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# Higher Education Institution Research Dissemination and Utilization through the Lens of Community Engagement

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**Abstract** Using community involvement as a lens, this study analyzed the amount of distribution and utilization of a public higher education institution's research outputs in Bicol, Philippines. The Diffusion and Dissemination Theory alongside the use of Knowledge For health (K4Health) of the United States Agency for International Development (USAID) Model served as the theoretical and conceptual underpinnings of this study that facilitated the analysis of research produced by the institution, its dissemination, the enablers, and barriers, and until utilization. The case study design was used to portray an in-depth analysis of the institution's situation from research output generation to the enablers and barriers to research utilization. The analysis of graduate student and faculty research revealed a predominance of quantitative descriptive study on the issue of "research in aid of policies." Documentary evidence on research outputs utilized in policies, programs, and projects is minimal. For the faculty, the enablers on research utilization are promotions and incentives while for the graduate students it is a provision of better library services and research resources. The faculty considered personal and professional issues as barriers while the graduate students cited accessibility of resources, access policies, and professional/work-related issues. Overall, the utilization of research in the institution characterizes Conceptual Research Utilization (CRU) only. In conclusion, the overall dissemination and utilization of research are still beset with leadership, management, access to dissemination tools, research resources, and researcher motivation issues. Due to insufficient attention being placed on research applications to capacitate and empower the community, the approach contributed to low research output utilization. It is suggested that the proposed action plan based on the findings of this study be implemented.

**Keywords:** action plan; community engagement; enablers and barriers; research dissemination; research utilization.

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## 1. Introduction

Higher education institutions all across the world must conduct high-quality research. From their beginnings until they are used by the community, these research products have carried the hallmarks of the institution from which they originated. The high level of utilization in an institution is one of the best indicators that the effort and financial investment allotted to the

research is worthwhile. Aiming for a high level of research utilization therefore should be one of the major considerations of a researcher when drafting research proposals. Research outputs utilization can improve outcomes or bring positive change in the existing practices in the society thus fostering vibrant community engagements (USAID K4Health Program, 2016).

Research-oriented organizations around the world source financial support from their respective government and private funding institutions. Among the best practices that these organizations do is to make sure that their strategic plans and goals are aligned with the international, national, regional, and local research and development goals. To do this, organizations have consultative meetings and conversations to align their objectives with those of the government as a whole. One of the finest practices for research institutes is to form strong and long-term collaborations with famous universities or institutions for resource sharing.

In the Philippines, research organizations also get support from the government (Commission on Higher Education, 2009; Department of Science and Technology, 2017) research programs and local and foreign funding institutions. While there are reports of some research breakthroughs in the Philippines, reports also show that the country is moving at a slow pace compared to the developed countries and even with some Asian neighbors. Among the contributing factors to this slow pace is the Philippines' dismal 0.11% gross domestic product (GDP) allocation that pales in comparison to the world average of 2.228% and Japan's allocation of 3.28% (World Bank, 2015). It is obvious that meager funding results in fewer quality research outputs thus fewer outputs to disseminate and even fewer to utilize by adopters.

After the research is completed, the researcher must tell the stakeholders or communicate the findings to the community, ideally fostering and maintaining strong partnerships with other sectors. During research dissemination, the researcher acts as the primary source of the diffusion (Turpin & Krisha, 2007) of the generated knowledge or innovation. Diffusion is described as the process through which an innovation is communicated through certain channels over time among the members of a social system (Dearing, 2008). A sustained dissemination effort is necessary to reach many potential users or adopters. Subsequently, the term innovation was used to describe new ideas, beliefs, knowledge, practices, and technologies (Dearing, 2008). This system of ideas when communicated is what the Diffusion Theory aims to explain.

The key components of the classical Diffusion Theory are innovation, adopter, social system, adoption process, and the diffusion system or external change agent(s). Over time, the theory evolved into dissemination science in which the outcome is the demonstration of innovation effectiveness at an individual client and client system level. The evolution resulted

in a combined Diffusion and Dissemination Theory. This theory was used to underlie this study, notably in the classification of the institution's research output according to type/mode of research dissemination, and in conjunction with the Knowledge for Health or K4Health Program's research use model (USAID K4Health Program, 2016).

The K4Health model indicated that research outputs when utilized by various stakeholders would result or transition into the policy(ies), program(s), and practice(s) or any combination of these three thus a Research to Practice transition (Gagnon, 2011; Shankland et al., 2010; Tilbury et al., 2017). As the policies, programs, and practices are utilized over time, avenues for further improvement or gaps emerge and become a new set of inputs that would facilitate its re-evaluation. The re-evaluation processes raise new questions that may necessitate research thus facilitating the transition called Practice to Research forming a loopback or completing a cycle. The repeated research to practice and practice to research transitions create a cycle that is assessed in terms of impact to the community (Weißhuhn et al., 2018), may capacitate the society through a strong community—academe research collaboration (Foss et al., 2014), and empower the people from the different sector to take research participation seriously (Williams et al., 2008). When all of these scenarios happen, the synergy of all the efforts allotted to research will result in the development of the locale.

About research output dissemination strategies, the Community Alliance for Research and Engagement (CARE) identified media coverage; press release; creation of research summary document; handing out of flyers, posters, brochures, and research briefs; policy briefs; study newsletters; community agency publications; local events; seminars; conferences; community meetings; and finally sending off a letter of thanks to studying participants or combination of any of them as strategies. The capability of websites and list-servers to reach quickly a wider and diverse range of online audiences was also highlighted (CARE, 2014; Chavkin & Chavkin, 2008). Use of any of the strategies or the combination of them is not for everybody and hence should be used only based on the needs of specific interest groups (CARE, 2014; Huber, 2018).

CARE also stressed that dissemination content is another most important consideration hence communicating effective and useful information to the community should be made responsive, concise, key points are highlighted, logical, useful, attractive, uses simple language, appropriate headings, fonts, white spaces, and page numbers. Making the information engaging, as well as its cultural and ethical ramifications, should all be taken into account (CARE, 2014; Chan & Costa, 2005; ESRC, 2018; Hulme, 2010). If a research output is packaged in a form interesting to the beneficiaries, this will foster a much higher utilization thus helping capacitate the society. Furthermore, once interest has been established and ethics

carefully considered (Robinson-Pant & Singal, 2020) more and more potential beneficiaries will be emboldened to participate in the research endeavors thus raising the level of community engagement within the locale and even in the neighboring provinces.

To obtain a general idea of the volume of published research along with research dissemination and utilization from around the world, the researcher accessed the SJR website (Scimago Lab, 2018). It was found out that from the year 2013–2018, only the Asiatic Region (with one journal), North America (with two journals), and the Western Europe Region (with seven journals) focused on research and theory and along with the topics on speech pathology and nursing science only. Using the Philippines as search criteria in the country category yielded no journal on research and theory. This implies that there is a dearth in terms of studies along with research utilization in other fields particularly the field of education. While there is unpublished research produced by faculty researchers and graduates at Philippine higher education institutions, it is difficult to determine or quantify the impact of these studies on society's progress. Additional research is needed to better understand how research is used and how much usage is documented at Philippine Higher Education Institutions (HEIs), which could aid in the formulation of improvement action plans.

Moving down to Bicol Region, analysis of the publicly available annual accomplishments reports of two large universities in the region yielded research that does not deal with studies about research output utilization in any field thus showing the dearth of research output along with the topic. The research from these universities is experimental in the field of agriculture, engineering, sciences, and alongside the descriptive research in the field of social sciences and literature.

In the province of Masbate, it was observed that evidence on research utilization is weak or is largely not properly documented. Most of the reports are verbal in nature and are not supported by reliable data. In a visit conducted by the researcher in one of the regional government agencies before this study, it was found out that data being submitted to them by the province are mostly invalid data as evaluated by the agency statistical software and data validation mechanisms. During program accreditation visits, it is difficult for faculty counterparts to attach evidence of research utilization. The same situation was observed in lower-level accredited HEIs in the country that the proponent of this study visited being an accreditor of the Accrediting Agency for Chartered Colleges and Universities in the Philippines, Inc. (AACCUP, Inc.).

There are three types of research utilization namely: Conceptual Research Utilization (CRU), Instrumental Research Utilization (IRU), and Persuasive Research Utilization (PRU)

(Strandberg et al., 2014). CRU is a cognitive process where research findings enlighten a person's perception or understanding (Strandberg et al., 2014), may be used to change one's thinking about a specific practice, but may or may not result in a change in action (Squires et.al, 2011). The concrete use of research findings in practice is referred to as IRU, whereas persuasive or symbolic research utilization is the use of research as a persuasive or political tool to legitimize a stance or influence the practice of others (Squires et.al, 2011). If these three types of research utilization are evident in an institution, high community engagement would result, and the impact will be felt by the community.

Subsequently, since universities can be regarded as a set of groupings with different and sometimes competing interests, the engagement must offer something to each grouping (Benneworth et al., 2013). It is then imperative for the HEI to find avenues for community engagement while also considering the groupings within the university and matching them effectively with community groupings. Adjustments on faculty subject load could potentially increase the opportunity of the faculty to engage themselves on community projects that match their field of interest. The HEI may also consider tapping students (Wade & Demb, 2009) and grouping them per discipline, and matching them as well with community groupings thus effectively enlarging the workforce of the HEI and its capability to reach a large service area.

Scrutiny of the contents of the QMS manual in the Bicol HEI revealed no provision for disseminating research outputs as well as policies and procedures for the monitoring and analysis of utilization. The research and development (R&D) organizational structure also revealed the absence of research dissemination and utilization monitoring component. This could be one of the reasons why, after decades of collecting papers, journals, and other research outputs in the institution's library, there are just a few borrowers who are mostly students and faculty members. Seldom is there an instance when stakeholders and outsiders request permission to do library research and utilize the manuscripts. This may mean that the research outputs of the HEI are just left for utilization by mere chance.

While there are a few research projects in the institution, these were derived or inspired by knowledge gained from outside sources. This observation is corroborated by the analysis of the extension services terminal reports indicating that 95% of the extension programs utilize research outputs or programs from other agencies thus suggesting minimal utilization of institutional research outputs.

This Bicol HEI situation warrants an assessment to fully understand the reasons behind as well as the awareness that research requires the investment of effort, time, and money that needs to be justified through research utilization. The assessment focus was on the research

outputs produced by the institution's graduate students and faculty researchers; the classification of the research according to type/mode of dissemination; the categories of utilization in terms of policies (Johnston & Plummer, 2005; Newman et al., 2016, programs, and projects; and, the enablers and barriers (Landry et al. , 2001; Ofi et al., 2008; Tabak et al., 2015) to the utilization of research output.

Based on the findings in the focus areas, an action plan was generated to help research and extension coordinators propose solutions or processes that could be implemented to improve the present level of research output dissemination and utilization. Furthermore, this research could serve as a foundation for better ways to organize and disseminate research results, as well as contribute to evidence-based policies on research use in higher education institutions for enhancing practice. Research utilization through various agents will pave the way toward improving policy, programs, and practices thus increasing not only the level of research utilization in the institution but also expanding the influence of the institution along with community development.

## **2. Methods**

The lone public HEI in the province of Masbate, Bicol was the subject of this case study. The research output of the HEI from 2013–2018 was assessed using case study techniques that involved document analysis, key informant narrative analysis, Focus group discussion (FGD) narrative analysis, and non-participant observation notes analysis (Zainal, 2007) using the lens of community engagement.

For the HEI, community engagement happens largely through its extension services that deliver outreach, research-based, and needs-based extension programs, projects, or activities designed to be beneficial to the community. While the HEIs extension mandate is a good avenue for the diffusion of knowledge along with its academic programs and research, it entails human and material resources, and time allotment that needs to be justified through high levels of research utilization.

The sources of data analysis are the accomplishment reports, quality management manual, [DEBESMSCAT Research and Extension Procedures Manual \(2007\)](#), national/regional/local office orders, library management reports, and the interview and FGD narratives. Copies of research manuscripts written by graduate students in the education and agriculture areas were analyzed for the document analysis. Copies of research papers from faculty researchers in agriculture, engineering, arts and sciences, and education were also analyzed and classified based on the research themes identified in the Commission on Higher Education's National



Higher Education Research Agenda 2 (CHED–NHERA 2). The manuscripts yielded the actual count of research, the discipline themes, the salient outputs, as well as evidence of utilization as indicated in the attached library borrower slip.

For the key informant interview the Research Director and the Dean of the Graduate School were tapped last October 2019. For the FGD, an invitation through call and text message was sent on the first week of November 2019 to six graduate student respondents after the formal letter to the Dean of the Graduate School was approved. A separate invitation through call and text was also sent to nine faculty respondents on the second week of November 2019 after the formal letter to the Vice President for Academic Affairs was approved. In adherence to ethics, the respondents were informed that all responses will be recorded but their identities will be kept confidential before the interview. During the actual recording, no name was mentioned instead codes were used to call the attention of a target participant. The audio records of the narratives of the respondents were analyzed to get the significant statements and weed out non-related statements. Meanings were then formulated from the significant statements carefully and along with the process, bracketing was done to lessen if not remove author bias, out of the meanings the initial theme clusters were formed, and finally, analysis of the theme clusters produced the emerging themes that served as a basis during the discussion of results.

Strategies for ensuring trustworthiness were applied using Guba's Constructs namely: Credibility, Dependability, and Confirmability (Shenton, 2010). The application of these constructs provided a true picture of the phenomenon on research dissemination and utilization in the institution by demonstrating that the interpretation of the result was based solely on reliable documents and key informants, could be triangulated, and the FGD interpretation validated through a second FGD session conducted in the third and fourth week of November 2019 for each group to correct any inaccuracies. The findings of the study became the basis in the formulation of the research utilization improvement action plan.

### **3. Results and discussion**

Table 1 shows the matrix of research produced by the HEI from the year 2013 to 2018. Analysis of the manuscripts revealed that 96% used quantitative approaches, descriptive research methodologies, and are mostly focused on policy-oriented research. The policy-oriented focus limited the beneficiaries to school administrators, teachers, tertiary students, and graduate students. There was no research output in the field of agriculture for student research due to the absence of enrollees or graduating students. The repeated employment of the same approaches and methodologies in student research indicates that the students and their advisers



have only used previous approaches as a guide. This situation revealed a restricted repertory of possible research approaches and procedures within the institution, as well as maybe among the advisers, resulting in a less diversified collection of research that employs a variety of approaches or methodologies.

While there could be no perceived problem with this practice on the side of the researcher, the limited diversity of research methods used could work against efforts of reaching diverse stakeholders with diverse needs. Despite the availability of online research journals presenting a wide range of research ideas or approaches, the majority of the graduate students still opted to research conformance to their adviser's recommendations and based on existing manuscripts. The main reason cited is the absence of a very good internet connection in their respective workstations and homes that are not within the range of internet services thus preventing them from doing a lengthy internet search for good literature. Furthermore, the limited exposure and practical knowledge of the faculty and advisers on the use of other research methods was evident per observation during research methods discussion and as shown in the course syllabus.

For the faculty researchers, the majority of them are engaged in institutional research work except those who are still pursuing graduate studies. The majority of the institutional research work conducted/completed by the faculty is a collaborative endeavor while thesis/dissertation work is single authorship endeavors. The collaborative research work was more attractive due to its inherent characteristic of facilitating cooperative work thus lightening the workload of faculty researchers who may have a hard time doing the work all alone. Scrutiny of the research themes again revealed a similar situation with graduate student research outputs wherein policy-oriented research dominates followed by the theme of educational management. Again, these two themes effectively limit the beneficiaries to educators and students.

Further analysis of the research outputs in terms of its congruence to the Philippine national research agenda formulated by the CHED–NHERA 2 revealed that the majority of the research in the institution captured only the policy-oriented research or “Research in aid of policies” agenda. Research outside the national research agenda, is however highly congruent to the researcher's course or field of specialization and many of it may have the potential to contribute to local baseline data of the Bicol Region and the Province of Masbate when properly disseminated and the dissemination effort sustained.

In terms of community engagement and the goal of using research to effect change or improvement in the community, the fact that most research is directed toward “research in aid of policies” not only limits the scope of beneficiaries, but also necessitates time, resources,

motivation, and effort to be lobbied by policy advocates and implemented before the ostensible benefits can be felt. Tapping the local government official in charge of the education committee would be necessary however instances in the past received a lukewarm response. Those who attempted to tap local officials they know of for several years already suspected that the response was due to the lack of knowledge and complacency among the official on how to properly handle or lobby such requests. Unfortunately, these ill-equipped and inexperienced local officials proliferate throughout the country, particularly in underdeveloped regions like Masbate. Repackaging the results into a form that is easily understandable by the community and spreading it through extension efforts and demo projects is required for research outputs in different domains. At present, however, the community must make do with what the present institutional system has to offer thus effectively contributing to the low level of utilization.

Table 1. Matrix of Research Produced by the HEI in Masbate, Bicol per Discipline and Themes

Educational Disciplines of Researchers	Research Themes	No. of Completed Research	Salient Outputs
<i>Student Researchers</i>			
Education	Policy – oriented	49	Recommended policies for basic education schools, Improvement of Teaching Methods in Math and Science, Leadership/management Improvement, Language for effective teaching
	Pedagogy	17	
	School Development	5	
	Language	8	
Agriculture	Animal Science	0	
	Crop Science	0	
		<b>79</b>	
<i>Faculty Research</i>			
Education	Policy – oriented	23	Recommended policies for HEIs, Improvement/teaching innovation in HEIs, Leadership and Management in HEIs
	Pedagogy	7	
	Educational Leadership	5	
	Educational Management	11	
Agriculture	Animal Science	4	Animal husbandry research (swine, poultry, small ruminants), Rice and Vegetable research
	Crop Science	2	
Industrial Technology	Foods & Beverage Technology	3	Food Processing, design and fabrication of small food processing equipment
	Electrical Technology	1	
	Automotive Technology	1	
			Electrical setup for instruction design and assembly, Automotive waste processing

Educational Disciplines of Researchers	Research Themes	No. of Completed Research	Salient Outputs
Engineering	Agricultural Engineering	4	Small farm machine design and fabrication, machine for solid waste handling
	Mechanical Engineering	1	
ICT	Software Development	1	Software
	ICT Use Policy	1	project/capstone project,
	ICT in Education	2	ICT use (policy, management)
		<b>66</b>	

One drawback for non – nationally aligned HEI research agenda is the slim to zero chance of getting funding from other agencies or research organizations. Another drawback is during evaluation of the research performance of the HEI, research that are not aligned to national development goals gets a small credit point. A small credit point affects the overall performance of the HEI in terms of State Universities and Colleges (SUC) Levelling.

The SUC Levelling is among the major basis in budget allotment for the SUC during a fiscal year thus this may mean that having a small credit point on research outputs could potentially affect budget allotment for research as well as the potential to attract funding from other agencies. Relating this again to community engagement, the indirect effect of non – nationally aligned research and the inability of the HEI to avail of the research grants contributed to the limited number of research outputs that could have been disseminated and utilized by the community.

### 3.1. Classification of research according to type/mode of research dissemination.

Document analysis of the five annual reports and the local office orders from the year 2013–2018 revealed the presence of some agents and tools (Song et al., 2010; Tabak, et al., 2015) that the institution can tap or harness. The Research Director identified three human agents capable of disseminating research outputs namely: the research proponent(s), designated personnel, and the extension service personnel. Analysis of the presented evidence however revealed that these agents do not disseminate research outputs in a properly documented manner, with the regularity of schedule, and with a sustained effort. Observations made during extension operations revealed that the majority of the research outputs distributed originate from other agencies in the form of programs mandated by national regulatory and monitoring agencies.

About the dissemination tools, the use of ICT printed materials, and electronic presentations were evident. Analysis of the documentary records on the utilization of these

tools and user interviews revealed the underutilization of computers. Underutilization of computers happens when the computers are used as just a high-end typewriter in an office and are seldom used to run programs and aid the user in processing data proportional to its rated capability and capacity. The low internet speed (shared 40 Mbps as indicated in the subscription contract) and intermittent connection hampers the use of web-based tools and access to online research databases. This low bandwidth allocation is due to the limitations of the cellular signal distribution infrastructure in the locality. The intermittent connection is also partly due to the unstable electrical power supply in the locale.

On the use of other communication media, printing, and distribution of information flyers, local journals, and the like are not sustained. Document analysis of the reports of research output being packaged into information media is limited. For example, only one research compendium was produced in the institution and was distributed to the local government unit. On the use of the radio station, it was found out in the accomplishment reports of the station manager and radio scripts on file that the radio station does not regularly air research outputs in its programs since the programming is largely devoted to online instruction and announcements. There was a Knowledge Management (KM) Office (Girard, 2020) tasked to store organizational knowledge for updates and reuse however it was only established in the year 2019 hence cannot yet be assessed in terms of impact. Although there is a Management Information Services Office and a Public Information Office tasked with collating reports, their role is limited to reporting finished and ongoing research as part of top management's accomplishment reporting and the institution's regular newsletter issuance.

To find other possible dissemination agents, scrutiny of the research department's quality management system (QMS) manual revealed the absence of a formal dissemination component in the organizational structure. There were designated college-level research coordinators and extension coordinators, but their tasks focus on facilitative works and less on research output dissemination. Additionally, most of these coordinators are junior faculty members with little experience yet inefficiently conducting research output dissemination activities. The heavy teaching load of these coordinators also prevents them sometimes from engaging heavily with the community.

In terms of community engagement, while there are agents and channels for distribution of research outputs, the limited diversity of research outputs that may be used by diverse stakeholders adds to the low degree of research utilization. Potential beneficiaries from sectors other than the education sector could have increased the utilization level. There were also issues on the assignment of responsibilities to research coordinators and the extension coordinators

that hamper them from engaging heavily with the community, which has a potentially negative effect on efforts to increase research utilization.

### **3.2. Utilization of research outputs into policies, programs, projects**

Analysis of the annual accomplishment reports from 2013–2018 has shown indirect evidence of research utilized in policies, projects, or programs. The ongoing programs and projects in the HEI were merely adopted from other agencies. Among the reason cited by the key informant is the proven effectiveness and success of these projects that were also adopted by fellow HEIs. Consequently, no complete information along research utilization can be drawn from the intended research output beneficiaries. Interviews with non-professional stakeholders found that they are either too embarrassed to request information on the study results in which they were involved, or they just collaborated with no intention of subsequently utilizing the research product.

This lack of interest happens when the commissioned data gatherers fail to explain comprehensively the benefits of knowing the results after their completion to the respondents. This situation in Masbate is not similar to affluent provinces of the Philippines where respondents generally expect to be notified of the result of the research work, they were involved in. The researchers expressed their willingness to share the results however they relied on requests from the respondents or participants and the institutional dissemination mechanism to reach other stakeholders.

Document analysis and interviews as to whether the research in aid of policies was utilized revealed that some research outputs require the assistance of the local government to be implemented. Sadly, initiatives from research proponents to lobby the proposal toward implementation received lukewarm interest or backing from the politicians for no apparent reasons. A few of the policies formulated for school improvement were initially implemented in the workplace of the basic education public school teacher—researcher(s) but were not sustained. Among the reasons cited is the transfer of the implementing teacher or the school head to another station and their failure to properly turn over documents to those who replaced their post.

For research that could be utilized as programs, only one formally disseminated research output was found however the program was not sustained. While there were technological demonstration attempts in the field of engineering including three research outputs that may potentially become a program or project, only one research output made it to the utilization phase, and the endeavor was not continued. Among the reasons cited for the non-sustained

efforts are time, financial constraints, lack of product promotion assistance (Tsai, 2003), organizational politics, and administrative issues.

Examining the prevalence of research output utilization by the students through analysis of library holdings records revealed that the manuscripts were only used as basis in new crafting research proposal and as a writing style guide. There were some groups of students that used the previous research outputs as input in their new research proposal however many opted to formulate their own citing possible reliability issues with the previous outputs. This manner of utilization is classified as CRU.

### **3.3. Enablers and barriers on research utilization**

Two separate FGD sessions were conducted with the faculty and with the graduate student – researcher groups. The first session gathered each group’s narrative while the second session was for verification or validation of the researcher’s interpretation. For the faculty group, enablers emerging themes are research presentation and publication, and collaborative research work.

They expressed that presenting their research outputs in local, national, and international fora allows them to gain experience in interacting with diverse audience and researches outside of the organization. They also expressed that the research presentation gives them the opportunity to learn from fellow researchers thus broadening their knowledge on research topics, methodologies, and best practices in conducting research. While doing collaborative research work, junior faculty – researchers expressed that they have learned significantly from the senior faculty in terms of methods in doing research.

The learnings according to them have significantly boosted their courage to engage in research and to experience research presentations. Presenting in research fora have also benefited them since a small monetary incentive is given by the HEI to research presenters and recognition is given to them during the annual charter celebration of the HEI. The theme access to a well – managed and completely equipped library also emerged due to the nice ambience at the library and the adherence to standard placements of library holdings. For the utilization barriers the emerging themes are personal issues and the professional issues. When asked about personal and professional issues, one faculty cited his own philosophy or paradigm on research work wherein it simply does not attract him especially if he is not with a partner or a group who could guide him. According to this faculty, he would prefer a collaborative work and would not do a research work alone.

For the graduate students the enablers are the presence of the manuscripts at the library and the amiable staff. Like the rest of the students, the manuscripts according to them serve as their reference in conceptualizing topics and in writing the research report. One participant also mentioned that while sifting through the manuscripts she gained interest to conduct further research on a topic when she came across the recommendation of a former researcher. For the utilization barriers the emerging themes are accessibility of resources problems (due to distance from the workplace and the absence of online resources), library policies (such as borrowing and service days/ hours), and the professional concerns at their workplace.

Distance from the workplace was cited as a barrier since Masbate is an island province and six of its municipalities where some students come from are located in Burias Island and Ticao Island. Students complained that travel time and rough seas oftentimes prevent them from heading to graduate school. While this inconvenience could be bridged by provision of online library resources and flexible class arrangements, the power and ICT infrastructure of the province are both unstable and could not guarantee good internet connection. Graduate students that were also assigned in workstations located in the hinterlands also experience travel inconveniences due to rough or unpaved roads that is difficult to traverse during rainy season as well as the unavailability or instability of the internet connection and power supply. In terms of library policies, the graduate students cited the short borrowing time policy of library resources and the unavailability of the library services on Saturdays and beyond 5 o'clock during workdays. This short library service period is due to the limited number of librarians and staff. Again, this could have been addressed by provision of online library resources.

On the research motivations of the faculty, professional gain, recognitions, awards, and incentives granted by the institution are the major motivating factors. While these are encouraged motivators under NHERA 2, the noble purpose of conducting research for societal improvement should be the primary motive. An almost the same motivation was seen in the graduate students group. The present situation may require reorientation through values orientation workshops and similar activities that would facilitate a change in paradigm of the researchers over time.

As to the disposition of the FGD participants, each group have shown truthfulness and honesty in their answers although there were evident hesitations at the start. There was no monopoly of ideas shown by anyone during the session and everyone had the chance to express their ideas. There were however some rebuttals of participant comments that the group believed was due to misperception and this was gladly accepted by the commenters after a series of



thoughtful exchange of ideas. During the second session, divergent interpretations were gently raised by the participants and rectified by the researcher.

### **3.4. The research utilization improvement action plan**

Before the conduct of this research, no existing action plan for improved research utilization is in place thus the need to produce one. Five focus areas for improvement are proposed namely:

- 1) Review and harmonization of the Institution's Research Goals with the Philippine national research goals.
- 2) Diversification of Research Areas and Conduct of Research characterized through the:
  - a. use of varied research approaches to further widen the scope of research topics.
  - b. use of research dissemination strategies and activities that would further improve the effectiveness of the present dissemination agents and tools, and
  - c. noble desire to conduct research works with greater emphasis on societal development.
- 3) Formulation and implementation of policies on the use of varied and multiple research dissemination strategies to strengthen IRU and PRU such as:
  - a. Translation of the English language research output report into local dialect to foster better understanding among the non-professionals in the locale.
  - b. Use of drawings or illustrations to highlight salient research findings for printed materials and graphics and animations for electronic learning materials.
  - c. Adherence to non-gender, cultural, and religious biased presentations of the learning materials in both printed and electronic formats.
  - d. Public demonstration of the fabricated research project prototype with the target sector and provision of product testing opportunities for them.
  - e. Use of the HEIs radio station alongside social media platforms for better and convenience dissemination of the research outputs.
  - f. Coordination with local officials to help disseminate the use of the research output through local ordinances.
  - g. Establishment of a techno-demo project center that would be tasked to accommodate the public who would like to learn more about a research output that caught their interest.
  - h. Sustained financing for product testing with the community and development based on the inputs gathered during the testing.

- i. Consideration of granting an award to sectors who have shown great contribution to research output utilization by being an early adopter; and
  - j. Fostering a harmonious relationship with the community and the academe.
- 4) Consideration of categories of research utilization to widen research scope.
  - 5) Strengthening research utilization “Enablers” and finding innovative ways to eliminate the “Barriers” with emphasis on IRU and the PRU.

Formulation of HEI research agenda relevant to the national research agenda could contribute to higher utilization and better academe-community engagement. Once the goals had been set, revision of the existing organizational structure of the R & D unit to include the research dissemination component and the research output monitoring and evaluation as among the policies should be done. For the implementation of the action plan, the HEI administration could leverage the Strategic Performance Management System (SPMS) Program of the Philippine [Civil Service Commission \(2012\)](#) that requires government agencies to formulate a sound strategic plan. This strategic plan, in turn, serves as the foundation for the operational plans of the organization's units, which in turn serve as the foundation for departmental targets and individual employee goals.

#### **4. Conclusion**

The assessment conducted on the research dissemination and utilization in a higher education institution in Bicol, Philippines sets the institution’s research utilization under the CRU classification only. This case highlights the web of issues commencing from research conceptualization up to the evaluation of proposals that is supposed to bear a clear focus/alignment to the national goals and high responsiveness to the needs of the locale. The existence of potential adopters with a variety of requirements in the area necessitates research that is sound, dependable, intelligible, and responsive in order to lure and be valuable to them. Non-standardized procedures and a lack of persistent effort on the side of the agents are contributing to issues with dissemination strategies. This systemic problem in the institution results to the emergence of barriers that lower research output utilization. While awards, incentives, and benefits to researchers under NHERA 2 are already institutionalized in the HEI, this motivation should be the least consideration.

The overall situation of research dissemination and utilization in the HEI is still beset with leadership, management, access to dissemination tools and research resources, and faculty and student researcher motivation issues that can potentially hamper IRU and PRU from occurring.

The proposed action plan should be implemented, but other HEIs should proceed with care due to variances in experience, organizational culture, and local situations. Analysis using quantitative approaches on research utilization in the HEI was not yet considered in this work. Future researchers may conduct such study for a more comprehensive analysis of the situation and may also analyze the impact of the implementation of the action plan.

### **Author Contribution**

Conceptualization, methodology, validation, data analysis, and writing original draft preparation is done by Vincent M. Clores.

### **Declaration of Conflicting Interest**

There is no conflict of interest for this manuscript.

### **Short Biography**

Dr. Vincent M. Clores (ORCID ID: 0000-0002-5112-4391) received his Ph.D. in Research and Evaluation at the University of San Carlos, Cebu City, Philippines. His current field placement is with the College of Arts and Sciences at Dr. Emilio B. Espinosa, Sr. Memorial State College of Agriculture and Technology (DEBESMSCAT), Masbate, Philippines. He is interested in topics along with ICT in education, distance education, research and evaluation, smart technologies, future thinking, and in efforts to increase utilization of research produced by HEIs to foster a vibrant community engagement with the academe.

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