numerous schools in Western countries. In Japan, which is not a Christian nation, the prohibition policy against Christianity ended in 1873 and then the missionary activities commenced. However, in 1899, the supervision of Christian schools was strengthened through the Private School Ordinance (Yasushima, 2012). In the same year, Ministry of Education Instruction No. 12, which prohibited religious education, was issued. Missionaries abroad fought oppression to establish schools and devoted themselves to their development. The school motto was set forth according to the founders' wishes and prayers (Masuda, 2007). Doi (2001) argues that the school motto is needed to rebuild or strengthen Christian schools 'when they are shaken in some respect and when they are aware of their deficiencies' (p. 3). Mori (2003) explained the need to consider the school motto's inheritance within a sound historical perspective and insights into the new era in light of the current situation of Christian schools. Onishi (2015) emphasises the need for clarity and unity in Christian school education and the importance of presenting the educational goals of such schools in a way easily understood by non-Christian faculty and staff members. These arguments imply that it is more important to know how school mottos are embodied in educational activities than how they are shouted (Doi, 2001). This is because for the school motto to bring meaning to us not only in the past but also in the present and the future, it must 'heat up' the members of the Christian school 'as a vision or an idea' and must be expressed through concrete words and human actions (Fukaya, 2008). What is the status of Christian schools?

This study introduces the recent activities of the ACSJ, such as the establishment of the National Conference of Secretaries-General and Administrative Directors and the submission of the 'Request for Reform of School Corporation Governance' to the MEXT. While confirming the current status of the motto in Christian schools, this study also examined its degree of penetration. The necessity of surveying the school motto in Christian schools and verification of its degree of penetration are discussed in this study.

The ACSJ and the School Motto

The ACSJ (formerly the National Christian Education Association in Japan) was founded in 1910 owing to the merger of the 'Christian Education Alliance', founded by Protestant Christian schools, and the Women's Christian Education Association, founded in 1913. As of May 2023, the ACSJ had 102 Protestant school corporations nationwide. Article 3 of the Articles of Incorporation (ACSJ 2016) states that the ACSJ aims to contribute to education by studying issues common to all Christian school corporations and promoting the enhancement and development of Christian school education. Consequently, the ACSJ has developed various projects such as training teachers and staff, publishing newspapers on Christian school education, providing promotional grants for such education, and supporting employment in Christian schools.

The ACSJ's teacher and staff training aims to improve the quality of staff working in Christian school corporations. One such attempt was implementing a national training workshop called the National Conference of Secretaries-General and Administrative Directors. The considerations for establishing this national conference can be traced back to 2014. The 56th Conference of School Representatives of the ACSJ held on 15 November 2014, aimed to protect and promote the school motto, establish a national conference to increase the number of administrative staff who preserve and promote the school motto in member schools and train administrative managers to take the initiative in reforming school corporations and individual schools. Establishing a training program to increase the number of administrative staff members who could proactively work to reform Christian school corporations and individual schools was approved. In March 2015, at an extraordinary general meeting, in response to a consultation from the President, the Project Committee on New Collaboration in the Education Association reported on the need to establish a Liaison Conference of Secretaries-General and Administrative Directors to Promote the Mission Statement (School Motto). The Secretaries-General, Administrative Directors, and others were asked to oversee the qualities of administrative staff (sense of belonging and understanding of schools), discuss how systematic training opportunities could be established, and seek to establish a conference to recommend implementing such training opportunities. In January 2016, the First Liaison Conference of Secretary-General and Administrative Directors to Promote the Mission of Schools was held at Seinan Gakuin University in Fukuoka, Japan. In 2017, the name was changed to the National Conference of Secretaries-General and Administrative Directors, which has since been held annually. Confirming the history of the conference, the ACSJ has aimed to improve the quality of administrative staff through (1) a sense of belonging to the organisation and (2) an understanding of schools to uphold and promote the school motto. This can be interpreted as an attempt to promote the management and reform of Christian schools. The Secretaries-General and Administrative Directors, who are in charge of their organisations, are responsible for improving the quality of the administrative staff, and the National Conference of Secretaries-General and Administrative Directors is a forum for proposing relevant practices.

As previously mentioned, the school motto is the spiritual foundation of private schools, which is the same for Christian schools and is the basic principle and criterion for the school corporation to promote the conscious reflection of its members. In Christian school corporations, quotes from the Bible or the founder's legacy are often considered school mottos. The school motto directly or indirectly influences various elements related to the organisation of the school corporation, such as the method of selecting directors, councillors, and auditors and the attributes, characteristics, and ratios of the members of the school corporation. One example is the ACSJ's response to the recent school corporation governance reform. Debates on school corporation governance reform and the revision of the Private School Law have focused on the authority and function of the Board of Councillors in school corporation decision-making. The Board of Councillors functioned as a check on the Board of Trustees at the Nihon Daigaku School Corporation to manage Nihon University in countering frauds, resulting in the proposal that the Board of Councillors be composed solely of experts from outside the university. In response, the ACSJ submitted a Request for School Corporation Governance Reform (18 October 2021) to MEXT. It stated the necessity for the Board of Counsellors to be a well-balanced group of school personnel, including faculty members, alums, and parents who understand educational policy based on the school motto, the lifeline of school management and operation, and outside experts. It can be interpreted as follows: (1) the school motto is the lifeline for the operation of Christian schools, and (2) people who understand school mottos based on Christianity should be involved in the decision-making of Christian school corporations.

To summarise, the school motto is considered to require protection in the recent request by the ACSJ to establish a National Conference of Secretaries-General and Administrative Directors and another request by MEXT to reform school corporation governance. In the ACSJ newspaper, Masuda (2007) argued that the school motto of Christian schools must remain unchanged amidst changing times and that we must question whether it maintains its fresh vitality and is carried through in daily educational activities. In other words, verifying and evaluating the current status of school mottos is a prerequisite for any school reform. This would verify whether the motto has penetrated as 'common principles and goals of the educational community' (Funamoto, 2008). What is the current situation at Christian schools? Do school mottos permeate the daily activities today? To the best of our knowledge, no survey has been conducted on the degree of the penetration of school mottos among Christian school members. Therefore, this study conducted a questionnaire survey on school mottos among the administrative staff of a Christian school corporation in Japan, which is an ACSJ member. Based on the survey results, we make concrete proposals to improve the quality of administrative staff in the future and protect and promote the school motto in the governance reform of school corporations following the revision of the Private School Law 2023.

Based on the above discussion, the following research question was set up: Has school motto permeated administrative staff working in Christian schools in Japan?

Method

Purpose

This study investigates the degree of penetration of school mottos among administrative staff working in Christian schools.

Participants

Participants were 159 full-time administrative staff members working in Christian schools in Japan. As of 1 June 2023, 165 full-time administrative staff members worked in Christian schools during the survey. After excluding six employees on maternity or childcare leave, the participants were 159. All participants worked in the administrative offices of the Christian School Corporation in kindergartens, nurseries, and elementary, junior high, senior high, universities, and graduate schools.

Materials

The questionnaire developed for this study (see Appendix) consisted of two sections: one with 12 binary-choice questions and the other with open-ended questions. The binary section consisted of nine questions regarding the school motto and three questions regarding respondent's attributes (position, age, and affiliation with the school (alums of the school)). To develop the questionnaire, we surveyed the literature on educational goals and school mottos in Christian schools. We attempted to analyse the characteristics that should reflect such mottos in private schools and related matters. Fukaya (2008) conducted historical and theoretical research on the school mottos of Christian schools and pointed out that they serve as a vision or philosophy for the future of private schools, including Christian schools, and that their messages must be presented through concrete words and human actions consistent with the established National Conference of Secretaries-General and Administrative Directors by the ACSJ. Therefore, the questionnaire included questions that asked whether the school motto permeated the thinking, values, and concrete actions of Christian schools and whether it was communicated to members through concrete words and human actions. Fukaya (2008) asks, 'Who should communicate the school motto in concrete words and actions to inspire the school members and how?' In this survey, full-time administrative staff working in Christian schools are the subjects and based on the National Conference of Secretary-Generals and Administrative Directors conducted by the ACSJ, the Secretary-Generals and administrative directors are responsible for the school organisations regarding: (1) improving the qualifications of administrative staff and (2) discussing the educational policy and future of Christian schools through the school motto. In the questionnaire, we mentioned secretary-generals, administrative directors, and others as 'the persons in charge of the organisation' and did not specify specific titles or positions.

Procedures

After obtaining secret written consent, the questionnaire was administered using the Function of Questionnaire of DeskNet. Questionnaires and response formats were set using the Create Questionnaire function of DeskNet, and the start and end dates of the survey were entered. The questionnaire was administered over two weeks. The day before the survey commenced, letters of request were prepared for all 159 survey targets. The person administering the questionnaire survey (the author) stated that he was researching the governance of Christian schools and needed participants to complete the questionnaire to learn their thoughts on the school motto as part of the information-gathering process. One week later, another request letter was prepared and sent to the schools and departments requesting their cooperation in answering the questionnaire. The author visited all schools and departments where the staff members worked and handed the form in person. One week after the questionnaire was administered, an e-mail message was sent to all participants to provide an interim report on the collection rate and encourage cooperation in responding to the questionnaire. Consequently, 156 of the 159 eligible employees responded by the deadline, with a final response rate of 98.1%. Subsequently, the respondents clicked on Response History in the Desknets survey function, checked the contents of the Response Details section, and clicked on Download to download the response data. Of all respondents, 97 (62.1%) answered the Free Answer section, with 33,447 Japanese characters. All statistical analyses were performed using the free statistical analysis software R. The authors received prior consultation from iStat Inc. (https://istat.co.jp/) to select and perform appropriate statistical analysis methods.

Results

Table 1 presents the questionnaire results. The reliability coefficient (Cronbach's alpha) of the questionnaire items regarding the school motto (items 1–9, excluding those regarding attributes; items 10, 11, and 12) was 0.71. The results indicate that respondents (N=156) who 'feel' (54.5%) that the school motto applies to the organisation and its educational policies are approximately nine points higher than those who 'do not feel' (45.5%). Most respondents (80.8%) 'did not think' the school motto permeated their thoughts, values, or specific actions in their daily work. Moreover, most respondents (83.3%) 'did not think' that the school motto permeated their teaching faculty. The results suggested that 71.8% of the respondents 'understand and interpret the school motto', and 83.3% think 'the school motto should be reflected in their daily work, values, and specific actions'. However, a similar percentage of respondents 'agree' (49.4%) and 'disagree' (50.6%) that the person in charge of the organisation sends out messages regarding the school motto. They suggested that the influence of the messages on the organisation depends on the thinking and actions of the person in charge who sends out messages regarding the school motto. Moreover, 61.5% 'did not think' that the ideas and actions of those in charge of disseminating the school motto were the driving force of the organisation, while 38.5% believed they were.

A cross-tabulation of the results in Table 1 shows that nine respondents, or 5.8% of all respondents, chose affirmative responses ('feel', 'agree', or 'have') to all nine items regarding the school motto. When Item 3, a question about teaching faculty, was excluded, the number of respondents who gave affirmative responses to all eight items increased by 3 to 12, or 7.7% of all respondents.

Table 1. Results of the school motto questionnaire (N=156)

Question	Participants (N)	Yes, I do.	No, I don't
1. Do you feel that the school motto ("Seinan, Be True to Christ") is reflected in the organization and educational policies of Seinan Gakuin as an educational institution?	156	85 (54.5%)	71 (45.5%)
2. Do you think the school motto ("Seinan, Be True to Christ") permeates the thinking, values, and specific actions of the staff in their daily work?	156	30 (19.2%)	126 (80.8%)
3. Do you think the school motto ("Seinan, Be True to Christ") permeates the faculty's thinking, values, and specific actions of the teaching faculty in the workplace?	156	26 (16.7%)	130 (83.3%)
4. Do you have your own understanding and interpretation of the school motto ("Be true to Christ, O Southwest")?	156	112 (71.8%)	44 (28.2%)
5. Do you think it is desirable for the school motto ("Seinan, Be True to Christ") to be reflected in the thinking, values, and actions of the staff in the work of Seinan Gakuin as an educational institution?	156	130 (83.3%)	26 (16.7%)
6. Do you think the person in charge of the organization sends out messages about the school motto?	156	77 (49.4%)	79 (50.6%)
7. Do you think that the message about the school motto sent out by the person in charge of the organization contains his/her personal interpretation, thoughts, and feelings about the school motto?	76	71 (93.4%)	5 (6.6%)
8. In general, do you think the influence of the message on the organization differs depending on the thinking and actions of the person in charge of the organization who is in a position to transmit the message about the school motto?	156	147 (94.2%)	9 (5.8%)
9. Do you think that the thinking and actions of those in charge of the organization who are in a position to transmit the message about the school motto are the driving force of the organization?	156	60 (38.5%)	96 (61.5%)

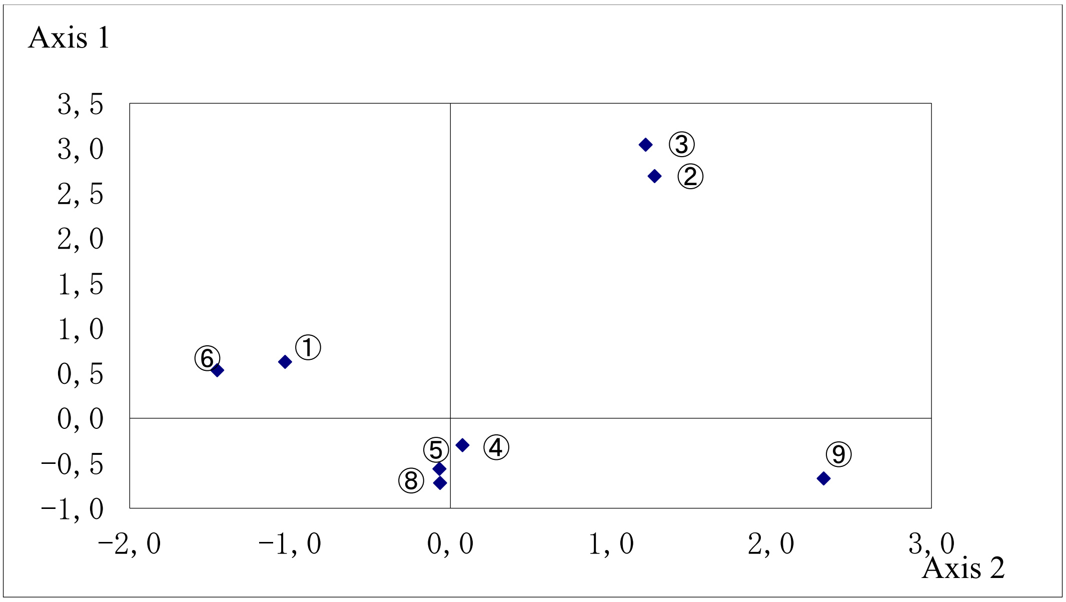

Figure 1. Similarity of Questionnaire Items according to Quantification III (N=156)

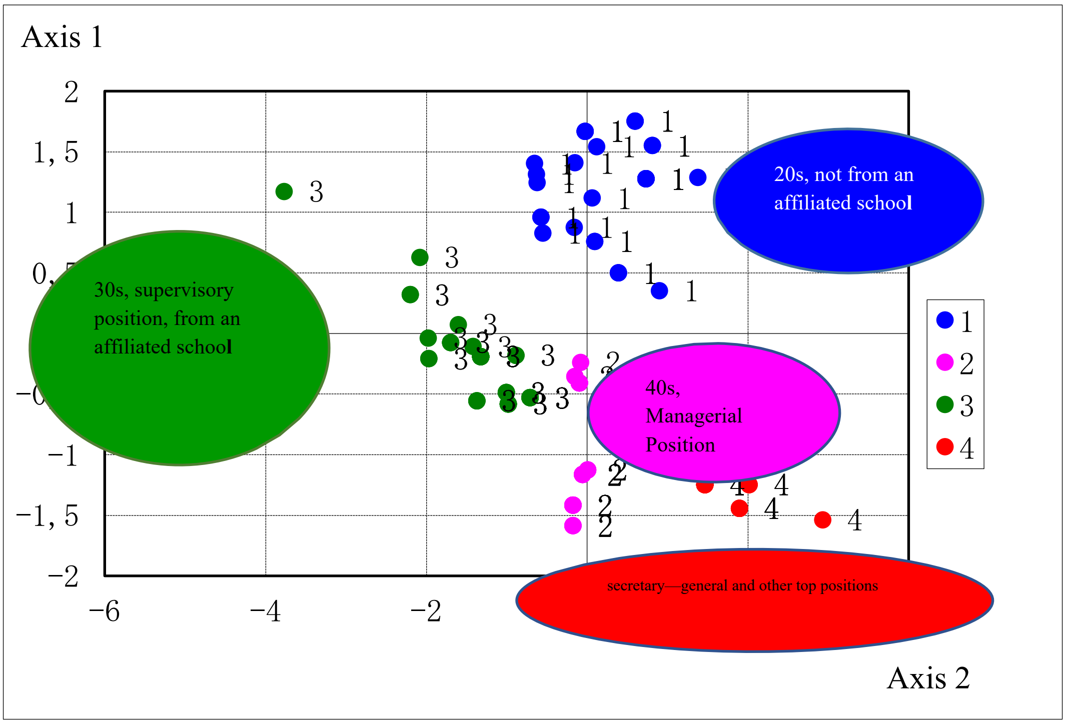

Figure 2. Degree of Association between Age, Job Title, and Affiliated High School Origin According to Quantification III (N=156)

Following cross-tabulation, an analysis was conducted using Quantification III. This is a statistical method for finding latent variables from observed variables and verifying the degree of similarity based on respondents' scores for the latent variables. Consequently, two axes (latent variables) were found in questionnaire items (1)–(9) (observed variables). Based on the analysis, we interpreted the vertical axis (Axis 1) to discriminate the degree of penetration and influence of the school motto and the horizontal axis (Axis 2) to discriminate the behaviour of those in charge as the organisation's driving force.

Figure 1 plots the scores (category scores) of survey participants for each survey item on the plane created by the above two axes. Next, we calculated the average score (category score) for each participant's attributes (survey items 10–12) and plotted information on age, position, and affiliated school background. Figure 2 shows the results, demonstrating the similarity of each questionnaire item and its relationship with the respondents' age, position, and affiliated school background. In Figures 1 and 2, items with high similarity are placed near each other, and items with low similarity are placed far from each other. Consequently, as Figure 2 shows, the characteristics and attributes of respondents' answers can be classified into four categories.

Discussion

Table 1 and Figures 1 and 2 present these discussions. Less than 10% of the respondents selected positive responses for all survey items. Interpreting these results is difficult because no criteria exist for judging them. However, given that 98.1% of the constituents responded, it was impossible to determine whether the school motto had penetrated the Christian school's administrative staff. In the Christian schools surveyed, the school motto was listed and disclosed on the school corporation's website, along with the organisational chart and educational policies of each school managed by the school corporation, suggesting that approximately half (54.5%) of the full-time employees were aware that the school utilised the 'spirit'. Furthermore, various activities, including Christian elements (entrance and graduation ceremonies, mandatory Christian courses, chapel lectures, and Christmas events) in each school (elementary school, junior high school, high school, university, and graduate school) have been traditionally and continuously implemented. The administrative staff recognise these activities along with the school motto. However, the school motto is considered 'utilised' to some extent in the organisation and educational policies. Moreover, only 19.2% of all respondents thought that the school motto permeated their thinking, values, and specific actions in their daily work, and the same tendency was true of the faculty from the administrative staff's perspective. This current situation suggests that the school motto is not the 'lifeline' (ACSJ, 2021) or the 'source of life' of the organisation (Masuda, 2007) among the administrative staff. However, approximately 71.8% of the administrative staff had their interpretations of the school motto, and 83.3% believed that it should be reflected in their thinking, values, and actions in their work at educational institutions. Approximately half (49.4%) of the administrative staff believed those in charge of the organisation sent messages about the school motto. However, over 90% (94.2%) agreed that the ideas and actions of those in charge had different influences on the organisation. What do these results imply? We examine the individual coordinate areas of the plan shown in Figure 1 from the perspective of the similarities between the question items. The high similarity between the responses to survey items (1) and (6) indicates that when respondents perceive the school motto as a message from the person in charge of the organisation, they feel that it applies to the organisation and its educational policies. The high similarity of responses to Items (2) and (3) of the questionnaire suggests that incorporating the school motto into the daily work of full-time staff is linked to the same among teaching faculty members. Furthermore, the high similarity between items (5) and (8) suggests that the influence of the school motto on the thinking, values, and behaviour of the staff is the thinking and behaviour of those in charge. The high similarity between items (4) and (9) suggests a relationship between one's interpretation of the school motto and the perception that the ideas and actions of those in charge of the organisation are the driving forces of the organisation. Regarding the similarities between these items, the survey participants and administrative staff members did not sufficiently discuss the school motto, and there were insufficient opportunities and support mechanisms available to confirm their interpretation and reflect it in their ideas, values, and actions. The school motto must be constantly interpreted to repeat the principles of past founders, reflect on history and find new meanings to prepare for the future (Fukaya, 2008), suggesting that individuals and organisations do not adequately perform this activity. To create an organisation based on the school motto, those in charge must transmit specific details in their own words. This will 'get the organisation's members fired up' (Fukaya, 2008). While the message content is important, it should also be consistent with the person in charge of the organisation's daily awareness and actions. In other words, those who are trusted and those who can be trusted by members speak passionately about the organisation's direction in their own words based on the school motto. Furthermore, for the administrative staff of Christian schools and the school motto to permeate organisations, the responsible person must send specific messages based on the interpretation of the school motto and convert it into a 'common language' to link it to daily work and mid- to long-term action plans.

What, then, should we do to improve the qualifications of the administrative staff of Christian schools and proper decision-making of school corporations for the activities mentioned above of the ACSJ and future reforms of school corporation governance? As mentioned earlier, approximately 70% of the respondents had their interpretations of the school motto. If we interpret the vertical axis (axis 1) as the axis that determines the penetration and influence of the school motto and the horizontal axis (axis 2) as the axis that defines the actions of those in charge as the driving force of the organisation, the axis of origin at the intersection of the two axes would be the secretary-general, administrative director, head of the internal audit office, and head of the administrative department, which are the top levels of the administrative organisation. Groups that can be judged to have different or even opposing response tendencies concerning the school motto at the top administrative levels are those in their 30s, have supervisory positions, and are graduates of affiliated schools. If we explain this result in Christian terms, the mentality of the top-level administrators regarding the school motto is 'heretical' for the '30s, supervisory positions, and affiliated school graduates' and the two groups are opponents as they claim their own 'legitimacy'. Considering the historical formation process of Christian denominations, Morimoto (2018) states that others with different opinions are essential for establishing legitimacy and attempting to expand the relationship between orthodoxy and heresy to organisational theory. Similar to the importance of meeting others with various interests and concerns to know oneself, it is also essential to discuss the school motto as a common topic among people and groups with different perceptions and to reflect the results in the organisation and its policies for the future. Some may ask the author to give specific suggestions on what the leaders of the organizations should do in light of these results. So, the author would like to make one suggestion. Based on the results of this study, the leaders of the organizations should continue to question whether the Christian schools surveyed "may not already be Christian schools," and only by continuing to act to envision what a Christian school should be like based on the "foundation spirit," express their thoughts in their own words, and motivate the members, will they be able to see light in the future of Christian schools. Many founders of Christian schools in Japan have experienced great setbacks in their lives, along with the accomplishment of their mission of establishing a school. This is because, even after founding the school, they continued to "sweat" to root Christianity in the organization, and never rested on the status quo. If you feel a sense of crisis about the current state of Christian schools, you need to have a strong conviction to be prepared to even feel a healthy sense of defeat at the end of the "sweat" to change it, rather than lamenting that "the status quo will not change" (Ito, 2023, p. 3).

What do the results of this study suggest regarding recent private school governance reforms? How and to what extent can top-level administrative staff, mostly directors and councillors of the school corporation, use different perceptions in the decision-making process of the school corporation? This is essential for creating an open organisational climate. Regardless, the current situation is that the school motto has not fully penetrated. There may be various ways to instil the school motto among the administrative staff of Christian schools. What can we do based on the research findings? We could give young people in their 30s and 40s the opportunity to become directors or councillors of school corporations, and exchange with older directors and councillors their opinions regarding the future of Christian school corporations. It is important to create a system in which young people can think about what a Christian school should be based on the school motto and reflect their opinions in the school corporation decision-making. Differences in opinions between generations regarding school mottos may provide energy for thinking about the future of Christian school corporations in Japan. We must involve the younger generation, who will be responsible for the future of Christian school corporations in Japan, in managing them at an early stage.

Conclusions and Remaining Issues

This study conducted a questionnaire survey on school mottos among administrative staff working in a Christian school in Japan to investigate the current status of the penetration, considered a prerequisite for improving the quality of full-time staff (sense of belonging and understanding of the school) and governance of the school corporation. The discussions in this study are summarised as follows. (1) The degree of penetration of the school motto among full-time employees is not high. (2) Full-time employees have a relatively high tendency to have their own interpret school mottos. (3) The perception of school mottos differed depending on the participants' attributes (age, position, and school background). (4) Based on the school motto, to improve the qualifications of administrative staff (sense of belonging to the school and understanding of the school) and examine the governance of the school corporation, discussions must be held among groups with different perceptions of such mottos.

The questionnaire included 13 items and free-text answers. In a subsequent study, we plan to analyse the content of the open-ended responses. Specifically, we describe and clarify the participants' feelings towards the school motto and the current organisation using AI word mapping to analyse the relationship between the terms and feelings expressed in their responses. If we can find 'school motto', 'staff', 'member', 'Christian', and 'organisation' in the data, word mapping can be used to measure the 'mental distance' and the relationship between the words to identify the participants' closeness to school motto based on Christianity, indispensable for Christian schools to be 'Christian'.

Notes

1. In this study, the term 'Christian school' is used to describe all private schools in Japan established based on Christianity. The extent to which school motto has been adopted in Christian schools in countries other than Japan (especially Western countries) is not within the scope of this paper. For literature on school motto in Christian schools in the West and North America, see Smith (2011) and Smith (2018). Unlike Western civil society, Christians make up less than 1% of the population in Japan. The purpose of this paper is to measure and evaluate the extent to which school motto has been adopted in Christian schools in this environment, and to present a case study to consider the future of Christian schools. The future of Christian schools in Japan cannot be considered without the understanding and cooperation of non-Christians.
2. In this study, we examined the degree of penetration of the school motto with reference to Fukaya (2008) and Sudo (2023). It is defined as the degree to which they feel that they are utilized by the organisation and its educational policies and recognize that they permeate their ideas, values, and specific actions in their daily work. Therefore, the three questionnaire items (1), (2), and (3) in the questionnaire developed and administered for this study were set to reflect the content of the definition.
3. According to Fukaya (2008), the role of communicating the school motto as a vision and philosophy for the future can be interpreted as that of university faculty members, including teachers. One of the anonymous reviewers pointed out that the participants for this survey were limited to full-time administrative staff. This survey was conducted in preparation for the author's own lecture, which was held at a training session for staff working at Japanese Christian schools (e.g., the National Executive Director/Secretary General Conference). Therefore, the subjects were limited to full-time administrative staff. It goes without saying that it will be necessary to measure the degree to which the school motto has penetrated teachers and students at Christian schools in Japan. Surveying full-time faculty members is currently under consideration.
4. The author does not believe that the administrative staff members involved in this study should have the same or highly similar understanding or perception of the school motto. The school motto is inherently subject to interpretation over time, which may also mean that each member of the organisation has a different view. Therefore, rather than making all concerned think in the same way according to the school motto, those in charge of the organisation should interpret the school motto independently according to the times and the environment inside and outside the school, express their own opinions, and develop discussions about the future of the Christian

school with this as the axis. For this, participation by the younger generation, who will be responsible for the future of Christian schools, is indispensable.
5. From the results of Quantification III, we can observe that managerial and non-managerial staff have different perceptions of the school motto. This study is unique in that the analysis of the questionnaire results allowed us to clarify the necessity of discussing the state of the organisation based on the school motto among specific age groups, rather than simply a general discourse on the necessity of stimulating discussion within the organisation.
6. Although the data are almost 10 years old, according to the Private School Management Study Group (2014), the average age of directors of school corporations was 65 to 69 years (46.4% for universities and junior colleges and 32.3% for high schools and below). The percentage of those under 55 was 1.3% for universities and colleges and 2.5% for high school and below.

References

Amano, I. (2009). *The birth of the university (1 & 2).* Chuko Shinsho.

Association of Christian Schools in Japan (ACSJ). (2016). *Articles of Association of Christian Schools in Japan (ACSJ)*. Retrieved August 21, 2023, from [https://www.k-doumei.or.jp/wp-content/uploads/2019/11/Teikan20160319.pdf].

Ito, A. (2022a). Understanding governance from bylaws. Christian School Education, May, 3. https://www.k-doumei.or.jp/publications/backnumber/.

Ito, A. (2022b). An analysis of bylaws of Christian school corporations in Japan: The impact of Christianity on organisational governance. *Higher Education Governance and Policy, 3*(2), 120-132. https://doi.org/10.55993/hegp.1217204.

Ito, A. (2023). School corporation governance reform and the function of the board of trustees. *Christian School Education*, May, 3. https://www.k-doumei.or.jp/publications/backnumber/.

Umetsu, J. (2022a). Christian universities and secularization in America: A historical sketch. *Aoyama Sogo Bunka Seiji Gaku, 4*(1), 65-96. https://doi.org/10.34321/12725.

Umezu, J. (2022b). *Is Christianity necessary for universities?: Opening a new era.* Kyobunkan.

Onishi, H. (2015). *A historical story of Christian school education.* Kyobunkan.

Kaneko, M. (2018). Governance of private universities: Japanese characteristics and challenges. *IDE: Contemporary Higher Education, 606*, 37-43.

Kimura, M. (2017). The role of the school motto in private universities. *Bulletin of the Center for Liberal Arts and Foreign Language Education, 8*(1), 71-82. https://kindai.repo.nii.ac.jp/records/18750.

Private School Management Research Association. (2014). Results of a survey on the composition and compensation of school corporation officers and trustees. Retrieved August 20, 2023, from https://sikeiken.or.jp/report/h26_4_rijihousyu.pdf.

Sudo, I. (2023). Seinan Gakuin's mission and peacebuilding. In T. Shimozono & E. Yamamoto (Eds.), War and Gakuin: Wartime Fukuoka's Christian schools that survived the Great East Japan Earthquake and Tsunami of 1945 (pp. 73-77). Seinan Gakuin University Museum.

Doi, S. (2001). The school motto and the university's finances. Shikoku Gakuin Institute of Christian Education Annual Report, 8, 28-55. https://ndlsearch.ndl.go.jp/books/R000000004-I5866514.

Nakajima, K. (2019). A study on the school motto in Christian universities: Based on recent research trends. *Bulletin of Hokuriku Gakuin University and Hokuriku Gakuin Junior College, 12,* 1-8. https://hokurikugakuin.repo.nii.ac.jp/records/1056.

Fukaya, J. (2008). The contemporary meaning of the school motto: A case study of the philosophy of Seinan

Gakuin University. *The Journal of Human Sciences, Seinan Gakuin University,* 4(1), 1-13. http://repository.seinan-gu.ac.jp/handle/123456789/467.

Funamoto, H. (2008). Christian education that makes the most of people. Sogensha.

Masuda, T. (2007). The school motto. Christian School Education, May, 1. https://www.k-doumei.or.jp/publications/backnumber/.

Mori, M. (2003). A new identity for Christian universities in the era of interfaith dialogue. *Hokusei Gakuen University School of Social Welfare: Hokusei Review, 40*, 77-92. https://ndlsearch.ndl.go.jp/books/R000000004-I6537667.

Morimoto, A. (2018). The age of heresy: *The shape of orthodoxy. Iwanami Shinsho.*

Smith, D. I. (Ed.). (2011). *Teaching and Christian practices: Reshaping faith and learning.* Eerdmans. https://doi.org/10.1177/1030570X14524371c.

Smith, D. I. (2018). *On Christian teaching: Practicing faith in the classroom.* Eerdmans. https://doi.org/10.1177/2056997118811832.

Yasushima, Y. (2012). On Christian private schools in the Meiji era. *Bulletin of the National Institute for Educational Policy Researc*h, 141, 273-276. https://ndlsearch.ndl.go.jp/books/R000000004-I024031199

Appendix

Questionnaire on the School Motto

The Seinan Gakuin (nursery school, kindergarten, elementary school, junior high school, high school, university, and graduate school) is where you are currently working. Please answer the questions while imagining the organisation, educational policy, and character development of students.

(1) Do you feel that the school motto (‘Seinan, Be True to Christ’) is reflected in the organisation and educational policies of Seinan Gakuin as an educational institution?

◉ I feel so ◉ I do not feel so

(2) Do you think the school motto (‘Seinan, Be True to Christ’) permeates the thinking, values, and specific actions of the staff in their daily work?

◉I think so ◉I do not think so

(3) Do you think the school motto (‘Seinan, Be True to Christ’) permeates the faculty's thinking, values, and specific actions of the teaching faculty in the workplace?

◉I think so ◉I do not think so

(4) Do you have your own understanding and interpretation of the school motto (‘Seinan, Be True to Christ’)?

◉ Yes, I do ◉ No, I do not

(5) Do you think the school motto (‘Seinan, Be True to Christ’) should be reflected in the thinking, values, and actions of the staff in the work of Seinan Gakuin as an educational institution?

◉ I think so ◉ I do not think so

(6) Do you think the person in charge of the organisation sends out messages about the school motto?

◉I think so ◉I do not think so

(7) Do you think that the message about the school motto sent out by the person in charge of the organisation contains his/her personal interpretation, thoughts, and feelings about the school motto?
If you answered ‘No, I do not think so’ in (8), you do not need to answer this.

◉I think so ◉ I do not think so

(8) In general, do you think the message’s influence on the organisation differs depending on the thinking and actions of the person in charge of the organisation who can transmit the message about the school motto?

◉I think so ◉ I do not think so

(9) Do you think that the thinking and actions of those in charge of the organisation who can transmit the message about the school motto are the driving force of the organisation?

◉I think so ◉ I do not think so

(10) Please indicate your current position.

◉ Secretary-General, Administrative Director, Head of the Internal Audit Office, and Head of the Administrative Department ◉Managerial Position ◉Supervisory Position ◉General Section Staff, Other

◉ No answer

(11) Please answer the following questions regarding your age.

◉20s ◉30s ◉40s ◉50s ◉60s ◉No answer

(12) Please indicate whether you are from a Seinan Gakuin-affiliated school.

◉ kindergarten ◉ nursery ◉ elementary school ◉ junior high school ◉ high school ◉ university ◉ graduate school ◉ not applicable ◉ no answer

(13) Free description

Please feel free to describe any feelings you have about the current Seinan Gakuin regarding the school motto. You can also provide detailed explanations or additional information regarding your answers to these questions.

---o---o---o--- Article Notes ---o---o---o---

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Graduate Student Well-Being: A Systematic Review

Özge Gökten Bayrak*

Abstract

Recent studies indicate that graduate students experience higher levels of stress, anxiety, depression, and physical health issues, resulting in the lowest levels of well-being compared to other groups in higher education settings. The COVID-19 pandemic has further exacerbated these negative experiences. This study aims to evaluate recent research on well-being of graduate students through a systematic review. The study was conducted by searching article abstracts in databases: JSTOR, Science Direct, ERIC, DergiPark, and TR Dizin using both Turkish and English keywords. A total of 781 publications were reviewed, and 12 studies were included in the detailed analysis based on predefined eligibility criteria. The review results show that the concept of well-being has been approached from different theoretical perspectives and research methods. Key findings indicate that graduate students face unique stressors, such as work-life imbalance, high academic pressures, faculty-student relationships, socialization within academic communities, and often limited social support, all of which contribute to lower well-being. Based on the results, several recommendations for supporting graduate students' well-being in both their academic and personal lives are proposed.

Keywords: Well-being, Graduate students, Higher education, Systematic review

Introduction

This For many years, the concept of "well-being" has been a research focus for researchers in many disciplines, including behavioral sciences and psychology. Being a multidimensional and complex concept, throughout the years, many different definitions have been proposed with the purpose of achieving an in-depth understanding of well-being (Bautista et al., 2023). Often, it is used interchangeably with "health"/"mental health" or "happiness". For example, the World Health Organization (WHO) defines health as the "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, n.d.), while the National Academies of Sciences, Engineering, and Medicine (2021) describe well-being as "a holistic concept referring to both physical and mental health". Likewise, some researchers argue that "well-being, utility, happiness, life satisfaction, and welfare" can be used synonymously (Easterlin, 2005), while others argue that these concepts are distinct from each other "conceptually, metaphysically, and empirically" (Raibley, 2011). Despite the disagreement and different perspectives and approaches to describing well-being, it is accepted as a multifaceted phenomenon, associated with physical, psychological and mental health that can be affected by many life experiences and circumstances (Diener, 2006; Yusuf et al., 2020).

The significance of well-being research has grown in higher education, especially concerning university students and personnel. Graduate students, in particular, face unique challenges and responsibilities, often balancing roles as students, researchers, teaching assistants, and family members. Although their well-being has been overlooked in empirical research (Sverdlik & Hall, 2020); recent findings reveal that graduate students experience significantly higher levels of stress, depression, anxiety, and physical

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health symptoms compared to the general population (Jackman et al., 2023). This alarming trend underscores the urgency of addressing their well-being, as graduate students often represent one of the most vulnerable groups in higher education institutions.

The demands placed on graduate students are unparalleled, requiring them to navigate academic, professional, and personal responsibilities simultaneously. The resulting pressure affects not only their physical and mental health but also their academic performance and ability to contribute effectively to their fields of study. These challenges have far-reaching implications for higher education systems, as graduate students play a critical role in advancing research and innovation, teaching undergraduates, and maintaining institutional operations. When their well-being is compromised, the effects ripple through the academic ecosystem, potentially diminishing the quality of education and research outputs.

Moreover, the recent COVID-19 pandemic has exacerbated these challenges worldwide, increasing existing stressors and introducing new ones. During this period, graduate students faced greater challenges trying to balance concerns about their own and loved ones' health while also coping with remote work/study demands (Sverdlik et al., 2022). These experiences highlight systemic vulnerabilities in higher education that have significant implications for institutions' capacity to support students and their well-being effectively during crises. Ensuring graduate student well-being is critical, as poor well-being has both short-term and long-term consequences. These include diminished academic performance, reduced research productivity, and, ultimately, threats to the sustainability of higher education, as these students are the future academics who will shape the field and supervise other students (Schmidt & Hansson, 2018; Vera et al., 2010).

Addressing graduate student well-being, therefore, is not just an individual concern but an institutional imperative. Developing comprehensive support systems and fostering an environment that prioritizes well-being is essential for maintaining the integrity and sustainability of higher education. By understanding the factors that affect graduate student well-being, institutions can enhance not only the experiences of students but also the overall quality of education and research outputs, ensuring the continued advancement of knowledge and innovation.

While global studies on graduate student well-being have increased, cultural differences remain underexplored, especially in non-Western contexts such as Türkiye. Cultural nuances play a pivotal role in shaping how individuals perceive, define, and experience well-being, making it essential to examine these factors in-depth. In many countries, societal attitudes towards mental health and well-being in general, may differ from those in Western contexts. For instance, it may carry stigma to discuss well-being concerns or to seek help in certain cultures. This cultural barrier can exacerbate feelings of isolation and reduce access to support systems for graduate students facing significant challenges.

The distinction between collectivist and individualist cultures may also influence individuals' well-being experiences. In collectivist cultures, where family and community are central to individual identity and decision-making; this can either provide emotional support to the individual or put additional pressure on them because of cultural expectations. Institutional support structures may also reflect societal and cultural nuances. The availability and accessibility of well-being or mental health facilities may differ in different contexts based on financial constraints or differing priorities of higher education institutions and higher education policies. Therefore, a deeper exploration of these cultural dynamics is crucial for understanding the unique challenges faced by graduate students in different contexts, such as Türkiye. By identifying culturally specific stressors and supports, researchers and policymakers can develop more effective, localized strategies for promoting graduate student well-being. Furthermore, incorporating cultural perspectives into the global discourse on well-being can enrich existing frameworks and highlight the diversity of experiences among graduate students. It encourages the development of universal models that are more inclusive and adaptable to different cultural contexts.

Graduate Student Well-Being

Undertaking a graduate degree can be really challenging. Most graduate school applicants are highly achieved; however, due to the extreme competitiveness of graduate programs, gaining admission and completing the programs can be incredibly draining (Ali & Kohun, 2006; Cassuto, 2013). Graduate students need to invest themselves and their time and resources in learning, researching, teaching, as well as trying to balance their personal life responsibilities as parents, significant others, or sometimes as employees outside of academia (Ryan et al., 2022). Many studies in the literature emphasized that graduate students suffer from severe anxiety, depression, chronic stress, mental health concerns, alarming physical health symptoms, and diminished quality of life (e.g. Barreira et al., 2018; Brown & Watson, 2010; Evans et al., 2018; Juniper et al., 2012). Moreover, studies indicate that graduate students are overwhelmed by their academic burdens, including their academic responsibilities and pressures, financial problems and debt (El-Ghoroury et al., 2012), as well as insomnia and social dysfunction (Pallos et al., 2005). Studies also found that unproductive student-supervisor/advisor relationship, peer pressure, pressure to publish academic work, high workload, and inability to balance work and personal life are among the stressors for graduate students, especially doctoral students (Huisman et al., 2002; Kurtz-Costes et al., 2006; Mays & Smith, 2009; Schmidt & Umans, 2014).

In addition to the common challenges that graduate students face, the effect of COVID-19 on graduate students, just like on everybody else, seems serious. The recent studies focusing on graduate students and how they were affected by the pandemic reported that graduate students suffer from post-traumatic stress disorder (PTSD) (Li et al., 2021), they feel overwhelmed and exhausted as they had delays with their fieldworks or in-person data collection, and they struggle with work-life balance even more, especially if they are the caregivers, as it is difficult to study or work from home with all the family responsibilities at home (Levine et al., 2021).

While some studies in the literature focused on the negative effects on graduate students' well-being, some other studies emphasized the positive effects. For instance, some studies indicated that positive academic socialization empowers graduate students (Stubb et al., 2011); positive relationships with the academic supervisor and mentoring increase students' self-efficacy beliefs (Paglis et al., 2006), demonstrations of care and concern from the supervisor increase graduate students' sense of belonging (Burt et al., 2021), which all ultimately lead to increased well-being.

The Current Study

When existing literature on graduate students' well-being is examined, it is seen that previous studies focus well-being from different perspectives, rather than holistically investigating the phenomenon. Based on these, this systematic review aims to examine the research studies conducted on graduate students' well-being, focusing on the last five years in order to address up-to-date studies and to catch the possible effect of COVID-19 and to provide suggestions for further research and practice.

As aforementioned, there is an ongoing debate concerning the definition of well-being. Because it is multilayered, well-being is associated with other concepts as health or happiness, and also it has its own layers such as subjective well-being, mental well-being, psychological well-being, and ontological well-being (Kocayörük et al., 2018). The current study, acknowledging the various definitions of well-being, focuses on graduate students' well-being in a comprehensive and pragmatic sense. The definition proposed by Medin and Alexanderson (2001) and used as a framework for the critical literature review by Schmidt and Hansson (2018) has been adopted for the current study: well-being is "the individual's experience of his or her health" (Medin & Alexanderson, 2001, p. 75).

This comprehensive definition aligns with multidimensional perspectives of well-being that encompass physical, mental, and emotional aspects of health. Unlike narrower frameworks that focus on specific dimensions, such as subjective happiness or solely physical health, Medin and Alexanderson's (2001) approach integrates these facets into a holistic understanding, positioning well-being as an overarching construct rooted in personal experience. By adopting this comprehensive framework, the current study ensures an inclusive and adaptable lens for examining graduate students' well-being. This perspective enables the exploration of the multifaceted challenges faced by graduate students, incorporating elements of physical, psychological, and emotional health. Moreover, it lays a strong foundation for synthesizing research findings and developing strategies that address the diverse and interconnected aspects of well-being in graduate student population.

Method

A systematic review is a structured approach to synthesizing research evidence with the aim of answering a pre-defined research question. It involves the comprehensive identification of all relevant primary research, the critical appraisal of the included studies, and the synthesis of their findings (Pollock & Berge, 2018). In the current study, in order to conduct the systematic review, the following steps were carried out in May 2024.

First, the databases to be searched were chosen based on the depth of empirical studies they contain and their inclusion of open access articles. Ultimately, in order to access studies that were conducted globally and also in Türkiye, the following databases were searched: JSTOR, Science Direct, ERIC, DergiPark, and TR Dizin. It was aimed to identify articles in English and in Turkish; therefore, the same databases were searched twice: once using keywords in English and once in Turkish. The command used to search articles' abstracts in English was: (((ab:“well-being") OR (ab:"wellbeing") OR (ab:"well being")) AND ((ab:"doctoral students") OR (ab:"master's students") OR (ab:"graduate students") OR (ab:“phd students”))). And the command used to search abstracts in Turkish was: (((ab:"iyi oluş") OR (ab:"iyilik")) AND ((ab:"doktora") OR (ab:"yüksek lisans") OR (ab:"phd") OR (ab:“lisansüstü”))). With these commands, the databases listed all the results relating to these keywords. The Table 1 below indicates the search process and the items that were found.

Table 1. Search process

Order of search	Search action	Databases					
		JSTOR	Science Direct	ERIC	DergiPark	TR Dizin	Number of articles
1	Keyword search	24	522	219	8	8	781
2	Filter: journals	17	440	142	6	6	613
3	Filter: peer-reviewed	17	440	138	6	6	609
4	Filter: time period: since 2020	2	131	91	3	6	233
5	Filter: language	2	54	91	3	6	150
6	Reduction by lack of relevance	0	1	11	0	0	12

Eligibility criteria were determined among the results, in order to ensure coherence and relevancy in this study: 1) results specifically relevant to the purpose of the current study, 2) selection of the content as journals for including empirical studies, 3) selection of peer-reviewed journals, 4) limiting the publication time as from 2020 to May 2024, in order to access up-to-date studies and to focus on graduate students' well-being after COVID-19, and 5) selecting the language as Turkish and English.

While this approach allows for a comprehensive examination of the literature, including studies only in these two languages inherently excludes research published in other languages, which may result in potential bias and limit the generalizability of the findings. Additionally, the reliance on open-access databases may have introduced a selection bias, as certain studies published in subscription-based journals might not have been included. These limitations were acknowledged, and efforts were made to mitigate their impact by conducting a thorough and systematic search to capture the most relevant and accessible studies.

In addition to these, the exclusion of studies focusing solely on undergraduate students or mental health was intentional to maintain the focus on the unique experiences of graduate students. The nature of mental health discussions in the context of undergraduate students is different from those at the graduate level, where issues related to academic identity, research pressures, and advisor relationships are more relevant.

Findings

Description of the Findings

The results identified 781 article abstracts in total after using the keywords in all databases. After applying the eligibility criteria, the results showed 150 studies. At that point, all remaining abstracts/articles were screened for relevancy and if there are any duplicates among databases. The articles that focus on undergraduate students or on students' mental health only were excluded from the study. Finally, 12 studies were identified that purely focus on graduate students' well-being and meeting the eligibility criteria, in order to conduct a well-tailored systematic review. Table 2 presents the studies included in the systematic review.

Table 2. Studies included in the systematic review

Authors/Year	Title of the Article	Country	Sample
Yusuf et al. (2020)	Work-life balance and well-being of graduate students	USA	343 graduate students
Sverdlik and Hall (2020)	Not just a phase: Exploring the role of program stage on well-being and motivation in doctoral students	Canada	3004 doctoral students
Koo et al. (2021)	"It's My Fault": Exploring Experiences and Mental Wellness Among Korean International Graduate Students	USA	15 international doctoral students
Ryan et al. (2021)	How can universities better support the mental wellbeing of higher degree research students? A study of students' suggestions	Australia	595 graduate students
Schwoerer et al. (2021)	#PhDlife: The effect of stress and sources of support on perceptions of balance among public administration doctoral students	USA	254 doctoral students
Sverdlik et al. (2022)	Doctoral students and COVID-19: exploring challenges, academic progress, and well-being	Canada	708 doctoral students
Zhang et al. (2022a)	International Doctoral Students' Sense of Belonging, Mental Toughness, and Psychological Well-Being	USA	3 international doctoral students
Zhang et al. (2022b)	Social predictors of doctoral student mental health and well-being	USA	336 doctoral students
Jackman et al. (2023)	Social support, social identification, mental wellbeing, and psychological distress in doctoral students: A person-centred analysis	UK	200 doctoral students
Griffin et al. (2023)	Surviving or flourishing: how relationships with principal investigators influence science graduate students' wellness	USA	90 doctoral students
Lorenzetti et al. (2023)	Exploring International Graduate Students' Experiences, Challenges, and Peer Relationships: Impacts on Academic and Emotional Well-being	Canada	13 international graduate students
Shanachilubwa et al. (2023)	Investigating the tension between persistence and well-being in engineering doctoral programs	USA	4 doctoral students

Of the reviewed 12 articles, seven of them were conducted in the USA, three of them were in Canada, one in the UK, and one in Australia. While three of the studies included all graduate students, including master's and doctoral students, nine of the studies focused only on doctoral students. Three of the studies explicitly focused on international graduate students. 11 of the articles were published in educational research journals (e.g. Higher Education Research & Development, Educational Psychology, Journal of Public Affairs Education), and one article was published in a journal in the field of science.

Operationalization of Well-Being Used in the Studies

The studies in this review vary in their operationalization of well-being, reflecting its multidimensional and subjective nature. Some studies prioritize specific aspects, such as mental or emotional well-being, while others adopt a broader, multi-dimensional approach.

Sverdlik and Hall (2020) exemplify this by treating well-being as a construct influenced by stress, depression, program satisfaction, and illness symptoms. Similarly, Ryan et al. (2021) acknowledge the multifaceted nature of well-being, exploring how various university-level interventions might impact graduate students' overall well-being. By contrast, Zhang et al. (2022b) focuses on graduate students' mental health and the predictors and outcomes tied to socialization processes, without offering an explicit operational definition.

Some studies offer structured frameworks: Yusuf et al. (2020) operationalizes well-being as "multi-dimensional with three components: quality of life, physical health, and mental health" (p.3). The authors uses quality of life and subjective well-being interchangeably throughout their study. In order to explore graduate students' well-being, the study investigates their work-life balance, comprising of several factors, as well as sources of stress and sources of support. Schwoerer et al. (2021) similarly examines well-being through the lens of work-life conflict, examining how support (e.g., emotional, academic) and stressors impact graduate student well-being. Shanachilubwa et al. (2023) argues that well-being is "ill-defined with colloquial usage of terminology" (p. 588) and proposes a six-dimensional model including positive emotion, engagement, relationships, meaning, accomplishment, and vitality. In addition, Griffin et al. (2023), defines well-being as "*a process and the practice of balancing competing interests in the pursuit of well-being, which is one's state of physical, mental and emotional health*" (p. 48), while investigating factors affecting graduate student well-being.

Few studies focus on specific populations and contextual challenges. For example, Koo et al. (2021), Zhang et al. (2022a), and Lorenzetti et al. (2023) investigate mental health, psychological well-being, and emotional well-being, respectively, among international graduate students, while Sverdlik et al. (2022) explores the effects of COVID-19 on psychological well-being, academic progress, and coping strategies. Jackman et al. (2023) advocates for a person-centered approach, suggesting that measuring well-being with variable-centered approaches might obscure individual differences in perceived and received support and social identification.

Theoretical Frameworks Used in the Studies

The studies reviewed utilized diverse theoretical frameworks to analyze graduate students' well-being, each offering unique insights into the complex factors that shape these experiences. Table 3 below maps the theoretical frameworks that were adopted by the studies included in the systematic review.

Table 3. Theoretical frameworks adopted by the studies

Authors/Year	Theoretical Framework
Yusuf et al. (2020)	Social cognitive theory, Structuration theory, Work/family border theory
Sverdlik and Hall (2020)	Self-determination theory, Social learning theory
Koo et al. (2021)	Holistic wellness model
Ryan et al. (2021)	Job Demands-Resources framework
Schwoerer et al. (2021)	New framework introduced focusing on support, stress, and role conflicts
Sverdlik et al. (2022)	Did not explicitly mention any framework
Zhang et al. (2022a)	Did not explicitly mention any framework
Zhang et al. (2022b)	Graduate socialization theory
Jackman et al. (2023)	Social identity approach
Griffin et al. (2023)	Wheel of wellness model
Lorenzetti et al. (2023)	Intersectionality theory, critical multiculturalism
Shanachilubwa et al. (2023)	PERMA-V framework

Yusuf et al. (2020) drew on multiple theories to explore graduate students' work-life balance. First, Bandura's social cognitive theory provided a basis for understanding human functioning as socially interdependent and shaped by societal dynamics. They also applied Giddens' (1984) structuration theory to examine how students balance work and personal life and employed work/family border theory to understanding students' work-life balance and how they manage their boundaries.

Sverdlik and Hall (2020), while examining graduate students' program phases' (e.g. coursework, dissertation phase) effect on students' motivation and well-being, benefitted from self-determination theory (Litalien & Guay, 2015) and social learning theory (Bandura, 1993) in order to measure motivation.

Holistic wellness models were applied in several studies. Koo et al. (2021) adopted the holistic wellness model by Chandler, Holden, and Kolander (1992) to examine international graduate students' well-being across six wellness dimensions, while Griffin et al. (2023) used the wheel of wellness model by Myers, Sweeney, and Witmer (2000), emphasizing spirituality, self-direction, and social relationships to assess factors affecting students' experiences.

Some studies focused on stressors and resources within the academic environment. Ryan et al. (2021) employed the Job Demands-Resources framework (Demerouti & Bakker, 2011; Schaufeli & Taris, 2014) to explore how imbalances between demands and resources in doctoral programs impact well-being and psychological distress. Schwoerer et al. (2021) proposed a new framework to understand doctoral students' well-being, emphasizing the dynamic relationship between support, stress, and role conflicts.

Other studies focused on social and cultural dimensions. Zhang et al. (2022b), while investigating mental health and well-being of doctoral students, benefitted from graduate socialization theory, which was described as "*a process of internalizing the expectations, standards, and norms of a given society (discipline), which includes learning the relevant skills, knowledge, habits, attitudes, and values of the group that one is joining*" (Austin & McDaniels, 2006). Jackman et al. (2023) adopted the social identity approach to explore how social support and in-group/out-group dynamics affect mental well-being. Lorenzetti et al. (2023) used intersectionality theory (Crenshaw, 1994) and critical multiculturalism (McLaren, 1995) to analyze the acculturation experiences and barriers faced by international students.

Finally, Shanachilubwa et al. (2023) employed the PERMA-V model (Zhivotovskaya & Seligman, 2018), which includes six dimensions—positive emotion, engagement, relationships, meaning, accomplishment, and vitality—to measure well-being over time and across personal characteristics.

A couple of studies included in the systematic review did not explicitly mention adopting a theoretical framework, but provided valuable empirical insights into graduate students' well-being (Sverdlik et al., 2022; Zhang et al., 2022a). These studies shed light on factors such as stress levels, coping mechanisms, and institutional support structures. While the lack of a defined framework limits the theoretical integration of these findings, they still enrich the discourse by highlighting practical and context-specific challenges faced by graduate students. These contributions underscore the importance of both theoretical and empirical perspectives in painting a comprehensive picture of well-being in higher education.

Methods Used in the Studies
Among 12 articles that were reviewed, six of the studies were designed as quantitative studies, while five as qualitative, and one as a mixed methods study. Table 4 below presents the research designs used in these studies.

Table 4. Research designs used in the studies

Authors/Year	Design
Yusuf et al. (2020)	Quantitative
Sverdlik and Hall (2020)	Quantitative
Koo et al. (2021)	Qualitative
Ryan et al. (2021)	Qualitative
Schwoerer et al. (2021)	Quantitative
Sverdlik et al. (2022)	Quantitative
Zhang et al. (2022a)	Qualitative
Zhang et al. (2022b)	Quantitative
Jackman et al. (2023)	Quantitative
Griffin et al. (2023)	Qualitative
Lorenzetti et al. (2023)	Qualitative
Shanachilubwa et al. (2023)	QUAL quan mixed methods

The one mixed methods study was designed as an embedded QUAL (quan) mixed-methods stud, and the data were collected in qualitative semi-structured interviews and a survey-based PERMA-V profiling instrument (Shanachilubwa et al., 2023). The qualitative studies collected data through semi-structured interviews (Griffin et al., 2023; Koo et al., 2021; Lorenzetti et al., 2023; Zhang et al., 2022a) and open-ended survey questions (Ryan et al., 2021). The quantitative studies used survey questions in order to collect data (Jackman et al., 2023; Schwoerer et al., 2021; Sverdlik & Hall, 2020; Sverdlik et al., 2022; Yusuf et al., 2020; Zhang et al., 2022b).

The qualitative data were analyzed using a variety of methods, such as thematic analysis (Griffin et al., 2023; Lorenzetti et al., 2023; Shanachilubwa et al., 2023; Zhang et al., 2022a); narrative configuration analysis (Shanachilubwa et al., 2023), constant comparative method (Koo et al., 2021; Ryan et al., 2021), and within-case and cross-case analysis (Zhang et al., 2022a). The quantitative data were analyzed through descriptive statistics (Sverdlik et al., 2022) or inferential statistics analysis methods, such as ANOVA (Jackman et al., 2023; Sverdlik & Hall, 2020; Yusuf et al., 2020), chi square tests (Sverdlik & Hall, 2020), and regression (Jackman et al., 2023; Schwoerer et al., 2021; Zhang et al., 2022b), and latent profile analysis (Zhang et al., 2022b)

Results

The studies reviewed for the current systematic review approached well-being from a variety of perspectives and investigated graduate students' well-being from different aspects. In this part, the results of the studies will be presented.

Griffin et al. (2023) investigated the influences on graduate students' well-being with a qualitative study and found four key themes: work-life balance, managing progress on research, program completion and job search, and overall faculty relationships. The results also showed that the faculty relationships can influence well-being directly in a positive or negative manner, as well as affecting how students' cope with other sources of stress. Similarly, Shanachilubwa et al. (2023) explored well-being of graduate students from a wider perspective. Acknowledging the multifaceted construct of well-being, the authors used PERMA-V framework to understand the influences of positive emotion, engagement, relationships, meaning, accomplishment, and vitality. The results showed that well-being of graduate students is indeed multifaceted and unique to each student.

Sverdlik and Hall (2020) found that students' well-being can change among doctoral program's stages/phases: coursework, comprehensive examination, and dissertation. The results indicated that graduate students' stress level is the lowest in coursework phase, and highest in the comprehensive examination stage. Moreover, the program satisfaction is highest during coursework, and lowers through each stage. The authors argued that this could cause from the isolation of students as they move through stages, and emphasized the need for student socialization. The study also found that graduate students who were employed within the university showed higher self-efficacy beliefs and motivation, compared to students who were not employed within the university.

Zhang et al. (2022b), while investigating the social factors affecting students' mental health and well-being found that there were no demographic differences among students in terms of gender, race, and ethnicity, which was interesting as this finding contradicted with many previous literature. However, they found that socialization variables, such as certainty of choice, academic development, sense of belonging, and satisfaction with advisor significantly affect mental health and well-being, especially in the early years of doctoral education. Interestingly, the results of the study indicated that academic productivity and confidence in research skills were found to be negatively related with mental health and well-being, meaning that students who seem academically successful and ambitious may suffer from mental exhaustion more, decreasing their well-being.

Jackman et al. (2023) explored the effect of social support and social identification on mental well-being of doctoral students. The authors investigated the socialization of students in relation to peers, advisors, and academic community. The findings revealed that high support and identification are positively related to increased mental well-being and lower psychological distress. However, the authors emphasized that a sense of identification is not enough for mental well-being in the absence of high levels of perceived and received support; and likewise, peer support and peer related identification are not enough for mental well-being in the absence of support from advisors. Similarly, Ryan et al. (2021) focused on what can be done by the universities to increase graduate students' well-being and found that a whole university approach that includes support from peers, advisors, and community is needed. The results of the study revealed that 67% of the suggestions made by the participants were related to the positive interactions with peers, supervisors, and colleagues. Furthermore, the results showed that graduate students need a sense of inclusion/belonging from academic community, care and empathy from advisors, and social support from peers, which are parallel to previous studies' findings in relation to socialization and social support and identification.

Yusuf et al.'s (2020) study also argued that several factors influence well-being as sources of stress and sources of support. Among them, the authors found that "work" sources of stress are related to school and academic life (e.g. workload, course requirements, research, faculty advisor); "life" sources of stress are related to non-academic life (e.g. dating or social life, finances, family issues, childcare and/or eldercare). Moreover, sources of support were found as peers/friends, spouse/partner/significant other, parent or other family member, academic advisor, other faculty, and graduate program director, respective of their reliance. The overall findings of the study argued that better work-life balance positively impacts quality of life and overall well-being of graduate students. Schwoerer et al. (2021) similarly explored the effect of stress and the sources of support for graduate students. More specifically, the authors focused on four distinct support systems: emotional support, academic mentor support, academic program support, and professional support. The results revealed that sources of social support, (e.g. emotional and mentor support), and sources of institutional support, (e.g. program and professional support), are vital for students' well-being, as increased support reduces stress, leading a higher level of well-being.

Sverdlik et al. (2022) focusing on the effect of COVID-19 on well-being, investigated graduate students' perceived challenges and coping strategies during the pandemic. The most significant challenges that students had to struggle with were found as: a) inability to see family and friends, b) being at home all the time, c) blurring of work and leisure/family time, d) being isolated, and e) inability to access the university. The coping strategies were found as: a) seeking social support from family/friends, b) working (as a distraction), c) exercising, d) watching TV, and e) creating a routine that the person is comfortable with. Furthermore, the results revealed that gender played an important role on well-being during the pandemic. It was highlighted that females had unique challenges, such as role conflict (especially if they are caregivers), and higher anxiety, stress and less sense of belonging, compared to males.

Three of the studies included in the review were conducted with international graduate students (Koo et al., 2021; Lorenzetti et al., 2023; Zhang et al., 2022a). These studies explicitly focusing on international graduate students' experiences were all qualitative and approached mental wellness/well-being (Koo et al., 2021), emotional well-being (Lorenzetti et al., 2023), and psychological well-being (Zhang et al., 2022a). Koo et al. (2021) found that limited English proficiency, self-imposed academic pressures and pressures from faculty and parents, self-blaming, and not knowing how to express feelings that also increases loneliness negatively affected their mental well-being, as well as other well-being aspects, such as physical, social, or occupational. The authors further stated that international graduate students expressed their methods of coping with their struggles as exercising daily or engaging in religious or spiritual activities, even though they did not consider themselves religious or spiritual when they were back home. Lorenzetti et al. (2023) explored three themes relating to international graduate students' experiences: adapting to new environments (settling in: impact of peer networks, funding and finances, communication barriers, loneliness and cultural adaptation); connecting with peers/peer mentors (sense of belonging, knowledge sharing, shared purpose, motivation and coping), and institutional roles (in relation to social and networking opportunities). The results of the study highlighted the importance of formal and informal peer mentoring and its effect on emotional well-being of international graduate students. Zhang et al. (2022a) examined the relationship among sense of belonging, mental toughness, and psychological well-being. The authors found that communication among graduate students and mentors, and peer support increase sense of belonging and psychological well-being. Furthermore, it was found that mental toughness: being able to find resources to cope with struggles (cognition), determination and self-motivation (behavior), and being able to regulating emotions and taking initiatives (affection) increased international graduate students' psychological well-being.

These findings highlight that international graduate students experience distinct challenges compared to their domestic peers, such as navigating cultural adaptation, overcoming language barriers, and coping with feelings of isolation from familial support systems. Unlike domestic students, international students often face the additional stress of balancing academic expectations with adjusting to unfamiliar cultural norms and financial constraints. The reviewed studies emphasize the need for tailored interventions that address these unique pressures.

Overall, the results of the reviewed studies collectively underscore the multifaceted and dynamic nature of graduate student well-being, highlighting influences such as social support, institutional structures, and external factors like the COVID-19 pandemic. Across the literature, well-being has been examined through various lenses, such as the PERMA-V framework (Shanachilubwa et al., 2023), social and psychological dimensions (Zhang et al., 2022a; Jackman et al., 2023), and program-specific factors (Sverdlik & Hall, 2020). This diversity reflects the complexity of well-being as a construct and the importance of contextual factors in shaping graduate student experiences. However, this breadth also reveals opportunities for further exploration, particularly in integrating diverse operationalizations of well-being and standardizing measurement tools.

Discussion

The results of the current systematic review indicated that well-being is indeed a multilayered concept that can be approached from distinct perspectives and methods (Bautista et al., 2023). However, based on the results of the reviewed studies, the influence of certain factors on graduate students' well-being was clearly demonstrated. The results showed that work-life imbalance, negative relationships or lack of support from peers, advisors, faculty members, or research/academic community, and lower sense of belonging/identification prominently influence graduate students' well-being in a negative manner.

Moreover, the findings from studies conducted during the COVID-19 pandemic provide critical insights into how external crises can exacerbate existing challenges for graduate students. For instance, the pandemic amplified feelings of isolation, blurred boundaries between work and personal life, and heightened stress levels, especially among female students who faced additional caregiving responsibilities. These results highlight the importance of proactive institutional support during times of uncertainty, such as providing virtual peer mentoring programs, ensuring access to mental health resources, and fostering a sense of community through online platforms.

Based on the results of the reviewed studies, few implications for practice that can positively affect graduate students' well-being can be made. First of all, the higher education institutions should create a positive climate that demonstrate dedication for ensuring students' and other key figures' well-being and also increase their sense of belonging and motivation. Students must have access to supportive infrastructure and resources on campus in case they need any help or guidance for sustaining their mental health or well-being. Both faculty members and students should be provided relevant information on well-being for ensuring positive relationship among peers and advisors. Program evaluation forms/surveys can be filled in by students regularly to identify students at risk and also to assess student-peer and student/advisor interactions. The institutions and advisors need to acknowledge that work-life imbalance negatively affects students' well-being and increases negative symptoms, such as anxiety, physical illness, or stress. The universities should offer students support systems so that students can improve their time management skills, or can better regulate their work/academia and personal life roles and responsibilities.

Moreover, additional precautions for international graduate students can be taken. For instance, international students should be aided with cultural adaptation resources on and off campus so that they can better adjust to an unfamiliar place and/or culture. International students should be provided with additional language proficiency resources. These students can be also assigned to a peer-mentor, so that their social integration can be ensured. The advisors of international students should be informed about students' culture, in order to eliminate any possible communication breakdowns or misunderstandings. Likewise, international students should be informed about the host country's culture and rules and regulations of the university, in order to learn about program requirements and eliminate any wrong assumptions. Finally, the higher education institutions in general and advisors in particular should present various opportunities to all students that they can seek guidance and help, in times of uncertainty or difficulties, such as during the pandemic.

It is also possible to make few suggestions for future research. The results of the systematic review revealed that although many of the studies focus on well-being, the studies lack operational definitions of the concept. Likewise, the results revealed inconsistency among measures of well-being. A framework that is utilized for exploring graduate students' well-being can help developing a strong measure for the phenomenon. The results of the review also showed that many studies only focus on a narrow aspect of graduate students' well-being. However, well-being, acknowledged as a multifaceted concept, can be investigated from a wider perspective to obtain in-depth and more holistic understanding of the concept in the future empirical studies.

While reviewing the literature, articles in Turkish were also searched using Turkish keywords in databases covering Turkish studies. However, this search did not identify any studies from the Turkish context published in peer-reviewed journals after 2020. Given the culture specific nuances of well-being, which is crucial to gain a deeper understanding of graduate students' well-being in Türkiye, further research could be conducted in the Turkish context. Such studies could explore how cultural norms, academic structures, and advisor-student dynamics unique to Türkiye influence graduate student well-being. Additionally, comparative studies between Turkish and international contexts could offer valuable insights into how cultural differences shape the well-being experiences of graduate students.

This systematic review is not without limitations. First, some relevant research may have been inadvertently excluded due to variations in terminology. For example, while searching for articles, the keywords used in English abstracts included 'well-being,' 'well being,' and 'wellbeing'; however, other studies that examine graduate students' well-being may have used alternative terms, such as 'wellness.' To minimize this limitation, the researcher searched for these keywords in abstracts rather than only in titles or keywords, as abstracts typically provide more detailed descriptions. This approach allowed the researcher to capture different variations of the term and access relevant articles. Likewise, the search for articles was conducted only in English and Turkish languages; therefore, it is possible to miss any other empirical studies conducted in other languages. Moreover, this review searched for the articles in databases that offered open access to the articles; therefore, some articles might be falsely excluded due to the accessibility or selection of databases. Despite these limitations, the systematic review provides a comprehensive foundation for future studies and practical interventions aimed at enhancing graduate students' well-being.

References

Ali, A., & Kohun, F. (2006). Dealing with isolation feelings in IS doctoral programs. *International Journal of Doctoral Studies*, *1*(1), 21–33. https://doi.org/10.28945/58

Austin, A. E., & McDaniels, M. (2006). Preparing the professoriate of the future: Graduate student socialization for faculty roles. In: Smart, J. C. (eds) *Higher education: Handbook of theory and research*, vol 21. Springer, Dordrecht. https://doi.org/10.1007/1-4020-4512-3_8

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist, 28,* 117–148.

Barreira, P., Basilico, M., & Bolotnyy, V. (2018). *Graduate student mental health: Lessons from American economics departments*. Harvard University, https://scholar.harvard.edu/bolotnyy/publications/graduate-student-mental-health-lessons-american-economics-departments

Bautista, T. G., Roman, G., Khan, M., Lee, M., Sahbaz, S., Duthely, L. M., Knippenberg, A., Macias-Burgos, M. A., Davidson, A., Scaramutti, C., Gabrilove, J., Pusek, S., Mehta, D., & Bredella, M. A. (2023). What is well-being? A scoping review of the conceptual and operational definitions of occupational well-being. *Journal of Clinical and Translational Science 7*(727), 1–12. https://doi.org/10.1017/cts.2023.648

Brown, L., & Watson, P. (2010). Understanding the experiences of female doctoral students. *Journal of Further and Higher Education, 34,* 385–404. https://doi.org/10.1080/0309877X.2010.484056

Burt, B. A., McCallum, C. M., Wallace, J. D., Roberson, J. J., Bonanno, A., & Doerman, E. (2021). Moving toward stronger advising practices: how black males' experiences at HPWIs advance a more caring and wholeness-promoting framework for graduate advising. *Teachers College Record: The Voice of Scholarship in Education, 123*(10), 31-58, https://doi.org/10.1177/01614681211059018

Cassuto, L. (2013). Ph.D. attrition: How much is too much?. *Chronicle of Higher Education*. Retrieved May 13, 2024, from https://www.chronicle.com/article/ph-d-attrition-how-much-is-too-much/?cid= gen_sign_in.

Chandler, C., Holden, J., & Kolander, C. (1992). Counseling for spiritual wellness: Theory and practice. *Journal of Counseling and Development, 71*, 168–175. https://doi.org/10.1002/j.1556-6676.1992.tb02193.x

Crenshaw, K. (1994). Mapping the margins: Intersectionality, identity politics, and violence against women of color. In M. A. Finneman. (Ed.), *The public nature of violence: The discovery of domestic abused* (pp. 93-117). Routledge.

Demerouti, E., & Bakker, A. B. (2011). The Job Demands-Resources model: Challenges for future research. *SA Journal of Industrial Psychology, 37*(2), 1–9. https://doi.org/10.4102/sajip.v37i2.974

Diener, E. (2006). Guidelines for national indicators of subjective well-being and ill-being. *Applied Research in Quality of Life, 1*(2), 151–157. https://doi.org/10.1007/s11482-006-9007-x

Easterlin, R. A. (2005). Building a better theory of well-being. In L. Bruni & P. L. Porta (Eds.), *Economics and happiness: Framing the analysis* (pp. 29–64). Oxford University Press

El-Ghoroury, N. H., Galper, D. I., Sawaqdeh, A., & Bufka, L. F. (2012). Stress, coping, and barriers to wellness among psychology graduate students. *Training and Education in Professional Psychology, 6*(2), 122–134. https://doi.org/10.1037/a0028768

Evans, T. M., Bira, L., Gastelum, J. B., Weiss, L. T., & Vanderford, N. L. (2018). Evidence for a mental health crisis in graduate education. *Nature Biotechnology, 36*(3), 282–284. https://doi.org/10.1038/nbt.4089

Giddens, A. (1984). *The constitution of society: Outline of the theory of structuration*. University of California Press.

Huisman, J., De Weert, E., & Bartelse, J. (2002). Academic careers from a European perspective: The declining desirability of the faculty position. *The Journal of Higher Education, 73*(1), 141–60.

Jackman, P. C., Slater, M. J., Carter, E. E., Sisson, K., & Bird, M. D. (2023). Social support, social identification, mental wellbeing, and psychological distress in doctoral students: A person-centred analysis. *Journal of Further and Higher Education, 47*(1), 45-58, https://doi.org/10.1080/0309877X.2022.2088272

Juniper, B., Walsh, E., Richardson, A., & Morley, B. (2012). A new approach to evaluating the well-being of PhD research students. *Assessment & Evaluation in Higher Education, 37*, 563–576. https://doi.org/10.1080/02602938.2011.555816

Kocayörük, E., Altıntaş, E., Şimşek, Ö. F., Bozanoğlu, İ., & Çelik, B. (2018). Ontological wellbeing of university students: A cluster-analysis approach. *Hacettepe University Journal of Education, 33*(3), 550- 564. https://doi.org/10.16986/HUJE.2017032927

Kurtz-Costes, B., Andrews Helmke, L., & Ülkü-Steiner, B. (2006). Gender and doctoral studies: The perceptions of Ph. D. students in an American university. *Gender and Education, 18*(2),137–55.

Levine, F. J., Nasir, N. S., Rios-Aguilar, C., Gildersleeve, R. E., Rosich, K. J., Bang, M., Bell, N. E., & Holsapple, M. A. (2021). Voices from the field: The impact of COVID-19 on early career scholars and doctoral students [Focus group study report]. American Educational Research Association; Spencer Foundation. https://doi.org/10.3102/aera20211

Li, X., Fu, P., Fan, C., Zhu, M., & Li, M. (2021). COVID-19 stress and mental health of students in locked-down colleges. *International Journal of Environmental Research and Public Health, 18*(2), 771. https://doi.org/10.3390/ijerph18020771

Litalien, D., & Guay, F. (2015). Dropout intentions in PhD studies: A comprehensive model based on interpersonal relationships and motivational resources. *Contemporary Educational Psychology, 41*, 218–231. doi:10.1016/j.cedpsych.2015.03.004

Mays, T. L., & Smith, B.T. (2009). Navigating the doctoral journey. *Journal of Hospital Librarianship, 9*(4), 345– 361.

McLaren, P. (1995). White terror and oppositional agency: Towards a critical multiculturalism. In P. McLaren (Ed.), *Critical Pedagogy and Predatory Culture: Oppositional Politics in a Postmodern Era* (pp. 87-124). Routledge.

Myers, J.E., Sweeney, T.J. and Witmer, J.M. (2000). The wheel of wellness counseling for wellness: A holistic model for treatment planning. *Journal of Counseling and Development, 78*(3), 251-266. https://doi.org/10.1002/j.1556-6676.2000.tb01906.x

Medin J., & Alexanderson K. (2001). *Health and health promotion – A literature study*. Lund, Swedish: Studentlitteratur.

National Academies of Sciences, Engineering, and Medicine. (2021). *Mental health, substance use, and wellbeing in higher education: Supporting the whole student*. The National Academies Press. https://doi.org/10.17226/26015

Nylund, D. (2006). Critical multiculturalism, whiteness, and social work: Towards a more radical view of cultural competence. *Journal of Progressive Human Services*, *17*(2), 27-42.

Pallos, H., Yamada, N., & Okawa, M. (2005). Graduate student blues: The situation in Japan. *Journal of College Student Psychotherapy, 20*(2), 5–15. https://doi.org/10.1300/J035v20n02_02

Pollock, A., & Berge, E. (2018). How to do a systematic review. *International Journal of Stroke, 13*(2), 138-156. https://doi.org/10.1177/1747493017743796

Raibley, J. R. (2011). Happiness is not well-being. *Journal of Happiness Studies, 13*(6), 1105-1129. https://doi.org/10.1007/s10902-011-9309-z

Ryan, T., Baik, C., & Larcombe, W. (2022). How can universities better support the mental wellbeing of higher degree research students? A study of students' suggestions. *Higher Education Research & Development*, *41*(3), 867–881. https://doi.org/10.1080/07294360.2021.1874886

Seligman, M. (2018). PERMA and the building blocks of well-being. *The Journal of Positive Psychology, 13*(4), 333–335.

Schmidt, M., & Umans, T. (2014). Experiences of well-being among female doctoral students in Sweden. *International Journal of Qualitative Studies on Health and Well-being, 9*(1), 23-59. https://doi.org/10.3402/ qhw.v9.23059

Schmidt, M., & Hansson, E. (2018). Doctoral students' well-being: A literature review. *International Journal of Qualitative Studies on Health and Well-being*, *13*(1), 150-171. https://doi.org/10.1080/17482631.2018.1508171

Schaufeli, W. B., & Taris, W. T. (2014). A critical review of the Job Demands-Resources model: Implications for improving work and health. In G.F. Bauer & O. Hämmig (Eds.), *Bridging occupational, organizational and public health: A transdisciplinary approach* (pp. 43–68). Springer. https://doi.org/10.1007/978-94-007-5640-3

Stubb, J., Pyhältö, K,, & Lonka, K. (2011). Balancing between inspiration and exhaustion: PhD students' experienced socio-psychological well-being. *Studies in Continuing Education, 33*(1), 33–50.

Sverdlik, A., & Hall, N. C. (2020). Not just a phase: Exploring the role of program stage on well-being and motivation in doctoral students. *Journal of Adult and Continuing Education 26*(1), 97-124.

Sverdlik, A., Hall, N. C., & Vallerand, R. J. (2022): Doctoral students and COVID-19: Exploring challenges, academic progress, and well-being, *Educational Psychology*, *43*(5), 545–560. https://doi.org/10.1080/01443410.2022.2091749

Vera M., Salanova M., & Martin B. (2010). University faculty and work-related well-being: The importance of the triple work profile. *Electronic Journal of Research in Educational Psychology*, 8(2), 581–602.

World Health Organization (n.d.) *WHO remains firmly committed to the principles set out in the preamble to the Constitution.* Retrieved May 13, 2024, from https://www.who.int/about/accountability/governance/constitution

Yusuf, J. E. (Wie), Saitgalina, M., & Chapman, D. W. (2020). Work-life balance and well-being of graduate students. *Journal of Public Affairs Education*, *26*(4), 458–483. https://doi.org/10.1080/15236803.2020.1771990

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