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Research Training Needs Analysis of Higher Educational Institutions

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Abstract

The need for research capacity and capability building will provide faculty development opportunities to inspire researchers. By identifying the research process areas where researchers are capable and not capable of including their needs, the institution would be able to formulate policies and implement strategies to help researchers equipped and motivated to conduct research. This study used both descriptive quantitative and qualitative research design to answer the extent of the research capability and needs of the respondents using a formulated and validated questionnaire. Triangulation as to the results were validated during the interview. As respondents, the study included 137 teaching and 90 non-teaching staff for Academic Year 2021-2022. The gathered data were treated using IBM-SPSS and analyzed based on the enumerated objectives of the study. The findings of the study showed that the higher the educational attainment of the researchers, the higher the number of research engagements. Researchers are capable but need to improve using statistical tools, including research publication, since they were rated slightly capable. On the other hand, non-researchers are generally slightly capable of the five phases of the research process. Similar results were noted regarding the extent of training needed, as both researchers and non-researchers believed they needed more training in all the research phases. Overall, the employees were capable in the research processes but not that very capable. Training is needed in all phases of the research process, especially in statistical tools and research publications. This data would allow the institution to identify and create programs that would strengthen the researcher's capabilities.

Keywords: Research training, need analysis, research capacity, research development

Introduction

It is crucial for the organization to assess the needs of its stakeholders to align programs, particularly in capability building as education progresses, technology advancement, and updating programs and processes. An approach to public investment in capacity-building initiatives that embraces a vision of collaborative research-rich professional practice and professional development along all career stages and commits to sustaining more comprehensive understandings of research culture in organizations, matched by appropriate recognition mechanisms (Oancea et al., 2021).

Some developing countries strategize to enhance university performance better through research capacity building. A study of four universities in Vietnam states that research-intensive universities' policies are not powerful enough to encourage academics to research to the best of their potential. Instead, human resource management capacity building should employ a stronger remuneration package, applying explicit indicators in assessing the lecturer's research performance and building a comprehensive staff development agenda for research team building (Nguyen, 2016). Similar studies have also been conducted in Indonesia, where long-term research needs and objectives have to be adequately analyzed to support structured training systems with all other supporting training devices so that the goal of improving research competence can be achieved (Leonard & Wibawa, 2020).

In the Philippines, several studies have found that there is research competency for teachers; however, a need for research capability enforcement, specifically in developing communication skills methods, particularly in developing a research design, constructing questionnaires, and statistical tools or treatment, is lacking. There is also a need to align research capability programs provided by the respective schools' research office in improving the competency of teachers based on the following: data management, problem conceptualization, appropriate use of data collection tools, application of technology, and research ethics provided by the schools (Cortes, 2019).

The research training needs related to capability building were cited in some of the studies in the university. Estacio et al. (2020) mentioned that one professional and learning needs are research competencies to promote enhanced work performance and satisfaction. Providing faculty development opportunities inspires teachers, mostly females, to perform at their best (Leon et al., 2020). In another study conducted in the graduate program, the faculty showed an expert level of knowledge regarding a part of research and a highly capable level of capability in accomplishing the different research activities. However, a study found that respondents have a lower mean and design and methodology, particularly statistical knowledge and related ability (Dapiawen, 2017). In a recent study by Dapiawen (2019) in a tertiary research capability program related to different research activities, the teachers are adequately capable of accomplishing different research activities, handling statistical knowledge, and relating to instruments. However, teachers are unfamiliar with the existing research capability program resources.

As universities envision and gear toward globalization, research has always been part of the criteria for the internationalization and accreditation of the programs. Thus, it is important to understand the capability and needs of teachers and staff. During accreditation, the need for university faculty and staff to have research has been greatly emphasized. It is one of the indicators of faculty and staff professional competence and skills, especially for teachers/faculty of the university who directly communicate and impact the student's learning. The teachers' acquired knowledge and skills would be a foundation for the students to be competent in the labor market. The Commission on Higher Education Order 52 Series of 2016 declared that a university is not only generator of knowledge, an educator of young minds, and a transmitter of culture but also a major agent of economic growth, a research laboratory, and a mechanism through which the nation builds its human capital to enable it to participate in the global economy actively. (Abouelenein, 2016) points out that determining professional needs is essential for any successful training process. On the other hand, the purpose of training is to ensure the effectiveness of the training program is well managed in the right types of training that the employees, employers, and organization need (Mazhisham et al., 2018).

Furthermore, training needs assessment or analysis is made out of the words; training (any activities to gain acquire knowledge, skills, or change attitude), needs (that there is a gap between the current and the desired or required standard), and assessment or analysis (the process of determining the needs and placing them in priority order). Studies have shown that training investment in an academic or organizational setting can improve performance. If it is implemented to match and complement the needs and objectives of the organization, it can also improve overall efficiency and effectiveness (Sönmez, 2019).

Training Needs analysis or assessment is a process of identifying the need for training and how to fill the gap. The gap between the status quo and desired status may indicate problems that can be translated into a training need. (Gupta & Lee, 2001) wrote the practical guide to needs assessment and presented a formula for the discrepancy or gap between the ideal and actual. The model was also seconded in the study made by (Kristina, 2017), which identifies the training required to overcome worker competence in innovative performance.

Training Needs = Desired Capability – Current Capability

The research training needs analysis would be able to identify and bridge the gap between the current and ideal competency of employees. Thus, this study aims to;

1. enumerate the demographic profile of the respondents
2. assess the extent of the research capability and training needs of faculty and staff along with the:
   a. Research conceptualization phase
   b. Research design phase
   c. Research empirical phase
   d. Research analytical phase
   e. Research dissemination phase
3. identify the extent of differences in the research capability and training needs according to employee classification; and
4. develop a research training development plan based on the result of the study.

Materials and Methods

Research Design

The descriptive research design was used to identify and analyze the research capability needs. A mixed-method design was used to collect quantitative and qualitative data retrieved from the Google form. On the data sampling, the employees' classification was clustered into subgroups of teaching and non-teaching employees.

Research Population

There were 640 employees classified as either teaching or non-teaching during the Academic Year 2021-2022. Using convenience sampling, 227 respondents from different schools, colleges, departments, and offices participated in the study. In as much as the total employees were encouraged to participate, voluntary participation was not that much based on the total number of respondents.

Data Gathering Tools

The researchers prepared a semi-structured checklist-type questionnaire based on the study's objectives. The tool was prepared using a 4-point Likert rating scale to measure the level of competency and perceived need in each area or indicator of the research capability training. At the same time, other comments and suggestions were analyzed qualitatively.

Treatment of Data

The study utilized descriptive statistics. In line with the first objective; frequency count and percentage were used to analyze and establish the profile of the respondents, such as employee classification, educational background, office, and the number of researches ongoing, completed, and published, while arithmetic mean was used to interpret the research capability and training needs. The data were processed using the IBM Statistical Package for the Social Sciences (SPSS).

Based on the Likert scale responses, the following statistical limits and verbal interpretation tables were used in interpreting the weighted means.

Validity of Questionnaire

The questionnaire was validated and tested by administering it to (16) employees, (8) non-teaching, and (8) teachers from the different schools/offices for reliability tests, and such respon-

dents were excluded in the final data gathering. The research questionnaire has established a Cronbach alpha of 0.958, which means it is very reliable.

Scale value		Verbal interpretation	Description
4	3.26-4.00	Very Capable / Strongly Needed	The respondent is very able to perform / strongly needed the identified research phase
3	2.51-3.25	Capable / Needed	The respondent is able to perform/need the identified research phase
2	1.76-2.50	Slightly Capable / Slightly Needed	The respondent is slightly able to perform / slightly needs the identified research phase
1	1.00-1.75	Not Capable / Not Needed	The respondent is not able to perform/does not need the identified research phase.

Data Gathering Procedures

When the paper was approved to commence by the Institutional Research Committee (IRC) and Research Ethics Committee (REC) members, the Research and Development Center (R&DC) requested approval to administer the questionnaire to test its validity. When the tool was established to be reliable, the same questionnaire was administered to all the institution's schools, departments, and offices, with 640 employees, through online platforms and physical visits to offices to augment participation and data collection. After two months of data collection and persistent follow-ups, 227 volunteer participants answered the questionnaire.

Ethical Consideration

Ethical considerations were complied with by ensuring that the respondents were aware of the objectives and extent of their participation. Informed consent was included as part of the preliminary statements and instructions provided before they started answering the questions. Provisions of the Data Privacy Act of 2012 were cited, and the respondents can withdraw from answering the questions should they wish not to continue. The responses from the employees were treated with utmost confidentiality, and their names were neither used nor disclosed in any way. The output will be presented to the academic and administrative council for policy-making and the creation of employee development programs and research. The output will also be published internationally to have a wider range of readers to complement research undertakings.

Results and Discussions

Demographic profile of respondents

The researchers are composed of teaching and non-teaching employees. Table 1 shows the demographic profile of the respondents, specifically as to the classification of employees and their highest educational attainment. The respondents have grouped accordingly from being a researcher and non-researcher. For purposes of making a distinction between the two, researchers are either teaching and non-teaching staff who have completed at least one research output, while non-researchers are those who may have knowledge of research and attended training or workshops but have never produced a completed research output. Among researchers, teaching staff comprised the majority of the respondents at 69.6%, which is expected among educational institutions. Non-researchers, on the other hand, is higher among non-teaching staff. As Estacio et al. (2020) mentioned, training and development have only been extended to the teaching employees considering

that the employee program is also crucial to non-teaching personnel who play a relevant role in the education institution. Similar data in the study of Quitoras and Abuso (2021) shows that research is part of teachers' mandate to conduct, especially among higher educational institutions. Nonetheless, the need to produce research has been continuously encouraged even among non-teaching staff as required in the accreditation and internationalization of institutions. Regarding educational attainment, it was noted that most postgraduate researchers (62.8%) are actively engaged in research. This result implies that the higher the educational attainment, the higher the research engagements.

Table 1. Demographic profile of researchers and non-researchers according to classification and education

Employee Classification	**Over-all**		**Researcher**		**Non-Researcher**	
	N	**%**	**n**	**%**	**n**	**%**
Teaching	137	60.4	103	69.6	34	43.0
Non-teaching	90	39.6	45	30.4	45	57.0
Total	**227**	**100**	**148**	**100**	**79**	**100**
Highest educational attainment						
High School/TechVoc	3	1.3	0	0	3	3.80
College	118	52	55	37.2	63	79.7
Master's Degree	87	38.3	74	50.0	13	16.5
Doctorate	19	8.4	19	12.8	0	0
Total	**227**	**100**	**148**	**100**	**79**	**100**

Number of researchers with ongoing and completed research

The current status of research at the university is classified as ongoing, completed, presented, and published research.

Table 2 shows that most (62%) of the respondents have no ongoing research. This implies that although research is encouraged in the university, research production and publication would be affected since the lack of continuity in ongoing research is also limited. On the other hand, 50% of the respondents have completed a research output and viewed it acceptable compared to other educational institutions but may be considered low for a research university. Regardless of the percentage of respondents, it is expected that all employees of the university should be actively engaged in research.

Table 2. Number of ongoing and completed research, including thesis/dissertation

	Ongoing		**Completed**	
	Frequency	**Percent**	**Frequency**	**Percent**
None	141	62.1	114	50.2
One (1)	65	28.6	56	24.7
Two (2) or more	21	9.3	57	25.1
Total	**227**	**100**	**227**	**100**

Number of research presented and published

Research colloquia and publications are avenues to disseminate the findings of the research outputs. As such, researchers must ensure these processes are accomplished to complete the research process successfully. As reflected in Table 3, most (58%) of the respondents have not yet presented at least one research output. This figure could also be attributed to the high percentage of no ongoing and completed research presented in Table 2. As expected, the output for paper presentations would always depend on the frequency of completed research.

Table 3. Number of research presented and published

	Presented		**Published**	
	Frequency	**Percent**	**Frequency**	**Percent**
None	131	57.7	164	72.2
One (1)	57	25.1	31	13.7
Two (2) or more	39	17.2	32	14.1
Total	**227**	**100**	**227**	**100**

Regarding published research, 72% of the respondents have no publication, while 28% have one or more publications. Publication is encouraged in internationally recognized journals. If the research was not published in national or international journals, the institution has its university research journal for a such avenue for publication. The high percentage of no publication could also be attributed to the fact that the research is still among the ongoing researchers and a high percentage of non-researchers.

Level of research capabilities as perceived by the respondents

The research capability may develop over time as it is a skill that needs enhancement or constant practice through training and seminars, and similar activities (Mazhisham et al., 2018). In order to establish a complete plan and program intervention that would encourage employees to develop their research abilities and bolster the research culture in the university, it is necessary to evaluate the level of research capabilities as perceived by the respondents. The extent of the respondents' research capability and the phases of research with 5 indicators each. The respondents perceived the overall mean on the extent of capability, and all sub-mean in the phases of research as capable, as shown in Table 4. The data indicates that the respondents are capable of writing research. However, the need for the respondent to use statistical tools and research publications shows the lowest mean rating, and both are interpreted as slightly capable.

The respondents' verbatim responses to the survey's open-ended questions show some of the challenges, particularly in the statistical tools whereby researchers have encountered as follows: elaborated use of SPSS in interpreting the data gathered (questionnaires), formulation of research instruments like questionnaire, need to know what statistical tool is needed for different research types, need more training on statistical analysis, treatment of quantitative data, and use of research appropriate instruments. Likewise, in the Dissemination Phase, some of the barriers of the respondents in research publications are: assisting in the publication of research, how to publish in Scopus and high index journals, transforming research outputs to publishable journal articles, and international exposures and publication. The latest study by Perez et al. (2022) revealed that it is vital to see different angles in understanding research capability. Understanding research capability requires considering several perspectives. These could be referred to as research abilities and capabilities. Assessment of research capacity is necessary to identify areas for improvement. In a similar study

by (Zia-ur-Rehman et al., 2020), training practices and employee performance have a strong correlation, making it imperative to include training to help prepare the researchers.

Table 4. The extent of research capability among researchers and non-researchers

	Overall (N=227)				Researcher (n=148)				Non-Researcher (n=79)			
	R	**M**	**SD**	**Int**	**R**	**M**	**SD**	**Int**	**R**	**M**	**SD**	**Int**
A. Conceptualization Phase	2				3				3			
1. Topic identification		2.81	0.737	C		2.97	0.694	C		2.52	0.731	C
2. Conduct a review of the literature		2.83	0.740	C		3.01	0.680	C		2.49	0.732	SC
3. Formulation of research objectives		2.76	0.738	C		2.94	0.682	C		2.43	0.728	SC
4. Development of hypothesis		2.76	0.740	C		2.91	0.699	C		2.47	0.731	SC
5. Framework development		2.65	0.752	C		2.78	0.724	C		2.39	0.741	SC
Sub means		**2.76**	**0.680**	**C**		**2.92**	**0.631**	**C**		**2.46**	**0.671**	**SC**
B. Design Phase	**3**				**4**				**2**			
1. Research design identification		2.63	0.801	C		2.81	0.759	C		2.29	0.770	SC
2. Population and sampling design		2.78	0.784	C		2.81	0.786	C		2.72	0.783	C
3. Use of appropriate research instrument		2.62	0.824	C		2.64	0.841	C		2.58	0.794	C
4. Data gathering procedure		2.86	0.737	C		2.89	0.770	C		2.82	0.675	C
5. Ethical consideration		2.92	0.816	C		2.98	0.820	C		2.81	0.802	C
6. Statistical tools		2.45	0.788	SC		2.46	0.803	SC		2.43	0.763	SC
Sub means		**2.71**	**0.617**	**C**		**2.76**	**0.613**	**C**		**2.61**	**0.615**	**C**
C. Empirical Phase	**1**				**1**				**1**			
1. Data gathering procedure		2.95	0.727	C		3.13	0.663	C		2.61	0.724	C
2. Floating of the questionnaire		3.04	0.754	C		3.22	0.698	C		2.70	0.740	C
3. Conduct an interview		2.95	0.742	C		3.01	0.733	C		2.85	0.753	C
4. Focused group discussion method		2.76	0.752	C		2.78	0.743	C		2.71	0.770	C
5. Observation method		2.86	0.733	C		2.91	0.741	C		2.77	0.715	C
Sub means		**2.91**	**0.525**	**C**		**3.01**	**0.499**	**C**		**2.73**	**0.525**	**C**
D. Analytical Phase	**4**				**3**				**4**			
1. Data analysis		2.68	0.763	C		2.82	0.738	C		2.42	0.744	SC
2. Interpretation of the data		2.68	0.762	C		2.86	0.710	C		2.35	0.752	SC
3. Writing the conclusion		2.75	0.729	C		2.89	0.691	C		2.49	0.732	SC
4. Writing the recommendations		2.75	0.731	C		2.90	0.697	C		2.47	0.713	SC
Sub means		**2.72**	**0.703**	**C**		**2.87**	**0.660**	**C**		**2.43**	**0.696**	**SC**
E. Dissemination Phase	**5**				**5**				**5**			

1. Research presentation		2.73	0.748	C		2.90	0.707	C		2.42	0.727	SC
2. Research publication		2.38	0.856	SC		2.46	0.860	SC		2.24	0.835	SC
Sub means		**2.56**	**0.739**	**C**		**2.68**	**0.707**	**C**		**2.33**	**0.746**	**SC**

LEGEND: C – Capable | SC – Slightly capable

The overall mean was also subdivided into two categories to compare researchers and non-researchers in the university.

The respondent's capability in the empirical phase was rated the highest, particularly in data gathering procedures, floating questionnaires, and interviewing since there is already a procedure for conducting data gathering, such as a request for assistance. The result emanates from respondents who are researchers and non-researchers who are capable in the empirical phase since data gathering involves the manner of communicating and asking permission from the concerned authorities and respondents to get the relevant and necessary information that will be part of the data collection. The data shows that the respondents can perform such research functions and highlighted this as their major strength.

The conceptualization phase was rated as the second highest capability among respondents, particularly on topic identification and conducting a review of the literature. The same is true with researchers but not for the non-researcher, who are slightly capable. This implies that researchers are capable of topic identification until the creation of research frameworks.

On the other hand, the analytical phase, such as writing the conclusion and recommendation, was rated capable for researchers but slightly capable for non-researchers. The differences could be attributed to the degree of exposure and training where researchers are already familiar with what should be included in the analytical phase of the research output.

As to the design phase, both researchers and non-researchers recognize that they are slightly capable of determining statistical tools. In similar findings in the study of Samosa (2021), on average, when teachers rank their research anxiety, they agree that they are anxious to improve their statistical skills in action research. This shows that this is part of the research process that the respondents are not capable of and normally require help from statisticians to treat the data by the identified objectives.

The dissemination phase scored lowest in the mean among the research phases. Indeed, the publication is beyond the control of the researchers. The difficulty in international publication is also among the weaknesses of higher educational institutions. Similar observations were highlighted in the study of Navarro-Montaño et al. (2020), which believed that the training needs of teachers should consider the quality indicators for training to help them prepare and conduct research undertakings. Looking at the indicators that researchers are incapable of, there is a need to categorically identify and define specific training for the researcher to meet the complex requirements in publication.

The extent of the need for training

Conducting research training needs requires a foundation to formulate aligned programs, training, and activities to strengthen the research culture and increase research productivity. In the Commission on Higher Education (CHED) memorandum order (CMO) number 52, 2016, the institution must demonstrate a strong commitment to conducting research activities and an environment that encourages such activities. The findings suggest that training is necessary to improve researchers' skills in writing research. The emphasis on continuous professional development initiatives should be on the five (5) phases. Respondents affirmed that training from the Conceptualization

Phase to the Dissemination Phase was needed as these findings imply that it is important for researchers to be well-versed or learn about the different skills involved, such as research conceptualization, analyze the data and information gathered using the appropriate tools, to research dissemination,

Table 5. According to the extent of the need for training

	Over-all (N = 227)				**Researcher (n=148)**				**Non-Researcher (n=79)**			
	R	**M**	**SD**	**Int.**	**R**	**M**	**SD**	**Int.**	**R**	**M**	**SD**	**Int.**
A. Conceptualization Phase	**4**				**4**				**5**			
1. Topic identification		2.92	0.869	N		2.89	0.885	N		2.99	0.840	N
2. Conduct a review of the literature		2.97	0.874	N		2.92	0.915	N		3.06	0.790	N
3. Formulation of research objectives		2.99	0.833	N		2.93	0.886	N		3.09	0.720	N
4. Development of hypothesis		3.00	0.849	N		2.96	0.903	N		3.09	0.737	N
5. Framework development		3.16	0.777	N		3.18	0.806	N		3.13	0.723	N
		3.01	**0.788**	**N**		**2.97**	**0.818**	**N**		**3.07**	**0.730**	**N**
B. Design Phase	**3**				**3**				**3**			
1. Research design identification		3.11	0.821	N		3.11	0.874	N		3.11	0.716	N
2. Population and sampling design		3.02	0.836	N		2.98	0.877	N		3.09	0.754	N
3. Use of appropriate research instrument		3.09	0.847	N		3.08	0.892	N		3.10	0.761	N
4. Data gathering procedure		3.03	0.851	N		2.96	0.903	N		3.15	0.735	N
5. Ethical consideration		3.02	0.859	N		2.96	0.925	N		3.14	0.711	N
6. Statistical tools		3.23	0.815	N		3.28	0.856	SN		3.14	0.729	N
		3.08	**0.777**	**N**		**3.06**	**0.815**	**N**		**3.12**	**0.704**	**N**
C. Empirical Phase	**5**				**5**				**4**			
1. Data gathering procedure		2.95	0.868	N		2.85	0.921	N		3.14	0.729	N
2. Floating of the questionnaire		2.85	0.911	N		2.73	0.952	N		3.06	0.790	N
3. Conduct an interview		2.96	0.856	N		2.90	0.917	N		3.09	0.720	N
4. Focused group discussion method		3.04	0.819	N		3.01	0.873	N		3.10	0.709	N
5. Observation method		3.01	0.857	N		2.96	0.910	N		3.10	0.744	N
		2.96	**0.806**	**N**		**2.89**	**0.842**	**N**		**3.10**	**0.718**	**N**

D. Analytical Phase	**2**				**2**				**2**			
1. Data analysis		3.16	0.821	N		3.17	0.876	N		3.14	0.711	N
2. Interpretation of the data		3.17	0.816	N		3.19	0.860	N		3.14	0.729	N
3. Writing the conclusion		3.11	0.847	N		3.10	0.902	N		3.13	0.740	N
4. Writing the recommendations		3.08	0.853	N		3.06	0.913	N		3.11	0.734	N
		3.13	**0.806**	**N**		**3.13**	**0.853**	**N**		**3.13**	**0.714**	**N**
E. Dissemination Phase	**1**				**1**				1			
1. Research presentation		3.16	0.821	N		3.17	0.852	N		3.14	0.763	N
2. Research publication		3.28	0.764	SN		3.34	0.753	SN		3.16	0.775	N
		3.22	**0.758**	**N**		**3.26**	**0.766**	**SN**		**3.15**	**0.744**	**N**

LEGEND: N – Needed | SN– Slightly needed

Concerning the extent of the respondents' capability, it can be gleaned in table 5 that the extent of need of the respondent mean scores the highest in the dissemination phase. Congruently, the dissemination phase scores the least in the respondents' capability, proving that respondents are least capable and training needs more in the dissemination phase. Additionally, considering other reasons why the dissemination phase needs training, such as being the last stage of research, the challenge of identifying reputable journal publications or Scopus index journals, and expensive publication fees. A study by Tabak et al. (2017) on cluster mapping of medical research in improving impact research evidence found that Communicating Research Findings was ranked very easy but not very important. The findings imply that after the research output, researchers can present the findings; however, they find it less important.

Table 6. Comparing the research capability and training needs according to the classification of employees

		Levene's Test for Equality of Variances		**t-test for Equality of Means**		
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**
Research Capability	Equal variances assumed	.017	.897	-2.885	225	.004
	Equal variances not assumed			-2.880	189.409	.004
Training Needs	Equal variances assumed	2.062	.152	3.553	224	.000
	Equal variances not assumed			3.654	207.698	.000

The ranking of the training needs and the phases of research are as follows. First is in the Dissemination phase, the second is in the analytical phase, the third is the design phase, and the fourth in rank is the conceptualization phase. The results mentioned above are supported by qualitative responses to open-ended questions about their difficulties.

Lastly, the mean with the lowest rating among the phases is in the empirical phase. The rating validates the respondents' answer that they are capable yet need it most to be addressed in help-

ing them do the research better. On average, the respondents perceived a need for training in all phases of research. Thus, respondents are capable of conducting research. However, there still need to have regular research training to refresh and update employees concerning their knowledge and skill that will enhance their capability in the research phases.

As to the significant difference in the research capability and need for training between researchers and non-researchers, Levene's test for equality of variances had been established to be significantly different.

The p-value for the t-test for Equality of Means is .000, much lower than the p-value significance threshold of 0.05. The number tells us that there is indeed a statistically significant difference in the mean scores for Non-Teaching and Teaching. This significance level can be attributed to the type of work the employees perform and the level of academic preparation and engagements. Likewise, research output is expected among teaching employees while not much of a requirement for the non-teaching staff, although recommended.

Conclusion

Given the salient findings in this study, it can be concluded that the extent of research capability among university employees is capable but not very capable, especially in using statistical tools and research publications during the research phases. Training is needed in all research phases, both for researchers and non-researchers. Furthermore, the specific need has been identified most, especially in statistical tools and research publications. The following were highlighted to address the gaps of the study: the institution should encourage the non-teaching staff to be actively involved in research to increase the research productivity of the university. This can be done through a mentorship program to provide confidence and motivation to non-researchers to complete research; on the other hand, the Research Center of the institution should conduct capacity and capability training in all of the phases of the research process while emphasizing the use of statistical tools in treating the data gathered. An output-based training program would help measure the extent of learning and understanding among participants and would be part of the research training development plan. Seminar workshops in internationally peer-reviewed and indexed research publications, especially as to the publisher's requirements, templates, and expectations, could be done regularly to help research publications and encourage engagement among university employees to foster the organization's research culture.

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