# **Evaluation of Quality Performance and Social Effectiveness of Arts and Humanities Journals Indexed in the Web of Science Database**

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### **ABSTRACT**

This study aimed to evaluate the qualitative and Altmetrics status of 147 journals indexed in the Arts and Humanities Citation Index (AHCI). This practical-analytical study used qualitative indicators of journals and quantitative Altmetrics. Data was collected from Web of Science, Journal Citation Reports, and Altmetrics Explorer. The results showed that most of the journals this database covers are from European countries, and only one is from Asian countries. More than half of the reviewed journals have a score lower than average regarding Journal Citation Indicator, Eigenfactor Score, and Article influence score. In addition, 63 % of journals cite articles published less than 19 years ago. Nearly 20 % of journals were not on social media. There is a significant relationship between Journal Citation Indicator indices with Citing Half-life, Article influence score with Eigenfactor Score, and between qualitative and Altmetrics indicators. Most of the reviewed journals showed low-quality performance. These journals needed high scientific impact to increase their credibility and quality and remain in the Web of Science database.

Keywords: Qualitative performance; Altmetrics; Arts and humanities; Journal citation reports database

### 1. INTRODUCTION

Research findings are still primarily published in journals, and journals' expertise is essential to make decision processes in most scientific fields<sup>1</sup>. Researched performance is evaluated at all levels, whether individuals, departments, research groups, or entire universities, and these evaluations impact their funding and careers. The primary objective of an assessment is to assess the quality of people's research output, which is generally a journal article. Focusing on the quality of research leads to concentrating on the quality of the published journal. Several factors contribute to this: helping researchers determine the target journal for their articles, promoting competition between journals, and, in some cases, using the quality of a journal as a proxy for article quality<sup>2</sup>

There is no universally accepted criterion for evaluating the "quality" and "influence" of journals on the scientific community<sup>3</sup>. Several features are available in journal citation reports (JCR) for quality evaluation, including citation totals, Journal Impact Factors (JIF), Journal Citation Indicator (JCI), Eigenfactor Score (ES), and Article Influence Score (AIS). The journal impact factor (JIF) was the most commonly used measure for evaluating the quality of scientific journals for years, although it was widely criticised for its use. Scientific journals are ranked according to their quality using

Received: 20 March 2023, Revised: 22 October 2023 Accepted: 06 November 2023, Online published: 23 January 2024 complex algorithms and other databases with the help of new bibliometric Indicators<sup>4</sup>. Therefore, considering the quantity and quality of citations, the impact factor should be observed in other criteria, such as ES and AIS. Using newer criteria provides a more comprehensive view of journals and their relative position<sup>3,5</sup>. This approach allows reviewers to step beyond the limitations of the impact factor.

Humanities is one of the areas that can be influential in the development and progress of a country because it is the intellectual foundation and theoretical framework of development. Humanities is related to the dimensions of human existence and efforts to improve the condition of human societies in various social fields and play a fundamental role in developing, preserving, and promoting society's social and cultural values. Therefore, in recent years, knowledge production, localisation of knowledge, and the importance of training experts in this category of sciences have been highlighted.

Simultaneously with the growth of the publication process by researchers in various scientific fields, some humanities fields are known as soft sciences, emphasizing abstract and mental methods. Compared to other fields, such as basic and experimental sciences, known as hard sciences, and rely on objective methods, this field of publications has not grown sufficiently. Its reasons can be book-oriented<sup>7</sup>, the unpredictability of publishing and citation behavior of researchers in these fields<sup>8</sup>.

individualism in publishing scientific productions<sup>7</sup>, and others pointed out.

The long period to receive citations and the insufficient coverage of citation databases for indexing non-English language and native research works are among the problems of traditional methods of evaluating the impact of research works in the field of humanities<sup>9</sup>. Altmetrics indicators try to solve these problems by analyzing and measuring the immediate impact of research and using comprehensive sources, which are not limited to a database with specific journals<sup>10</sup>. Therefore, Altmetrics indicators can act as a complementary and effective supporting tool and a collaborative platform in the influence and quality of journals in humanities. The potential in social networks is a suitable tool for the accessibility and recognition of works and research results in art and humanities<sup>11</sup>.

Altmetrics studies of any scientific document are measured based on the number of times it is viewed, bookmarked, saved, liked, clicked, and subscribed, the number and quality of comments received on social media, and the number of people who follow that document. The basis of the central review in Altmetrics studies is the article. Altmetrics indicators can be used at different levels of articles and journals. Many studies have examined immersion at the article level, but more needs to be said about the journal level, especially among subject groups. Article-level indicators examine the performance of an article without considering the publishing journal and other articles published in that journal. On the other hand, journal-level indicators measure a publication's activity on various social media platforms <sup>12-13</sup>.

This study aimed to evaluate the journals of this field by considering the mentioned challenges by examining the quality performance of the journals and the effect of Altmetrics indicators. Some indicators are related to the journal, referring to the quality performance of the journal. In this study, "JCI," "Citing Half-life (CHL)," "ES," and "AIS" indicators have been used. Information about these indicators was collected from JCR. The results of this study can be helpful for researchers and policymakers in improving the performance of publications.

Therefore, this paper aims to evaluate the qualitative and Altmetrics status of journals in arts and humanities indexed in the Web of Science (WOS) database and seeks to answer the following questions:

- What is the quality performance of the journals in the investigated field indexed in the WOS database?
- What is the Altmetrics status of the field-indexed journals in the WOS database and
- Is there a correlation between the qualitative performance of the journals indexed in the WOS database and their published articles regarding the Altmetrics coverage and the average Altmetrics score?

## 2. RESEARCH LITERATURE

The research literature is related to the quality of

journals and the presence of journals in social media (article and journal level). Studies related to the quality of journals have been reviewed many times. Tsay14 examined the citation type of Taiwanese social science literature and found that social scientists in Taiwan tended to cite material published in the past ten years. Most citations in the sample journals were related to articles four to seven years old, indicating that social scientists in Taiwan tend to cite the most recent reports. Mingers and Yang<sup>2</sup> assessed the quality and ranking of business and management journals and showed significant differences in journal rankings, although the indicators appear highly correlated. Griffiths and Blades<sup>15</sup> investigated the long-term and short-term impact of Applied Spectroscopy journal articles. It used the fiveyear impact factor indicator for short-term effects and the cited half-life and CHL to investigate the long-term impact of articles published in the respective journal. According to the findings, the articles published in the Applied Spectroscopy journal have "staying power."

Halim & Khan<sup>16</sup> classified academic journals in computer science using multiple bibliometric indicators in a data science-based framework. Markusova,<sup>17</sup> et al. studied Altmetrics as an indicator of the scientific impact of a journal. The findings indicated a positive correlation between Altmetrics and bibliometric indicators, and Altmetrics should be used as additional criteria to evaluate the article's impact.

Roldan-Valadez, <sup>18</sup> et al. evaluated journals with several bibliometric indicators instead of the impact factor and concluded that radiologists and other researchers should examine the bibliometric indicators before submitting manuscripts. Reranking journals using eigenfactor, AIS, and cited half-life provides a better assessment of their importance and validity in specific disciplines. Quevedo-Blasco, <sup>19</sup> et al. bibliometrically analysed Spanish psychology journals indexed in the Citation Emerging Sources Citation Index (2018-2020) and ranked the journals with the JCI. Other similar studies have been done in this regard<sup>3-5, 20</sup>.

There are many studies on the relationship between Altmetrics indicators and citation indicators at the article level, which are few at the publication level. A study such as Nuredini and Peters<sup>21</sup> analysed the Altmetrics indicators of 30 journals in economics and business indexed in the WOS database. The results showed that Twitter, Mendeley, and news media contributed the most in this field. Xia,<sup>22</sup> et al. also showed that Twitter users are more concerned about sharing Nature journal articles than Facebook users. The relationship between tweets and citations of Nature articles depends on other factors like the field of study, the type of users, and the year of publication of the article.

In economics and business studies, Nuredini<sup>23</sup> examined the Altmetrics data of the top 1000 journals in the Handelsblatt ranking (often used in German-speaking countries). The results showed that the altmetrics explorer

database often mentions high-ranked journals. The number of bookmarks in Mendeley positively correlates with the number of citations at the article and journal levels.

### 3. METHODOLOGY

This applied analysis used bibliometrics and Altmetrics indicators at the journal level. Data related to Altmetrics indicators and quality performance indicators of journals were collected on 25/12/2021.

WOS, JCR, and Altmetrics explorer databases extracted information. First, the browse categories section was clicked to search for journals on the main page of the JCR database. Then, all eight subjects were selected in the arts & humanities, interdisciplinary section. On the newly opened page, the selection journals indexed in AHCI were chosen in the arts and humanities, Interdisciplinary groups, humanities, and multidisciplinary topics. In the following, the desired indicators were manually extracted from the profile of each journal in JCR for 2020, and the quality indicators related to them were stored in excel software. After reviewing 150 retrieved journals, three journals were excluded. These three journals differed significantly from other journals in the number of issues and research outputs published in the year, which might affect the examined indicators. Therefore, it was tried to compare journals with similar characteristics quantitatively, and 147 journals were reviewed as the research population.

First, research outputs (types of sources including research articles, reviews, conferences, notes, letters to the editor, and book reviews) of journals were extracted from WOS databases. In this way, the titles of 147 journals were individually searched on the first page of the WOS database by selecting publication titles and entering the desired search title. Then the research outputs from 2010 to 2021 and the required information from the results were removed. The total number of research outputs from 147 journals was 89,256. Then, each of the research outputs of the journals was searched in the Altmetrics explorer database, and the related Altmetrics indicators were stored in the excel software. The indicators used in this research include the following:

JCI: This indicator includes the average Category Normalised Citation Impact (CNCI) of the citable items (articles and reviews) published in the journal during the last three years. The average JCI in a category equals 1, and a journal with (JCI = 1.5) has 50 % more citation impact than the average.

Citing Half-life: Citing half-life in a journal in year Y equals the years we have to go back from year Y to see 50% of the total number of citations given to other journals. The more recent articles are referenced within the journal, the citing half-life in the journal decreases. This reduction can be an indication of the up-to-date scientific information of the authors of the journal articles.

**Eigenfactor Score:** Indicates the journal's importance and is calculated based on the number of citations received

by the journal and the quality of citing journals. The total eigenfactor for all journals in JCR will equal one each year, and the corresponding score of the journal will be compared with the score of one. This indicator is calculated in five years, and self-citation is removed.

Article Influence Score: This indicator normalizes the eigenfactor score according to the cumulative size of the journal cited in the last five years. The average article impact score for each article is 1. A score greater than 1 indicates that each article in the journal has a higher-than-average influence (Journal Citation Report Database https://jcr.clarivate.com/).

Altmetrics Coverage: This indicator is calculated from the ratio of the number of articles shared on at least one social media with the total number of research outputs published in the journal during the study period, which the researchers calculated.

Average Altmetrics Score: This score is the average attention that a journal's articles have gained by sharing on different types of social media. The meaning of average attention is the average score that the Altmetrics Explorer database gives to each article according to the amount of activity and sharing in different social networks. The researchers calculated the average of these scores from the database<sup>9</sup>.

Spearman's rank correlation test was used to check the correlation in the data analysis section because the publications' distribution was not normal. Microsoft Excel software was used for descriptive statistics, and R software was utilised for inferential statistics.

## 4. FINDINGS

Table 1 shows that in the review of 147 journals indexed in AHCI in arts and humanities, most of the journals are from European countries, and the only Asian country with a journal is South Korea.

According to Table 2, the best score in JCI (7.91), AIS (1.293), and ES (0.0029) belong to "Psychology of Aesthetics Creativity and the Arts" journal. Further,

Table 1. Coverage of art and humanities journals in different countries

| Country         | Journals coverage |
|-----------------|-------------------|
| ENGLAND         | 52                |
| USA             | 47                |
| CANADA          | 7                 |
| NETHERLANDS     | 7                 |
| Other countries | 34                |

Table 2. Status of journals in quality indicators

| Indicator | Average | Best score |
|-----------|---------|------------|
| JCI       | 1.2     | <7.91      |
| CHL       | 19.3    | 5<         |
| ES        | 0.00048 | < 0.00291  |
| AIS       | 0.36    | <1.293     |

the lowest score in CHL, considered the best score, has performed best with five years of "Journal of Scholarly Publishing". The findings showed that less than half of the journals had a higher-than-average score in the JCI, ES, and AIS indicators (43 %, 31 %, and 40 %, respectively). 88 journals (60 %) cited articles from the last 20 years, and 17 journals have used the scientific productions of the last 10 years, which shows the up-to-date scientific information of the authors of these journals.

We also analysed the journals using different quality indicators (JCI, Citation Half-Life, Eigenfactor Score, Article Impact Score). The appendix table shows the top ten journals in each indicator. The results showed that out of 40 journals in this ranking, 19 are among the top journals in terms of only one indicator, and their performance is low in other indicators. Meanwhile, the DAEDALUS journal stands out in all the indicators despite having different ranks (in the JCI, CHL, ES, and AIS indicator 9, 8, 5, and 8, respectively). Psychology of Aesthetics Creativity and the Arts" is the second journal to stand out in the JCI, ES, and AIS indexes (ranks first, respectively). However, in the Citation Half-Life index, it is not among the top ten journals. Finally, seven journals are among the top ten according to two indicators.

Table 3 shows that out of the 147 reviewed journals, 60 % have an article AIS lower than the average, nearly 70 % have an ES lower than the average, and 63 % have a JCI score lower than the average. According to

the results, most of the reviewed journals (140 journals had a CHL score) performed better regarding the CHL indicator. In addition, 19 % were without Altmetrics coverage.

A total of 28 journals (19 %) were excluded because they were not shared at least once. According to Table 4, no journal has had 100 % Altmetrics coverage; the highest Altmetrics coverage with 79 % and the highest mean Altmetrics score of 18.8 is related to the Medical Humanities journal.

The Shapiro-Wilk test was used to check normality. The findings showed that the data have a non-normal distribution. Therefore, Spearman's test was used to check the correlation relationship. Figure 1 shows a high correlation and direct connection between the AIS and ES variables. There was a relationship between Mean Altmetrics Score and Altmetrics Coverage (0.62), JCI and Article influence score (0.62), JCI and Altmetrics Coverage (0.58), and AIS and Altmetrics Coverage

Table 3. Frequency of journals with a higher-than-average score in quality indicators

| Indicator                         | Frequency of journals |
|-----------------------------------|-----------------------|
| AIS                               | %40> average          |
| ES                                | %31> average          |
| CHL                               | %63< average          |
| JCI                               | %37> average          |
| Journals with altmetrics coverage | % 81                  |

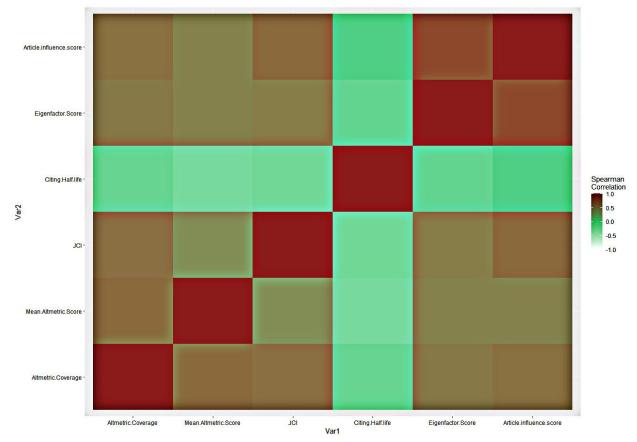


Figure 1. Correlation matrix between Altmetrics indicators and quality indicators of journals.

| Altmetrics coverage | Journal name                                       | Altmetrics score average | Journal name                                     |
|---------------------|--|--------------------------|--|
| 79                  | Medical Humanities                                 | 18.8                     | Medical Humanities                               |
| 73.6                | Textile-Cloth and Culture                          | 15.3                     | Heritage Science                                 |
| 66                  | Fashion Theory-The Journal of Dress Body & Culture | 12.5                     | Daedalus   |
| 64.5                | Cultural Trends                                    | 12                       | Psychology of Aesthetics Creativity and the Arts |
| 63.5                | Patterns of Prejudice                              | 11                       | Index on Censorship                              |

(0.57). Further, a relationship was found between ES and Altmetrics Coverage (0.52), ES and JCI (0.50), ES and Mean Altmetrics Score (0.47), and AIS and Mean Altmetrics Score (0.47). These relationships mean that the strength of the relationship has decreased. The results indicate that the correlation of CHL with other calculated variables is negative, which shows the inverse relationship between these and other variables. The correlation of the CHL variable with Altmetrics Coverage, ES, and AIS variables is not significant, but other correlations are significant.

### 5. DISCUSSION

This study was conducted to analyse the qualitative performance of arts and humanities journals indexed in the WOS database and investigate the relationship between Altmetrics quantitative indicators and the qualitative performance of journals. The research results showed that the coverage of journals in the arts and humanities of European countries in the AHCI database is appropriate, but Asian countries are fragile. These results are consistent with previous research that writers of non-English-speaking humanities fields often publish articles in national databases and local languages and on national and cultural issues<sup>24-28</sup>. This indicates a deep scientific gap in arts and humanities subjects between Asian countries and other countries. Therefore, Asian countries should be encouraged to index journals in the WOS database. The criteria for indexing journals in the WOS database is that the journals have international standards in terms of language, topics, authors, and editorial board, which international researchers can use. In this way, the attention of these standards will increase the coverage of journals of Asian countries.

The age of citations in the reviewed journals varies from 5 to 75 years, and 63 % of journals tend to cite materials published less than 19 years ago. Therefore, the cited sources are old. This result confirms the hypothesis of the long period to receive citations in the arts and humanities fields. Journals did not have a good status in terms of citation by credible journals, and only 30 percent of the reviewed journals have a score above the average (0.00048). The highest score in this indicator in the sample journals is lower than the score of one (comparison score). The important thing is that there is no denominator in the ES index calculation. Therefore,

journals that publish many articles have higher ES than journals that publish very few articles, if the articles published between these journals have similar average quality.

Since the ES is the influence of the total number of citations, it can also be increased the number of citations by increasing the articles published in the journal. However, taking measures to make these citations from authentic journals is necessary. Among these measures, we can mention the marketing of journals to publish articles from prominent authors in this field. In addition, the analysis of JCI and AIS indicators found that nearly 60 % of journals have a score lower than the average, meaning they perform poorly in terms of citation impact and influence.

Nine journals were among the top 10 journals in at least two qualitative indicators. Three journals with a high JCI indicator (citation impact) cited new sources, confirming a significant and negative statistical relationship between the CHL and JCI indicators. High-quality journals cited journals that had a high article influence. In this regard, the findings showed a high correlation between the AIS and ES variables and a direct relationship between them. Daedalus journal performs well among all the reviewed journals due to being high in all four qualitative indicators. Generally, the ranking of journals with different indicators showed different scales. None of the journals has been ranked in the same position across all four metrics. This inconsistency could suggest that those metrics are different in what they measure. Examining and ranking journals with multiple indicators provides a more accurate assessment for decision-makers in this field and provides us with the necessary information to understand journals. In this regard, it is suggested to inform the editors of the journals about the importance of these indicators so that they can take steps to improve them so that the quality and effectiveness of scientific productions will gradually increase.

However, Spearman's correlation analysis between the criteria (JCI, AIS, ES, and CHI) showed a good and significant correlation in this study. In this field, Mingers and Yang<sup>2</sup> confirmed that despite the correlation of the indicators, there are many differences in the rankings of journals. Thus, deciding which metric is most appropriate to use as the gold standard reference for evaluating journal impact in this field is challenging. Considering that indicators are effective from each other and paying attention to them increases the quality of journals in other fields. Therefore, paying attention to newer criteria provides a more comprehensive view of the relative position of journals, and along with measures to increase the number of citations, attention should be paid to the quality of the published sources, the up-to-dateness of the published topics, and the novelty of the references of the articles to increase the citation impact and influence of the articles.

Examining journals on social media revealed that nearly 20 % of journals are absent. The review of journals in social media showed that most journals with high Altmetrics coverages are among the top ranks in quality indicators. Also, a statistically significant, positive, and acceptable relationship was found between qualitative indicators and the Altmetrics coverage. This finding is consistent with the results of Markusova, 17 et al. study. Also, some<sup>29-31</sup> studies suggest that articles viewed more frequently receive higher citation rates than those rarely accessed. Therefore, the current research confirms the hypothesis of the necessity of journals in social media for visibility and influence in science. In this regard, Altmetrics indicators can be used as complementary criteria to citation indicators to evaluate the impact of articles. Researchers in this field can use social media to share their research outputs at the international level. In addition, publishers should consciously and deliberately try to share their articles on social media to increase the visibility of their journals.

According to the findings, the top 5 journals were identified based on Altmetric indicators, and this shows that the results of their studies are interesting and practical for most of the people in society, and sharing their articles on social media has attracted people's attention. Also, nearly 20% of journals were not present on social media. This is not a good situation. Since people are active in social media today, journals must use the benefits of social media to make their scientific products visible.

## 6. CONCLUSION

Considering the low coverage of journals in Asian countries, the se countries' policymakers should examine their journals' strengths and weaknesses to have a successful scientific presence at the global level and take measures to provide indexing criteria for journals in this database. In addition, most of the examined journals showed a low-quality performance by scoring lower than the average in JCI, ES, and AIS. These journals need high scientific impact and influence to increase credibility and quality and remain in the WOS database.

Journal publishers are suggested to adopt policies that cite newer sources in journals, publish articles on up-to-date and innovative topics, and make the reviewing process accurate and logical. High availability in the environment of scientific and social networks, publication

of the pre-published version of articles, and publication in the form of open access are among the things that can be effective in the visibility and impact of journals. Research policymakers can use the findings of this research, editorial board members, and those involved in publications to increase their quality, influence, and visibility. Having high-quality scientific journals in reliable international citation and information databases, especially the databases of Clarivate Analytics Institute, is a sign of countries' scientific progress.

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Appendix: Top ten journals based on quality indicators

| JCI   |      | Citation half-life  |     | Eigenfactor score                                   |         | Article impact score                                   |       |
|---|------|---|-----|---|---------|--|-------|
| Psychology of<br>Aesthetics Creativity<br>and the Arts                            | 7.91 | Journal Of Scholarly<br>Publishing  | 5   | Psychology of Aesthetics<br>Creativity and the Arts | 0.00291 | Psychology of<br>Aesthetics Creativity<br>and the Arts | 1.293 |
| Medical Humanities  | 5.3  | Cultural Trends   | 5.9 | American Quarterly                                  | 0.00283 | Slavic Review  | 1.267 |
| International Journal of Heritage Studies   | 4.89 | Fashion Practice-The<br>Journal of Design Creative<br>Process & the Fashion<br>Industry         | 7.5 | International Journal of<br>Heritage Studies        | 0.00263 | American Quarterly                                     | 1.118 |
| ACM Journal on<br>Computing and<br>Cultural Heritage                              | 4.26 | International Journal<br>of Humanities and Arts<br>Computing-A Journal of<br>Digital Humanities | 7.7 | Slavic Review                                       | 0.00236 | October  | 1.076 |
| Archives and<br>Records-The Journal<br>of the Archives and<br>Records Association | 4.07 | ACM Journal on<br>Computing and Cultural<br>Heritage  | 7.8 | Daedalus  | 0.00233 | Oriens   | 1.04  |
| Empirical Studies of the Arts   | 4.04 | Acta Borealia   | 7.9 | Digital Scholarship in the Humanities               | 0.00202 | Journal of Islamic<br>Studies                          | 1.014 |
| Curator-The Museum<br>Journal   | 3.56 | Museum Management and<br>Curatorship  | 8   | Heritage Science                                    | 0.00178 | Patterns Of Prejudice                                  | 1.009 |
| Museum Management and Curatorship   | 3.32 | Daedalus  | 8.1 | Modernism-Modernity                                 | 0.00174 | Daedalus   | 0.989 |
| Daedalus  | 3.29 | Merkur-Deutsche Zeitschrift<br>Fur Europaisches Denken  | 8.5 | Quaestio Rossica                                    | 0.00169 | Modernism-Modernity                                    | 0.966 |
| Senses & Society  | 3.25 | Curator-The Museum<br>Journal   | 8.6 | Angelaki-Journal Of The<br>Theoretical Humanities   | 0.00164 | Classical Receptions<br>Journal                        | 0.925 |