

# Multinational Visitors' Framing of Al-Qarawiyyin University: An Analysis of Google Reviews

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**Abstract:** *The present study investigated the viewpoints of visitors and their experiences with al-Qarawiyyin as conveyed through Google Reviews. The study aimed to determine the primary aspects that underlie the visitors' experiences at al-Qarawiyyin and to examine these experiences through sentiment. This research examined both quantitative ratings and qualitative comments. The reviews were obtained from Google by utilizing the Google Review Downloader tool. The reviews underwent content analysis in order to categorize them into distinct aspects or categories. Subsequently, a sentiment analysis was performed to ascertain positive, negative, and neutral viewpoints about the institution. The results unveiled seven key aspects pertaining to visitor experiences: access, education, facilities, general aspects, location, national and international heritage, and serenity. The categories of national and international heritage, as well as facilities, were given greater emphasis, while the category of location received comparatively less attention. Based on the examination of star ratings and sentiment, it can be inferred that the majority of visitors were satisfied with their experience at al-Qarawiyyin. Nevertheless, the aspect that garnered the bulk of one-two-star ratings and negative reviews was the access category. The results of this study carry significant implications for scholarly investigations in the fields of higher education and tourism.*

**Keywords:** Al-Qarawiyyin, google reviews, sentiment analysis, star rating, tourism, higher education

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## 1. Introduction

Al-Qarawiyyin<sup>1</sup>, founded in the middle of the ninth century, is the world's oldest university (UNESCO, n.d.). According to Guinness World Records, it is "the oldest existing, and continually operating educational institution in the world" (Guinness World Records, n.d.). This decision is based primarily on the fact that al-Qarawiyyin University displayed a set of attributes that qualified it as a university at an early period of history (Abdul Majid al Mardi, the imam of the university's mosque, as cited in Aljazeera.net). Al-Qarawiyyin has supplied generations of learners with intellectual nourishment for over 1100 years. It has experienced enormous changes over the course of human history (Richardson, 2016). Beginning as a mosque with an attached Koranic school and small library, al-Qarawiyyin has developed into a world-renowned institution that offers postsecondary education, to use Hirst, Jeffs, and Paris's (2017) phrase, and full-time degrees in several areas, such as religious studies, linguistics, medicine, and astronomy, attracting students and scholars from all over the world

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<sup>1</sup> Al-Qarawiyyin is spelt variously as al Quaraouiyyine, Al-Karaouine, and Karueein.

(bbc.com). Examining al-Qarawiyyin's foundation, focus, and prominent role in society reveals echoes of global developments, both a thousand years ago and now (Richardson, 2016).

Al-Qarawiyyin has garnered much interest as it represents a watershed moment in the history of education, research, and social containment (Waardenburg, 1965; Dossett, 2014; Richardson, 2016; Pitso, 2023). The university has recently received even more attention as a result of the mounting challenges facing higher education institutions, notably the effects of COVID-19 on education and its post-pandemic ramifications. For example, Ewing (2021) commented that universities, including the University of al-Qarawiyyin, founded in 859 in Morocco, followed by the University of Bologna, founded in 1088 in Italy, are among the world's oldest continuously operating institutions and have weathered far more devastating pandemics and crises than COVID-19. Thus, it is necessary to draw on these institutions' experiences and lessons about responses to the difficulties and the future of the post-pandemic world. Higher education is understudied, especially from a service industry viewpoint (Ewing, 2021; Lahlou, 2019). This is because it constitutes one of the least understood service systems (Lella et al., 2012, as cited in Ewing, 2021).

The current study, in contrast, examines the perspectives and experiences of visitors to al-Qarawiyyin. The objective of this research is to determine the primary aspects that underlie the experiences of visitors to al-Qarawiyyin and to examine these experiences using sentiment analysis. Because they offer informative viewpoints based on user experiences, user-generated reviews are becoming more valued in business, education, and e-commerce (Chen et al., 2012). Today, numerous visitors and tourists depend extensively on internet review platforms to make decisions regarding a variety of topics, including visits (De Boeck et al., 2022). Online reviews serve multiple purposes, encompassing the articulation of reviewers' emotions, the description of actual experiences, the provision of recommendations, and the communication of significant information (Taecharungroj & Mathayomchan, 2019). To the best of the author's knowledge, no study has been undertaken on reviews of visitors and tourists with regard to the university in question.

## 2. Literature Review

As previously stated, the University of al-Qarawiyyin in Fez, Morocco, began operating in 859. Fatima al-Fihri founded it after deciding, along with her sister, to invest all of the wealth they received from their father in constructing a mosque that satisfies the needs of their community. The construction of the mosque and learning centre took two years, from 857 to 859. It is worth mentioning that Fatima took a vow to keep fasting until the mosque was built and made her first prayer in the mosque as an act of gratitude to Allah (Cherradi, 2016). In medieval times, al-Qarawiyyin played a significant role in the transfer of knowledge and cultural exchange between the East (i.e., the Muslim World) and the West (Europe). It formed a community based on trust and respect, as the university was founded as a waqf (or pious endowment), contributing to the enhancement of the community's well-being and prosperity. Furthermore, the university offered classes for craftsmen and the general public. This support increased to the extent that several craftsmen in Fez had taken part in discussions with the scholars and scientists in the university on jurisprudence, hadith, and logic according to the Imam of al-Qarawiyyin (cited in Aljazeera.net).

Numerous intellectuals have graduated from al-Qarawiyyin, making significant contributions to both Muslim and global society. Ibn Rushayd al-Sabti (1258/9–1321) was a hadith scholar and traveller best known for his work, *Rihla*, a historically invaluable book that contains

cultural and biographical data. Leo Africanus (1483/1495–1554), a Berber Andalusian diplomat, is a well-known traveller and writer. *Della descrizione dell’Africa* (Description of Africa), his most popular work, contains vital political, social, and geographical information about North Africa in the first half of the 16<sup>th</sup> century. Ibn Khaldun (1332-1406) is a jurist and historian whose work, *The Muqaddimah* (or the Prolegomena in Greek), has significant contributions in the fields of philosophy of history, social sciences or sociology, demography, historiography or cultural history, and economics (Park & Boum, 2005; Cherradi, 2016). Gerbert of Aurillac (999-1003), known as Pope Sylvester II, a scholar and scientist, popularized Arabic numerals in Europe after studying in al-Qarawiyyin (Zaimeche, 2002; Griffiths & Buttery, 2018).

Current research on al-Qarawiyyin University is focused on higher education and Islamic education and pedagogy (Hardaker & Sabki, 2012; Sabki & Hardaker, 2013; Richardson, 2016), institutional longevity and service industry (McCowan, 2019; Hanusch & Biermann, 2020; Ewing, 2021), and financing, that is, waqf (endowment) and philanthropy (Ramdane et al., 2017; Hoque & Abdullah, 2021). Hardaker and Sabki (2012) explore the teaching practice of al-Qarawiyyin University, with a specific emphasis on Islamic pedagogy, employing participant observation and relationships with teachers and students. The results revealed that the teaching methods are based on knowledge and sacred concepts, as well as skills like orality and memorising sacred texts. The paper emphasizes the uniqueness of the Islamic pedagogy’s belief in God, which enables oral transmission and a didactic approach towards sacred texts.

Hanusch and Biermann (2020) examine “deep-time organizations,” offering in-depth comparative historical analyses of some of the oldest organizations that are still running today, including Sveriges Riksbank, the world’s oldest bank, the University of al-Qarawiyyin, the oldest university, and the Imperial House of Japan, the oldest dynasty. The authors develop 12 basic design principles that, if backed by further empirical research along similar lines, might serve as the foundation for the creation and design of “deep-time organizations” to address the long-term issues of earth system governance and planetary stewardship.

Hoque and Abdullah (2021) investigate the development and operation of Al-Qarawiyyin University’s financial sources, reviewing and investigating historical data. The findings demonstrate the importance of waqf: the individual fund, the collective waqf fund, the Sultan fund, and the alumni fund, as well as other forms of charities, in providing financial assistance to the university’s communities and in enhancing academic excellence. The study suggests that studying the finance experiences of the world’s oldest university helps develop solutions to funding difficulties in modern universities.

In the areas of higher education, service industry, and financial independence, the studies reviewed above show that the oldest universities, such as al-Qarawiyyin University, al-Azhar University, and the University of Bologna, are still a starting point. In order to learn from their experiences and lessons on how to better handle the various future challenges, more research on these universities is therefore required. Furthermore, despite the shown interest in prior research, no studies were conducted on the experiences of visitors to al-Qarawiyyin. To prosper, a quality model in higher education and other sectors must characterize the stakeholders’ shared perspectives (Srikanthan & Dalrymple, 2003). Thus, it is critical to evaluate the many perspectives of stakeholders, such as visitors, students, and financial organizations, on the institution’s quality.

### 3. Methodology

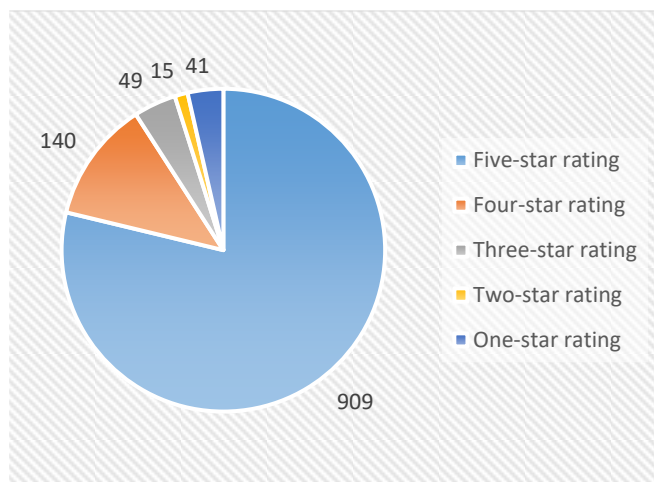
The current study aims to investigate visitors' perspectives, as well as experiences of al-Qarawiyyin provided via *Google reviews*. The study employed *Google reviews* since it is the most prominent online platform for visitors to submit feedback. *Google reviews* on Al-Qarawiyyin are typically left by visitors who perform a *Google* search for the university and mosque or use *Google Maps* to visit the location. In addition, *Google reviews* include both quantitative star ratings and textual reviews. This study investigates both quantitative ratings and qualitative comments. Both of these methods can influence customers in two distinct ways: heuristically and systematically. Quantitative attributes, such as the average star rating and number of reviews, serve as heuristic cues that customers can use to make judgments and decisions without looking at the textual content of reviews. Qualitative attributes in reviews necessitate additional effort, as the text must be read and processed in a more systematic way (Maslowska et al., 2017).

Neglecting the potential impact of exposure to reviews on decision-making can result in incorrect specification of empirical models and biased estimates for heuristic cues (Maslowska et al., 2017), as it is uncertain whether users' decisions are based solely on heuristic cues or reading reviews. Certain researchers have even suggested that the content of a review has more sway than its total star rating. The reason for this is that individuals depend more heavily on emotions while making decisions, and star ratings lack detailed evaluations (Hu et al., 2012). The reviews' textual content sometimes includes information not represented in the star ratings (Bigne et al., 2021). The sentiments conveyed in reviews regarding tourist attractions offer context-specific, implicit descriptions of the reviewer's sentiments and experiences, surpassing mere numerical ratings (Bigne et al., 2023). Furthermore, the consistency between rankings and comments allows researchers to make sense of all accessible data, that is, visitors' remarks.

As of July 2012, all of Al-Qarawiyyin's ratings and comments were gathered using a *Google* search. The university had 1,154 reviews in total, all of which were retrieved on July 14, 2023. To extract the reviews from *Google*, the *Google Review Downloader* was employed. The data was downloaded in the form of an Excel File, which included the author (i.e., reviewer), date, rating, helpful count, and review. Visitors' posts with no comments, irrelevant comments, tags only, emoji with undiscerned meanings, and inaccessible comments were excluded. French, Arabic, English, Spanish, Chinese, Indonesian, Korean, German, Turkish, Russian, Japanese, Hebrew, Dutch, Italian, Malay, Portuguese, Romanian, Polish, and Bangla were among the languages represented in the reviews. The comments in all these languages were included in order to have a complete data collection. The review spreadsheet included both the original comments and their *Google Translate* translation. The English translation of the comments in Arabic and French was validated by the author, and the English translation of those written in the other languages was validated by linguistic experts. Using a content analysis method, the retrieved reviews were then classified into several categories. The comments were then manually analysed and classified as positive, negative, or neutral.

### 4. Results

A total of 1,154 visitors rated al-Qarawiyyin University. The university has an average star rating of 4.6 (out of 5). It attracted 1049 five-four-star ratings (90.9%), 49 three-star ratings (4.2%), and 56 two-one-star ratings (4.9%). Figure 1 indicates in detail al-Qarawiyyin University's star ratings.



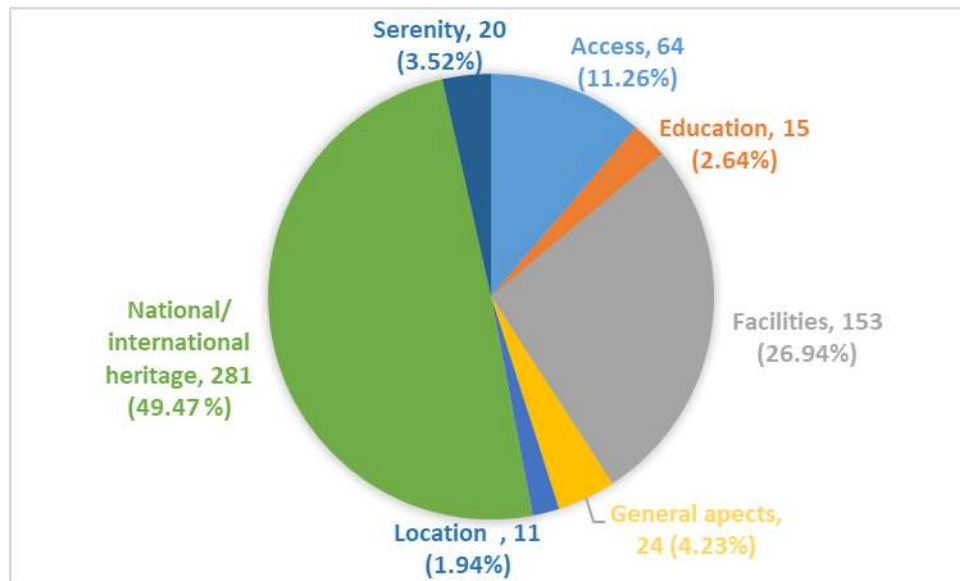
**Figure 1: Visitors' star ratings**

600 of the 1,154 visitors rating the university left comments. However, the al-Qarawiyyin administration did not respond in any way to any of the visitors' reviews. After filtering the comments, 568 comments were left for analysis. The content analysis of these reviews yielded seven aspects or categories: access, education, facilities, general aspects, location, national and international heritage, and serenity (see Table 1 for the categories' descriptions and examples).

**Table 1: The categories' descriptions and examples found in Google Reviews**

Category	Description	Example
<b>Access</b>	Statements related to entering al-Qarawiyyin	It's a beautiful place, and there are no tickets. Non-Muslims are not allowed to enter.
<b>Education</b>	Statements about higher education, teaching, alumni, information inquiries, etc.	There is al-Qarawiyyin University, where students are still studying, and registration for non-Moroccans is through the embassy.
<b>Facilities</b>	Statements about infrastructure, capacity, reading rooms, collection, etc.	Al-Qarawiyyin Mosque has seventeen doors and two wings that meet at the edge of the courtyard in the middle of the mosque. Each contains a place for ablution made of alabaster.
<b>General aspects</b>	Statements not related to any particular aspect of al-Qarawiyyin	I work near this university.
<b>Location</b>	Statements about vicinity, destination, etc.	One of the oldest historical mosques in the world... flanked by a variety of shops that sell traditional and popular products.
<b>National and international heritage</b>	Statements related to al-Qarawiyyin's history, foundation, architecture, preservation, etc.	This magnificent mosque-university, which has lasted more than a thousand years, features stunning Andalusian architecture.
<b>Serenity</b>	Statements about spirituality, calm, etc.	A place of worship for Muslims, full of spirituality.

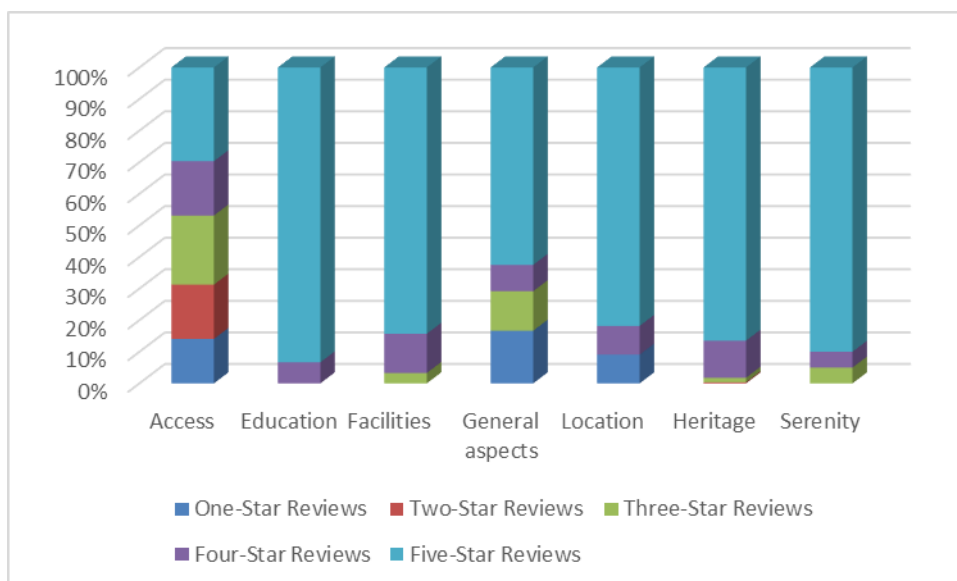
The predominant category seen in the Google reviews of al-Qarawiyyin primarily revolves around its national and international heritage, with a total of 281 reviews. A total of 153 reviews focuses on the institution's facilities. In addition, 64 reviews discuss access to al-Qarawiyyin; 24 reviews address general aspects; 20 reviews emphasize serenity; and 15 reviews specifically focus on the educational aspects of al-Qarawiyyin. The minimum number of reviews that pertain to the category of location is 11. Figure 2 shows the frequency of Google review categories.



**Figure 2: Google review category frequency**

Based on the data shown in Figure 3, it can be seen that out of the total of 568 reviews, the majority, namely 514 reviews, were assigned ratings ranging from four to five stars. A total of 27 reviews received two to one-star ratings. A total of 27 reviews received three-star ratings. The category of national and international heritage had the highest number of four to five-star ratings, namely 276. This was followed by facilities, which received 148 five-star ratings, access 29 five-star ratings, serenity 19 five-star ratings, general aspects 17 five-star ratings, education 15 five-star ratings, and location 10 five-star ratings. In contrast, the access category garnered the biggest number of two-one-star ratings, amounting to a total of 21 reviews. Following this were general aspects, which received four two-star ratings, and location, as well as national and international heritage, which each received a two-one-star rating.

In relation to the cases of three-one-star ratings, it is worthy of note that the category of education did not get any such ratings. The location category received a single one-star rating, but no ratings of two or three stars were given. The category of serenity did not receive any one or two-star ratings; it received one three-star rating. The category of facilities did not receive any two or three-star ratings, but it received five three-star ratings. The general aspects category did not obtain any ratings of two stars, but it did receive four ratings of one star and three ratings of three stars. The category of national and international heritage did not get any ratings of one star, but it did receive one rating of two stars and four ratings of three stars. The category of access received ten ratings of one star, eleven ratings of two stars, and fourteen ratings of three stars.



**Figure 3: Google Reviews category star ratings**

The findings of the sentiment analysis indicate that most of the reviews, namely 83%, exhibited a positive sentiment. Conversely, a small percentage of the reviews, comprising 12%, had a negative sentiment. Additionally, a smaller percentage of the reviews, including 5%, were neutral. Table 2 presents a comprehensive breakdown of the frequency and percentage of the reviews' sentiment.

**Table 2: Google reviews category sentiment frequency and percentage**

Category	Positive Comments		Negative Comments		Neutral Comments	
	Freq.	%	Freq.	%	Freq.	%
Access	21	33	36	56	7	11
Education	13	87	2	13		
Facilities	146	95	1	1	6	4
General aspects	16	67	4	17	4	17
National/international heritage	248	88	19	7	14	5
Location	8	73	3	27		
Serenity	18	90	2	10		

The majority of positive reviews (248) were in the category of national and international heritage, then came facilities (146), access (21), serenity (18), general aspects (16), education (13), and location (8). The category that received the highest number of negative reviews was access (36), followed by national and international heritage (19), general aspects (4), location (3), education and serenity (2), and facilities (1). Only four categories received neutral reviews: national and international heritage (14), access (7), facilities (6), and general aspects (4).

## 5. Discussion

The primary objective of the present study was to examine the viewpoints and experiences of individuals visiting al-Qarawiyyin. The results of the study show that visit experiences at al-Qarawiyyin contained seven aspects or categories: access, education, facilities, general aspects, location, national and international heritage, and serenity. The national and international

heritage category, then the facilities category, were by far the most significant. The category of location received the least amount of attention compared to the other categories.

According to the star ratings, the majority of the reviews (91%) were awarded four to five-star ratings, while a minority of reviews (9%) were given three to one-star ratings. The latter star ratings were significantly affected by the category of access, resulting in a disproportionately high number of one to two-star ratings in particular. In comparison, the results obtained from the in-depth sentiment analysis reveal that the majority of the reviews, namely 83%, had a positive attitude. In contrast, a minority of the reviews, accounting for 12%, had a negative sentiment. Furthermore, a lesser percentage of the reviews, including 5%, exhibited a neutral sentiment.

National and international heritage received the highest number of positive reviews, with facilities ranking second. Access, on the other hand, received the highest number of negative reviews. It is noteworthy that some of the reviews provided by visitors did not align with the star rating they offered. As an example, while the category of education garnered only four- to five-star ratings, it was not exempt from receiving two negative comments. According to Valdivia et al. (2019), users tend to express negative sentiments in their reviews, even when they rate a product or service with four or five stars. This behaviour is driven by a motivation to assist other users or consumers. Overall, both star ratings and sentiment analysis results indicate that most visitors were satisfied with their experience at al-Qarawiyyin.

As previously pointed out, national and international heritage garnered the highest number of positive reviews, along with the largest number of four-five-star ratings. This shows the level of visitors' satisfaction with this aspect, especially heritage, the status of al-Qarawiyyin as the oldest university in the world, its founder, preservation efforts, and architectural features. For example, one of the visitors said, "This is the oldest university in the world, and it was founded by Fatima Al-Fihri, a Muslim woman." For another example, a tourist said, "Beautiful, serene, and spectacular mosque. The courtyard and the mosque overall offer great architectural designs that have been preserved with so much care and attention."

On the other hand, most of the negative reviews were regarding access, especially from non-Muslim visitors. For example, one of the visitors said, "Might be nice but will never know because non-Muslims can't go inside." Another tourist said, "Very nice place to visit even if you're only allowed to see from the outside. Better if you receive some explanations from the local people." As a matter of fact, non-Muslims can only access the entrance and courtyard given that a mosque can only be accessed by Muslims, especially in Morocco based on the latter's religious, as well as cultural, considerations. The prohibition of non-Muslims accessing mosques may be traced back to the tenure of the French Marshal Lyautey, Resident General in Morocco, from 1912 to 1925. During his time in office, Lyautey prioritized the respect of ancient institutions and implemented measures that restricted Europeans from accessing mosques and sanctuaries (Vermeren, 2006). It is worthy of note here that one of the French visitors responded to visitors' complaints about access, mentioning this in her comment by saying, "It was Marshal Lyautey who banned non-Muslims from entering mosques in Morocco."

Though only 12% of the visitors' reviews were negative, al-Qarawiyyin administration should take action to sort out the issues raised by the negative sentiments. This is because the influence of negative words in a service review on its star rating is anticipated to surpass positive words, a proposition substantiated by negativity bias theory and prospect theory (Bigne et al., 2023).



The negativity bias theory posits that individuals tend to give greater importance to negative experiences compared to positive ones, as the former are more vivid and readily remembered. According to prospect theory, individuals care more about avoiding losses than making gains, which makes negative online reviews more informative.

Al-Qarawiyyin administrators should focus on all components of service experiences. Consumers frequently have conflicting reactions to service experiences, especially at tourist attractions. This includes essential characteristics, supporting facilities, lodging, and communication with service employees and customers (Kandampully et al. 2018, as cited in Bigne, et al., 2023). A visitor to Doge's Palace, for instance, may like its architectural features but express dissatisfaction with long queues, local transportation, and entry fees (Bigne, et al., 2023).

Importantly, as previously stated, the al-Qarawiyyin administrators provided no response to the reviews submitted by visitors, despite the fact that some of these reviews included inquiries like "Has the mosque been transformed into a university?" "I would like to know the origin of the name associated with al-Qarawiyyin mosque," and "I don't know about the specific location of this mosque in Morocco." The lack of response from al-Qarawiyyin administrators to visitors' inquiries and complaints might potentially be seen as a lack of attentiveness, which may have adverse consequences not only for the image of the institution as the world's oldest university but also for the educational and tourism industries. It is essential for the administration to effectively make use of the feedback offered by visitors. They should actively engage with commenters on platforms where views are expressed in order to attend to their needs and foster, as well as sustain, their loyalty.

## **6. Conclusion**

The current research aimed to determine the primary aspects that underlie the experiences of individuals visiting al-Qarawiyyin and to examine these experiences via the use of sentiment analysis. The study revealed seven key aspects of visitor experiences at al-Qarawiyyin: access, education, facilities, general aspects, location, national and international heritage, and serenity. The categories of national and international heritage, as well as facilities, have more significance, while location has received less attention. Based on the star ratings and sentiment analysis results, it can be inferred that most visitors were satisfied with their experience at al-Qarawiyyin. However, the aspect that received the majority one-two-star ratings and negative reviews was access.

The findings of the current research provide valuable new insights into the historical significance of al-Qarawiyyin, which is recognized as one of the oldest mosques, the world's oldest university, and a prominent tourist destination. The study's findings have considerable significance for the fields of higher education and tourism. Therefore, it is advisable to uphold the positive aspects of the institution and take action by addressing the concerns voiced by visitors. Additionally, it is essential to respond to visitors' comments and inquiries, even if the proportion of negative sentiment is small.

The present research represents the inaugural investigation of the viewpoints of visitors at al-Qarawiyyin. However, the analysis of the study was limited to the use of a single review site, namely Google Reviews. Hence, it is possible that the reviews seen in Google Reviews may not reflect the overall sentiment or experiences of the visitors. It is recommended to do further research on other platforms in order to get a more comprehensive dataset.

## References

- Aljazeera.net. Jāmi'atu l-qarawiyīn [Al-Qarawiyyin University]. (2017, May 7). <http://www.aljazeera.net/news/cultureandart/2017/5/7/-جامعة-القرويين-معتبر-ابن-خلدون-وأخريين>
- Bigne, E., Ruiz, C., Cuenca, A., Perez, C., & Garcia, A. (2021). What drives the helpfulness of online reviews? A deep learning study of sentiment analysis, pictorial content and reviewer expertise for mature destinations. *Journal of Destination Marketing & Management*, 20, 100570. <https://doi.org/10.1016/j.jdmm.2021.100570>
- Bigne, E., Ruiz, C., Perez-Cabañero, C., & Cuenca, A. (2023). Are customer star ratings and sentiments aligned? A deep learning study of the customer service experience in tourism destinations. *Service Business*, 17(1), 281-314. <https://doi.org/10.1007/s11628-023-00524-0>
- Bishop, M. (2001). *The Middle Ages*: Houghton Mifflin Harcourt.
- Chen, L., Qi, L., & Wang, F. (2012). Comparison of feature-level learning methods for mining online consumer reviews. *Expert Systems with Applications*, 39(10), 9588-9601. <https://doi.org/10.1016/j.eswa.2012.02.158>
- Cherradi, Y. (2016). Fatima Al Firida, Founder of the Oldest University of al Quaraouiyyine. *Journal of Medical and Surgical Research*, 2(3), 208-209.
- De Boeck, K., Verdonck, J., Willocx, M., Lapon, J., & Naessens, V. (2022, August). Reviewing review platforms: a privacy perspective. In *Proceedings of the 17th International Conference on Availability, Reliability and Security* (pp. 1-10). <https://doi.org/10.1145/3538969.3538974>
- Dossett, R. D. (2014). The historical influence of classical Islam on western humanistic education. *International Journal of Social Science and Humanity*, 4(2), 88. <https://doi.org/10.7763/IJSSH.2014.V4.324>
- Ewing, L. A. (2021). Rethinking higher education post COVID-19. In J., Lee & S. H. Han (Eds.), *The Future of Service Post-COVID-19 Pandemic* (pp. 37-54). Vol. 1. Springer. <https://doi.org/10.1007/978-981-33-4126-5>
- Griffiths, C., & Buttery, T. (2018, March 20). The world's oldest centre of learning. *BBC*. <http://www.bbc.com/travel/gallery/20180318-the-worlds-oldest-centre-of-learning>
- Guinness World Records. (n.d.). Oldest higher-learning institution, oldest university. Retrieved from <http://www.guinnessworldrecords.com/world-records/oldest-university>.
- Hanusch, F., & Biermann, F. (2020). Deep-time organizations: Learning institutional longevity from history. *The Anthropocene review*, 7(1), 19-41. <https://doi.org/10.1177/2053019619886670>
- Hardaker, G., & Sabki, A. I. A. (2012). An insight into Islamic pedagogy at the University of al-Qarawiyyin. *Multicultural Education & Technology Journal*, 6(2), 106-110. <https://doi.org/10.1108/17504971211236308>
- Hirst, S. P., Jeffs, C., & Paris, B. (2017). Starting Conversations that Matter. *Papers on Postsecondary Learning and Teaching*, 2, i-iii. <https://doi.org/10.11575/pplt.v2i.43146>
- Hoque, M. N., & Abdullah, M. F. (2021). The World's Oldest University and Its Financing Experience: A Study on Al-Qarawiyyin University (859-990). *Journal of Nusantara Studies*, 6(1). <https://doi.org/10.24200/jonus.vol6iss1pp24-41>
- Hu, N., Bose, I., Koh, N. S., & Liu, L. (2012). Manipulation of online reviews: An analysis of ratings, readability, and sentiments. *Decision support systems*, 52(3), 674-684. <https://doi.org/10.1016/j.dss.2011.11.002>
- Jāmi'atu l-qarawiyīn [Al-Qarawiyyin University]. (2015, November 17). *Aljazeera.net*. <http://www.aljazeera.net/encyclopedia/citiesandregions/2015/11/17/جامعة-القرويين>

- Lahlou, H. (2019). Students' Views of Science Education Challenges: A Focus Group Study. *Language in India*, 19(12), 27-34.
- Maslowska, E., Malthouse, E. C., & Viswanathan, V. (2017). Do customer reviews drive purchase decisions? The moderating roles of review exposure and price. *Decision Support Systems*, 98, 1-9. <https://doi.org/10.1016/j.dss.2017.03.010>
- McCowan, T. (2019). *Higher education for and beyond the sustainable development goals*. Palgrave Macmillan. <https://doi.org/10.1007/978-3-030-19597-7>
- Park, T. K., & Boum, A. (2005). *Historical dictionary of Morocco* (2nd Edition ed. Vol. 95). Oxford: Scarecrow Press.
- Pitso, T. (2023). *Reconstructing and Reclaiming African Spirituality in the Post-Truth Era*. African Sun Media.
- Richardson, S. (2016). *Cosmopolitan Learning for a Global Era: Higher Education in an Interconnected World*. London and New York: Routledge.
- Sabki, A. I. A., & Hardaker, G. (2013). The madrasah concept of Islamic pedagogy. *Educational review*, 65(3), 342-356. <https://doi.org/10.1080/00131911.2012.668873>
- Samara, A. Y. (2011). Ibn Khaldun and Some Classic Views in 20th Century Linguistics. *Theory and Practice in Language Studies*, 1(11), 1521-1530. doi:10.4304/tpls.1.11.1521-1530
- Souad, M., Ramdane, T., & Khan, M. S. (2017). Fātimah Al-Fihriyyah and Religious Fraternity in Al-Qarawiyy in University: A Case Study. *International Journal of Humanities and Social Science*, 7(10).
- Srikanthan, G., & Dalrymple, J. (2003). Developing alternative perspectives for quality in higher education. *International Journal of Educational Management*, 17(3), 126-136.
- Taecharungroj, V., & Mathayomchan, B. (2019). Analysing TripAdvisor reviews of tourist attractions in Phuket, Thailand. *Tourism Management*, 75, 550-568. <https://doi.org/10.1016/j.tourman.2019.06.020>
- Valdivia, A., Hrabova, E., Chaturvedi, I., Luzón, M. V., Troiano, L., Cambria, E., & Herrera, F. (2019). Inconsistencies on TripAdvisor reviews: A unified index between users and Sentiment Analysis Methods. *Neurocomputing*, 353, 3-16. <https://doi.org/10.1016/j.neucom.2018.09.096>
- Vermeren, P. (2006, May 15). le "Marocain" [The "Moroccan"]. *Histoire Coloniale et Postcoloniale* [Colonial and Postcolonial History]. <https://histoirecoloniale.net/Lyautey-le-Marocain-par-Pierre.html>
- Waardenburg, J. (1965). Some Institutional Aspects of Muslim Higher Education and Their Relation to Islam. *Numen*, 12(1), 96-138. <https://doi.org/10.2307/3269519>
- Zaimeche, S. (2002). *Education in Islam: The role of the mosque*. United Kingdom: Foundation for Science Technology and Civilization. <https://www.muslimheritage.com/uploads/ACF2C23.pdf>