Management Students' Research Experiences in the University through the Lenses of the Management Curriculum

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Abstract. Research experiences of the university student plays a critical role in the holistic development of such students. Therefore, the Management curriculum can never be taken for granted in augmenting the research experiences of Management Education students in higher education. Using the sequential explanatory research design and by the adoption of the stratified proportionate sampling technique, 361 Management Education students across all levels from two public universities in Ghana were involved in the study. It was found out that regarding students' research experiences, a statistically significant difference exists among the students. However, the difference is obvious between undergraduates and postgraduate students, but not among the post-graduate students including research masters, non-research and PhD students. The PhD students' research experiences did not necessarily differ from the M.Phil students due to their busy schedules. Therefore, time for research exposure activities such as conferences, workshops and seminars are scarce that inhibits the amount of research exposure given to students as part of acquiring research experiences in the university. Conversely, the exuberance level on the part of research masters coupled with the enthusiasm to complete their thesis on time compel them to attend all programmes intended to beef-up and enhance their research skills. It is, however, recommended that the university should create the enabling research environment for all students regardless of their level and programme, as well as, faculty in order to instil research culture in them in order to augment their research experiences.

Keywords: management curriculum, management education, research experience, research culture, research-based, research-teaching nexus

Introduction

Whereas seeing students as change agents is relatively new, students have engaged in disciplinary research-based learning for much longer (Fung, 2016; Healey & Jenkins, 2009). Students and staff collaborating in research, particularly at the undergraduate level, is well established and recognised as a powerful learning model where both students and staff benefit as they work together toward knowledge creation. Research-based education originated as part of educational innovations at Massachusetts Institute of Technology in the United States and was expanded with support from the National Science Foundation. These efforts focused on recruiting talented and well-nurtured students to join or lead research activities (Brew, 2010). A parallel movement has since developed in many universities to make undergraduate research available to all students (Healey & Jenkins, 2009). It is important to emphatically state that while some advocates support students' research experiences integrated into the curriculum as a precursor to enriching students' learning experiences in higher education, others perceive it as a distortion of students learning outcomes (Fung, 2016).

However, the connotation of 'student as producers of knowledge' and 'student as partners of the knowledge creation process' has been applied to these practices only recently

(Neary, 2014; Healey et al., 2014). In the same vein that disciplinary traditions and norms inform the ways that teaching and research are linked (Healey, 2005), assumptions about realms of responsibility and the roles of students and staff are informed by conventions over the years. Student–staff partnerships challenge these traditions. They link realms that have traditionally been the purview of one or another constituency and blur the boundaries of roles that have traditionally been clearly delineated and defined. Such linking and blurring is manifest in one of the most powerful components of both research-based education and student–staff partnership: an insistence on valuing and acting on multiple perspectives. Research-based education that embraces partnership principles of respect, reciprocity and shared responsibility not only positions students alongside staff as legitimate producers of knowledge, it contributes to a culture shift that moves institutions toward a more collaborative mode of operation.

Research-based education that embraces partnership principles takes another step toward transforming universities into egalitarian learning communities. It is in view of these issues that the following research questions and hypothesis are formulated to guide the study. Therefore, this study seeks to examine how Management students experience research as part of the Management curriculum in the university. In addition, the hypothesis is stated as:

H_0: There is no statistically significant difference between Management students' research experience of the Management curriculum across their levels of study (undergraduate, research masters, non-research masters and PhD)

H_1: There is a statistically significant difference between Management students' research experience of the Management curriculum across their levels of study (undergraduate, research masters, non-research masters and PhD)

Literature Review

The literature further reveals that research knowledge transfer is more problematic at undergraduate compared to postgraduate (Horta, Dautel, & Veloso, 2012). Further difficulties in feeding research into undergraduate teaching come from modular systems, dynamism of research and constraints of syllabi (McLernon & Hughes, 2003). Thus, the study specifically explored the undergraduate level while expanding to postgraduate level where appropriate. Painting a more complex picture, Robertson and Bond (2001) ended up with the five different experiences of the relationship between the two activities. This includes the experience of teaching and research as symbiotic activities in a learning community between academics and students, supported for example by Brew (2010); the experience of teaching being a means of transmitting new research findings (research-led teaching); and the experience that teachers demonstrate and facilitate inquiry-based learning (research-based teaching). In contrast, they further reveal some less visible experiences by academics in contradiction to the prominent ideal: the experience that research and teaching are mutually incompatible, and the experience of no or little connection between research and teaching at undergraduate level, earlier reported in meta-analyses by Hattie and Marsh (1996).

Management Curriculum and Management Students' Research Experiences

The features of curriculum design within the context of Management Education are just indicative of many possibilities and choices. Choices made are likely to be affected by what have been described as the 'signature pedagogies' found within the social sciences realm (Fung, 2016) of the given discipline such as Management Education. Decisions about curriculum design will also depend on the length and level of the degree programme including the Bachelors, Masters and even PhD. It is important to indicate that these differ most obviously between undergraduate and postgraduate awards, especially in the context of Business Education. For undergraduate programmes, which may be from four to six years in

duration, there are various creative possibilities in terms of the use of mandatory and optional modules, and how to map content, learning activities and assessments not only across a given year of study, but also across the years (Brew, 2010).

For taught postgraduate programmes, there will be fewer design options available but still perhaps more flexibility than some institutions and departments have taken up (Neary, 2014). How might a Masters' degree become more effectively 'connected'? In the UK, a Masters programme is typically worth 180 credits for Business-related programmes. These are often made up of 120 learning credits, divided into taught modules, which often include some options to be made by students, followed by 60 credits allocated to an independent research project (Healey & Jenkins, 2009). Because postgraduate programmes may only last for one year, there is particular benefit in designing the curriculum very carefully to make sure that students negotiate the transition into postgraduate study quickly and become fully prepared to undertake the research study needed in the final year phase. This preparation often takes the form of a designated module about research, for example introducing methodologies, methods and ethics, and/or embedding aspects of these topics into the wider module choices. So, for instance, several authors have indicated, research could be embedded into teaching in two major ways including: the structure of the curriculum as well as disciplinary-specific strategies to consciously integrate (Fung, 2016).

As with undergraduate programmes, it may be useful and possible to create a linear module that lasts the full length of the period of study, for which students experience a combination of peer and tutor support. Such a module can both introduce approaches to research and support the student through their choices of research project. It can be facilitated by inviting students to collate and curate their best work, including their research dissertation, and to present it as a whole. Similar functions can be carried out in an academic tutor group, which can offer some individualised support and guidance as well as challenging students in groups to deepen their levels of overall understanding and extend their intellectual and practical skills (Healey & Jenkins, 2009). The number of students in a cohort and ratio of students to teachers will help determine what is practical.

A great deal has been said and written about 'students' research experiences' in recent years, much of it conflated with ideas of 'customers' experiences' rather than about how students encounter learning and enquiry as part of their wider lived experience (Neary, 2014). The second dimension of the Management curriculum framework, 'A throughline of research activity is built into each programme', directs our attention not only to the overall shape and structure of the whole programme of study and the impact of its design upon students' learning but also to the extent to which they experience a coherent developmental journey of discovery that is meaningful to them. If we see education as a form of moving towards a new picture of oneself through critical dialogue with others, it is inherently about developing one's own identity, voice and story.

Methods

Research Design

The sequential explanatory mixed method research design was adopted for this study in order to further provide a comprehensive elaboration on the research experiences of Management Education students (Cresswell, 2013). It offered the researcher the opportunity to offer further clarifications to the quantitative results by probing the participants to unravel the issues beyond the numbers.

Population

The population for this study comprises all Management Education students (undergraduates, graduate students and post graduate students) of two Public Universities in Ghana. In all, 361 Management Education students across all levels from two public universities in Ghana were involved in the study. Proportionately, regarding the students' population, 217 respondents were selected from the population of University A, while 144 are selected from University B (Krejcie & Morgan, 1970).

Sample and Sampling Technique

Based on the Krejcie and Morgan (1970) sampling table, a sample of 361 Management Education students were selected using the stratified proportionate technique to participate in the study. Since the students' population was made up of different categories of students across all levels (undergraduate, masters and Ph.D) and these category were selected from these two universities, to ensure fair representation of the population, the selection was done proportionately according to the number of students in each category. The proportionate stratified sampling technique was used to select the Management Education students so as to ensure a fair representative selection and was subsequently climaxed by the simple random lottery technique (Creswell, 2013).

Research Instruments

Self-developed questionnaire was used to elicit information from the students. To ensure a high level of reliability of the instrument, it was designed to conform to literature, and aspect of it was adapted from reliable scholars to ensure high integrity. The development of the instrument was informed by literature subjected to peer review and enriched with pilot testing.

Validity and Reliability of Instruments

To ensure the face validity of the items on the questionnaire, the items were strictly crafted to conform to the literature. In order to ensure content validity, the questionnaires were handed over to experts and other colleagues who went through and offered their suggestions. To ensure the construct validity of the self-developed questionnaire, a principal component analysis (PCA) was conducted. An oblique, specifically, *promax rotation* was used, where the eigenvalue-greater-than-one rule was used to determine an appropriate number of factors to retain. Thus, only factors with an eigenvalue of 1.0 or more were retained for further investigation (Kaiser, 1958).

To clarify further, the eigenvalue of a factor represents the amount of the total variance explained by that factor. The least Kaiser-Meyer-Olkin measure of sampling adequacy was .64, which is acceptable. Bartlett's Test of Sphericity indicates that the correlations between variables are different enough from zero, $p < .001$. Several factors emerged, which cumulatively explained an average amount of 70% of the variance measured by the items.

Data Collection Procedures

An ethical clearance was given by the Ethical Review Board of the College of Education Studies, University of Cape Coast, after the proposal was submitted. After the ethical clearance was granted, an introductory letter was obtained from the Department of Business and Social Sciences Education, University of Cape Coast. The introductory letter was presented to the various Registrars of the Universities to seek their permission in order to administer the questionnaire, as well as, conduct the interview. This was necessary to ensure that students were pre-informed about the data collection. A follow-up was done to arrange for time and date which were convenient for the data to be collected and an opportunity to

explain to the respondents what the study sought to achieve and the need for the study. The date and time were arranged and data collection commenced. The students responded to the survey in their respective lecture theatres.

Based on the consent granted by the Registrars of the various universities, the questionnaires were distributed to the students to solicit their responses regarding the research-teaching nexus. The survey lasted for an average period of 30 minutes per respondent In all, six weeks was used to collect the data.

The respondents were told that they were not required to provide names or index numbers. The questionnaires were collected in a random manner such that responses provided could not be traced to any specific individual. This ensured anonymity (Koshy, 2010). We further sought the consent of the participants by signing the consent declaration section of the questionnaire.

Data Processing and Analysis

The data gathered was checked one after the other to ensure its completeness. Respondents who did not respond to more than 10% of the items on the questionnaire were eliminated (Koshy, 2010). The questionnaires were then numbered from one to the last number based on each category of respondents. The data was coded and entered into the Statistical Product for Service Solution (SPSS, version 23) computer software. The data was screened for entry errors and outliers. Inferential analysis was done using a confidence interval of 95% and an alpha level of .05. For inferential analysis, the researcher checked for the normality assumptions together with other significant assumptions depending on the type of statistical analysis.

In testing for the normality, multiple indicators were used since only one could not be relied on. The Shapiro-Wilk test did not provide enough evidence, an inspection of the graphs was necessary. In some cases, the mean and the median were also compared. This was necessary because Pallant (2010) argues that data with large samples are likely to yield a significant result using the Shapiro-Wilk test. After testing for statistical significance, the practical significance (effect sizes) was also computed to find out the magnitude of the differences.

After a thorough check, the closed-ended questionnaire items were analysed statistically using descriptive statistics (i.e. frequency counts, percentages, means, and standard deviations) and inferential statistics (ANOVA with a follow-up by Tukey's Honest Significant Difference (HSD)) was also used to examine statistical effects and differences between and among variables. The .05 was used as the criterion for establishing statistical significance for all the inferential statistical procedures in the study. Effect sizes were calculated to establish the practical significance of the results that showed statistical significance to determine the extent of the effect of the independent variable on the dependent variable.

Results

Students' Demographics

Table 1. Gender of students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	198	54.8	54.8	54.8
	Female	163	45.2	45.2	100.0
	Total	361	100.0	100.0	

Source: Field Data (2020)

From Table 1, in terms of sex of students, more than a half (n = 198, 54.8%) of the students who partook in the study were males, while lesser than a half (n = 163, 45.2%) of the students were females. These numbers reflected the number of students in terms of gender who are interested in Management programmes as shown in prior studies. Some of their findings were that more male students are interested in reading Management programmes relative to their female counterparts who preferred other subject disciplines other than Management. This might have been accounted for by the several complex calculations and diagrams that characterise Management programmes.

Testing of Hypothesis

There is no statistically significant difference between Management students' research experience of the Management curriculum across their levels of study (undergraduate, research masters, non-research masters and PhD).

A one-way analysis of variance (ANOVA) was conducted to find out whether differences exist in Management students' research experience across levels of tertiary education. In other words, the analysis was done to examine how students' research experience is influenced by their level of studies. Four levels (Undergraduates, Research masters, Non-Research masters and Doctoral students) were involved. The dependent variable was students' research experience, which is continuous. It is important to establish here that students' research experience is the composite of all the activities that gives the student research exposure, hence, conceptualised as one variable. As a rule of thumb, for one-way ANOVA test to be conducted, the data needs to meet the normality assumption and thus, Shapiro-Wilk test was conducted to test for the normality of the data. A visual examination of the normality check indicated that the data was normal.

Table 2. Test of homogeneity of variances

Levene Statistic	df1	df2	Sig.
3.04	3	363	.029

Note: *Significant at .05 level

The finding from the homogeneity of variance test (p=.029) shows that the data violated the assumption of test for homogeneity of variance. This is evident as the p-value for the test was lesser (p>.05) than the level of significance and consequently, was significant. This suggests that unequal variances are assumed. Since the assumptions underlying the use of one-way ANOVA has not been satisfied, the actual test could not be conducted using one-way ANOVA. However, the *Welch Test* was the appropriate test adopted to find out whether differences exist in students' research experience across levels of tertiary education.

Table 3. Robust tests of equality of means

	Statistic[a]	df1	df2	Sig.
Welch	14.87	3	93.71	.000
Brown-Forsythe	16.89	3	174.53	.000
a. Asymptotically F distributed.				

Note: *Significant at .05 level

Results from the Robust Tests of Equality of Means in Table 3 revealed that a statistically significant differences exist in the mean scores across the four levels of tertiary education for the students [df (3, 93.71) =.000, p<.05] with regards to their research experience. Table 4 sets out the descriptive statistics of Management students' experience.

Table 4. Management students' research experience across level of study

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Undergraduate	209	2.73	2.53	.17	2.39	3.08
Research Masters	61	5.03	3.13	.39	4.24	5.82
Non-Research Masters	64	3.65	2.18	.27	3.10	4.19
PhD	27	4.93	2.28	.43	4.05	5.81
Total	361	3.46	2.73	.14	3.18	3.74

Source: Field Data (2020)

The descriptive statistics presented in Table 4 only gave the mean values and standard deviations of the scores. Even though, differences exist in the mean scores across the levels: Undergraduates (*M*=2.73 *SD*=2.53); Research Masters (*M*=5.03 *SD*=3.13); Non-Research Masters (*M*=3.65 *SD*=2.18) and PhD (*M*=4.93 *SD*=2.28). Just by looking at the mean scores, the results fail to tell whether the observed differences among the four levels are significant or not. Therefore, leading to contentious questions such as: Are the difference in the mean scores among the four levels statistically significant or due to chance? Where actually does the differences lie?. In an effort to address these contentious questions, a multiple comparison analysis (post-hoc tests) was conducted. Therefore, the Tukey's Honest Significant Difference (HSD) follow-up procedure was used for the multiple comparisons as displayed by Table 5.

Table 5. Post hoc: multiple comparisons (Tukey HSD)- Games-Howell

	(I) level	(J) level	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Games-Howell	Undergraduate	research masters	-2.30*	.44	.000	-3.43	-1.17
		non-research masters	-.91*	.32	.027	-1.75	-.08
		PhD	-2.19*	.46	.000	-3.44	-.95
	research masters	undergraduate	2.30*	.43	.000	1.17	3.43
		non-research masters	1.39*	.48	.023	.14	2.63
		PhD	.10	.58	.998	-1.43	1.64
	non-research masters	undergraduate	.91*	.32	.027	.08	1.75
		research masters	-1.39*	.48	.023	-2.63	-.14
		PhD	-1.28	.51	.068	-2.63	.068
	PhD	undergraduate	2.19*	.46	.000	.95	3.44
		research masters	-.10	.58	.998	-1.64	1.43
		non-research masters	1.28	.51	.068	-.07	2.63

*. The mean difference is significant at the 0.05 level.

Source: Field Data (2020)

From the post-hoc analysis, it is not surprising to find out that there is a statistically significant differences among the students' level regarding their research experiences at the university. The category of students with the least research experience are undergraduates lagging behind with a mean difference with the other category of students by Research Master (-2.30); Non-research Masters (-.91) and PhD (-2.19). All these mean differences were statistically significant, $p < .001$ for all categories. Comparing research masters and non-research masters' students, a statistically significant difference occurred in their research

experience (p=.023). while though, the mean value of PhD students outweighs that of the non-research masters' students, the difference was not statistically significant (p=.068). PhD students, compared to Undergraduates level of research experience was also statistically significant (p <.001).

Based on the results, research masters had the highest mean value (5.03), implying that in terms of research experiences and exposure, they have the highest level of research experience relative to the other students, including PhD students. A point of interest in the findings is that though, the mean value for research masters (M=5.03, SD=3.13) was higher than that of the PhD students (M=4.93, SD=2.28), however, the difference was not statistically significant (p=.998). Considering the mean scores that revealed that research masters' students are more exposed to research than PhD students could be attributed to complacency on the part of the PhD students who appears to believe they have had enough of research, especially, through conferences, workshops and seminars, and are not likely to attend. Coupled with complacency could be the busy schedules of these PhD students. Most of the PhD students are either faculty members of their respective universities or employees of other jurisdictions. Therefore, time for research exposure activities such as conferences, workshops and seminars are scarce that inhibits them from adding on to their research experiences. Conversely, the exuberance level on the part of research masters compel them to attend all programmes intended to beef-up and enhance their research skills. In their quest to learn, they devote a considerable length of time for attending research programmes with the view to enhancing their research skills since they believe their self-efficacy in conducting research is relatively low compared to their PhD counterparts.

Qualitative Results

An interview was also conducted to solicit for the views of Management Education students regarding their research experiences in the university. Their responses were therefore, organised into the following themes: *Encouragement to participate, Scarcity of time resource, Classroom encounter research experiences, as well as, Expected experiences from faculty.*

Encouragement to participate

One of our lecturers always encourages us to attend research seminars, workshops and conferences, but won't even hear of some, unless international conferences that are not easy to attend. Rarely, do you hear of local seminars and conferences. Except for the ones organised by GRASAG twice every academic year, which I believe are not enough for a postgraduate student, especially, within the context of Management Education. (**RM 2)**

Scarcity of time resource

When I get time, I usually attend some research seminars and conferences, but for want of time due to busy schedules: job and family matters. For reading of journal articles, I read them extensively to shape my doctoral thesis and to be updated in my discipline. I also consult my supervisors anytime I need a document related to research. Last three years, I partnered with my M.Phil supervisor in Management Education to come out with an article, and we published together. (**PhD 1**)

For me, because of busy work schedules, I don't get time to attend conferences and seminars. What I do is I normally read research books to acquaint myself with research issues I had forgotten. At times, I call some of my colleagues and lecturers to clarify some pertinent issues on research and statistics. **(PHD 2)**

Classroom encounter research experiences

I experienced research through the research methods we did in level 300 and the project work we are doing. I also read some research papers sometimes. At times, I wish I could participate in some research activity, but I don't get the opportunity. **(UGD 1)**

Expected experiences from faculty

We expect our lecturers to sometimes bring in new perspectives by inviting resource persons such as research fellows and guest lecturers to share their expertise with us. But throughout my studies up till now, I have not had such an exposure yet, neither do my colleagues. I also expect lecturers to frequently use their personal research to make illustrations, but they don't. **(RM 1)**

Discussion

The study revealed that a statistically significant differences exist among the categories of students in terms of their research experiences. Thus, the difference is obvious between undergraduates and postgraduate students, but not among the post-graduate students (research masters, non-research and PhD students). In more specific terms, when a comparison was made between research masters and non-research masters students, a statistically significant difference was identified in terms of their research experiences. Although, the mean value of PhD students outweighs that of the non-research masters' students, the difference was not statistically significant. PhD students, compared to Undergraduates level of research experience is also statistically significant. These findings are not really surprising except for the research experiences between M.Phil students and PhD students. It is not surprising because, Neary (2014) asserted that the higher your level within the academic landscape, the likelihood that your research experiences will be enriched.

There are several ways through which students acquire research experiences. These include attending research conferences and seminars, participating in research projects, reading research papers and other research-related activities. In the light of the above findings, Horta, Dautel, and Veloso (2012) examined the link and research experiences of students. They found a weaker research experiences at the undergraduate level and a much more stronger experiences for the postgraduate students. This goes a long way to confirm Neary's (2014) assertion that the higher your level within the academic landscape, the likelihood that your research experiences will be enriched. Therefore, juxtaposing the findings within the context of scholar's perspectives about the research experiences of students, I can say that postgraduate students are likely to have more research experiences than the undergraduate students.

Furthermore, a positive impact on research production was found when engaging in research activities with both undergraduate and graduate students by emphasising pedagogical approaches where students are actively engaged in the research process. The study shows how the research-teaching nexus is dependent on these pedagogical approaches as informed by the level of study by all manner of students. Similar results regarding publications have also been reported earlier for the PhD level education in the Norwegian context. A stronger nexus is likely to be experienced for research-oriented programmes (Healey & Jenkins, 2009).

When discussing the issue of students' experiences of research in the university, one must not lose sight of the pedagogies and methods adopted in the teaching and learning process. The method used by a faculty member is likely to inform whether students would be exposed to research or not. In support of this Deem and Lucas (2006) intimated in their study that the methods adopted in the teaching of research methods to educational practitioners has practical implications for the development of connections between the two forms of teaching,

either at school and in higher education and research, and further to engage students in joint learning experiences with their tutors. Thus, this contributes directly to the development of a research-based teacher professional. And that all students know about the transmission model of teaching research methods (research-oriented/-led) and most students also had an idea of cultural and learning models of teaching research methods; some students recognized a symbiosis between teaching and research (research-based teaching).

These results are consistent with the study of Brew (2010) which indicated that teacher–researchers developing pedagogical case studies use class room debate to develop their thinking. Naturally, such links depend to a large degree on the type of student body concerned (Taylor, 2007). Discussion with graduate or MBA students differ from those with first year students, who often lack the experience required to understand the scope of discussions and the possibility of transforming the results of discussions into actionable knowledge, the emphasis being ‘on discovery and invention.

The literature further reveals that this research knowledge transfer is more problematic at undergraduate compared to postgraduate (McLernon & Hughes, 2003; Jenkins, 2000; Lindsay et al, 2002). Further difficulties in feeding research into undergraduate teaching come from modular systems, dynamism of research and constraints of syllabi (McLernon & Hughes, 2003). Thus, the study specifically explored the undergraduate level while expanding to postgraduate level where appropriate.

Painting a more complex picture, Robertson and Bond (2001) end up with the five different experiences of the relationship between the two activities. This includes the experience of teaching and research as symbiotic activities in a learning community between academics and students, supported for example by Brew (2010); the experience of teaching being a means of transmitting new research findings (research-led teaching); and the experience that teachers demonstrate and facilitate inquiry-based learning (research-based teaching). In contrast, they further reveal some less visible experiences by academics in contradiction to the prominent ideal: the experience that research and teaching are mutually incompatible, and the experience of no or little connection between research and teaching at undergraduate level, earlier reported in meta-analyses by Hattie and Marsh (1996) and uz Zaman (2004).

Conclusion

Based on the findings, research postgraduate Management students are more exposed in terms of research experience than their non-research students’ counterpart (non-research masters and undergraduates). This is as a result of the inherent nature of their programme of study. PhD and M.Phil programmes are research-intensive, hence, a high level of research exposure such as attending research seminars, embarking on research critique and attending conferences as well as publishing articles. Considering the mean scores that revealed that research masters’ students are more exposed to research than PhD students could be attributed to complacency on the part of the PhD students who appears to believe they have had enough of research, especially, through conferences, workshops and seminars, and are not likely to attend. Coupled with complacency could be the busy schedules of these PhD students. Most of the PhD students are either faculty members of their respective universities or employees of other jurisdictions. Therefore, time for research exposure activities such as conferences, workshops and seminars are scarce that inhibits them from building their capacity to acquire research experiences. Conversely, the exuberance level on the part of research master students coupled with the high level of zeal to complete their thesis on time compel them to attend all programmes intended to beef-up and enhance their research skills. In their quest to learn, they devote a considerable length of time for attending research

programmes with the view to enhancing their research skills since they believe their self-efficacy in conducting research is relatively low compared to their PhD counterparts.

Implication for Policy and Practice

1. The university should create the enabling research environment for all students regardless of their level, as well as, faculty in order to instil research culture in them. This would further enhance their skills, knowledge, and abilities in research, thereby, facilitating its integration into teaching to promote lifelong learning and other inherent benefits of the research-teaching nexus.
2. They should also make research programmes flexible enough to cater for each category of student or faculty in order to create equal opportunity for all to benefit.
3. The university should create the enabling environment to enable all manner of students, regardless of their level of study, to benefit from research-related activities with the view to enhancing the research-teaching nexus. This could be facilitated through research-related events such as research conferences, seminars, exhibitions and encourage their students to attend to enrich their research experience and exposure to serve as preparatory grounds to achieve the research-teaching nexus goals.
4. Research should also be made an integral part of the curriculum and assessment processes in the university. This will encourage students to take active part in all research-related activities in the university. Thereby, enriching their research experiences.

References

Brew, A. (2010). Imperatives and challenges in integrating teaching and research. *Higher Education Research & Development, 29*(2), 139–150.

Cresswell, J. W. (2013). *Steps in conducting a scholarly mixed methods study.* Digital-Commons, University of Nebraska-Lincoln.

Deem, R., & Lucas, L. (2006). Learning about research: Exploring the learning and teaching/research relationship amongst educational practitioners studying in higher education. *Teaching in Higher Education, 11*(1), 1-18.

Fung, D. (2016). Engaging students with research through a Management curriculum: an innovative institutional approach. *CUR Quarterly*, *37*(2), 30–5.

Hattie, J. & Marsh, H. (1996). The relationship between research and teaching: a meta-analysis. *Review of Educational Research, 66*, 507-542.

Healey, M. & Jenkins A. (2009). *Developing undergraduate research and inquiry*. Heslington, York: The Higher Education Academy, https://www.heacademy.ac.uk/system/files/resources/developing_research-based_curricula_in_cbhe_14.pdf

Healey, M. (2005). Linking research and teaching to benefit student learning. *Journal of Geography in Higher Education, 29*(2), 183-201.

Healey, M., Jenkins, A. & Lea, J. (2014). *Developing research-based curricula in college-based higher education*. Heslington, York: The Higher Education Academy, https://www.heacademy.ac.uk/system/files/resources/engagement_through_partnership.pdf.

Horta, H., Dautel, V., & Veloso, F. (2012). An output perspective on the teaching–research nexus: An analysis focusing on the United States higher education system. *Studies in Higher Education, 37*(2), 171–187.

Kaiser, H. F. (1958). The varimax criterion for analytic rotation in factor analysis. *Psychometrika*, *23*(3), 187-200.

Koshy, V. (2010). *Action research for improving educational practice: A step-by-step guide*. Sage Publications Ltd.

Marsh, H. W. (1996). Positive and negative global self-esteem: A substantively meaningful distinction or artifactors? *Journal of personality and social psychology*, *70*(4), 810.

Marsh, H. W., & Hattie, J. (2002). The relation between research productivity and teaching effectiveness. *Journal of Higher Education, 73*(5), 603–641.

Pallant, J. (2010). *SPSS Survival Manual.* New York Open University Press.

Taylor, J. (2007). The teaching research nexus: A model for institutional management. *Higher Education, 54*, 867–884.