



ASSESSING SCHOLARSHIP: AN ANALYSIS OF RESEARCH APPRECIATION BY GHANAIAN ACADEMIC RESEARCHERS

Francis Justice Kwesi Agbofaⁱ

Department of Education,
Seventh-day Adventist College of Education,
Asokore-Koforidua,
Ghana

Abstract:

The study sought to analyze academic research appreciation by research faculty of Ghanaian universities and colleges of education. The study is underpinned by the social exchange theory and used a quantitative approach, where an electronic questionnaire based on items and scales identified in literature was shared on social media platforms of academic faculties of Ghanaian universities and colleges of education. A total sample of 1175 was considered. The data generated from respondents' submission of the electronic questionnaire was analyzed with SPSS using descriptive and inferential statistics, where means with standard deviations and independent samples t-tests with eta statistics were the units of analysis. The study revealed statistically significant differences in (1) access to research, (2) utilization of research, and (3) practice of and engagement in research between faculty of universities and colleges of education. The study found no significant difference in what respondents perceived of the worth of research between the two classes of faculty. The study identified that Ghanaian academic researchers have limited access to research, and moderately use existing research per their limited access. The study found that respondents consider themselves as having more to achieve in research as they identified as having moderate experience. In terms of perception of the worth of research, the study revealed that academic researchers see research as a very important dimension of their career for its relevance to their instruction. The study recommends that efforts should be made to bridge the difference in scholarship between universities and colleges of education. Again, research training and collaborations should be prioritized in higher education. Lastly, institutions of higher learning should ensure easy access to research.

Keywords: scholarship, comparative, research, appreciation, Ghanaian faculty

ⁱ Correspondence: email agbofafrancis@gmail.com

1. Introduction

Academic research has become a significant aspect of institutions of higher learning. As competition and demand for teaching positions increases, institutions of higher learning have been prioritizing staff and faculty members who excel in research (Prince *et al.*, 2007). Prince *et al.* (2007) presuppose that this preference is justified by the claim that research enhances teaching quality and instructional delivery. Faculty members so are tasked with conducting research that pertains to their fields of study. As such, academic staff place significant importance on their research. According to Healey (2005), the allegiance of most academic staff is directly tied to their field of study or profession.

Dialogues on academic research rest on researchers' preoccupations with what research is and is not and what researchers do when they carry out research. According to Brew (2001), it has been acknowledged that researchers know what research is. Despite many researchers being able to articulate their ideas about the nature of research, the absence of systematic investigation into the ways research is conceptualized means that many commonly held ideas have not been examined empirically. As such, there are several assumptions about the nature of research experience. There are positions in which conceptions of research are determined by disciplinary differences. Another has to do with the fact that the methodology used or the kinds of research (i.e. strategic, applied or curiosity-driven) determine researchers' conceptions of research. These assumptions tend to be based on researchers' personal experiences, but not on empirical evidence.

There is a substantial body of literature (including Samuelowicz and Bain (1992, 2001), Kember (1997), Pratt (1998), Prosser and Trigwell (1999), and Akerlind (2004)) that have investigated how academics experience and understand teaching, and being a university teacher. There is relatively little literature addressing academics' understanding of research and being a researcher. In essence, while research on conceptions of learning and teaching in higher education is well established, conceptions of research have rarely been a subject for investigation. Empirical work on how research is experienced by those who undertake it is hard to find. Contributing empirical evidence on the subject, this study assessed researchers' appreciation of research. The study specifically analyses how academic researchers in colleges of education (COEs) and universities in Ghana can access existing research materials, utilize research materials, and conduct research. The study further reviews what academic researchers perceive as the worth of research. The study, by so doing, further compares academic staff from COEs and universities based on the dimensions outlined, and, hence, tests the null hypotheses that:

H1: There is no statistically significant difference between the faculty of COEs and universities in terms of access to research materials;

H2: There is no statistically significant difference between the faculty of COEs and universities in terms of utilizing research materials;

H3: There is no statistically significant difference between the faculty of COEs and universities in terms of conducting research, and

H4: There is no statistically significant difference between faculty of COEs and universities in terms of their perceived worth of research.

2. Theoretical Underpinning: Social Exchange Theory (Homans, 1961)

The study is underpinned by the social exchange theory. The social exchange theory posits that individuals assess relationships and interactions in terms of the rewards and costs they receive. Homans (1961) defined social exchange as the exchange of activity, tangible or intangible, and more or less rewarding or costly, between persons. The main way that cost is seen is in terms of the chances or other activities that the parties concerned have sacrificed. According to Homans (1961), behaviour is a function of payoffs, irrespective of the payoffs coming from other people or the non-human environment (in the context of this study, the academic environment: people and structures). The social exchange theory is a demonstration of how person A's behaviour reinforces person B's behaviour, and vice versa.

Homans framed key propositions for the study of social behaviour in terms of rewards and punishments. A behaviour that is rewarded in general continues (at least up to the limit of diminishing marginal utility). Homan's first proposition, the success proposition, has it that a behaviour that generates positive consequences is likely to be repeated. The second proposition, the stimulus proposition, states that behaviour that has been rewarded in the past under some circumstances will be performed in similar circumstances. The third is the value proposition. According to the value proposition (Homan, 1961), the more valuable the result of an action is to an actor, the more likely it is for that action to be performed. The fourth proposition, the deprivation-satiation proposition, qualifies the stimulus proposition introducing the general idea of diminishing marginal utility: the more often a person has recently received a particular reward for an action, the less valuable is an additional unit of that reward. Finally, the fifth proposition specifies when individuals will react emotionally to different reward situations. Homans (1974) contends that people will become angry and aggressive when they do not receive what they anticipate. Homan argues that they can become angry when they do not receive a fair level of return, introducing the normative concept of distributive justice into his analysis of dyadic exchange.

Homans' work has been criticized as (1) it was too reductionistic (in essence, it uses psychological concepts as the foundation for sociological phenomena); and (2) downplaying the importance of both the institutional and the social processes and structures that result from social contact when examining the sub-institutional level of social behaviour.

Despite criticisms, the tenets of the social exchange theory apply to the behaviour of faculty in the context of academic research. Faculty members engage in research studies and scholarly publications based on their appreciation of the reward they are going to receive for engaging in research. This is a venture where faculty members trade their time, financial and intellectual resources. Faculty decision to conduct research is

thus influenced by the benefits they receive (access to resources, collaboration opportunities, recognition, promotion, etc.) compared to the efforts and costs involved (time, effort, competing demands, health, etc.). As such, the study analyses faculty appreciation of research in the context of the social exchange theory as when the expected outcome for faculty research is rewarding, they would positively appreciate research, but when it is costly, research appreciation by faculty is going to be negative.

3. Methods

3.1 Study Setting: Higher Education and Scholarship in Ghana

Over the past two decades, the number of tertiary institutions in Ghana has grown positively, particularly private institutions. As of 2012, there were more than 126 public and private universities accredited by the National Accreditation Board (NAB) in Ghana. NAB (2020) reports that there are 9 public universities, 10 technical universities and polytechnics, 8 specialized and professional tertiary educational institutions, 46 colleges of education and 67 public nurses and midwifery training colleges. For private institutions, NAB (2020) reports 73 private universities, 3 private colleges of education and 3 private nurses and midwifery training colleges. This brings about a total of 222 tertiary educational institutions in Ghana.

NAB (2020) reports on 5800 academic staff in public universities in Ghana, 1855 in colleges of education, 2710 in private universities and colleges, and 1764 in technical universities and polytechnics. Data available on Statista.com has it that, as of 2019, Ghanaian universities and colleges employed a greater number of academic staff members with lecturer titles. These institutions employed close to 1500 tutors, 6000 lecturers and about 3000 senior lecturers. Most academic faculty members work full-time jobs at private tertiary institutions.

3.2 Study Design, Population and Sampling, and Data Analysis and Presentation

The study adopted a quantitative approach with a cross-sectional survey design. Underpinned by the positivist philosophical paradigm, the study used a self-designed questionnaire composed of close-ended and Likert-format questions. The scales of the questionnaire were informed by the items identified by Sheehy (2016). The study sought to analyze the appreciation of research by academic researchers in Ghanaian universities and colleges of education.

The population considered for the study encapsulate all academic staff of universities and colleges of education in Ghana who are interested in research. In essence, academics who only focus on taught programmes/courses with no research activities, and as well do not involve in research activities were not of interest. Non-research faculty did not constitute entities in the population of the study. Whilst there is available data on the number of academic staff in the various tertiary educational institutions in Ghana, ready statistics on academic staff who conduct academic research are difficult to identify. The study, therefore, adopted the Cochran formula for sample size estimation (Cochran,

1977). Cochran (1977) has it that when the population of the study is unknown and the population proportion is unknown, a sample of about 384 respondents is appropriate (Kotrlík *et al.*, 2001). Two groups of respondents were established: (1) research faculty from colleges of education, and (2) research faculty from universities. This dichotomy was used as the basis for comparing academic researchers' appreciation of research. As such, 384 was considered the minimum number of respondents to be sourced either for university faculty or college of education faculty.

An electronic version of the questionnaire was conveyed in Microsoft Forms, and the link (URL) to the questionnaire was shared on the social media platforms of the targeted groups to respond to. As such, all respondents who responded to the study did so at their convenience, connoting the employment of convenience sampling. Convenience sampling was observed because every one of the respondents could give the exact information the study sought. The questionnaire, however, sought to validate respondents as research faculty before the subsequent questions were made accessible to them. A period of two months was determined as the duration for data collection. The questionnaire was left open until the end of the 60 days. A total of 1175 responses were received and all entries were entered for analysis.

The study employed SPSS v23 to analyze the data. Statistics using means and standard deviation and independent samples t-tests were used as the units of analysis. Tables were used to present the data from the study.

4. Results and Discussion

4.1 Socio-demographic Characteristics of Respondents

To appreciate the results from the study, the socio-demographic characteristics of respondents were analyzed. The study revealed that a total of 1175 academic researchers responded to the study. Among them, 730 were males and 445 were females. The majority of respondents (620) were aged between 30 and 35 years old. Academic researchers who were aged between 50 and 55 years were the least group observed in terms of age.

Based on the highest academic qualification attained by respondents, it was observed that the majority of the respondent academic researchers had attained up to a master's degree with 310 of them indicating that they have PhDs. The responses were limited to only master's degree and a PhD because that is the requirement to fit into the population of interest. The study also found that the majority of the respondents were employees of universities, with 480 of them being affiliated with a College of Education. The study identified that the majority of the respondent researchers have been in service for up to or less than 5 years, with the least being in service for over 20 years.

Table 1: Socio-demographic Characteristics of Respondents

Variable	Value	Frequency	Percent (%)
Gender	Male	730	62.1
	Female	445	37.9
Age	30 to 35	620	52.76
	36 to 40	175	14.89
	41 to 45	160	13.61
	46 to 50	190	16.17
	50 to 55	30	2.55
Highest academic qualification	Masters	865	73.6
	PhD	310	26.4
Type of institutional affiliation	College of Education	480	40.9
	University	695	59.1
Years in service	5 and below	620	52.76
	6 to 10	175	14.89
	11 to 15	160	13.61
	16 to 20	190	16.17
	Over 20	30	2.55
Total		1175	100

Source: Fieldwork (2023).

4.2 Access to Research Materials

The study used constructs in Table 2 to measure the level of access respondent researchers have to research materials. The study established that the constructs making up the access sub-scale have a good internal consistency when observing a Cronbach's alpha of 0.778. The items of the scale were rated on a five-point Likert scale which was organized from strong disagreement to strong agreement. The first item sought to establish respondents' agreement with the statement that respondent faculty know journals in the areas of their research interests. It was revealed that respondents were somewhat undecided on this statement. Academics typically are known for making repeated decisions on journal selection throughout their careers. Finding a somewhat neutral agreement would not be expected. However, this resonates with the finding on the highest academic qualification of respondents. The higher number of respondents with Master's degrees signifies the dominance of novice researchers among faculties who have more to learn and explore.

The second item sought to establish if respondents have subscriptions to journals such that content published will be made available to them as and when issues in journals are completed and published. The study established that respondents were also undecided concerning this statement on finding a mean of 3.35 (SD = 1.25). The literature identifies that faculty do not usually have personal subscriptions to journals. Findings by Smith (2003) revealed that only 10% of total articles read per week by faculty come from personal electronic subscriptions. Irrespective of whether researchers have subscriptions to journals or not, the algorithm of the websites of some journals makes it possible to contact audiences who have ever visited the journal to notify them of new content published.

The study in a follow-up sought to find out from academic researchers if they get such notifications. The study found a mean of 3.2 (SD = 1.17) for the case, emphasizing the fact that researchers are generally not decided on the issue. This finding could be linked with the fact that faculty studied do not depend on subscriptions to journals for information. Journals and publishers usually notify persons or groups and labs that have subscribed to their newsletters. Hence, the case where respondents could not tell whether or not they have subscriptions justifies the established neutrality in agreement.

The third construct sought to explore whether respondents get full access to all journal content they need. The study established that respondents do not get full access to the content of journals. This is a common situation with researchers who are affiliated with institutions which do not obtain access to educational resources for staff such that they can log on to download and use content from there. Advanced universities all over the world solve this problem by giving their faculties direct access to several electronic journals and books. According to Smith (2003), the Libraries of the University of Georgia (UGA) in 1990 began a concerted effort to provide patrons with electronic access to scholarly journals. Anecdotal evidence suggested faculty and students alike were taking advantage of electronic access to journals (Smith, 2003). This is a good initiative and it is recommended that Ghanaian universities and colleges of education should emulate it.

Table 2: Descriptive Statistics of Access Sub-scale Items

Variable	Sample		University		COE	
	M	SD	M	SD	M	SD
I know of journals in my area.	3.29	1.48	3.29	1.48	2.76	1.42
I have subscriptions to journals in my area.	3.67	1.18	3.67	1.18	2.9	1.17
I get notifications/updates of new articles published in my area.	3.42	1.19	3.42	1.19	3.09	1.13
I get full-text copies of articles I need in my area.	2.89	1.24	2.89	1.24	2.46	1.17
I have funding to purchase the articles I need.	2.99	1.05	2.99	1.05	2.81	1.1

Source: Fieldwork (2023).

The last item in the scale observed a mean score of 2.99 (SD = 1.05) which expresses a somewhat neutral position, connoting that respondents were of the view that they are not very sure of having funding specifically for purchasing articles. Despite all respondents being paid the annual book and research allowance, this finding has been established because the designated amount is for the conduct of research, which is usually spent on data collection with no allocation for funds to purchase literature.

Subscriptions, licenses, or other payments made to commercial publishing houses have historically limited access to scientific knowledge (Bjork, 2017). Despite superannuation, Agada (2000) averred that scholars in developing nations often decry limited access to research. According to Van Noorden (2013), open-access publishing (OA) provides a platform that allows academics to share their findings more broadly without having to pay fees for article processing. Open-access journals and institutional repositories offer global readership to researchers since the visibility and impact of their works are notably increased (Ali *et al.*, 2013; Jain, 2012). Schimmer *et al.* (2015) report a

notable rise in the number of open-access articles available online in scholarly journals and institutional repositories. [Dlamini and Snyman \(2017\)](#) contend that the open-access movement in academic/university libraries has brought forth the concept of open-access institutional repositories. Piwowar *et al.* (2018) and Smith *et al.* (2021) reported that the subscription-based model of gold open-access journals—where all articles are immediately available upon publication—is gradually being replaced by an article publication charges (APC) business model (Zhang *et al.*, 2022). In 2020, out of the 12,289 journals covered by InCites (Clarivate), only 2577 journals are still subscription-based, while the remaining 9712 journals are gold or hybrid (Zhang *et al.*, 2022). The increase in pure open-access journals is reflected in their output, which has been increasing annually by 1% of total publications. Currently, it makes up about 13% of all research papers. It is interesting to note that this increase persists at every research facility, with or without any policies or support systems in place (Zhang *et al.*, 2022). Researchers who need materials to guide their research can now access papers due to this ongoing increase without necessarily subscribing to journals. Hence, finding Ghanaian academic researchers are neutral in agreement with whether or not they subscribe to journals is explained here as they are not strictly bound to subscribe to get access to publications. However, as it has been expressed that the faculties studied have limited access to full-texts of literature, I recommend that research faculty should take advantage of the growing number of open-access journals and institutional repositories to increase their access to research. In addition, Ghanaian higher education institutions should prioritize the open access movement, where they will also make their research output readily available through archiving in institutional repositories.

4.3 Utilization of Research

The research utilization sub-scale consisted of 6 items as presented in Table 4. The sub-scale had a Cronbach's alpha of 0.864, which suggests a good internal homogeneity. The first item established the regularity with which researchers read research articles. According to Manarin *et al.* (2015), experts view academic reading as an avenue for entering the disciplinary conversation. Reading scientific literature is necessary to ascertain the present level of understanding of a particular subject, to pinpoint areas of research where there is insufficient evidence, and to serve as a foundation for developing guidelines (de Vries *et al.*, 2020). The study established a mean of 3.12 (SD = 1.3) for the case, which indicates that respondents are generally not certain if they read research articles often. This may be a result of the fact that studied researchers are not only researchers but work full time as teachers with some having large class sizes. They also work on students' assessment as well as well as prepare content to teach which renders limited time for reading research articles. Huber (2006, 71) has it that sometimes faculty "take for granted what students, as the novices, generally do not see" to justify why faculty is reluctant to read in general. Despite this, Howard *et al.* (2018) contend that faculty strongly indicate that reading implicitly or explicitly has value.

Researchers' information needs vary depending on where they are in the cycle of a scientific publication. As the associated information-search tasks include searching across several information sources using various search queries, they are by nature complicated, ambiguous, and multifarious (Du & Evans, 2011). Müngen and Kaya (2018) aver that when researchers search for a topic, they quickly look at abstracts and keywords. The current study has found that respondent academic researchers do not necessarily read through the titles and abstracts of research articles when they are browsing journals to survey or search research materials. This was revealed by establishing a mean of 2.97 (SD = 1.18), expressing that they usually have less focus on keywords of articles when they are doing so. Conclusions drawn by de Vries *et al.* (2020) identify that literature searches based on title, abstract, and keywords alone may not be sufficient, underscoring the potential value of full-text literature searches, provided full-texts are accessible.

What constitutes successful reading comprehension involves the construction of a coherent mental representation of the text in a reader's memory. This mental representation of the text is the product of reading comprehension – the offline result of reading (Kendeou *et al.*, 2011). With the establishment of a mean of 3.7 (SD = 1.94), the study has found that respondents fully understand the content of the research they read. In addition, the study has established that respondents are of the view that their use of research articles helps them to grow as academics or educators, with the establishment of a mean of 3.97 (SD = 1.23). These findings concord with Cherryholmes (1993), who has it that researchers are experienced readers; They read textbook after textbook as undergraduate and graduate students, they read the text of the setting within which they conduct research, and they read the research of others.

Table 3: Descriptive Statistics of Utilization Sub-scale Items

Variable	Sample		University		COE	
	M	SD	M	SD	M	SD
I read research articles often.	3.12	1.3	3.37	1.23	2.74	1.32
I read through titles and abstracts of research articles when I receive/browse academic journals.	2.97	1.18	3.24	1.1	2.59	1.18
I fully understand the content of the articles in academic research journals.	3.72	1.19	2.83	1.21	2.57	1.15
Reading academic journals helps my growth as an educator.	3.97	1.27	3.1	1.28	2.78	1.14
I feel there are not enough journal articles focused on my area or research interest.	1.05	1.27	3.24	1.23	2.77	1.27
I use research articles to aid my research.	3.97	1.14	3.17	1.13	2.68	1.11

Source: Fieldwork (2023).

Utilization is the measure of what proportion of what is available at a time that is used. The study investigated what respondents perceived as the availability of research to inform the assessment of their use of research. A mean of 1.04 (SD = 1.27) was found to mark the case that there is the perception of less availability of enough research materials. To me, I am of the view that this finding does not mean research publications in the areas

of respondent faculty are not enough in terms of numbers. The perceived less availability can be associated with the fact that respondents have limited access to research. Given that universities aim to create and disseminate knowledge, research output grows in all disciplines. Where there are gaps or dearth in knowledge, researchers are poised to identify gaps and bridge them. It was further revealed that the respondents used existing research articles to inform their research on finding a mean of 3.97 (SD = 1.14).

4.4 Practice of and Engagement in Research

A Cronbach's alpha of 0.778 was established for the sub-scale that measured the practice of research by academic researchers. The sub-scale was composed of variables in Table 4. The first variable of the sub-scale measured respondents' level of agreement with the statement that they know what it means to conduct research. A mean score of 2.86 (SD = 1.05) suggests there is a somewhat general uncertainty among respondents. Finding this identifies that the overall goal of institutions of higher learning, which is to conduct research and create knowledge, has been somehow compromised. Fairweather (1996) and Gappa *et al.* (2007) view faculty performance as critical to the health of institutions of higher education and the education of citizens. Despite this, the scores found for respondents with university affiliations (M = 3.06; SD = 0.99) are higher than those for respondents with college of education affiliation (M = 2.58; SD = 1.07). This is an expression of the fact that respondents acknowledge that there is room for them to improve on what they know about conducting research. To confirm the case, the study further found that respondents consider that they have a moderate level of experience in research. A mean score of 2.7 (SD = 0.93) supports the case. Inferring from the ages and years respondents have spent in service. The study found that the respondents who responded to the current study were more youthful, expressing their position as early career researchers, which underscores their expression of having a limited level of experience in research, as it has been presented in Table 1. To further justify the case, it is worth noting that the majority of the respondents had up to the master's degree, expressing that they had not yet completed a PhD and the associated research, which would equip them with enough experience in research.

Table 4: Descriptive Statistics of Practice and Engagement Sub-scale Items

Variable	Sample		University		COE	
	M	SD	M	SD	M	SD
I know what it means to conduct research.	2.86	1.05	3.06	0.99	2.58	1.07
I am experienced in conducting research.	2.71	0.93	2.9	0.89	2.44	0.91
I am interested in conducting research.	2.74	0.89	2.83	0.82	2.6	0.96
I can independently conduct research.	3.34	0.90	3.24	0.88	2.5	0.91
I have researched on my own.	3.82	0.98	3.86	0.99	2.77	0.96
I understand and can analyze and interpret data for scientific research.	3.34	1.04	3.43	0.98	3.2	1.11
I have experience in serving as a participant in research.	3.16	1.05	3.33	0.93	2.91	1.16
I am interested in serving as a participant in research.	2.49	1.0	2.56	1.01	2.4	0.99

My exposure to research is sufficient so that I can read it and understand it.	2.86	1.10	3.06	1.12	2.57	1.01
The number of research publications.	3.69	1.15	3.78	1.05	3.57	1.27

Source: Fieldwork (2023).

The study revealed that respondents were generally uncertain ($M = 2.7$; $SD = 0.89$) on whether they have an interest in undertaking research, despite the fact they can independently conduct research ($M = 3.34$; $SD = 0.9$) and have ever conducted research independently ($M = 3.82$; $SD = 0.98$), as well as having the competence to analyze research data ($M = 3.34$; $SD = 1.04$). Identifying that researchers are generally undecided on how much interest they have in conducting research presupposes that respondent faculty are working outside of their passion. Harvard Business Review has it that passion is an important factor to consider when choosing a job, but it's not the only factor. However, instead of asking, "How can I find a job that I'm passionate about?" individuals should rather be asking, "How can my career be a *conduit* to passion?" Based on this, I recommend that the upcoming generation of academic researchers should link their practice of research to their passion. A would-be academic who has a passion for computers can chart a research interest in the area of computing such that their passion can be met halfway.

The study further revealed that respondents were moderate ($M = 3.15$, $SD = 1.05$) in terms of having experience as respondents in research surveys. There is also, a general uncertainty ($M = 2.5$; $SD = 1.0$) with the statement that they are interested in serving as respondents to surveys. Based on how much exposure respondents have to research and the availability of research to read, understand and be abreast with current information, the study established that respondents are moderately exposed. This also underscores the fact that the majority of respondents are early career researchers. On this background, measuring the number of research publications that respondents have to their academic or intellectual credit revealed their research performance. The study identified that respondents have an average of 10 to 15 publications with finding of a mean of 3.69 ($SD = 1.14$). Finding an average of 10 to 15 publications as the intellectual output of Ghanaian academic researchers supposes somewhat low performance. Dlamini and Snyman (2017) express that in terms of research performance, developing countries in Africa rank lowest. The rationale for the case has been expatiated by Mohammed (2013). According to Mohammed (2013), the research outputs of the majority of African academics and researchers are kept unpublished in departmental offices and institutional libraries, where they collect dust. Dlamini and Snyman (2017), however, contend that to ensure academic promotion, African scholars endeavour to publish their works in globally recognized peer-reviewed journals. The social exchange theory justifies the position of Dlamini and Snyman (2017) that the reward for publishing one's research as an academic exceeds the cost of publishing it. As a condition coming with their jobs, academics need to engage in research to remain academics. This resonates with the popular discourse in the academic space – *publish or perish*. Once academics cannot afford the cost of *perishing*, it becomes imperative that they *publish*. Despite this, the works of many scholars are not

published in journals, especially where article publication charges are too high for scholars to bear (Mohammed, 2013). Like the social exchange theory, where decisions are made based on costs and benefits, rational choice is not economically efficient when one needs to exhaust all one's financial reserves in order not to *perish*. This conforms with Nye's (1978) expression that where costs and rewards are equal, individuals choose alternatives that promise the greatest financial gains for the least financial expenditures. In such a situation where there is no economic gain but publishing means economic loss, one would rather wish to *perish* than *publish*. It is therefore strongly recommended that Ghanaian higher education institutions should establish schemes to support faculty to publish their research in peer-reviewed journals. Higher education institutions should also prioritize local peer-review journals to foster global access to their intellectual output.

4.5 Perceived Worth of Research

Considering the perceived worth of research by respondent academic researchers, the study used a sub-scale made of items in Table 5. There were six variables in all, which had a Cronbach's alpha of 0.765, which also suggests a good internal consistency among variables. The first variable studied the importance and connection between respondents, research and how they teach. A mean of 3.34, which expresses a general position of uncertainty, was found for this variable. The study established a mean of 3.74 (SD = 1.16) for the fact that academic researchers perceived research as an important part of their careers as teachers. To support this, the study has found a mean of 3.33 (SD = 1.14) for the perception of the importance of research as part of the academic profession. The study has it that teachers and researchers have similar goals of educating or informing people (Mean = 3.59; SD = 1.12).

Respondent academic researchers generally were uncertain about the consideration that they base teaching on research that has been conducted in their areas of expertise. Prince *et al.* (2007) hold that emphasis on research productivity in the faculty incentive and reward system is often justified by the claim that research enhances teaching. According to studies by Neumann (1992), Halsey (1992), and Gray (1996), the majority of administrators and faculty members agree that research improves instruction. The literature has mentioned several rather contradictory research, such as those by Marsh and Hattie (2002), Jenkins (2004), and Uz Zaman (2004). The issue, according to Prince *et al.* (2007), is that the two sides discuss opposing ideas. The two propositions under contention are (1) research can support teaching, and (2) research has been demonstrated to support teaching in practice. Proposition 1 is backed by data presented by those who support the claim that research enhances instruction. They emphasize how scholarship may enhance instruction, stressing the importance of evidence in maintaining the currency of course content. The side that supports proposition 2 acknowledges the mutually beneficial nature of research and teaching, but they also point to studies that regularly demonstrate a weaker relationship between the two.

Table 5: Descriptive Statistics of Perceived Worth Sub-Scale Items

Variable	Sample		University		COE	
	M	SD	M	SD	M	SD
I see an important connection between research in my area and how I teach.	3.34	1.12	3.48	0.96	3.13	1.29
Research is a very important part of my career as a teacher.	3.74	1.16	2.83	1.26	2.60	1.07
Research is important to the academic Profession.	3.33	1.14	2.37	1.18	2.28	1.08
Teachers and researchers have similar goals for educating students.	3.59	1.12	2.61	1.09	2.56	1.17
I aim to base my teaching on research that has been done in my field.	3.49	0.93	2.45	0.95	2.55	0.90
I feel connected to research in education.	3.53	0.91	2.50	0.83	2.56	1.02

Source: Fieldwork (2023).

Finally, it was revealed that researchers studied feel they are connected to research in education (Mean = 3.52; SD = 0.91). The mean score observed for university faculty respondents was higher than that found for respondents with college of education affiliation for all variables of the perceived worth sub-scale, which connotes that university researchers had a better appreciation of the worth of research than their college-level participants.

4.6 Statistical Difference in Research at Universities and Colleges of Education

Having discussed the scores for unique variables which made the sub-scales used, the study employed independent samples t-test to explore the statistical differences between research among university-level academic researchers and college-level academic researchers. Considering differences in research, the study compared the means in the scores for the four dimensions of research studied. It has been revealed that all the sub-scales did not violate the assumption of equality of variances as Levene's test of equality of variances found for all the sub-scales was not significant, except for that for practice of research; access to research materials ($F = 0.71$; $p = 0.401$); utilization of research materials ($F = 0.88$; $p = 0.347$), practice of research ($F = 102.13$; $p = 0.00$), and perceived worth of research ($F = 0.31$; $p = 0.576$). As such, the values of the t that correspond with the equal variances assumed have been reported for the differences in access to research materials, utilization of research materials, and perceived worth of research. The t that corresponds with equal variances not assumed has also been reported for the differences in the practice of research.

In terms of the differences in access to research materials, the study observed a significant difference ($t(1173) = -8.611$; $p = 0.00$) between the scores for university affiliate respondents ($M = 3.25$; $SD = 0.92$) and college of education affiliate respondents (Mean = 2.80; $SD = 0.82$). A moderate effect size revealed by an eta-squared statistic of 0.06 supports the case (Mean Difference = -0.449; 95% CI: -0.55 to -0.55). The study, therefore,

rejects the null hypothesis that there is no statistically significant difference between faculty of COEs and universities in terms of access to research materials.

The study found a significant difference ($t(1173) = -8.605$) also in the utilization of research resources by respondents with university affiliation (Mean = 3.14; SD = 0.86) and respondents with college of education affiliation (Mean = 2.69; SD = 0.9). A moderate effect size, which expresses a realistic effect of the difference, has been established in support of an eta squared statistic of 0.06 (Mean difference = -0.447; 95% CI: -0.55 to -0.35). Based on the significant difference established in the utilization of research, there is enough evidence to reject the null hypothesis that there is no statistically significant difference between faculty of COEs and universities in terms of utilizing research materials.

Table 6: Descriptive Statistics of Sub-scales Item

Sub-scale	Institution	M	SD	SEM
Access to research materials	College of Education	2.8	0.82	0.04
	University	3.25	0.92	0.03
Utilization of research materials	College of Education	2.69	0.9	0.04
	University	3.14	0.86	0.03
Practice of and engagement in research	College of Education	2.75	0.7	0.03
	University	3.00	0.47	0.02
Perceived worth of research	College of Education	2.61	0.84	0.04
	University	2.71	0.64	0.02
Research	College of Education	2.72	0.61	0.03
	University	3.03	0.53	0.02

Source: Fieldwork (2023).

A statistically significant difference ($t(774.28) = -6.88$; $p = 0.00$) was also established for the difference in the practice of research between university faculty (M = 3.00; SD = 0.47) and college of education faculty (M = 2.75; SD = 0.7). For this significant difference in the practice of research, a moderate effect size (eta squared statistic = 0.04, Mean difference = -0.25; 95% CI: -0.32 to -0.18), which suggests a realistic difference supports the evidence for rejecting the null hypothesis for the case.

Table 7: Statistical Differences in Research among
 Academic Researchers in COEs and Universities

Service	T-test for equality of means				
	T	df	Sig.	MD.	SED
Access to research materials	-8.61	1173	0.00	-0.45	0.05
Utilization of research materials	-8.61	1173	0.00	-0.45	0.05
Practice of and engagement in research	-6.88	774.28	0.00	-0.25	0.04
Perceived worth of research	-0.54	1768	0.59	-0.02	0.04
Research	-9.02	922.99	0.00	-0.31	0.03

Source: Fieldwork (2023).

In terms of the perceived worth of research, the study retains the null hypothesis. In essence, there is indeed no significant difference between what university faculties (M = 2.71; SD = 0.64) perceive of the worth of research and what college of education faculties (M = 2.61; SD = 0.84) perceive of the worth of research. This is to say that what the two classes of faculty perceive of the worth of research is similar according to the sub-scale used. This was established by finding a $t(1768) = -0.54$; $p\text{-value} = 0.59$; and an eta squared statistic of 0.000 (Mean difference = -0.02; 95% CI: -0.18 to -0.01).

Following the need to produce teachers with the requisite qualities and motivation to help achieve the expected outcomes at the basic school level, colleges of education were reformed in 2018. The reform witnessed the upgrade of colleges of education to degree-awarding institutions. Colleges of education in Ghana now offer 4-year Bachelor of Education (B. Ed) programmes with an emphasis on basic education (T-TEL, 2018; Amadu *et al.*, 2023). Given the perceived worth of the research sub-scale used in this study focused on the relevance or research for instruction, establishing no significant difference here can be attributed to the fact that colleges of education now run 4-year bachelor's programmes as in the case of universities in the country. Future studies should, however, consider establishing the statistical strength of the relationship between the perception of the worth of research for instruction and the programme type and curriculum run by higher educational institutions.

Table 8: Effect Sizes of Statistical Differences

Service	Eta Squared	Effect Size
Access to research materials	0.059	Moderate
Utilization of research materials	0.059	Moderate
Practice of research materials	0.039	Small
Perceived worth of research	0.000	Small
Research	0.065	Moderate

Source: Fieldwork (2023).

For the composite of the sub-scales, the study established the statistical difference in research appreciation by faculty of universities and faculty of colleges of education. As has been presented in Tables 6, 7 and 8, the study found a significant difference ($t(923) = -9.02$; $p = 0.00$) in research appreciation among the faculty of universities (M = 3.03; SD = 0.53) and faculty of colleges of education (M = 2.72; SD = 0.61). At a 95% confidence interval, a mean difference of 0.31 was found with an eta-squared statistic of 0.065, suggesting a moderate effect size for the significant difference. For all, the exact rationale for all the differences observed could not be revealed by the study. I am of the view that all the ways universities differ from colleges of education, including resource endowment, intellectual competence of scholarship, and academic ranks of faculty, could play a role in bringing about these differences. Future studies could build on this study to establish a well-rounded research appreciation by academic staff of higher educational institutions in the country.

5. Conclusions and Recommendations

The study achieved the overall objective of analyzing how the scholarships of Ghanaian universities and colleges of education appreciate academic research. Despite achieving the objective of the study and going further to test hypotheses on the significant difference between universities and colleges of education, some limitations played out in the study. The scope of the study limited the study from arriving at some conclusions which could enhance readers' understanding of how academic faculty appreciate research. To mention, the study did not analyze factors underlying the differences in research appreciation established between faculties of universities and colleges of education.

Based on the findings of the study, the study recommends that there should be concerted efforts by the Ministry of Education (MoE), Transforming Teaching, Education and Learning (T-Tel), Ghana Tertiary Education Commission (GTEC), National Council for Curriculum and Assessment (NACCA), National Accreditation Board (NAB), and management of universities and colleges of education in Ghana Education to bridge the difference in research appreciation between universities and colleges of education. This is not to say that universities should lower their standards to match up with colleges of education. However, efforts should target raising the research standards at colleges of education to match up with that of universities. Suggesting this, the minimum qualification for engagement as a college tutor should be reviewed, where at least a research degree would be considered. The study also recommends that institutions of higher learning in Ghana should prioritize local and international training and collaborations in research where faculty members will get the opportunity to learn from the best. Research should be intensified, and researchers should be rewarded for good work. Stakeholders in higher education in Ghana who have been called here should put up structures to make access to research and information easy. The Ministry of Education should make budgetary allocations to institutions of higher learning targeting easy access to research. Universities and higher educational institutions can emulate international practices of subscribing to educational content such that their affiliate can easily source information. Lastly, higher educational institutions should embark on free research output sprees, where they will make the research of their faculties readily available to whoever is interested. Despite these recommendations being drawn for the Ghanaian case, they can be applied to higher education in other developing countries with similar education systems.

Acknowledgement

I acknowledge Mr. Sender Kyeremeh for analyzing and interpreting the data used for this research and helping me to prepare this publication.

Conflict of Interest Statement

The author declares that no competing financial interests or personal relationships could have appeared to influence the work reported in this paper.

About the Author(s)

Francis Justice Kwesi Agbofa had attended University of Cape Coast in the Central Region of Ghana for his undergraduate and postgraduate programs. He holds a Bachelor of Education (B.Ed.) in Arts, a Master of Education (M.Ed.) in Educational Administration, a Master of Education (M.Ed.) in Teacher Education, a Master of Philosophy (MPhil) in Educational Administration, a Doctor of Education (Ed.D) in Educational Administration, and a Doctor of Philosophy (PhD) in Management. Francis Justice Kwesi Agbofa is affiliated with the Education Department at the Seventh-day Adventist (SDA) College of Education, Asokore-Koforidua in the Eastern Region of Ghana, where he teaches educational courses. He is currently pursuing a second Doctor of Philosophy program in Educational Leadership at University of Education, Winneba, Ghana. He is currently appointed as Academic Planning and Quality Assurance Officer. He has contributed to the body of knowledge on Teacher Education, publishing research articles in peer-reviewed journals.

References

- Agada, J. (2000). Knowledge Seeking Behavior in an Inner-City Community: Assessment of a First-Generation Universal Service Program. In *Proceedings of the ASIS Annual Meeting* (Vol. 37, pp. 149-58).
- Åkerlind, G. S. (2004). A new dimension to understanding university teaching. *Teaching in higher education*, 9(3), 363-375.
- Ali, S., Jan, S., & Amin, I. (2013). Status of open access repositories: a global perspective. *International Journal of Knowledge Management and Practices*, 1(1), 35.
- Amadu, C. D., Fevlo, E. S., & Gato, C. C. (2023). Implementation of learner-centred curriculum in the colleges of education in Ghana: an assessment of chemistry tutors' classroom practices. *European Journal of Education Studies*, 10(2).
- Bartlett, J. E., Kotrlik, J. W. & Higgins, C. C. (2001). Organizational research: Determining appropriate sample size in survey research. *Information technology, learning, and performance journal*, 19(1), 43.
- Björk, B. C. (2017). Gold, green and black open access. *Learned Publishing*, 30(2), 173-175.
- Brew, A. (2001). Conceptions of research: A phenomenographic study. *Studies in higher education*, 26(3), 271-285.
- Cherryholmes, C. H. (1993). Reading research. *Journal of Curriculum Studies*, 25(1), 1-32.
- Cochran, W. G. (1977). *Sampling techniques*. John Wiley & Sons.

- de Vries, B. B. P., van Smeden, M., Rosendaal, F. R., & Groenwold, R. H. (2020). Title, abstract, and keyword searching resulted in poor recovery of articles in systematic reviews of epidemiologic practice. *Journal of Clinical Epidemiology*, *121*, 55-61.
- Dlamini, N. N., & Snyman, M. (2017). Institutional repositories in Africa: obstacles and challenges. *Library Review*, *66*(6/7), 535-548.
- Du, J. T., & Evans, N. (2011). Academic users' information searching on research topics: Characteristics of research tasks and search strategies. *The Journal of Academic Librarianship*, *37*(4), 299-306.
- Fairweather, J. S. (1996). *Faculty work and public trust: Restoring the value of teaching and public service in American academic life*. Longwood Division, Allyn and Bacon, 160 Gould St., Needham Heights, MA 02194-2310.
- Felder, R. M. (1994). The myth of the superhuman professor. *Journal of Engineering Education*, *83*(2), 105-110.
- Gappa, J. M., Austin, A. E., & Trice, A. G. (2007). *Rethinking faculty work: Higher education's strategic imperative*. Jossey-Bass.
- Gray, P. J. (1996). A National Study on the Relative Importance of Research and Undergraduate Teaching at Colleges and Universities, with Executive Summary.
- Halsey, A. H. (1992). *Decline of donnish dominion: The British academic professions in the twentieth century*. Oxford University Press.
- Healey, M. (2005). Linking research and teaching to benefit student learning. *Journal of Geography in Higher Education*, *29*(2), 183-201.
- Homans, G. C. (1961). *Social behavior: Its elementary forms*. Harcourt, Brace.
- Homans, G. C. (1974). *Social Behaviour: Its Elementary Forms*. Rev. ed. New York: Harcourt Brace Jovanovich, Inc.
- Howard, P. J., Gorzycki, M., Desa, G., & Allen, D. D. (2018). Academic reading: Comparing students' and faculty perceptions of its value, practice, and pedagogy. *Journal of College Reading and Learning*, *48*(3), 189-209.
- Howe, L. C., Jachimowicz, J. M., & Menges, J. I. (2021). *Your Job Doesn't Have to Be Your Passion*. Retrieved March 27, 2024, from <https://hbr.org/2021/06/your-job-doesnt-have-to-be-your-passion>
- Huber, M. T. (2006). Disciplines, Pedagogy, and Inquiry-Based Learning about Teaching. *New directions for teaching and learning*, *107*, 69-77.
- Jain, P. (2012). Promoting open access to research in academic libraries. *Library Philosophy and Practice*, *1*.
- Jenkins, A. (2004). *A guide to the research evidence on teaching-research relations*. York: Higher Education Academy.
- Kember, D. (1997). A reconceptualisation of the research into university academics' conceptions of teaching. *Learning and instruction*, *7*(3), 255-275.
- Kendeou, P., Muis, K. R., & Fulton, S. (2011). Reader and text factors in reading comprehension processes. *Journal of Research in Reading*, *34*(4), 365-383.
- Manarin, K., Carey, M., Rathburn, M., & Ryland, G. (2015). *Critical reading in higher education: Academic goals and social engagement*. Indiana University Press.

- Marsh, H. W., & Hattie, J. (2002). The relation between research productivity and teaching effectiveness: Complementary, antagonistic, or independent constructs? *The journal of higher education*, 73(5), 603-641.
- Mohammed, A. (2013). Institutional digital repository: An option for scholarly communication in Nigeria. *International Journal of Education and Research*, 1(6), 1-10.
- Müngen, A. A., & Kaya, M. (2018). Extracting abstract and keywords from context for academic articles. *Social Network Analysis and Mining*, 8, 1-11.
- National Accreditation Board (NAB). (2020). Tertiary education statistics: Annual statistics report 2019. Available at <https://gtec.edu.gh/download/file/TEI%20Statistical%20Report%202019.pdf>.
- Neumann, R. (1992). Perceptions of the teaching-research nexus: A framework for analysis. *Higher Education*, 23(2), 159-171.
- Piwowar, H., Priem, J., Larivière, V., Alperin, J. P., Matthias, L., Norlander, B., ... & Haustein, S. (2018). The state of OA: a large-scale analysis of the prevalence and impact of Open Access articles. *PeerJ*, 6, e4375.
- Pratt, D. D. (1998). *Five perspectives on teaching in adult and higher education*. Krieger Publishing Co., PO Box 9542, Melbourne, FL 32902-9542.
- Prince, M. J., Felder, R. M., & Brent, R. (2007). Does faculty research improve undergraduate teaching? An analysis of existing and potential synergies. *Journal of Engineering Education*, 96(4), 283-294.
- Prosser, M., & Trigwell, K. (1999). Relational Perspectives on Higher Education Teaching and Learning in the Sciences. *Studies in Science Education*, 33(1), 31–60. <https://doi.org/10.1080/03057269908560135>
- Ramsden, P., & Moses, I. (1992). Associations between research and teaching in Australian higher education. *Higher Education*, 23(3), 273-295.
- Rugarcia, A. (1991). The Link between Teaching and Research: Myth or Possibility? *Engineering Education*, 81(1), 20-22.
- Samuelowicz, K., & Bain, J. D. (2001). Revisiting academics' beliefs about teaching and learning. *Higher education*, 41, 299-325.
- Schimmer, R., Geschuhn, K. K., & Vogler, A. (2015). Disrupting the subscription journals' business model for the necessary large-scale transformation to open access.
- Sheehy, Meghan Kilpatrick (2016). A Quantitative Analysis of the Relationship Between K–12 Music Educators and Collegiate Music Education Researchers and Instructors: Is There a Disconnect?. Dissertations. 349. <https://aquila.usm.edu/dissertations/349>
- Smith, A. C., Merz, L., Borden, J. B., Gulick, C. K., Kshirsagar, A. R., & Bruna, E. M. (2021). Assessing the effect of article processing charges on the geographic diversity of authors using Elsevier's "Mirror Journal" system. *Quantitative Science Studies*, 2(4), 1123-1143.
- Smith, E. T. (2003). Changes in faculty reading behaviours: The impact of electronic journals on the University of Georgia. *The Journal of Academic Librarianship*, 29(3), 162-168.

- T-TEL. (2018). *Endline survey report: Phase 1*. Accra: T-TEL.
- uz Zaman, M. Q. (2004). *Review of the academic evidence on the relationship between teaching and research in higher education* (pp. 1-122). London: Department for Education and Skills.
- Van Noorden, R. (2013). The true cost of science publishing. *Nature*, 495(7442), 426-429.
- Zhang, L., Wei, Y., Huang, Y., & Sivertsen, G. (2022). Should open access lead to closed research? The trends towards paying to perform research. *Scientometrics*, 127(12), 7653-7679.

Creative Commons licensing terms

Author(s) will retain the copyright of their published articles agreeing that a Creative Commons Attribution 4.0 International License (CC BY 4.0) terms will be applied to their work. Under the terms of this license, no permission is required from the author(s) or publisher for members of the community to copy, distribute, transmit, or adapt the article content, providing proper, prominent, and unambiguous attribution to the authors in a manner that makes clear that the materials are being reused under permission of a Creative Commons License. Views, opinions, and conclusions expressed in this research article are the views, opinions, and conclusions of the author(s). Open Access Publishing Group and the European Journal of Education Studies shall not be responsible or answerable for any loss, damage, or liability caused by/arising out of conflicts of interest, copyright violations, and inappropriate or inaccurate use of any kind of content related or integrated into the research work. All the published works meet the Open Access Publishing requirements and can be freely accessed, shared, modified, distributed, and used for educational, commercial, and non-commercial purposes under a [Creative Commons Attribution 4.0 International License \(CC BY 4.0\)](https://creativecommons.org/licenses/by/4.0/).