

# Optimizing Search Engine Optimization Strategies to Increase Visibility and Author Awareness in Scientific Journals

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## ABSTRACT

This study **aims to analyze** the optimization of Search Engine Optimization (SEO) strategies to increase journal visibility and author awareness in Technomedia Journal. In the era of digital publication, scientific journals are not only required to publish quality articles but also to be easily found through search engines and academic platforms. This study employed a **quantitative approach** by distributing questionnaires to 101 respondents, including authors, researchers, academics, and journal users familiar with Technomedia Journal. The data were analyzed using the **Structural Equation Modeling (SEM-PLS)** method with the help of SmartPLS software. The research model consists of SEO, Paper Quality (PQ), Open Journal Systems (OJS), and indexing and digital presence as independent variables, journal visibility as an intervening variable, and author awareness as a dependent variable. The results showed that **indexing and digital presence** have the strongest influence on journal visibility with a path coefficient value of 0.641. In addition, journal visibility also has a strong positive effect on author awareness with a path coefficient value of 0.670. The R-square value for journal visibility is 0.804, which means that 80.4% of the variation in journal visibility can be explained by the independent variables. Meanwhile, the R-square value for author awareness is 0.704, which means that 70.4% of the variation can be explained by journal visibility and SEO. **These findings indicate** that strengthening indexing, digital presence, article PQ, OJS management, and SEO strategies in an integrated manner can increase journal visibility and author awareness of Technomedia Journal.

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**Journal homepage:** <https://adi-journal.org/index.php/ajri>

## 1. INTRODUCTION

Advances in information and communication technology have brought about significant changes in the world of scientific publication. Today, scientific journals serve not only as a medium for disseminating research results, but also as a means of enhancing academic reputation, research visibility, and collaboration among researchers globally. In the digital age, the existence of scientific journals is greatly influenced by their ability to be easily found through search engines such as Google. Therefore, implementing SEO strategies is a crucial approach to increasing the visibility of scientific journals online. SEO enables a website or journal platform to appear higher in search results, thereby increasing visits, article access, and potential citations from researchers in various countries [1]. This digital transformation is also closely aligned with Sustainable Development Goal (SDG) 9 industry, innovation and infrastructure, particularly in promoting the use of digital technologies and innovative information infrastructure to strengthen scientific communication and knowledge dissemination.

Technomedia Journal, as a technology-based scientific journal, plays a crucial role in supporting the dissemination of knowledge in the fields of information technology, digital business, and digital innovation [2]. However, increasingly fierce competition among scientific journals requires journal managers to develop effective digital strategies to make their journals more easily discoverable by authors and readers. One of the main challenges facing many scientific journals is their low visibility in search engines and a lack of author awareness, which refers to the level of awareness and interest among authors in the existence of a journal as a place to publish their scientific work. If a journal has low visibility in search engines, the chances of researchers discovering and accessing the journal will also be reduced, which can ultimately affect the number of submitted manuscripts and the development of the journal's reputation [3]. Improving the discoverability and accessibility of scholarly publications also supports SDG 4 quality education, as greater access to scientific knowledge can facilitate learning, research activities, academic development, and the wider dissemination of educational resources.

This study examines how SEO strategies can enhance visibility and author awareness in Technomedia Journal. By optimizing keywords, metadata, content quality, and utilizing backlinks and indexing, SEO helps improve a journal's search engine ranking and reputation within the academic community. The findings aim to assist journal managers in leveraging SEO to enhance accessibility, reputation, and competitiveness in the digital publication era, while offering a reference for other journals seeking to optimize their digital marketing strategies [4]. The study contributes to SDG 9 by strengthening technology-enabled digital publishing infrastructure and innovative approaches to scholarly communication, while also contributing to SDG 4 by improving access to and discoverability of academic knowledge. The novelty of this study lies in integrating technical SEO, PQ, OJS usability, and indexing and digital presence within a single model. These factors are examined as antecedents of Journal Visibility, which serves as a mechanism linking journal discoverability to Author Awareness. This framework demonstrates whether author awareness is driven by SEO alone or by a broader digital publishing ecosystem, thereby providing a comprehensive perspective on how digital innovation can support a more accessible and sustainable scholarly publishing environment.

## 2. LITERATURE REVIEW

### 2.1. Search Engine Optimization

SEO is a strategy for improving the discoverability of digital content through search engines. In scientific journals, SEO can be applied through relevant keywords, metadata optimization, search-friendly URLs, and content structure. These strategies help researchers find journal articles more easily and can support the online exposure of scientific publications. However, SEO works more effectively when supported by indexing and broader digital presence.

### 2.2. Paper Quality and Open Journal Systems

PQ and OJS are important components of digital journal management. High-quality articles with relevant topics, clear structures, and appropriate references can increase the attractiveness and credibility of a journal. Meanwhile, OJS supports the management, publication, accessibility, and discovery of journal articles through its digital platform. Good content quality combined with an accessible journal system can provide a better experience for researchers and readers.

### 2.3. Indexing, Digital Presence, and Journal Visibility

Indexing and digital presence increase the opportunity for scientific articles to be discovered through search engines, academic databases, and other digital platforms. Academic indexing, backlinks, metadata, and digital dissemination can strengthen the online presence of a journal. Journal Visibility reflects how easily a journal can be found and accessed by researchers. Therefore, strengthening indexing and digital presence, supported by SEO, PQ, and OJS usability, can improve the discoverability of scientific journals.

### 2.4. Journal Visibility and Author Awareness

Journal Visibility is closely related to Author Awareness because researchers are more likely to recognize a journal when it is easily found through search engines and academic platforms. Greater visibility can increase familiarity with the journal, its reputation, and its potential as a publication venue. Therefore, an integrated digital strategy involving SEO, PQ, OJS, and Indexing and Digital Presence is expected to strengthen Journal Visibility and subsequently increase Author Awareness in Technomedia Journal.

## 3. RESEARCH METHOD

### 3.1. Research Design and Methodology

This study adopts a quantitative survey approach to examine the influence of SEO strategies on Journal Visibility and Author Awareness in Technomedia Journal. Data were collected through questionnaires from authors, researchers, academics, and journal users familiar with the journal, with respondents selected using purposive sampling based on relevant experience in journal searches or scientific publications [5]. The research model includes SEO (X1), Quality (X2), OJS (X3), and Indexing and Digital Presence (X4) as independent variables, with Journal Visibility (Y1) and Author Awareness (Y2) as dependent variables. These constructs were measured through indicators covering keyword and metadata optimization, article quality and relevance, OJS usability, indexing and digital connectivity, journal discoverability, and author recognition, interest, and perceived credibility [6].

Data were collected using a five-point Likert scale ranging from strongly disagree to strongly agree and analyzed using Structural Equation Modeling (SEM-PLS) with SmartPLS. The analysis included validity and reliability assessment, outer model evaluation, and inner model testing to examine relationships among the constructs [7]. Hypotheses were evaluated using path coefficients,  $t$ -statistics,  $p$ -values, and 95% confidence intervals, with statistical significance determined at  $p < 0.05$  and confidence intervals excluding zero. Since all constructs were measured through a single questionnaire, potential common method bias was addressed through neutral wording, item separation, confidentiality assurance, and the absence of right or wrong answers [8].

### 3.2. Research Hypothesis

Based on the theoretical study and conceptual framework explained previously, this study develops several hypotheses to test the relationship between SEO, Content Quality, Website Usability, and Indexing & Digital Presence variables on Visibility and Author Awareness in Technomedia Journal. This hypothesis was formulated to determine the extent to which the implementation of digital strategies in managing scientific journals can increase the visibility of journals in search engines and increase authors' awareness of the existence of the journal as a scientific publication medium. The statistical significance of the structural relationships was evaluated using a bootstrapping procedure with insert number subsamples. Each hypothesis was assessed based on its path coefficient,  $t$ -statistic,  $p$ -value, and 95% confidence interval. A relationship was considered statistically significant when  $p < 0.05$  and the confidence interval did not include zero. Because all constructs were measured using one questionnaire, common method bias was considered. Neutral wording, item separation, confidentiality assurance, and the absence of right or wrong answers were used to reduce response bias [9].

SEO strategies are vital for boosting a website's search engine ranking. Optimizing keywords, meta-data, and page structure can enhance a journal's visibility [10]. Hence, the first hypothesis is:

- **H1:** SEO has a positive effect on Visibility on Technomedia Journal.  
Besides SEO, high-quality content improves journal visibility. Well-structured, relevant articles are more likely to be discovered, cited, and ranked higher [11].
- **H2:** Quality has a positive effect on Visibility in Technomedia Journal.  
Website usability also influences the user experience in accessing scientific journals. Journal websites

with clear navigation, easy-to-understand displays, and fast access speeds will enhance user experience in searching and reading articles. This can enhance user interaction with the journal website and drive increased visitation [12].

- **H3:** OJS have a positive effect on Visibility in Technomedia Journal.  
A journal's presence on digital platforms and databases enhances its visibility. Greater indexing increases the likelihood of articles being discovered.
- **H4:** Indexing & Digital Presence have a positive effect on Visibility in Technomedia Journal.  
High visibility in search engines increases the chances of authors finding the journal when searching for research references or publications. When a journal frequently appears in search results, authors' awareness of the journal increases. This can encourage authors to consider the journal as a place to publish their scientific work.
- **H5:** Journal visibility has a positive effect on author awareness in Technomedia Journal.  
In addition to visibility, implementing SEO strategies can also directly increase author awareness of a journal's existence. A journal website that is easily found in search engines will be accessed more frequently by researchers and prospective authors. This can increase the journal's recognition among academics and encourage authors to submit articles to the journal [13].
- **H6:** SEO has a positive effect on Author Awareness in Technomedia Journal.  
High visibility in search engines increases the likelihood that authors will discover the journal when searching for relevant research references or potential publication venues. When a journal consistently appears in relevant search results, its exposure to potential authors increases, thereby strengthening their awareness and familiarity with the journal. Greater awareness can subsequently encourage authors to explore the journal, evaluate its relevance to their research, and consider it as a potential venue for publishing their scientific work.

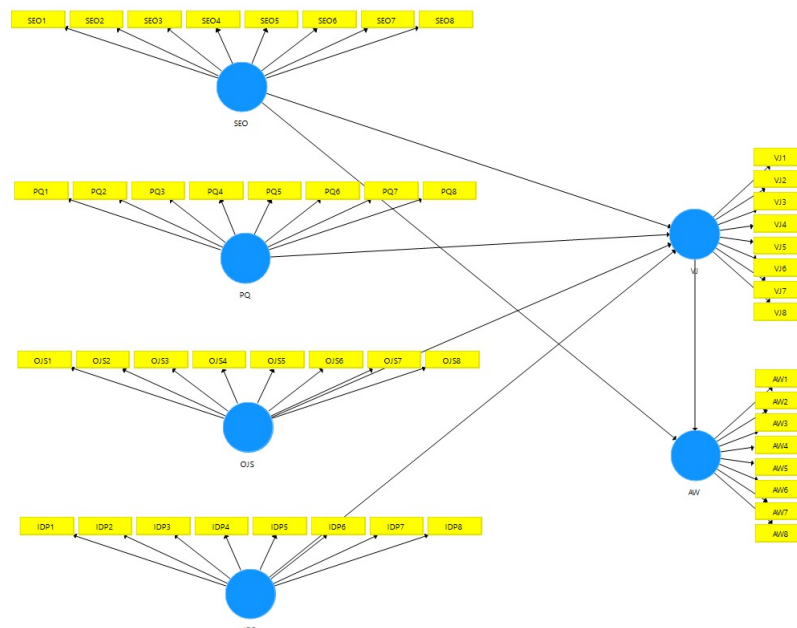


Figure 1. Research Framework for SEO, OJS, Indexing, and Author Awareness

Figure 1 illustrates the proposed structural relationships among the independent variables, namely PQ, SEO, IDP, and OJS, the intervening VJ, and the dependent variable of AW. Hypotheses H1–H4 examine the direct effects of PQ, SEO, IDP, and OJS on VJ, respectively. These relationships are intended to determine the extent to which content quality, technical optimization, academic indexing, digital presence, and journal-platform usability contribute to improving the discoverability of scientific journals.

Furthermore, H5 examines the effect of VJ on AW, indicating that greater journal visibility may increase authors' recognition, familiarity, and interest in the journal as a potential publication outlet [14]. H6 assesses the direct effect of SEO on AW, allowing the model to determine whether SEO enhances author awareness independently of journal visibility. Each latent construct is measured using multiple indicators, such as PQ1–PQ8, SEO1–SEO8, IDP1–IDP8, OJS1–OJS8, VJ1–VJ8, and AW1–AW8. Overall, the framework provides an integrated explanation of how content, platform, and digital dissemination capabilities jointly influence journal visibility and author awareness [15].

## 4. RESULT AND DISCUSSION

### 4.1. Data Collection Result

This research was conducted by distributing questionnaires to 101 respondents, consisting of 32 female respondents aged 26–30 and 69 male respondents aged 18–25, including students, researchers, academics, and scientific journal users who had experience accessing or were aware of the existence of Technomedia Journal. The data obtained were then analyzed using the SEM-PLS method with the assistance of SmartPLS software [16].

This analysis was conducted to determine the influence of SEO, PQ, OJS, and IDP on VJ and its influence on AW in Technomedia Journal [17].

### 4.2. SEM-PLS Analysis Results

After collecting the questionnaire data, the next step was to process the data using SmartPLS. The results of the data processing produced a structural model showing the relationships between latent variables, path coefficient values, outer loading values for each indicator, and the R-square value for the dependent variable [18].

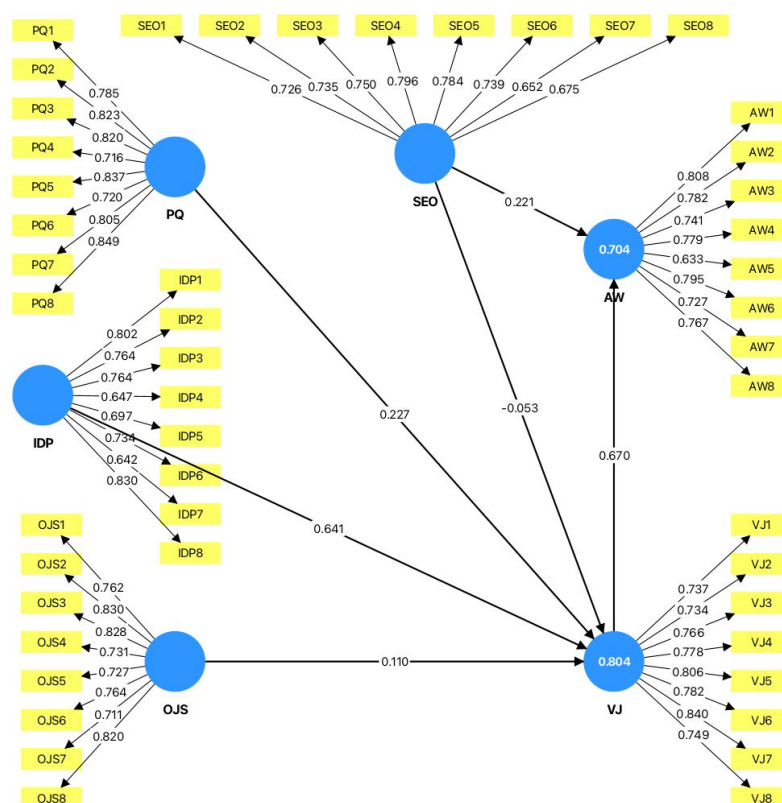


Figure 2. Results of SEM-PLS Structural Model

Figure 2 illustrates the SEM-PLS to assess relationships between variables. It depicts the measurement and structural models, with key latent variables including PQ, SEO, Indexing and IDP, OJS, VJ, and AW.

These variables are measured through observed indicators, represented by numbers on the paths. The arrows indicate causal relationships, while path coefficients show the strength and significance of each relationship. For example, the coefficient between SEO and VJ is 0.804, indicating a strong positive influence of SEO on journal visibility. Additionally, the relationships between PQ, IDP, and OJS with VJ and AW highlight the interconnectedness of content quality, digital presence, and system optimization in influencing journal visibility and author awareness. This model provides empirical insights into how these factors contribute to journal visibility and author awareness, particularly through SEO strategies and digital presence [19].

#### 4.3. Evaluation of the Outer Model Measurement Model

The measurement model, or outer model, was evaluated to assess whether each indicator adequately represents its corresponding latent construct. This evaluation focuses on the outer loading value, which reflects the strength of the relationship between an indicator and the construct it measures. Higher outer loading values indicate that an indicator more strongly represents the underlying construct [20].

An indicator is generally considered to meet the validity criterion when its outer loading value exceeds 0.70. However, for exploratory research, values ranging from 0.60 to 0.70 may still be considered acceptable when the indicator contributes meaningfully to the validity of the construct. Therefore, indicators with outer loading values within this range can be retained when they provide adequate support for the measurement model.

Table 1. Outer Loading Values for Each Indicator

| AW   |              | IDP  |              | OJS  |              | PQ   |              | SEO  |              | VJ   |              |
|------|--------------|------|--------------|------|--------------|------|--------------|------|--------------|------|--------------|
| Ind. | Loading Ind. | Ind. | Loading Ind. | Ind. | Loading Ind. | Ind. | Loading Ind. | Ind. | Loading Ind. | Ind. | Loading Ind. |
| AW1  | 0,808        | IDP1 | 0,802        | OJS1 | 0,762        | PQ1  | 0,785        | SEO1 | 0,726        | VJ1  | 0,737        |
| AW2  | 0,782        | IDP2 | 0,764        | OJS2 | 0,830        | PQ2  | 0,823        | SEO2 | 0,735        | VJ2  | 0,734        |
| AW3  | 0,741        | IDP3 | 0,764        | OJS3 | 0,828        | PQ3  | 0,820        | SEO3 | 0,750        | VJ3  | 0,766        |
| AW4  | 0,779        | IDP4 | 0,647        | OJS4 | 0,731        | PQ4  | 0,716        | SEO4 | 0,796        | VJ4  | 0,778        |
| AW5  | 0,633        | IDP5 | 0,697        | OJS5 | 0,727        | PQ5  | 0,837        | SEO5 | 0,784        | VJ5  | 0,806        |
| AW6  | 0,795        | IDP6 | 0,734        | OJS6 | 0,764        | PQ6  | 0,720        | SEO6 | 0,739        | VJ6  | 0,782        |
| AW7  | 0,727        | IDP7 | 0,642        | OJS7 | 0,711        | PQ7  | 0,805        | SEO7 | 0,652        | VJ7  | 0,840        |
| AW8  | 0,767        | IDP8 | 0,830        | OJS8 | 0,820        | PQ8  | 0,849        | SEO8 | 0,675        | VJ8  | 0,749        |

Table 1 outer loading values for each indicator, representing the strength of the relationships between the observed indicators and their corresponding latent variables. The table includes values for AW, IDP, OJS, PQ, SEO, and VJ. The values range from 0.642 to 0.849, with higher values indicating stronger relationships between the indicators and their respective constructs. For instance, the outer loading value for the indicator "AW1" is 0.808, showing a strong relationship with the Author Awareness construct. The values are essential for assessing the validity and reliability of the research model. For the AW variable, the outer loading values range from 0.633 to 0.808. The indicator with the highest value is AW1 at 0.808, while the lowest is AW5 at 0.633. Although AW5 has the lowest value, it is still acceptable because it is above the minimum limit of 0.60 [21].

For the IDP variable, the outer loading values range from 0.642 to 0.830. The highest indicator is found in IDP8 at 0.830, while the lowest indicator is found in IDP7 at 0.642. This indicates that most IDP indicators adequately describe the digital presence and indexing of journals [22].

For the OJS variable, the outer loading values range from 0.711 to 0.830. The highest value is found in OJS2 at 0.830, while the lowest value is found in OJS7 at 0.711. All OJS indicators have values above 0.70, thus it can be concluded that the OJS indicators have met the criteria for convergent validity. For the PQ variable, the outer loading values range from 0.716 to 0.849. The highest indicator is found in PQ8 at 0.849, while the lowest value is found in PQ4 at 0.716. All PQ indicators have values above 0.70, thus it can be concluded that the quality in this study has been measured using valid indicators [23].

For the SEO variable, the outer loading value ranges from 0.652 to 0.796. The highest indicator is found in SEO4 at 0.796, while the lowest indicator is found in SEO7 at 0.652. Although there are indicators below 0.70, namely SEO7 and SEO8, these values are still acceptable because they are above 0.60.

For the VJ variable, the outer loading value ranges from 0.734 to 0.840. The highest indicator is found in VJ7 at 0.840, while the lowest indicator is found in VJ2 at 0.734. All Visibility Journal indicators meet a

good outer loading value, as they are above 0.70. Based on the overall outer loading results, it can be concluded that all indicators in this study are suitable for use because they meet the convergent validity criteria. Several indicators with relatively low loading values, such as AW5, IDP7, IDP4, SEO7, and SEO8, can still be retained because their values are still above the minimum acceptable limit [24].

#### 4.4. Evaluation of the Inner Model Structural Model

Structural model, or inner model, evaluation is conducted to assess the extent to which the exogenous variables explain variations in the endogenous variables and to examine the predictive capability of the proposed model. This evaluation primarily uses the coefficient of determination ( $R^2$ ) and adjusted  $R^2$  values for each endogenous construct. The  $R^2$  value indicates the proportion of variance in the dependent variable that can be explained collectively by its predictors, whereas the adjusted  $R^2$  accounts for the number of predictors included in the model and provides a more conservative estimate of explanatory power. Higher values indicate that the structural model has a stronger ability to explain the endogenous constructs. Therefore, the assessment of  $R^2$  and adjusted  $R^2$  is essential for determining whether the proposed relationships provide adequate explanatory support for Journal Visibility and Author Awareness [25].

Table 2. R-square and Adjusted R-square Values

|    | R-square | R-square adjusted |
|----|----------|-------------------|
| AW | 0,704    | 0,697             |
| VJ | 0,804    | 0,795             |

Table 2 presents the R-square and Adjusted R-square values for the constructs of Author Awareness and Visibility Journal. The R-square values indicate the proportion of variance explained by the independent variables in the model. For AW, the R-square value is 0.704, and the adjusted R-square value is 0.697, indicating a strong explanatory power of the model for Author Awareness. For VJ, the R-square value is 0.804, with an adjusted R-square of 0.795, suggesting that the independent variables explain a significant amount of the variance in Visibility Journal. These values are essential for evaluating the model's fit and the strength of the relationships between the variables [26].

#### 4.5. Results of Testing the Relationship Between Variables

Based on the SmartPLS structural model results, the path coefficient values show the strength and direction of relationships between variables [27]. Positive and significant coefficients indicate that factors like SEO and IDP positively impact VJ, while visibility also increases AW [28]. Higher path coefficients suggest stronger relationships, providing empirical evidence of how digital strategies enhance a journal's performance and reputation [29].

Table 3. Results of Path Coefficients Between Variables

| AW   |       |       |       |       |       |       | IDP  |       |       |       |       |       |       | OJS  |       |       |       |       |       |       |
|------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|
| Ind. | AW    | IDP   | OJS   | PQ    | V     | VJ    | Ind. | AW    | IDP   | OJS   | PQ    | V     | VJ    | Ind. | AW    | IDP   | OJS   | PQ    | V     | VJ    |
| AW1  | 0,808 | 0,721 | 0,697 | 0,691 | 0,574 | 0,740 | IDP1 | 0,608 | 0,802 | 0,689 | 0,672 | 0,609 | 0,752 | OJS1 | 0,661 | 0,691 | 0,762 | 0,650 | 0,610 | 0,646 |
| AW2  | 0,782 | 0,618 | 0,641 | 0,684 | 0,565 | 0,645 | IDP2 | 0,614 | 0,764 | 0,654 | 0,676 | 0,527 | 0,717 | OJS2 | 0,689 | 0,726 | 0,830 | 0,733 | 0,631 | 0,715 |
| AW3  | 0,741 | 0,599 | 0,666 | 0,584 | 0,476 | 0,604 | IDP3 | 0,617 | 0,764 | 0,604 | 0,694 | 0,565 | 0,690 | OJS3 | 0,675 | 0,684 | 0,828 | 0,616 | 0,540 | 0,675 |
| AW4  | 0,779 | 0,547 | 0,665 | 0,577 | 0,524 | 0,619 | IDP4 | 0,516 | 0,647 | 0,561 | 0,494 | 0,589 | 0,567 | OJS4 | 0,542 | 0,550 | 0,731 | 0,518 | 0,413 | 0,540 |
| AW5  | 0,633 | 0,443 | 0,476 | 0,337 | 0,487 | 0,453 | IDP5 | 0,619 | 0,697 | 0,646 | 0,639 | 0,567 | 0,669 | OJS5 | 0,574 | 0,627 | 0,727 | 0,587 | 0,527 | 0,554 |
| AW6  | 0,795 | 0,641 | 0,610 | 0,619 | 0,539 | 0,598 | IDP6 | 0,545 | 0,734 | 0,591 | 0,556 | 0,572 | 0,566 | OJS6 | 0,677 | 0,717 | 0,764 | 0,734 | 0,630 | 0,663 |
| AW7  | 0,727 | 0,587 | 0,539 | 0,601 | 0,528 | 0,649 | IDP7 | 0,409 | 0,642 | 0,544 | 0,495 | 0,527 | 0,484 | OJS7 | 0,514 | 0,569 | 0,711 | 0,486 | 0,436 | 0,500 |
| AW8  | 0,767 | 0,604 | 0,559 | 0,516 | 0,450 | 0,629 | IDP8 | 0,705 | 0,830 | 0,700 | 0,688 | 0,550 | 0,714 | OJS8 | 0,618 | 0,650 | 0,820 | 0,667 | 0,564 | 0,618 |
| PQ   |       |       |       |       |       |       | SEO  |       |       |       |       |       |       | VJ   |       |       |       |       |       |       |
| Ind. | AW    | IDP   | OJS   | PQ    | V     | VJ    | Ind. | AW    | IDP   | OJS   | PQ    | V     | VJ    | Ind. | AW    | IDP   | OJS   | PQ    | V     | VJ    |
| PQ1  | 0,543 | 0,595 | 0,598 | 0,785 | 0,604 | 0,562 | SEO1 | 0,422 | 0,450 | 0,378 | 0,439 | 0,726 | 0,352 | VJ1  | 0,677 | 0,676 | 0,627 | 0,609 | 0,508 | 0,737 |
| PQ2  | 0,624 | 0,725 | 0,635 | 0,823 | 0,660 | 0,721 | SEO2 | 0,357 | 0,504 | 0,371 | 0,470 | 0,735 | 0,428 | VJ2  | 0,659 | 0,721 | 0,646 | 0,570 | 0,485 | 0,734 |
| PQ3  | 0,634 | 0,673 | 0,686 | 0,820 | 0,689 | 0,705 | SEO3 | 0,466 | 0,475 | 0,433 | 0,554 | 0,750 | 0,465 | VJ3  | 0,582 | 0,646 | 0,550 | 0,637 | 0,536 | 0,766 |
| PQ4  | 0,602 | 0,594 | 0,631 | 0,716 | 0,597 | 0,537 | SEO4 | 0,531 | 0,610 | 0,562 | 0,627 | 0,796 | 0,509 | VJ4  | 0,602 | 0,655 | 0,609 | 0,654 | 0,577 | 0,778 |
| PQ5  | 0,628 | 0,696 | 0,690 | 0,837 | 0,663 | 0,658 | SEO5 | 0,458 | 0,533 | 0,490 | 0,495 | 0,784 | 0,402 | VJ5  | 0,601 | 0,669 | 0,612 | 0,637 | 0,537 | 0,806 |
| PQ6  | 0,573 | 0,651 | 0,613 | 0,720 | 0,594 | 0,611 | SEO6 | 0,644 | 0,665 | 0,695 | 0,768 | 0,739 | 0,680 | VJ6  | 0,622 | 0,657 | 0,572 | 0,641 | 0,557 | 0,782 |
| PQ7  | 0,653 | 0,687 | 0,688 | 0,805 | 0,605 | 0,679 | SEO7 | 0,525 | 0,594 | 0,496 | 0,683 | 0,652 | 0,616 | VJ7  | 0,678 | 0,734 | 0,668 | 0,695 | 0,614 | 0,840 |
| PQ8  | 0,652 | 0,713 | 0,646 | 0,849 | 0,658 | 0,673 | SEO8 | 0,500 | 0,523 | 0,605 | 0,474 | 0,675 | 0,458 | VJ8  | 0,666 | 0,713 | 0,667 | 0,596 | 0,481 | 0,749 |

Table 3 it can be seen that the IDP variable has the greatest influence on VJ with a coefficient value of 0.641. Furthermore, the VJ variable has a strong influence on AW with a coefficient value of 0.670. Meanwhile,

the relationship between SEO and VJ shows a negative value of -0.053, which means that the direct influence of SEO on visibility in this model is still very weak [30].

Table 4. Achieved power

|           | Path coefficients | Alpha 1% | Alpha 5% |
|-----------|-------------------|----------|----------|
| IDP ->VJ  | 0,641             | 1,000    | 1,000    |
| OJS ->VJ  | 0,110             | 0,110    | 0,293    |
| PQ ->VJ   | 0,227             | 0,478    | 0,734    |
| THIS ->AW | 0,221             | 0,455    | 0,715    |
| SEO ->VJ  | -0,053            | 0,036    | 0,132    |
| VJ ->AW   | 0,670             | 1,000    | 1,000    |

Table 4 reports the achieved statistical power of each structural path at the 1% and 5% alpha levels. IDP has a strong positive effect on Journal Visibility ( $\beta = 0.641$ ), while Journal Visibility strongly influences Author Awareness ( $\beta = 0.670$ ) both paths achieve power values of 1.000. In contrast, the SEO-Journal Visibility relationship is weak and negative ( $\beta = -0.053$ ), with low statistical power, indicating insufficient evidence of a reliable direct effect. Other relationships show lower-to-moderate power and should therefore be interpreted cautiously.

#### 4.5.1. The Influence of SEO on Journal Visibility

SEO has a very weak negative effect on Journal Visibility ( $\beta = -0.053$ ), indicating no meaningful direct contribution [31]. Journal visibility appears to depend more strongly on indexing quality, academic backlinks, domain reputation, citations, and database coverage. Therefore, SEO should complement a broader digital-presence strategy through improved keywords, metadata, URLs, internal links, and article-page optimization [32].

#### 4.5.2. The Effect of Quality on Journal Visibility

The PQ variable has a path coefficient of 0.227 on Journal Visibility, indicating a positive influence [33]. Higher quality, with relevant topics, good structure, complete references, and clear discussions, increase the likelihood of the journal being discovered, read, and cited by other researchers [34]. PQ enhances the article's informational value, making it more attractive to readers and authors. Technomedia Journal should prioritize maintaining high PQ through a robust review process, scope alignment, and consistent publication to improve visibility [35].

#### 4.5.3. The Impact of OJS on Journal Visibility

The analysis indicates that OJS has a positive but weak effect on Journal Visibility ( $\beta = 0.110$ ). While OJS improves accessibility, navigation, and article discovery, its impact depends on integration with SEO, indexing, and digital promotion strategies. Similarly, Quality ( $\beta = 0.227$ ) and OJS usability serve as supporting factors, showing that journal visibility is strengthened through the combination of content quality, platform usability, and effective dissemination.

#### 4.5.4. The Influence of Indexing and Digital Presence on Journal Visibility

IDP has the strongest effect on Journal Visibility ( $\beta = 0.641$ ) [36]. Broader indexing, academic backlinks, optimized metadata, and consistent promotion across digital platforms can significantly improve Technomedia Journal's discoverability [37].

#### 4.5.5. The Influence of Journal Visibility on Author Awareness

The analysis shows a strong positive relationship between [Journal Visib]ility VJ and AW, with a path coefficient of 0.670 [38]. This means that higher visibility leads to greater author awareness of the journal. A journal that frequently appears in search results and is easily accessible enhances its reputation, making it more familiar to potential authors. Therefore, increasing Technomedia Journal's visibility is crucial for building author awareness and establishing its presence in the academic community [39].

#### 4.5.6. The Influence of SEO on Author Awareness

SEO positively influences Author Awareness ( $\beta = 0.221$ ), although its effect is weaker than that of Journal Visibility [40]. Optimized titles, keywords, metadata, and content structure improve journal recognition, but broader visibility still depends on academic indexing and digital-platform integration. Therefore, SEO acts as a complementary rather than independent driver of journal awareness and visibility [33].

#### 4.6. Summary of Discussion Results

The model explains 80.4% of Journal Visibility through SEO, Quality, OJS, and Indexing and Digital Presence, while Journal Visibility and SEO explain 70.4% of Author Awareness [17]. Indexing and Digital Presence have the strongest effect on Journal Visibility ( $\beta = 0.641$ ), whereas Journal Visibility strongly influences Author Awareness ( $\beta = 0.670$ ), indicating that greater journal discoverability increases author recognition.

Meanwhile, Quality and OJS have a positive impact on Journal Visibility, although not as significant as Indexing and Digital Presence [41]. The direct impact of SEO on Journal Visibility shows a very weak negative value, necessitating an evaluation of the implemented SEO strategies [42]. However, SEO still has a positive impact on Author Awareness, so SEO strategies remain important to support increased journal recognition among authors [43]. Overall, the results of this study indicate that increasing visibility and author awareness in Technomedia Journal can be done by strengthening indexing, increasing digital presence, maintaining quality, improving OJS management, and optimizing SEO strategies in a more targeted and sustainable manner [44]. The findings are limited to Technomedia Journal and its OJS-based environment. Differences in discipline, indexing, platform configuration, readership, and institutional context may produce different results; therefore, the findings should not be generalized directly to other journals [45].

### 5. MANAGERIAL IMPLICATIONS

The findings of this study have significant implications for journal managers aiming to enhance the visibility and awareness of their publications. The results emphasize the importance of implementing effective SEO strategies to improve a journal's ranking in search engine results. By optimizing keywords, metadata, and ensuring the use of a search-engine-friendly website structure, journal managers can increase both the visibility and accessibility of their content, leading to higher traffic and greater citation opportunities.

Moreover, content quality plays a crucial role in improving the journal's online presence. Journals that publish high-quality, relevant, and well-structured content are more likely to attract attention from researchers and be cited in future publications. It is essential for journal managers to prioritize the publication of articles that meet these criteria to enhance the journal's reputation and attract high-quality submissions.

Furthermore, improving the digital presence of a journal by increasing its indexing in academic databases and utilizing backlinks is vital for reaching a broader audience. This helps in building a strong digital footprint, making the journal more accessible to a global academic community. Lastly, fostering author awareness through increased journal visibility will encourage more researchers to submit their work to the journal. Managers should focus on building a brand that is not only easy to find but also recognized for its credibility and relevance within the academic community. Implementing these strategies will help ensure the long-term sustainability and competitiveness of the journal in the digital publishing era.

### 6. CONCLUSION

Based on the results of research conducted on 101 respondents, it can be concluded that digital strategies play a significant role in increasing Journal Visibility and Author Awareness in Technomedia Journal. The SEM-PLS results show that SEO PQ, OJS, and IDP explain 80.4% of the variance in Journal Visibility, indicating that visibility is influenced not only by SEO but also by article quality, journal system management, and digital presence. Among these factors, Indexing and Digital Presence is the most dominant factor, with a path coefficient of 0.641. Furthermore, Journal Visibility has a strong positive influence on Author Awareness, with a path coefficient of 0.670, indicating that easier access to Technomedia Journal through search engines, scientific databases, and academic platforms can increase authors' awareness, recognition, and interest in the journal.

Overall, increasing Journal Visibility and Author Awareness requires an integrated digital strategy. Journal managers should strengthen indexing and digital presence, maintain article quality, improve OJS per-

formance, and continuously optimize SEO. Although the direct effect of SEO on Journal Visibility is weak, SEO still contributes to increasing Author Awareness. Therefore, consistent digital strategies are important for making Technomedia Journal more discoverable, recognized, and attractive to prospective authors. However, these findings are specific to Technomedia Journal and should not be generalized directly to all scientific journals, as differences in discipline, indexing status, journal reputation, platform configuration, and target audience may affect the effectiveness of SEO and digital-presence strategies.

## 7. DECLARATIONS

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### 7.2. Author Contributions

Conceptualization: NL; Methodology: AF; Software: RZ; Validation: NL and GG; Formal Analysis: RZ and NL; Investigation: AF; Resources: RZ; Data Curation: NL; Writing Original Draft Preparation: AF and GG; Writing Review and Editing: NL and AF; Visualization: RZ; All authors, NL, AF, RZ, HA and GG have read and agreed to the published version of the manuscript.

### 7.3. Data Availability Statement

In line with our commitment to research transparency, the dataset underlying this study has been archived in the Zenodo Repository <https://doi.org/10.5281/zenodo.21913384>.

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### 7.5. Declaration of Conflicting Interest

The authors state that there are no financial or personal conflicts of interest that may have influenced the findings or interpretation of this research.

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