

Impact of Open Access Awareness on the Research Productivity of Faculty in Selected Higher Education Institutions, Philippines

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Abstract: This study examined the impact of open access (OA) awareness focusing on the existing resources and the research productivity among 72 full-time faculty in the six University of Perpetual Help System-JONELTA campuses. It determined the level of OA awareness and research productivity, differences of the level of OA awareness and research productivity to the faculty's profile, and the relationship between the level of OA awareness and research productivity. The researchers utilized descriptive-comparative-correlational research design. Findings revealed that full-time faculty members demonstrated a very high level of open access awareness across all dimensions. In terms of faculty's research productivity, 11 or more research papers are being: presented, published, completed, and ongoing research projects for the past three years. Meanwhile, there are only 6-10 attended training/seminars, workshops related to research. There is a significant difference in the faculty's highest educational attainment to the level of OA awareness. While no significant difference in terms of their age, gender, and length of service. Similarly, there is no significant difference of faculty's profile to their published, presented, and completed research projects. However, there is a significant difference in ongoing research papers in terms of their highest educational attainment. There is a significant relationship in terms of faculty's level of OA awareness in all domains to the papers published and presented. While there is no significant relationship to the completed research, ongoing research, and training/seminar, workshops attended. This concludes that the higher the level of faculty's awareness on (OA) resources will reflect on their productivity in disseminating research studies.

Keywords: *Open Access Awareness, Faculty Research Productivity, Higher Education Institution.*

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I. INTRODUCTION

Today, one of the major issues facing Philippine Higher Education Institutions (HEIs) is producing research studies in which a number of faculty members have limited research output despite its acknowledged significance for innovative teaching methods and institutional growth. A study found that tenured professors at a private higher education institution in Southern Mindanao had not conducted any research in the previous five academic years (Morales, et. al, 2023). Research productivity is crucial for both quality assurance and university rankings. Nevertheless, it is discovered that Filipino researchers produce limited studies, especially at HEIs (Amanonce, 2025).

One of the Commission on Higher Education Institutions (CHED) A.C.H.I.E.V.E. Agenda 2030 aims to develop research capability within higher education institutions by means of enhanced faculty competence, higher scholarly

degree attainment, modern research infrastructure, and stronger institutional research management systems. An SDG-aligned, strategically responsive research and development ecosystem that addresses local, national, and international development issues and turns knowledge into practical approaches that enhance Filipinos' quality of life. In this sense, internationalization strengthens mobility between nations and global involvement while promoting knowledge sharing and advancing national growth in higher education institutions in the Philippines. (Commission on Higher Education Institution, 2026).

Higher Education Institutions (HEIs) in the Philippines are demanded to strengthen the research productivity as part of the accreditation, internationalization, and compliance with the standard of Commission on Higher Education (CHED) research agenda. In the Joint Circular No. 1 s. 2026 of the Department of Budget and Management (DBM) Faculty's research output must be completed research-based papers or

articles that are published in CHED accredited journals; or international refereed publications such as Elsevier Scopus and Thompson Reuters Journals (Department of Budget and Management-Commission on Higher Education, 2003).

Open access resources were determined to be suitable and available for research purposes by the faculty members (Florentino, 2025). However, many Higher Education Institutions (HEIs) in the Philippines struggle with research. The research skills of Filipino educators have already been evaluated in several types of studies, emphasizing the need for advancement in this field. Nevertheless, research accomplishments continue to fall short of expectations despite HEIs offering programs that address this problem (Aguilar, 2024). In this matter, Khan and Hazari (2025) found that open-access enhances research productivity by improving access to resources, supporting collaboration, and increasing efficiency in tasks such as literature review, data analysis, and manuscript preparation, resulting in higher publication output and research quality. Instead of publishing their own research, the faculty members more frequently accessed open access sources for scholarly information (Sheikh, 2017).

Open access comes from a different type of electronic resources such as journals, images, books and others (Atanda, 2025). These e-resources are programs put in place by governments, funders, or academic institutions to encourage unrestricted access to scientific research material free from financial or legal restrictions (Mensah, 2024). There are existing types of open access journals such as: Gold, Hybrid, Diamond/Platinum, Bronze, and Green (GSU Library Research Guides: Open Access: Types of OA., n.d.). The cost of publication is typically transferred from the reader to the author under open access structures. Research articles published in gold open access journals are automatically and instantly made available to readers at no cost. Articles in OA repositories that self-archive are known as Green Open Access. However, in order for an article to be published in Hybrid Journals, the publisher must be paid a publication fee. Researchers are funded by universities and taxpayers to conduct research, and authors provide their time for peer review and their work to publishers at no cost in order to help disseminate their findings. Additionally, publishers impose copyright restrictions on publications about the use and dissemination of the research for educational, research, and learning objectives (LibGuides: Open access publishing: Introduction to open access, 2026). In this sense, faculty have favorable perceptions of OARs, while having a better understanding of major OA principles. Faculty were quite familiar with the open access repositories/databases (Mahmud, et al., 2020).

II. THEORETICAL FRAMEWORK

This study is anchored on the Diffusion of Innovations Theory by Everett Rogers (2003), a theory of social change and innovation adoption that explains how new ideas, practices, or technologies spread within a social system over time through the stages of knowledge, persuasion, decision, implementation, and confirmation. It is considered an innovation adoption theory as it focuses on how individuals or groups accept and utilize new innovations. In the context of this study, Open Access resources awareness represents the initial stage of

innovation adoption, where faculty members become aware of Open Access resources that provide free and unrestricted access to scholarly literature, research outputs, and academic publications. This study is also supported by Goal-Setting Theory of Locke and Latham (2006), which posits that individuals perform better when they have clear, specific, and challenging goals.

The theory explains that goals direct attention, increase effort, and enhance persistence, leading to improved performance. In the context of this study, research productivity closely aligns with Goal-Setting Theory. When the faculty members have a clear and specific understanding of the proper and appropriate way to produce a particular study by having an awareness and knowledge of the existing resources including how to utilize open access resources, what are the policies in accessing information, what are the importance of utilizing databases, publication models, and others. In line with this, it will enable researchers to produce studies that will contribute to the continuous innovation of modern society.

Therefore, the integration of the Diffusion of Innovations Theory and Goal-Setting Theory serves as a robust theoretical foundation for this study, elucidating how awareness of Open Access resources and goal-oriented behavior influence their adoption and ultimately enhance research productivity among faculty members in higher education institutions.

III. METHODS

This study employed a descriptive-comparative-correlational research design for the present study. The descriptive component aims to provide detailed information on the level of open access awareness (repositories/databases and primary models). The comparative component determined the differences of faculty's 1) level of open access awareness and 2) research productivity (papers published in research journals, papers presented in local and international conferences, number of completed research projects, number of ongoing research projects and number of research-related training, seminars and workshops attended) when grouped according to their profile (age, gender, highest educational attainment, and length of service). Meanwhile, the correlation component examined the relationship between the level of open access awareness and research productivity among full-time faculty members at the University of Perpetual Help System-JONELTA campuses.

The population of the study consisted of 88 full-time faculty members in the selected private universities in the Philippines. Using a Raosoft sample size calculator with a 95% confidence level and 5% margin of error a sample of 72 respondents were determined. Stratified random sampling was used to ensure proportional representation from each campus. A structured self-made survey questionnaire served as the primary data collection instrument of the study. The instrument was subjected to expert validation and pilot testing to ensure its validity and reliability. The reliability of the questionnaire was assessed using Cronbach's alpha, yielding a coefficient of .966 for awareness indicators.

Data collection was conducted using both digital and printed formats, depending on respondent accessibility, and

ethical considerations, including informed consent and confidentiality, were strictly observed throughout the process. To minimize social desirability bias, no personally identifiable information such as names, office assignments, or department affiliations was collected. Respondents were assured of complete anonymity, and participation was entirely voluntary to foster honest and unbiased responses.

To analyze the data, several statistical tools were utilized. Frequency and percentage distribution were used to describe the respondents' demographic profile and research productivity. Weighted mean scores were calculated to determine the level of open access awareness. Also, weighted mean scores and Kruskal-Wallis test was used to determine the differences of faculty's open access awareness and research productivity when grouped according to their profile. In addition, Post hoc pairwise comparisons using Dunn-Bonferroni were utilized to determine the difference of

faculty's level of open access awareness to their highest educational attainment. Spearman rho correlation was used to determine the relationship between the level of faculty awareness on open access and their research productivity.

IV. RESULTS

This section presents the key findings of the study on the impact of open access awareness and research productivity of full-time faculty members in a private university system. It details the level of open access awareness (repositories/databases and primary models) and research productivity (published research, presented research in conferences, completed research projects, ongoing research papers, and training/seminar/workshop attended). Additionally, it provides a result and interpretation of the relationship and differences among variables.

➤ Demographic Profile of the Respondents

Table 1 Demographic Profile of the Respondents

Profile	Group	Frequency	Percentage (%)
Age	30 years old and below	27	37.5
	31-45 years old	25	34.7
	46 years old and above	20	27.8
Gender	Female	44	61.1
	Male	28	38.9
Highest Educational Attainment	Bachelor's	4	5.6
	Master's	46	63.9
	Doctorate	22	30.6
Length of Service	5 years and below	29	40.3
	6-10 years	17	23.6
	11-15 years	10	13.9
	16 years and above	16	22.2

N=72

Table 1 presents the demographic profile of the respondents by age, gender, highest educational attainment, and length of service. The study involved a total of 72 faculty respondents from selected higher education institutions.

In terms of age, most respondents are 30 years old or younger (37.5%), followed by 31–45 years old (34.7%), while the least represented group is 46 years old and above (27.8%). This indicates that the respondents are mostly young to middle-aged faculty members. In terms of gender, the results show that females comprise the majority, 44 (61.1%), while males account for 28 (38.9%), indicating a female-dominated respondent group. Concerning educational attainment, most respondents hold a Master's degree, 46 (63.9%), followed by a Doctorate, 22 (30.6%), while only a small proportion have a Bachelor's degree, 4 (5.6%). These results suggest that the

respondents are highly educated. In relation to length of service, most respondents have been in service for 5 years or less, 29 (40.3%), followed by 6–10 years, 17 (23.6%), 16 years and above, 16 (22.2%), and 11–15 years, 10 (13.9%). This suggests that a considerable proportion of the respondents have relatively short tenures in their respective institutions.

This finding is supported by the study of Pentang and Domingo (2024), which found that faculty members' research productivity is influenced by research self-efficacy and institutional support. The study revealed that faculty members with higher research self-efficacy tend to have better research output, while those who experience challenges such as limited institutional support, lack of research exposure, time constraints, and pressure to publish tend to have lower research productivity.

➤ Level of Faculty Awareness on Open Access

Table 2 Level of Faculty Awareness on Open Access in terms of Repositories/Databases

Indicators	WM	SD	Interpretation
1. Awareness of the concept of open access resources.	3.69	.493	Very High
2. Awareness of the importance of open access resources in research.	3.72	.451	Very High
3. Awareness of the availability of free academic journals online	3.66	.503	Very High

4. Awareness of the existence of open access repositories and databases.	3.61	.518	Very High
5. Awareness of the Platforms such as Google Scholar, DOAJ, PubMed Central, and ERIC.	3.61	.518	Very High
6. Awareness of the institutional repositories provided by universities.	3.38	.617	High
7. Awareness of government-funded open access research platforms.	3.27	.632	High
8. Awareness of the availability of different types of materials, such as journals, e-books, and multimedia in open access.	3.61	.518	Very High
9. Awareness of the search engines used for accessing open access materials.	3.55	.553	Very High
10. Awareness of the role of open access in increasing access to scholarly information	3.59	.521	Very High
Average Weighted Mean	3.57	.372	Very High

Note. Scoring Range: 3.25 – 4.00 (Very High); 2.50 – 3.24 (High); 1.75 – 2.49 (Low); 1.00 – 1.74 (Very Low)

Table 2 presents the level of faculty awareness on Open Access in terms of repositories and databases. Overall, the Average Weighted Mean of 3.57 with a standard deviation of 0.372 was interpreted as Very High, indicating that faculty members demonstrate a very high level of awareness regarding open access repositories and databases, with relatively consistent responses across all indicators.

Among all indicators, Indicator 2 (1), obtained the highest number of WM 3.72 (Very High) which states that the full-time faculty members are more aware in regards to the importance of open access resources in research. This was followed by; Indicator 1 (2), with a WM of 3.69 (Very High); Indicator 3 (3), with a WM 3.66 (Very High); Indicators 4, and 5, (4) both obtained a WM of 3.61 (Very High); Indicator 8 (5), also obtained a WM of 3.6 (Very High); Indicator 10 (6), with a WM of 3.59 (Very High); and Indicator 9 (7), obtained a WM of 3.55 (Very High). However, indicator 6 (8), obtained

a WM of 3.38 (High) as well as indicator 7 (9), obtained the lowest WM of 3.27 (High).

These findings are supported by the study of Schiavo (2024), which revealed that faculty members possessed sufficient knowledge and positive attitudes toward scholarly open access resources and repositories. In the same manner, Bryant and Thomas (2024) explained that faculty awareness of open access publishing and information systems encouraged greater participation in scholarly communication platforms and academic resource sharing. Furthermore, Ambrose et al. (2024) emphasized that familiarity with open educational resources and digital repositories enhances the utilization of accessible academic information systems among educators and researchers. These related studies affirm that increased awareness and understanding of open access platforms contribute to stronger engagement with scholarly information resources and academic research activities.

Table 3 Level of Faculty Awareness on Open Access in terms of Primary Models of Open Access

Indicators	WM	SD	Interpretation
1. Awareness of the concept of open access publishing models	3.30	.572	Very High
2. Awareness of the difference between open access and subscription-based publishing	3.40	.573	Very High
3. Awareness of the existence of different open access models such as gold, green, hybrid, and diamond	3.12	.690	High
4. Awareness of the purpose of open access models in research dissemination	3.47	.555	Very High
5. Awareness of how open access models improve accessibility of research outputs	3.44	.602	Very High
6. Awareness that some open access models require publication fees	3.37	.637	Very High
7. Awareness that some open access models do not require author payment	3.25	.644	Very High
8. Awareness of the role of open access models in knowledge sharing	3.54	.579	Very High
9. Awareness of the contribution of open access models to research visibility	3.44	.578	Very High
10. Awareness of the general features of different open access publishing models	3.38	.640	Very High
Average Weighted Mean	3.37	.462	Very High

Note. Scoring Range: 3.25 – 4.00 (Very High); 2.50 – 3.24 (High); 1.75 – 2.49 (Low); 1.00 – 1.74 (Very Low)

Table 3 presents the level of faculty awareness on Open Access in terms of the primary models. Overall, the Average Weighted Mean of 3.37 with a standard deviation of 0.462 was interpreted as Very High, indicating that faculty members demonstrated a very high level of awareness regarding the primary models of open access, with relatively consistent responses across all indicators.

Among the indicators, Indicator 8 (1), obtained the highest WM 3.54, interpreted as Very High. Followed by Indicator 4 (2), with a WM 3.47. Indicator 5 (3), with a WM 3.44. In a similar manner, Indicator 9 (4), with a WM 3.44. Indicator 2 (5), with a WM 3.40. Indicator 10 (6), with a WM 3.38. Indicator 6 (7), with a WM 3.37. Indicator 1 (8), with a

WM 3.30. Indicator 7 (9), with a WM 3.25. Meanwhile, Indicator 3 (10), with a WM 3.12 obtained a high level of open access awareness.

These findings are supported by Bryant and Thomas (2024), who found that faculty members demonstrate awareness of open access publishing and its various models, including gold, green, hybrid, and diamond approaches. The study emphasizes that faculty understanding of open access contributes to improved scholarly communication, research dissemination, and accessibility of academic outputs, which aligns with the present findings on faculty awareness of the primary models of open access.

Table 4 Overall Level of Faculty Awareness on Open Access

Scale	Domains	WM	SD	Interpretation
Awareness of Open Access	Repositories/Databases	3.30	.608	Very High
	Primary models of open access	3.07	.674	Very High
OVERALL		3.27	.535	

Note. Scoring Range: 3.25 – 4.00 (Very High); 2.50 – 3.24 (High); 1.75 – 2.49 (Low); 1.00 – 1.74 (Very Low)

The data in Table 4 indicate the respondents' overall awareness of open access, particularly in relation to repositories/databases and primary open access models. The findings revealed an overall weighted mean of 3.27 with a standard deviation of 0.535, which is interpreted as Very High. Specifically, awareness of repositories and databases obtained a weighted mean of 3.30, while awareness of the primary models of open access obtained a weighted mean of 3.07.

The findings support the idea that open access initiatives have become increasingly recognized in higher education institutions because they improve accessibility, visibility, and dissemination of scholarly works.

This result is supported by the study of Singh and Mishra (2024), which found that faculty members in higher education institutions demonstrated high awareness of open access platforms and recognized their importance in improving research accessibility and scholarly communication.

➤ Research Productivity of the Respondents

Table 5 Research Productivity of the Respondents

Categories	Groups	Frequency	Percentage (%)
Papers published in research journals	11 and above	31	43.1
	6-10	17	23.6
	5 and below	24	33.3
Papers presented in conferences	11 and above	34	47.2
	6-10	19	26.4
	5 and below	19	26.4
Completed research projects	11 and above	29	40.3
	6-10	16	22.2
	5 and below	27	37.5
Ongoing research projects	11 and above	55	76.4
	6-10	14	19.4
	5 and below	3	4.2
Training/seminar/workshop attended related to research	11 and above	23	31.9
	6-10	26	36.1
	5 and below	22	30.55

N=72

Table 5 shows the level of respondents' research productivity, as measured by publications, conference presentations, research projects, and engagement in research-related activities. The results showed that the majority of respondents had at least 11 and above research presented at conferences (47.2%) and published in research journals (43.1%). Similarly, 40.3% of respondents had finished 11 or more research projects, while the majority (76.4%) reported having 11 or more continuing research projects. The highest percentage of respondents (36.1%) fell into the 6–10 category when it came to attending research-related courses, seminars, and workshops. These results show that full-time faculty

members are actively involved in scholarly projects and research. Their active participation in research projects, publications, and presentations indicates that research output plays a significant role in their academic and professional obligations.

This finding is supported by the study of Alvarez et al. (2023), which emphasized that institutional research support, faculty collaboration, and professional development activities significantly contribute to higher research productivity among faculty members in higher education institutions.

➤ Difference in the Respondent's Level of Faculty Awareness on Open Access When Grouped According to their Profile Variables

Table 6 Difference in the Respondents' Level of Faculty Awareness on Open Access When Grouped According to their Profile Variables

Profile	Groups	Mean	Inferential	p-value	Interpretation
Age	30 years old and below	36.70	$X^2 = 1.463$	.481	Not Significant
	31-45 years old	39.74			
	46 years old and above	32.18			
Gender	Female	35.25	$U = 561.000$	.524	Not Significant

	Male	38.46	Z=-.637		
Highest Educ. Attainment	Bachelor's	32.25	$\chi^2=7.876$	.019	Significant
	Master's	41.61			
	Doctorate	26.59			
Length of service	5 years and below	37.83	$\chi^2=1.103$	.776	Not Significant
	6-10 years	33.29			
	11-15 years	41.00			
	16 years and above	34.69			

Note. Dependent: Awareness of open access

Table 6 shows the results of the analysis to determine if there are any significant differences in respondents' levels of awareness about open access when grouped by profile variables. Since the resulting value, p-values were higher than the 0.05 level of significance, the results showed that there were no significant differences in awareness levels according to age ($p=.481$), gender ($p=.524$), and length of service ($p=.776$). This indicates that regardless of respondents' age, gender, or years of service, awareness of open access is comparatively constant.

However, when respondents were categorized based on their highest level of educational attainment, a statistically significant difference was discovered. A statistically significant difference in average scores across educational

attainment levels was found using a Kruskal–Wallis test ($\chi^2=7.876$, $p=.019$). There was a significant difference between respondents with master's degrees and those with doctorates, according to Post hoc pairwise comparisons using Dunn-Bonferroni correction ($p=.019$). This demonstrates that those with master's degrees are demonstrated significantly higher awareness than those with doctorates.

This finding is supported by the study of Rahman et al. (2025), which reported that educational attainment significantly affects faculty awareness and utilization of open access resources, particularly in higher education institutions where research engagement varies according to academic qualifications.

➤ Difference in the Respondents' Research Productivity (Number of Research Papers Published) When Grouped According to Their Profile Variables

Table 7 Difference in the Respondents' Research Productivity (Number of Research Papers Published) When Grouped According to their Profile Variables

Profile	Groups	Mean Rank	Inferential	p-value	Interpretation
Age	30 years old and below	33.50	$\chi^2=3.477$	.176	Not Significant
	31-45 years old	34.22			
	46 years old and above	43.40			
Gender	Female	36.08	$U=597.500$	.819	Not Significant
	Male	37.16	$Z=-.229$		
Highest Educ. Attainment	Bachelor's	28.00	$\chi^2=5.988$	.051	Not Significant
	Master's	33.27			
	Doctorate	44.80			
Length of service	5 years and below	32.29	$\chi^2=4.071$	.254	Not Significant
	6-10 years	39.97			
	11-15 years	32.45			
	16 years and above	42.97			

Note. Dependent: Number of research papers published

Table 7 examined whether respondents differed in the number of research papers published when grouped according to age, gender, highest educational attainment, and length of service. The findings revealed that all computed p-values were greater than the 0.05 level of significance, indicating that there were no statistically significant differences in research productivity across the profile variables considered.

The respondents who were 46 years of age or older had the highest mean rank (43.40), followed by those who were 31 to 45 years old (34.22). The differences between the age ranges were not statistically significant. This implies that the number of papers published is not greatly impacted by age. Male respondents had a higher mean rank (37.16) than female respondents (36.08) in terms of gender, however the difference

was minimal and not statistically significant. Respondents with doctorates had the highest mean rank (44.80) for greatest level of education, followed by those with bachelor's degrees (28.00) and master's degrees (33.27). The difference was not significant at the 0.05 level, despite the fact that PhD holders seemed to publish more research papers. Respondents with 16 years or more of service had the highest mean rank (42.97) for duration of service, but there was no statistically significant difference between the categories.

The findings supported by the study done by Orfan et al. al. (2024), which indicated that faculty research publications at four HEIs that gender, length of service, and educational level do not affect the number of research publications. Nonetheless, it goes contrarily to Rosario et. al (2025) study,

which found that gender differences exist in higher education research production. In higher education, women face more

obstacles than men, which has an impact on research study productivity.

Table 8 Difference in the Respondents' Research Productivity (Research Papers Presented) When Grouped According to their Profile Variables

Profile	Groups	Mean Rank	Inferential	p-value	Interpretation
Age	30 years old and below	33.50	$X^2 = 2.889$	.236	Not Significant
	31-45 years old	34.78			
	46 years old and above	42.70			
Gender	Female	36.53	$U = 614.500$	.985	Not Significant
	Male	36.45	$Z = -.019$		
Highest Educ. Attainment	Bachelor's	28.88	$X^2 = 2.538$	.281	Not Significant
	Master's	34.72			
	Doctorate	41.61			
Length of service	5 years and below	29.52	$X^2 = 7.463$	.059	Not Significant
	6-10 years	45.15			
	11-15 years	38.35			
	16 years and above	38.81			

Note. Dependent: Research Papers Presented

Table 8 assessed whether respondents differed in the number of research papers presented when grouped according to age, gender, highest educational attainment, and length of service.

Age did not significantly influence the number of research papers presented. Respondents aged 46 years and above recorded the highest mean rank (42.70), but the observed differences among age groups were not statistically significant. Gender also showed no significant difference where female respondents had a mean rank of 36.53, while male respondents had 36.45. With respect to highest educational attainment, no significant difference was found wherein doctorate degree holders obtained the highest mean rank (41.61), followed by master's degree holders (34.72) and bachelor's degree holders (28.88). However, these differences

were not statistically significant. The length of service likewise did not significantly affect research papers presented, although respondents with 6–10 years of service obtained the highest mean rank (45.15), the result remained above the 0.05 threshold and therefore was interpreted as not significant.

The findings echo the conducted study of Morales, et al. (2023) which stated that tenured professors at a private higher education institution in Southern Mindanao had not conducted any research in the previous five academic years. However, it contradicts the statement of Hipolito and Santos (2025) in which they concluded that research productivity and highest educational attainment correlates to each other as teaching responsibilities do not necessarily impede activities like publishing in local journals or presenting at regional and national conferences.

Table 9 Difference in the Respondents' Research Productivity (Number of Completed Research Projects) When Grouped According to their Profile Variables

Profile	Groups	Mean Rank	Inferential	p-value	Interpretation
Age	30 years old and below	40.35	$X^2 = 3.217$	.200	Not Significant
	31-45 years old	30.96			
	46 years old and above	38.23			
Gender	Female	34.11	$U = 511.000$	.194	Not Significant
	Male	40.25	$Z = -1.299$		
Highest Educ. Attainment	Bachelor's	31.63	$X^2 = .414$	.813	Not Significant
	Master's	36.15			
	Doctorate	38.11			
Length of service	5 years and below	36.34	$X^2 = .965$	.810	Not Significant
	6-10 years	39.68			
	11-15 years	37.10			
	16 years and above	33.03			

Note. Dependent: Number of Completed Research Projects

Table 9 illustrates the variations in research productivity among respondents, measured by the number of completed research projects, categorized by profile variables including age, gender, highest level of education, and length of service. The results indicated that there were no significant statistical differences in research productivity based on any of the profile

variables, as all calculated p-values exceeded the 0.05 level of significance.

In terms of age, respondents aged 30 years old and below obtained the highest mean rank (40.35), followed by those aged 46 years old and above (38.23), while respondents aged 31–45 years old had the lowest mean rank (30.96). For gender,

male respondents obtained a higher mean rank (40.25) compared to female respondents (34.11). With regard to highest educational attainment, respondents with doctorate degrees obtained the highest mean rank (38.11), followed by those with master's degrees (36.15), while respondents with bachelor's degrees had the lowest mean rank (31.63). Lastly, in terms of length of service, respondents with 6–10 years of service had the highest mean rank (39.68), followed by those with 11–15 years (37.10), 5 years and below (36.34), and 16 years and above (33.03).

These findings are supported by the study of Benjamin, L. S (2023) through its innovative initiative, open access journals are dedicated to bringing forth genuine and dependable scientific contributions to the relevant community. The open access journals were established with the goal of developing a dependable platform and providing unrestricted access to scientific literature and the rapid dissemination of recent updates in various fields of science and technology.

Table 10 Difference in the Respondents' Research Productivity (Number of Ongoing Research Projects) When Grouped According to their Profile Variables

Profile	Groups	Mean Rank	Inferential	p-value	Interpretation
Age	30 years old and below	33.11	$X^2 = 2.931$	.231	Not Significant
	31-45 years old	36.62			
	46 years old and above	40.93			
Gender	Female	35.44	$U = 569.500$	.468	Not Significant
	Male	38.16	$Z = -.726$		
Highest Educ. Attainment	Bachelor's	36.63	$X^2 = 6.241$	.044	Significant
	Master's	33.25			
	Doctorate	43.27			
Length of service	5 years and below	32.76	$X^2 = 6.329$	.097	Not Significant
	6-10 years	34.59			
	11-15 years	46.10			
	16 years and above	39.31			

Note. Dependent: Ongoing Research Projects

The table illustrates the variation in research productivity among respondents based on the number of active research projects, categorized by their profile variables, including age, gender, highest level of education, and duration of service. The findings revealed that only the highest educational attainment exhibited a statistically significant difference, whereas age, gender, and length of service did not show notable differences concerning ongoing research projects.

In terms of age, respondents aged 46 years old and above obtained the highest mean rank (40.93), followed by those aged 31–45 years old (36.62), while respondents aged 30 years old and below had the lowest mean rank (33.11). For gender, male respondents obtained a slightly higher mean rank (38.16) compared to female respondents (35.44). With regard to highest educational attainment, respondents with doctorate degrees obtained the highest mean rank (43.27), followed by those with bachelor's degrees (36.63), while respondents with

master's degrees had the lowest mean rank (33.25). Lastly, in terms of length of service, respondents with 11–15 years of service obtained the highest mean rank (46.10), followed by those with 16 years and above (39.31), 6–10 years (34.59), and 5 years and below (32.76). However, the p-value of .097 indicates that the difference is not statistically significant. Thus, length of service does not significantly influence the respondents' ongoing research productivity.

Dunn–Bonferroni post-hoc analysis revealed a significant difference between the Doctorate and Master's groups ($p = .044$). This gap is significant because resilience, social justice, and resource sustainability are central to everyday life in Palestine, suggesting that conventional ESD approaches may not fully address such conditions or may require substantial modification (Subaveerapandiyan, A et al., 2026).

Table 11 Difference in the Respondents' Research Productivity (Research-Related Training, Seminars and Workshop Attended) When Grouped According to Their Profile Variables

Profile	Groups	Mean Rank	Inferential	p-value	Interpretation
Age	30 years old and below	36.98	$X^2 = .150$	.928	Not Significant
	31-45 years old	35.28			
	46 years old and above	37.38			
Gender	Female	33.73	$U = 494.000$	.136	Not Significant
	Male	40.86	$Z = -1.489$		
Highest Educ. Attainment	Bachelor's	36.25	$X^2 = 1.794$	.408	Not Significant
	Master's	38.74			
	Doctorate	31.86			
Length of service	5 years and below	35.71	$X^2 = 2.742$	.433	Not Significant
	6-10 years	35.50			

	11-15 years	45.80			
	16 years and above	33.19			

Note. Dependent: Research-Related Training, Seminars and Workshop Attended

Table 11 presents the difference in respondents' research productivity in terms of research-related training, seminars, and workshops attended when grouped according to age, gender, highest educational attainment, and length of service.

In terms of age, the respondents aged 46 years old and above obtained the highest mean rank (37.38), the difference is not statistically significant. This finding is consistent with the study of Song et al. (2024), which emphasized that variations in research productivity are more strongly associated with institutional and academic factors rather than demographic characteristics such as age. This supports the present result, as it suggests that participation in research development activities is not age-dependent but may instead be influenced by institutional support and access to opportunities.

For gender, the male faculty members obtained a slightly higher mean rank (40.86) compared to female faculty members (33.73), the difference is not statistically significant. Dy-Boorman et al. (2021) support this finding, emphasizing

that scholarly productivity is primarily influenced by factors such as mentorship, collaboration, and institutional support systems rather than gender. This reinforces the present result, which shows that gender does not significantly affect participation in research-related professional development. With regard to highest educational attainment, the faculty members with master's degrees obtained the highest mean rank (38.74), followed by bachelors and doctorate degree holders; the differences are not statistically significant. Song et al. (2024) noted that while academic degree may contribute to research productivity in some contexts, its influence is not always significant depending on institutional conditions.

In terms of length of service, the faculty members with 11–15 years of service obtained the highest mean rank (45.80), the variation among groups is not statistically significant. Dy-Boorman et al. (2021) emphasized that scholarly productivity is strengthened through research skill development, mentorship, and collaborative networks rather than years of service alone. This supports the present result, indicating that research engagement is not dependent on tenure in service.

➤ Relationship Between the Level of Awareness of Open Access and Research Productivity of the Respondents

Table 12 Relationship Between the Level of Awareness of Open Access and Research Productivity of the Respondents

Awareness of open access	Papers Published	Papers Presented	Completed Research Project	Ongoing Research Project	Seminar/Training/Workshop attended in research
Repositories/Databases	$\rho = .323$ $p = .006^*$	$\rho = .337$ $p = .004^*$	$\rho = .160$ $p = .179$	$\rho = .061$ $p = .613$	$\rho = .079$ $p = .510$
Primary models	$\rho = .260$ $p = .027^*$	$\rho = .271$ $p = .021^*$	$\rho = .222$ $p = .061$	$\rho = .071$ $p = .552$	$\rho = .148$ $p = .216$

Note. Correlation: 0.00 – 0.19 (very weak); 0.20 – 0.39 (weak); 0.40 – 0.59 (moderate); 0.60 – 0.79 (strong); 0.80 – 1.00 (very strong). (Evans, 1996) *Significant at $< .05$.

Table 12 presents the relationship between the level of awareness of open access and the research productivity of the respondents in terms of papers published, papers presented, completed research projects, ongoing research projects, and attendance in research-related training, seminars, and workshops.

In terms of open access awareness on repositories and databases, the results revealed weak but correlates with papers published ($\rho = .323$, $p = .006$) and papers presented ($\rho = .337$, $p = .004$). This indicates that higher awareness of open access repositories and databases is associated with increased research dissemination output in terms of research publications and conference presentations. However, no significant relationships were found with completed research projects, ongoing research projects, and research-related training and workshops. This finding is supported by Clayson, Baldwin, and Larson (2021), who emphasized that open access significantly improves research visibility and citation impact by removing access barriers, thereby increasing the likelihood of publication dissemination and academic reach.

For primary models of open access, the results also showed weak but correlates with papers published ($\rho = .260$, $p = .027$) and papers presented ($\rho = .271$, $p = .021$). This indicates that respondents who are more aware of open access publishing models tend to have higher research dissemination output. However, no significant relationships were observed with completed research projects, ongoing research projects, and attendance in research-related training. This is supported by Ochieng and Gyasi (2021), who explained that open access systems enhance knowledge sharing and research visibility by improving access to scholarly outputs, which in turn supports increased dissemination such as publications and presentations.

V. DISCUSSIONS

This study examined full-time faculty members' awareness of open access and how it relates to their research output in selected Philippine higher education institutions. The results showed that faculty members had very high awareness of open access resources. This indicates that faculty members understand the value, usability, and function of open access

resources in contributing with research and scholarly activities. The high level of awareness can be attributed to the rising integration of digital resources, institutional motivations for research participation, and increased acknowledgment of open access platforms in higher education institutions.

The findings also showed that faculty members had an in-depth awareness of the idea of open access resources and how open access models contribute to knowledge sharing. The results support Rogers' (2003) Diffusion of Innovations Theory, which states that awareness is the initial phase of innovation adoption. In this regard, faculty members who are aware of open access are able to embrace and make use of these platforms in their research and scholarly activities.

The full-time faculty demonstrated involvement in research-related activities in terms of research productivity, especially in publishing papers, presenting studies at conferences, and carrying out ongoing research initiatives. This indicates that faculty duties at higher education institutions have adopted research as an essential aspect of their responsibilities. However, it also shows that participation at training sessions, workshops, and seminars pertaining to research was rather low. This may indicate that even while academic members produce high-quality research, there may still be limited time or opportunities for ongoing professional development pertaining to improving research.

The results also showed that faculty awareness of open access did not significantly differ by age, gender, or length of service. This indicates that faculty members are generally aware of open access resources, regardless of their demographics. Nonetheless, there was a significant difference between faculty members with master's degrees and those with doctorates in terms of their highest educational attainment. This implies that exposure to and familiarity with open access resources and platforms may depend on educational attainment.

Furthermore, the study revealed that there is a significant relationship between open access awareness (repositories/databases and primary models) and research productivity in terms of: papers published and papers presented in the conferences. However, there is no significant relationship in open access awareness (repositories/databases and primary models) between research productivity in terms of: completed research projects, ongoing research projects, and training/seminar/workshops attended.

VI. CONCLUSION

The study concludes that awareness of open access significantly influences faculty members in the dissemination, production, and creation of research studies. As the full-time faculty members demonstrated a high level of awareness in regards to the importance of open access resources, these resources serve as valuable tools in maximizing the utilization of existing knowledge. This not only supports faculty members in their research endeavors but also enhances and innovates teaching practices within the modern learning environment through access to reliable information sources. Consequently, the institution will be encouraged to

continuously provide comprehensive knowledge and support to students, faculty members, administrators, and other professionals to further strengthen academic and professional development.

Furthermore, the findings serve as an essential reference for the institution, revealing that the faculty members of UPHS-JONELTA possess a high level of awareness of existing knowledge resources, which positively affects their productivity in practicing open access. In line with this, it is recommended that the institution continue providing support to faculty members through their participation in research-related training, seminars, and workshops to ensure continuous growth and sustainability in research practices.

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