

## Open and Distance Learners' Readiness on Article Publications: An Inclusive Education Context

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### Abstract

This study analyzes the readiness and challenges of publishing scientific articles among learners and alumni of Universitas Terbuka Medan. Using a qualitative descriptive method based on case studies, data were collected through questionnaires and face-to-face focus group discussions. Thematic analysis revealed three main issues: first, some respondents had initial readiness in the form of understanding article structure and the urgency of publication; second, dominant obstacles included academic writing skills, the use of scientific language, and limited systematic guidance; third, the publication process often stalled at the submission stage due to technical obstacles or low self-confidence. More than 50% of respondents emphasized the need for support for reference access and ongoing training. The results suggest strengthening academic literacy through intensive workshops, regular mentoring, and institutional policies that encourage publication inclusivity. This study's contribution lies in emphasizing the importance of structured interventions in open and distance education environments to improve the productivity and quality of student publications.

### Keywords:

Open and distance education,  
Scientific articles,  
Article structure,  
Inclusive education

## 1. Introduction

Inclusive education has gained global attention in the past two decades due to its emphasis on providing equal access to education for all learners, including those with special needs and those studying in Open and Distance Education. The concept of inclusive education emphasizes not only acceptance but also the development of learners' academic potential so they can compete scientifically. One crucial aspect of this academic development is the ability to write and publish scientific articles, which serve as a benchmark for the academic quality of students and graduates (Florian & Beaton, 2018).

In the context of higher education, publishing scientific articles serves as a means of developing knowledge and academic contributions to specific scientific fields. For ODE learners, this skill becomes even more crucial given their flexible educational system, which demands a high level of learning independence (Culduz, 2024). For that reason, research on ODE learners' readiness to write and publish scientific articles within an inclusive education framework is significant. Despite the crucial role of scientific publications, various studies have shown that many learners face challenges in writing articles, including academic writing skills, limited literature, and a lack of adequate guidance (Patty, 2024; Rehman et al., 2025; Tiwari, 2023). For ODE learners, these challenges are compounded by limited direct interaction with lecturers and peers. This can impact their readiness to produce publishable papers.

Previous research has highlighted the importance of academic literacy as a prerequisite for scientific publication. For example, research by Flowerdew (2019) emphasized that non-native English-speaking learners often struggle with academic writing due to language limitations and limited

understanding of scientific article structure. In addition, other research indicates that institutional support plays a significant role in shaping learners' publication readiness (Cargill & O'Connor, 2016). However, most of this research focuses on face-to-face education, rather than on open and distance learning contexts.

In Indonesian context, research on student scientific publications is still limited to regular learners at conventional universities. For example, research by Rone et al (2023) highlighted learners' low interest in publishing due to limited motivation and academic literacy. However, studies on the readiness of ODE learners to write and publish scientific articles are still rare, especially from an inclusive education perspective. This indicates a research gap that needs to be bridged. Furthermore, the literature on inclusive education emphasizes physical and pedagogical accessibility, but has not addressed learners' academic readiness for scientific publication (Ainscow, 2020). Therefore, this study differs from previous research by emphasizing the relationship between academic publication readiness and the context of inclusive education within the ODE system.

ODE learners' readiness to write scientific articles is influenced not only by internal factors such as writing skills and motivation, but also by external factors such as mentor support, academic facilities, and institutional policies (Ode & Suherman, 2022; Satria, 2022). These factors play a crucial role in determining the extent to which learners are able to actively participate in scientific publication. The challenges of publishing articles for ODE learners are inextricably linked to the technical barriers they face. Although advances in digital technology have expanded access to scientific resources, many ODE learners still struggle to access reputable journals due to limited subscription fees and a lack of digital literacy. Moreover, proficiency in digital tools such as reference managers, data processing software, and article submission platforms remains uneven. These technical barriers often slow down the process from writing to submitting articles, requiring learners to receive more support in the form of technical skills training. Beyond technical barriers, there are also non-technical barriers related to psychological and academic factors. Motivation to write articles is often low because ODE learners feel that writing scientific publications is not a priority compared to completing regular coursework (Satria, 2022). Furthermore, learners' confidence in writing remains low, especially when using academic language or English. Limited intensive guidance from lecturers or supervisors exacerbates this situation, as distance learning learners lack regular face-to-face opportunities that allow for in-depth discussions about the structure, style, and substance of scientific articles.

In the context of inclusive education, publication challenges are further complicated by the diverse circumstances and needs of learners. Learners with special needs, for example, face accessibility barriers in both devices and learning resources (Jardinez & Natividad, 2024). The inability of ODE institutions to provide disability-friendly facilities, such as screen readers, audio materials, or adaptive writing support, can hinder their participation in scientific publications. Thus, inclusivity concerns not only the acceptance of learners from diverse backgrounds but also ensuring adequate support is available to enable them to participate in academic activities, including article publication (Zabeli et al., 2021).

In addition, it can be emphasized that the challenges of article publication for ODE learners are multidimensional, encompassing technical, non-technical, and inclusive aspects. These barriers not only affect learners' readiness to write articles but also create a gap between academic demands and the learners' actual conditions. Therefore, educational institutions that organize ODE need to formulate more comprehensive support strategies, including academic literacy training, motivational reinforcement, and the provision of resources that support the principle of inclusivity. These efforts are crucial to ensure that all learners, without exception, have equal opportunities to produce scientific publications.

However, the challenges faced by ODE learners are more complex than those faced by regular learners. They often face technical obstacles, limited access to literature, and a lack of a supportive academic community (Maringe & Sing, 2014). This situation can hinder their efforts to write and publish quality scientific articles. Accordingly, research on the readiness and challenges of ODE learners to publish scientific articles in the context of inclusive education is crucial. This research is expected to provide an empirical overview of the conditions of ODE learners and identify the obstacles they face. The results can serve as a basis for educational institutions to design more effective mentoring strategies.

Specifically, this study aims to assess the level of ODE learners' readiness to write and publish scientific articles and identify the challenges they face in the publication process. Hence, this research is expected to contribute to the literature on inclusive education and offer practical implications for the development of academic policies in higher education, particularly those implementing the ODE system.

## 2. Method

### 2.1 Research Design

This research uses a qualitative descriptive method with a case study approach. This approach was chosen to gain an in-depth understanding of ODE students' readiness to publish scientific articles in the context of inclusive education. In line with Creswell (2018), a qualitative approach was used to explore experiences and challenges contextually, so that the research not only describes general conditions but also the dynamics of publication readiness from the students' perspective.

### 2.2 Participants and Sampling Technique

The research participants were 30 ODE postgraduate students from Universitas Terbuka, who were selected purposively because they had experience learning in open and distance education systems and were involved in scientific writing activities. An additional research location was at UPBJJ-UT Medan, considering that most respondents resided in that area.

### 2.3 Data Collection Techniques

The study used two main data collection techniques:

1. Questionnaire

A questionnaire was used to measure the level of publication readiness, covering aspects of academic literacy, writing skills, understanding of publication ethics, and experience accessing scientific journals.

2. Focus Group Discussion

The FGD was conducted face-to-face at the UPBJJ-UT Medan and involved five current and former students. This technique was chosen to deepen the questionnaire findings through discussions regarding experiences, obstacles, and strategies for publishing scientific articles. The research instrument included participant demographics, indicators of student readiness, and aspects of article publication from an inclusive education perspective.

### 2.4 Research Procedure

The research was conducted in several stages:

1. Preparation of the questionnaire instrument based on indicators of publication readiness.
2. Distribution of the questionnaire to 30 respondents.
3. A face-to-face FGD was conducted at UT Medan to explore article publication experiences.
4. The questionnaire data was analyzed descriptively, and the FGD analysis used thematic analysis.
5. The results were presented in the form of descriptive narratives to illustrate the relationship between student readiness and the challenges of article publication in the context of inclusive ODE.

### 2.5 Data Analysis Techniques

Quantitative data were analyzed using descriptive statistics. Several variables were tested using Fisher's exact test to examine the relationship between two categorical variables, such as gender or age (Agresti, 2019; Fisher, 1922). Meanwhile, qualitative data from the focus group discussions were analyzed using thematic analysis, as described by Miles et al. (2014), to identify patterns and categories of publication challenges.

### 2.6 Data Validity

Validity was maintained through triangulation of sources and methods. Source triangulation was conducted by comparing information from current and postgraduate students at MPBI, ensuring a more comprehensive data collection and not representing only one respondent group.

This research employed a qualitative descriptive method with a case study approach. This method was chosen because the research aimed to provide an in-depth description of the readiness of ODE learners to publish scientific articles, particularly in the context of inclusive education. According to Creswell (2018), a qualitative approach is relevant for exploring the experiences of research subjects

in detail and gaining a contextual understanding of the challenges they face. Therefore, this research not only captures general conditions but also analyzes the dynamics of publication readiness from the perspective of actual ODE learners. Moreover, the data was obtained from the questionnaire that was filled by 30 respondents from ODE learners from postgraduate learners in UT. Subjects were selected purposively, considering that they had gained learning experience in open and distance education systems and had exposure to scientific writing activities within the academic environment.

Furthermore, the data collection was conducted using two main techniques. First, a questionnaire was used to measure the level of readiness to publish scientific articles, covering aspects of academic literacy, writing skills, understanding of publication ethics, and experience accessing journals. Second, a face-to-face Focus Group Discussion was conducted at the Distance Learning Program Unit of Universitas Terbuka Medan, involving current learners and alumni in the group discussion sessions. Additionally, FGD's was also conducted to deepen the analysis with 5 learners from Medan. The reasons for conducting FGDs in Medan were because majority learners who answer the questionnaire came from Medan. The instrument of this study encompasses all aspects related to how ODE learners have worked in the inclusive environment to publish the articles. These include demography of learners, aspect of learners' readiness in publishing scientific articles, aspect of process of publishing the articles from inclusive point of view.

Additionally, the research was conducted in stages. First, the researcher developed a questionnaire instrument based on publication readiness indicators. Second, the researcher distributed the questionnaire to 30 respondents. Third, the researcher held a face-to-face FGD at UT Medan to explore the experiences and challenges of article publication. Fourth, the questionnaire data was analyzed descriptively to illustrate the level of readiness, while the FGD results were analyzed using thematic analysis techniques to identify patterns and categories of challenges. Fifth, the analysis results were presented in the form of a descriptive narrative that highlighted the relationship between student readiness and the challenges of article publication in the context of inclusive ODE.

All responses were analyzed in a descriptive statistic result. Some variables also measure using fisher's exact test to see any regression from two contingency such as gender or age variables (Agresti, 2019; Fisher, 1922). The final data from FGDs result was analyzed using thematic analysis to comprise the all information from the respondents (Miles et al., 2014; Miles & Huberman, 1994). This FGD allowed for direct interaction between respondents, eliciting diverse perspectives, experiences, and strategies they used to address the challenges of article publication. The validity of the data in this study was maintained through the application of source and method triangulation. Source triangulation was conducted by comparing and confirming information obtained from two groups of respondents: current learners and graduate learners of the MPBI Master's Program at UT Medan. This approach enabled researchers to identify similarities and differences in experiences, resulting in more comprehensive data that did not solely represent one particular perspective.

### 3. Results and Discussion

#### 3.1 Results

This section demonstrated the result of data analysis. The findings are explained based on the previous research question that have been formulated systematically to give a clear elaboration of how ODE learners' readiness on article publication.

##### A. Level of Readiness of ODE learners in writing and publishing scholarly articles.

The following table consists of the summary of data from respondents in form of descriptive statistic.

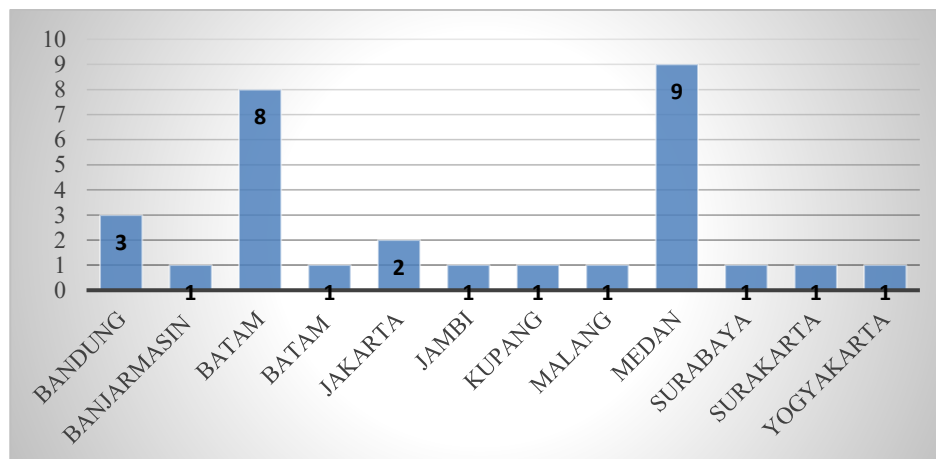
**Table 1**  
*Description of responses based on gender and age*

Characteristic	Scale	N	Percentage
Gender	Male	12	40%
	Female	18	60%
Age	20 – 29	6	20%
	30 – 39	5	16.67%

	40 – 49	15	50%
	40 – 59	2	6.67%
	60 – 69	2	6.67%
<b>Total</b>		<b>30</b>	<b>100%</b>

The table shows participant characteristics by gender and age group. The majority of participants were female (60%), a pattern consistent with previous studies that found that female students in open education programs tend to have high learning motivation and persistence (Creswell & Poth, 2018). This predominance of female students may influence the dynamics of publication readiness, particularly in terms of academic literacy and time management.

In terms of age, most participants were between 40 and 49 years old. This middle-aged group generally has more mature professional experience, which can positively contribute to writing readiness, such as discipline, understanding the work context, and reflective skills. However, the literature also notes that mature students often face challenges related to dual role burdens and adapting to technology (Bawa, 2016), so these results cannot be interpreted as absolute readiness without considering learning environment factors. Overall, these gender and age characteristics provide important context for interpreting the data on writing skills and publication readiness. The following graph shows the distribution of participants' enrolment regions, which helps understand how geographic backgrounds shape their learning experiences and access to publication resources.



**Figure 1. Distribution of ODE learners based on UT Regional Offices registration areas**

The graph shows that the majority of respondents are from North Sumatra and enrolled at UT Medan, followed by other regions on Sumatra Island, such as UT Batam. Two other major locations are UT Bandung and UT Jakarta. This distribution pattern confirms that ODE students are widely distributed across Indonesia, in line with the character of open education, which emphasizes access without geographical boundaries. In the context of higher education accessibility theory, this finding supports the view that the open learning model facilitates the participation of students from diverse social and regional backgrounds (Muhammad Suleiman & Gambo Danmuchikwali, 2020).

The preference of students from diverse regions to choose UT, despite the availability of many other universities in their area, also suggests that the flexibility and inclusivity of the ODE system are key attraction factors. This is relevant to adult education theory (Elaine & Cowie, 2010), which emphasizes that adult learners seek learning environments that enable them to balance study with work and family responsibilities.

More broadly, this geographic distribution provides important context for the findings related to publication readiness. Regional diversity demonstrates that student preparedness is influenced not only by individual factors, but also by access to academic resources, institutional support, and the availability of learning communities in each region. Thus, these data reinforce the interpretation that the inclusiveness of the UT system plays a role in opening publication opportunities for ODE students throughout Indonesia.

**Table 2**  
*Learners' responses based on readiness of publication*

Participation	N	Yes (%)	No (%)
Experience of publishing the scientific articles	30	76,7	23,3
Student's capability to submit articles in different type of journal	30	90,0	10,0
Student's readiness of publishing articles in the accredited journal	30	53,3	46,7

This table shows the level of student readiness in publishing scientific articles. More than 50% of participants stated they had submitted or published an article, indicating that most ODE students had initial experience with the publication process. This finding aligns with the concept of learning autonomy in distance education (Segbenya & Anokye, 2023), where students are required to develop academic independence, including in seeking publication opportunities.

Furthermore, nearly 90% of students were able to distinguish between publisher types or journal categories. This ability indicates that their academic literacy is quite developed, particularly in assessing journal quality and article relevance. Some students also understood the difference between accredited and unaccredited journals (53.3%), a crucial skill in scientific publication practice. This knowledge can be linked to digital literacy theory, which emphasizes the importance of critically navigating academic information in online environments (P. Diep et al., 2021). However, 46.7% of participants were still unable to identify journal accreditation. This finding indicates a gap in publication literacy that requires attention. This aligns with previous research confirming that adult learners often require explicit support in understanding the publication ecosystem, including journal access, accreditation standards, and writing ethics (Elaine & Cowie, 2010).

Therefore, these results emphasize the importance of institutional support, such as scientific writing training, publication mentoring, and providing access to academic resources, to enhance ODE students' readiness to publish articles in reputable journals. The following information outlines other aspects that shape this publication readiness.

**Table 3**  
*Distribution of respondent publication in respect to age group*

Age Group	Crosstab	Article publication target		Publishing based on available template		Submission	
		Yes	No	Yes	No	Yes	No
Young < 34 Years old	Within Age Group	88.9%	11.1%	88.9%	11.1%	55.6%	44.4%
Older > 34 Years Old		71.4%	28.6%	90.5%	9.5%	76.2%	23.8%
	Fisher's Exact Test, Exact Sig (1-sided)	.297		.672		.240	

Table 3 outlines three key aspects related to students' understanding of the article publication process by age group. The data indicate that younger students tend to be more proactive in setting publication goals than those over 34. This finding aligns with the literature on generational academic motivation, where younger learners generally have a stronger achievement orientation and are more

adaptable to the demands of digital academics (Olvido et al., 2024). However, the proportion of students over 34 who experienced challenges (71.4%) does not indicate an extreme lag, but rather indicates that the need for institutional support, such as writing training and publication mentoring is a crucial factor in improving publication readiness across all age groups. This is consistent with Jacobs (2024) theory of andragogy, which emphasizes the need for relevant support for adult learners.

Regarding understanding of journal instructions and templates, both age groups demonstrated nearly equal ability. 88.9% of younger students and 90% of older students were able to follow publishers' writing guidelines. This equality confirms that basic academic literacy can develop equitably in distance learning environments, especially when publication tools are clearly provided and easily accessible. Conversely, regarding the article submission process, older participants appeared more consistent, with 76.2% of them having submitted manuscripts. This consistency aligns with research findings regarding goal persistence in adult learners, who tend to be more persistent in completing academic tasks despite time constraints or additional workloads (Martin, 2012).

Fisher's exact test results showed that publication goal ( $p = 0.297$ ), understanding of article templates ( $p = 0.672$ ), and article submission ( $p = 0.240$ ) all had  $p$  values  $> 0.05$ . Thus, there were no significant differences between age groups in these three aspects. Theoretically, these results reinforce the understanding that age is not the sole determinant of publication readiness; learning environment factors, institutional support, and access to learning resources appear to be more influential in the ODE context.

**Table 4**  
*Distribution of respondent publication in respect to gender*

Gender	Crosstab	Article publication target		Publishing based on available template		Submission	
		Yes	No	Yes	No	Yes	No
Male	Within Age Group	91.7%	8.3%	91.7%	8.3%	75.0%	25.0%
Female		66.7%	33.3%	88.9%	11.1%	66.7%	33.5%
Fisher's Exact Test, Exact Sig (1-sided)		.125		.653		.472	

Table 4 displays the distribution of publication readiness by gender, including publication target setting, adherence to journal templates, and the article submission process. The data shows that male students tend to be more proactive in setting publication targets (91.7%). However, more than half of female students were also able to set clear targets, indicating that publication motivation is influenced not only by gender but also by factors such as learning experience and academic support. This finding aligns with the literature on academic motivation, which emphasizes that gender differences in achievement are often more related to access and the learning environment than biological characteristics (Salmela-Aro et al., 2022). In terms of template adherence, males and females demonstrated nearly equal performance, each above 80%. This equality indicates that basic academic literacy and the ability to follow writing guidelines have developed equally between both genders. This supports digital literacy theory (Riau et al., 2023), which emphasizes that technical skills can improve equally when learners are given equal access to information resources and training.

In the article submission process, both genders demonstrated relatively equal levels of performance. This ability reflects technical readiness and consistent perseverance, in accordance with self-regulated learning theory, which explains that success in independent tasks such as publication is not determined by gender, but rather by the ability to manage strategy, time, and effort (Pangestu et al., 2022).

Fisher's exact test results showed that all three variables publication target ( $p = 0.125$ ), template adherence ( $p = 0.753$ ), and article submission ( $p = 0.472$ ) had  $p$  values  $> 0.05$ . Thus, there were no statistically significant differences based on gender. This means that while there is proportional variation between genders, the differences are not strong enough to be considered gender-influenced.

Theoretically, these findings confirm that publication readiness in the ODE environment is more influenced by pedagogical factors and the availability of support than by gender characteristics.

## **B. The Process of Publishing Scientific Articles within an Inclusive Education Framework**

To understand students' experiences in the process of publishing scientific articles, answers to closed-ended questions were analyzed using a thematic approach. From this analysis, the following main theme and subthemes emerged.

### **Theme 1. Steady growth in students' academic literacy**

#### Subtheme 1.1. Ability to navigate academic resources

Students demonstrated improved ability to select, understand, and utilize academic resources, including online publication sites. They not only accessed journals but also adapted to publication procedures. This is evident in the following quote:

E1: *"I studied the publication website, read several publications, then downloaded the journal template, submitted the journal, after which I received feedback from the editor and made several revisions..."*

This quote indicates the participants' ability to navigate the scientific publication system, from exploring the site, understanding the journal's writing style, to making revisions based on the editor's feedback. These indicators illustrate the continuous strengthening of academic literacy.

#### Subtheme 1.2. Independent mastery of the research process

In addition to understanding the publication process, students also demonstrated the ability to systematically carry out the research process. This is evident in the following quote:

E2: *"... I formulated a specific research problem and developed objectives... The data obtained were then analyzed... I structured the manuscript to meet scientific publication standards..."*

This quote demonstrates mastery of research components, from problem formulation and methodology to data analysis and manuscript writing, in accordance with scientific standards. This activity confirms that students are not only performing their duties but also behaving like novice researchers.

#### Subtheme 1.3. Strengthening academic literacy through publication practice

Through these activities, it is evident that direct experience in the publication process is an effective means of improving academic literacy. Students develop critical reading skills, information synthesis, and structured academic writing. Thus, publication practice serves as a learning tool that progressively strengthens their academic competencies.

### **Theme 2. Student readiness for writing scientific papers**

To understand student readiness for writing and submitting scientific articles, participant responses were analyzed thematically. From the data, a main theme emerged with several subthemes that illustrated the variations in readiness, challenges, and strategies used by participants.

#### Subtheme 2.1. Initial understanding of article writing and submission procedures

Some participants demonstrated a basic understanding of the initial steps in writing an article through consultations with their supervisors and following writing guidelines. This is evident in the following quote:

E3: *"I consulted with my supervisor... downloaded the article template according to instructions, then consulted again..."*

This quote demonstrates that participants are aware of following formal procedures through repeated consultations and the use of journal templates. This process demonstrates initial readiness to understand the structure of academic writing.

#### Subtheme 2.2. Strengthening competencies through guidance and social support

Some participants relied not only on their supervisors but also expanded their sources of support, such as alumni, to deepen their understanding of the publication process.

E4: *"...my supervisor, starting with how to format an article...to journal publication, then asking alumni for help regarding publisher information..."*

This quote confirms that participants actively sought additional assistance to overcome their limited knowledge. This social support played a significant role in increasing their preparedness.

#### Subtheme 2.3. Challenges in the submission and revision management stage

Although participants understood the procedures, the article submission process remained challenging. Some participants shared experiences of journal rejection after a lengthy process.

E5: “...following it in a scientific article...checking for plagiarism and grammar, then submitting it...However, my article was rejected...”

This quote indicates that participants had followed the correct writing steps but still faced rejection. This illustrates that preparedness does not always equate to successful publication, and that rejection is part of the learning process.

Subtheme 2.4. Unpreparedness due to lack of publication experience

Not all participants were at the same level of preparedness. Some participants admitted to having no experience at all in scientific publication.

E6: “...I can't explain because I don't have any experience in publishing articles...”

This quote indicates that some participants were at an early stage and lacked practical insight into publishing. This lack of experience indicates a need for more systematic guidance from both the institution and their supervisor.

### **Theme 3. Learner obstacles in publishing scientific articles**

Analysis of the open-ended responses revealed various obstacles faced by learners when attempting to publish scientific articles. These challenges were grouped into several subthemes that illustrate the complexity of the publication process, both technically and psychologically.

Subtheme 3.1. Complexity of the research and academic writing process

Several learners stated that the entire publication process from determining the topic to submitting the article felt very difficult and challenging.

E7: “...identifying the topic and problem, conducting a literature review, and developing a theoretical framework... writing the article... selecting an accredited journal, submitting the article... were quite difficult for me...”

This quote indicates that obstacles did not only arise at the article writing stage, but began in the initial phase, namely problem formulation and literature review. This indicates that some learners still needed to strengthen their basic research competencies.

Subtheme 3.2. Difficulties navigating online publication systems and platforms

The next challenge relates to the use of digital platforms and procedural understanding, especially for learners unfamiliar with OJS-based publication processes or similar journal systems.

E8: “...I have to do a lot of things; I search for suitable journals...follow article templates...follow procedures from account registration to article submission.”

This quote illustrates that although learners understand the technical steps, they still experience difficulties navigating the digital process independently. This confirms that online learning, while inclusive, still presents barriers to communication and mentoring.

Subtheme 3.3. Challenges of repeated revision and dependence on guidance

The data also shows that learners often undergo repeated revision processes before their articles are ready for journal submission.

E9: “...writing journals according to the requirements...consulting with the supervisor, revising them repeatedly until I am qualified to submit them.”

This quote highlights two important aspects; learners' dependence on guidance, and the psychological burden of repeated revisions, which can reduce self-confidence and slow down the work process. Although revision is a normal part of the publication process, the high frequency of revisions can be a significant barrier, especially for students with limited time or motivation.

Analysis of quotes E7–E9 indicates that students with strong motivation tend to persist despite facing repeated revisions. Conversely, for students who lack confidence or support, the process can be a significant source of stress and delay publication.

## **3.2 Discussion**

The results of the readiness level of ODE learners in writing and publishing academic articles showed that the majority of participants were female (60%), and the dominant age group was 40 to 49 years. This is in line with Nwogu et al. (2025) theory of andragogy, which states that adult learners possess high intrinsic motivation and life experiences that support their readiness for independent learning. This explains why the middle-aged group appears more prepared to write and publish scientific articles. The wide geographic distribution, with learners predominantly from North Sumatra

and other parts of Sumatra, emphasizes the inclusive nature of UT's distance learning offerings. Similarly, Riady et al. (2025) state that principles of accessibility and equality, the ODE system opens learning opportunities to learners across the region, even in remote areas. This inclusivity strengthens access to scientific publication opportunities as part of academic practice.

The level of student readiness appears quite good, as evidenced by the fact that more than 50% have published articles, while nearly 90% are able to distinguish between publisher types. This demonstrates the development of academic literacy through experience using UT's online platform. According to Chen et al (2023), academic literacy encompasses an understanding of academic social practices, including the ability to assess publication quality. Despite this, 46.7% of learners still struggle to identify reputable journals or access accredited publications. This situation can be explained by the theories of the digital divide (Afzal et al., 2023) and transactional distance (Rafiq et al., 2024), which emphasize that disparities in access and lack of institutional support can hinder academic participation. In other words, individual readiness still needs to be supported by systemic support.

These findings provide theoretical implications that the readiness to publish in academic journals (ODE) among ODE learners is influenced not only by individual factors but also by the social environment, technology, and institutional policies. By emphasizing the context of inclusive education, this study broadens the understanding of academic literacy theory and distance education, namely that true inclusivity must ensure equal publication opportunities for all learners.

Practically, these results encourage institutions to strengthen mentoring programs, such as writing clinics, academic literacy training, and workshops on reputable publications. Sustained institutional support will help learners overcome technical and psychological barriers, while enhancing their contribution to the global academic community. With this strategy, UT not only provides inclusive access to education, but also builds a more equitable scientific publication readiness across all learners.

The results in Table 3 indicate that younger learners are more active in setting publication targets than learners over 34 years of age. This finding can be interpreted as indicating that younger learners tend to have a stronger goal orientation, as explained by Dweck (2019) who argued that the younger generation is more driven by motivation for academic development and achievement. However, older learners are not completely left behind, as 71.4% still reported difficulties but remained consistent in completing publication assignments.

Both age groups demonstrated nearly equal levels of understanding in following editors' instructions and adapting articles to publisher templates, with 88.9% for the younger group and 90% for the older group. These results indicate that technical literacy skills in following publication regulations are evenly distributed across all age groups. This aligns with research by Rafiq et al. (2024) which emphasized that academic publication success is largely determined by access to training and resources, rather than solely by age.

In terms of article submission, the older group actually demonstrated higher consistency (76.2%) than the younger group. These findings indicate that life experience and time management in mature age groups can support academic discipline. These results support by an observation done by Lau et al (2019) that older workers or learners tend to be more disciplined and consistent in completing responsibilities. Therefore, publication readiness across different age groups demonstrates complementary variations, not simply differences in ability.

Meanwhile, analysis of Table 4 shows the distribution of publication readiness by gender. Male learners appear to be more dominant in setting publication targets (91.7%), but female learners also demonstrate commitment, with more than 50% achieving publication targets. In terms of adherence to templates and the article submission process, both genders are relatively equal, with percentages exceeding 80%. This finding accordance with Khatri et al (2024) view that gender equality in academic literacy is strengthening, so that gender differences are no longer a significant factor in scientific publication readiness.

The Fisher exact test results in both tables show that neither age group nor gender exhibit statistically significant differences in terms of publication targets, adherence to templates, or article submission. This strengthens the argument that ODE learners' publication readiness is more determined by learning environment factors, access to resources, and institutional support, rather than demographic factors alone. As outlined by Karoui (2025) in the context of distance learning,

instructional support and access to technology have a greater influence on academic success than personal variables.

Theoretically, this finding broadens the understanding of scientific publication readiness by confirming that age and gender are not the primary determinants, but rather the interaction between motivation, academic literacy, and institutional support plays a more important role. This enriches the theory of academic literacy and inclusive education by adding the dimension of equal opportunity for all learners. Practically, the implications of this research call for ODE institutions like UT to strengthen scientific writing training programs, publication clinics, and equitable access to e-journals. Such support will not only improve learners' technical skills but also bolster their confidence in navigating the publication process in reputable journals.

When compared with previous research findings on student readiness to write scientific articles, the results of this study show a consistent trend. Many previous studies report that limitations in academic skills, access to resources, and lack of publication experience are key barriers. For example, according to Naz et al. (2022), a common barrier to publication for postgraduate learners lies in a lack of academic literacy and adequate guidance. This finding consistent with a study by Alostath (2021), which showed that publication readiness is strongly influenced by prior research experience and institutional support. This finding was also found among ODE learners in inclusive education contexts, demonstrating that the challenges of academic publication are common but more complex for learners from diverse backgrounds.

Despite these similarities, this research also uncovered important differences. Several studies report that intrinsic motivation is a strong motivator for learners to persist in writing and attempt to publish scientific articles (Cheung et al., 2021). However, for ODE learners, this motivation is often hampered by academic pressure, time constraints, and minimal institutional support. This contrasts with the report by Bandhu et al. (2024) that emphasized that intrinsic motivation can be a determinant of publication success if supported by a conducive learning environment. Therefore, this study confirms a gap that requires more systematic intervention to balance intrinsic motivation with adequate structural support.

Furthermore, this study broadens understanding of the context of inclusive education. While previous research focused more on technical challenges and writing skills, this study reveals that the success of scientific publications among ODE learners is also significantly influenced by inclusive learning environments (Li & Singh, 2022). An environment that supports equal access, personal mentoring, and institutional policies that support diversity can improve learners' publication readiness (Naz et al., 2022). These findings emphasize the importance of synergy between pedagogical, institutional, and policy aspects so that publication opportunities are not limited to a select few but truly open to all learners.

Regarding the publication of academic articles in the context of inclusive education, this study found that learners' academic literacy developed gradually and steadily. Learners were able to search for and select reading sources, synthesize information, formulate problems, analyze data, and write articles in accordance with scientific principles. This demonstrates that academic literacy is not only technical skills but also encompasses understanding and application of academic norms. In other words, the demands of the curriculum and online learning experiences have encouraged learners to more actively manage the entire research process through to publication, corresponding with Suman (2023) view that academic literacy develops through student engagement in meaningful academic activities.

In addition to skills, learners' readiness was also evident in their efforts to find publication strategies. They consulted with supervisors, followed article templates, and even sought information from alumni regarding suitable journals. This demonstrates that readiness extends beyond technical aspects to mental and social aspects, including the readiness to accept revisions, rejections, or postpone submissions if deemed inadequate. However, challenges still emerge during the submission and acceptance stages, indicating that readiness does not always correlate with publication success.

These results align with the findings of another research in Indonesia. Nadhifah et al. (2023), for example, explain that learners use social and metacognitive strategies to overcome the challenges of academic writing. Subandowo et al. (2025) also emphasize the importance of the pre-writing and revision stages in the context of English-language learning. However, the difference is that in this

study, learners actually had access to mentors and alumni networks yet still faced rejection and publication difficulties. This suggests that external factors such as journal standards, review processes, and publishing policies remain major obstacles.

Furthermore, this study also highlights new challenges in the context of online learning. Several learners admitted that non-face-to-face communication made the publication process feel even more complex. In addition to technical and procedural difficulties, the demands on article quality, repeated revisions, and long hours require strong motivation and mental resilience. Thus, this study confirms that scientific publication for learners is not just about writing skills, but also a long process that requires strategies, support, and resilience to overcome various obstacles.

This study accordingly makes a significant contribution to expanding the discourse on scientific publication readiness within the framework of inclusive education. By combining research perspectives and critical reflections on previous studies, this study confirms that academic publication is not simply an individual skill, but also the result of fair and equitable systemic support. These findings are expected to provide a valuable foundation for further research and inspire education practitioners to create increasingly inclusive, productive, and effective academic spaces.

#### **4. Conclusion**

This study concludes that the level of readiness of Open and Distance Education learners to write and publish scientific articles is in the intermediate category. This indicates that learners are aware of the importance of academic publication, but are still limited in technical skills, writing experience, and access to supporting resources. Therefore, the research objective was to determine the extent to which ODE learners' readiness within an inclusive education framework has been met. In addition to readiness, this study also identified various barriers faced by learners, including limited academic literacy, academic English language barriers, limited access to reference sources, and psychological barriers such as anxiety and low self-confidence. These barriers slow the writing process and reduce student participation in scientific publications. These findings provide a clear picture of the challenges that still need to be addressed to promote inclusivity in distance-based higher education.

The primary contribution of this study is to provide a new understanding that student readiness to publish scientific articles is influenced not only by academic factors but also by social, emotional, and institutional aspects. By emphasizing the inclusive dimension, this study advances the field of distance education studies through a more comprehensive approach oriented toward academic equity. Thus, this research expands existing knowledge and offers a more comprehensive perspective. The results of this study can be applied in practice by designing more targeted academic writing mentoring programs, such as writing clinics, online training, and ongoing mentoring systems. Furthermore, institutional policy support that guarantees equal access to academic resources will strengthen learners' readiness to actively participate in scientific publication. By implementing these strategies, ODE learners' opportunities to contribute to the global academic community can be further enhanced.

For future research, experimental studies are recommended to test the effectiveness of academic mentoring programs on improving ODE learners' publication readiness. Further research could also expand the focus to include motivational factors, the use of digital technology in writing, and a comparison of readiness between ODE learners and those from conventional education systems. Thus, future research is expected to deepen understanding of the most effective strategies for encouraging student participation in scientific publication within an inclusive education framework.

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