Configuration of Research Culture: Investment, Process, and Norm

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Abstract

Research is a priority in higher education institutions. Considering that the development of research culture is highly influenced by the paradigm by which institutions operate on, this paper sought to identify the configuration of the research culture. The researcher conducted a narrative inquiry with key informants from seven reputable teacher education institutions in Region VII and coded the interview transcripts with the aid of NVIVO 11.3.2. Using Thematic Analysis (Braun and Clarke, 2006), three overarching themes on the configuration of the research culture, with its corresponding attributes and characteristics, were identified. The results showed that the research culture consists of observable and measurable inputs and outputs that interact in internal and external dynamics that are developmental and systemic, leading to standardized and contextualized practices in a teacher education institution. Therefore, research culture is an investment, a process, and a norm as it is evidence-based, dynamic, and distinct to the academic institution.

Keywords: research culture, teacher education, narrative inquiry

1.0 Introduction

Research is a function of higher education institutions. Marchant (2009) argues that knowledge generation is a distinguishing characteristic of a university. In the international arena, university rankings support this notion. Samarasekera and Amrhein (2010) reported three major international rankings that have widespread reception, which include the following: (1) The Academic World Ranking of Universities, (2) the QS World University Rankings and (3) the Times Higher Education Rankings. All of these rankings put a premium on research and research-related areas, like citations and industry income (patents).

The Times Higher Education (THE) World University Rankings is the only world-ranking publication that evaluates research-led universities in terms of core functions that include teaching, research, knowledge transfer, and international outlook. It uses the same 13 performance indicators as the flagship World University Rankings, but with varying weights, depending on the field of discipline. In the area of social sciences, Research (32.5%) is given equal weight to that of Teaching (32.5%), but there is a separate measure for Citations (25%) and Industry Income/Innovations (2.5%),

which are indicators closely linked to Research (Times Higher Education, 2015). Value and quality of research productivity, therefore, are associated with quality university education. No Philippine university is in the Top 400 of this ranking.

The University of the Philippines, in the QS World University Rankings, made it to the list in 2014 (Rank 367), 2015 (Rank 374), and 2016 (Rank 367). It is leading in terms of research in the country (Valencia, 2004). UP President Alfredo E. Pascual attributed this achievement to their investments in research through funding, upgrading of facilities and laboratories, supporting graduate studies scholarships, recruiting faculty through the Balik-PhD Program and Visiting Professors Program, granting incentives for honor graduates who join the university's faculty, and pursuing internationalization. Becoming a leading university in the world and of the country requires a deliberate effort to invest in research (University of the Philippines Media and Public Relations Office, 2014).

It is a challenge for higher education countries in the Philippines to level up their research productivity and build their research culture, as reflected in the Commission on Higher Education (CHED) Memo 46, s. 2012, which calls for the typology of higher education institutions. This quality assurance system calls for the classification of higher education institutions as a professional institution, college, or university. Every institution's desired graduate competency, academic and co-curricular program offerings, faculty qualifications, learning resources, support structures, the nature of the partnerships they go into, and extension work are carefully evaluated, which in turn becomes the basis for their classification. To be classified as a university, research should be prioritized. The development of research culture is then a challenge shared by teacher education institutions.

There are many ways of looking at research. One way of defining it is as a process of knowledge generation, since teaching is seen as knowledge dissemination (Valencia, 2004), which makes a researcher a partner in knowledge generation (Shamai & Kfir, 2002 as cited in Tan, 2007). Cohen et al. (2007) see research as one of the many ways man seeks for the truth, while Kumar (2008) refers to it as the pursuit of knowledge and understanding of social and physical phenomena through a rigorous and intentional investigation. Though its definition may vary from one expert's perspective to another, research is consistently described as the act of systematically investigating a phenomenon to contribute to the existing body of knowledge. Integrating research into higher education institutions would mean inculcating research in its culture.

Culture is a "peculiar way of life" of the academic community; a paradigm or mindset; a way of thinking, behaving, or working in a place or organization (Hofstede, 1997). Gudykunst and Kim (1992), as cited in Jameson (2007), see culture as a shared system of knowledge by a group of people. Culture is revealed in the traditions, systems, processes, symbols, customs, and other elements of a social group. This idea is also reflected in the definition of research culture by Evans (2007) when he puts it as shared values, assumptions, beliefs, rituals, and other forms of behavior geared towards the acknowledgment of the value and significance of research practice and its outputs. Research undertakings are considered vital and meaningful in the overall operations of the academic community.

Existing literature reveals general definitions of culture (Hofstede, 1997; Jameson, 2007),

research (Valencia, 2004; Tan, 2007; Cohen et al., 2007; Kumar, 2008), and research culture (Evans, 2007; Hanover Research, 2014). There are papers on how to inculcate research culture in the undergraduate programs (Garde-Hansen & Calvert, 2007), doctorate programs (Henson et al., 2010), and in early career researchers (Tynan & Garbett, 2007). However, there is a gap in literature as to how this is viewed or defined in the context of those who are in the frontline of developing it. Any form of progress, productivity, or growth in research is largely influenced by the paradigm by which researchers and research leaders operate on. This paper sought to define what research culture is from the perspective of teacher education institutions, which can serve as the basis for studying its nature, characteristics, and development.

2.0 Methodology

A narrative inquiry was done to capture the configuration of research culture in the context of the experiences of higher education institutions. The design allowed the researcher to look into the experiences of the informants with consideration to the temporality (past, present, and future), sociality (personal and social conditions), and place (specific concrete, physical, and topological boundaries) of the development of research culture (Clandinin & Huber, 2010).

Purposive sampling was done in seven reputable teacher education institutions (TEIs) in Region VII, Philippines, which included four state universities and three private higher education institutions. The TEI must have a College of Teacher Education with at least a Level II accreditation to ensure the existence of a research culture. Semi-structured interviews were conducted with the five Vice-Presidents for Research, two Research

Directors, and seven College of Education Deans to capture how research culture is defined in their context. Permissions were sought from the heads of the agencies and the informants of the study. As part of the ethics protocol, the researcher explained the purpose of the research and in what ways the gathered information will be utilized. All the names of people, institutions, events, and other data that might be used to track the informants have been coded to ensure confidentiality.

The interview guide used for data collection was developed by the researcher and validated by five experts to draw out the narratives of the institutional journey in the area of research culture development. The open-ended questions included questions on how the informants define research culture and the parameters by which development is viewed. Since the interviews were semi-structured, follow-up questions were asked, depending on the answers of the informants. Data gathering was done in SY 2015–2016

Thematic analysis using Braun and Clarke's (2006) approach was done to validate the various propositions generated during the first phase of the study. First, the researcher went into the familiarization of data, which involved transcribing the interviews in verbatim, reading and reviewing the data, and taking down initial ideas. Second, she started the generation of initial codes and formulation of themes. Third, she reviewed the themes concerning the coded extracts (Level 1) and the entire data set (Level 2) to generate a thematic map of the analysis. The researcher did these three times with the aid of NVIVO 11.3.2. The researcher sought for themes as to the definitions given by the different informants by identifying significant statements and determining formulated meanings from them. The researcher composed the "narrative" or "thick description" from them and

created mind maps. Lastly, themes were finally defined, named, and reported in the next section of this paper.

3.0 Results

An analysis of the interviews conducted revealed three overarching themes on the configuration of research culture in teacher education institutions. Each theme is labeled as an emergent concept based on formulated meanings gathered on significant statements taken from the fourteen informants of the study. These three themes are not to be taken separately but are understood as interrelated aspects of a single experience shared by different institutions. The three themes, as derived from the present set of transcripts, reveal that research culture is perceived to be:

1. an investment (evidence-based and consists of observable and measurable inputs and outputs);
2. a process (dynamic and built through internal and external interactions that are developmental and systemic); and
3. a norm (distinct to the institution because standardization of practices is contextualized)

Theme 1: Research Culture as an Investment.

Nine of the fourteen informants (P2, P3, P4, P5, P6, P7, P9 P12, and P13) of the study defined research culture through observable elements integrated into the university and deliverables expected from the faculty, which manifests investment and its return. This theme opines that although research culture is a broad and abstract concept that may not have one encompassing definition, its existence is **evidence-based**. For discussion, this paper classifies these pieces of

evidence in two categories: inputs facilitated by research-driven policies and outputs that reflect development-oriented outcomes.

Research culture is said to be evident as input in the teacher education institution when there is harnessing of **human capital** accompanied by adequate **resource allocation**. In the process of defining research culture, the administrators mentioned of the participation (P12, P3, P5, P6, P9) or at the very least, awareness (P13) of the majority (P3, P5, P6, P9) if not all (P5, P12, P13) of the members of the school community in research activities. Human capital includes the students (P3, P12, P13), faculty (P3, P5, P6, P9, P12, P13), administration (P5), and support services (P13). P12 supports this statement:

> "So that is how we define research culture. It's everyone's concern. Everyone must perform."

In addition to human capital, two participants of the study have also stressed the inclusion of certain non-human resources as a component of research culture in terms of infrastructure, research laboratory, training, and budget (P4), plus incentives, expenses for the hiring of research faculty, publication outlet, office space, and library (P5). P5 further states:

> "So we have a very supportive system. We have the administration that supports research. There's funding available. There are facilities available: laboratory, office space, library, and so on. It's the entire environment. So research culture is not only having faculty who publish or having an administration that is supportive of research. It's an entire environment."

The participants stated that there should

be intentional inclusion of the research function in the institutional goals and objectives (P13), overall structure or in the overall conduct of instruction, research and extension (P3), the thrust of the university, faculty promotion (P6), and all actions, activities, programs (of the university) (P7). Research culture then, to be fully established in a teacher education institution, needs not only to assume support to the research function but also to clarify provisions to maximize productivity, thus the need for research-driven policies. According to P3,

> *"Research culture is a phenomenon and, at the same time, a process. It is a phenomenon in the sense that it is already embedded in the institution's culture or way of life; the way the institution conducts itself in the overall structure or the overall conduct of instruction, research, and extension."*

However, the presence of research-driven policies that maximize human capital and adequate non-human resource allocation is only taken to be effective if the teacher education institution has evidence of research productivity. Research productivity can be classified into two: **performance** and **product**. Return of research investments can be reported as activities that the institution undertakes, like the generation of knowledge (P2), use of generated knowledge for specific purposes (P2, P3), congresses (P13) research-based delivery of instruction (P3, P5, P6, P7), extension (P6), and research-oriented fulfillment of requirements for the students (P3). More often than not, research productivity is measured through tangible outputs as reflected in regular production of research papers (P1, P3), useful research findings (P5), and development of

initiatives for global and educational concerns (P2) to the point of influencing decisions in their sphere of influence (P2).

Theme 2: Research Culture as a Process.

All the participants of the study agree that the research culture is **dynamic** and is a result of a series of actions or changes in the institution **(systemic)** over time **(developmental)**. The interview transcripts reveal two dominant components of research culture dynamism: **internal**, which looks into dynamics within the teacher education institution, and **external**, which focuses on dynamics relating to entities outside the teacher education institution.

The internal dimension of research culture in the level of the **individual** includes the attitudes of the people within the institution and the value they put on the research function (P1, P2, P4, P6, P14), which leads to the initiative (P2, P8) to the point of being passionate (P1), in contrast to those who see it as a requirement (P5, P12). In the level of the **institution**, it can be manifested in the provision of proper mentoring (P3, P4), infrastructure (P4), incentives (P4, P10), de-loading schemes (P10), capability-building activities for the faculty (P2, P4, P6), its inclusion in the curriculum for the students (P12), and the awareness of it being ingrained in the system (P3, P7, P13) even to the level of support services, like the janitors, because research now serves as the driving factor of the institution (P13), which could be emphasized because of strong leadership in the university (P7, P8, P13). The internal dimension can be lifted from P6's statement:

> *"Actually, at the College, we are very overloaded. We have 24 units of regular load, then you also have our overload. It's tough to build the research culture.*

So those who are really into research are those who are young and those who have the drive. At this point, I can say that we are not strong in our research culture, and it is perhaps because the regular load is more than enough. If they would want us to build the culture of research, then perhaps we have to lessen the number of regular loads and to really give time for teachers to do research."

The external dimension to the development of the research culture is revealed in the interviews and can be categorized as the **"push"** to do research and the **"pull"** to be recognized as a reputable research institution. There is pressure put on the institution to do research from organizations like the Commission on Higher Education (P1, P3) and accreditation agencies (P3), as implemented by laws to be followed by higher education institutions (P5). The call to quality assurance in light of internationalization, ASEAN integration (P2), and the 21st century (P6) are also considerations that can't be overlooked. Publications in external regional, national, and international research journals are considered measures of research productivity (P2, P5) as opposed to just the conduct of research (P5). To highlight the value of external recognition to the individual researcher, higher education institutions provide incentives for those who publish in ISI, SCOPUS, and CHED-accredited journals (P5) and use them as the basis for promotion (P6). In defining the research culture of the teacher education institution, a characteristic of a mature environment includes the contribution to society (P3) to the point of influencing policies (P5). P2 supports this theme with the following statement:

"Maybe that is just the direction; that

research is not just meant for publication, not just meant for internationalization. It's meant to create new knowledge. That's one of the elements. That's how we define it; that the university is conducting researches not just for ASEAN integration, not just for the internationalization that I mentioned. It's because we want to generate knowledge and we want to use that knowledge for specific purposes."

Upon further analysis of the interview transcripts, however, it is revealed that in the development of research culture, these external forces do not only provide motivation or recognition but also support the development in research culture in the form of capacity building for the faculty members (P6).

Theme 3: Research Culture as a Norm

Another facet of defining research culture, as revealed in the interviews, takes into account how each institution's research culture is **distinct** from one another. This shows that research culture is established as a **norm** in an academic institution.

All of the participants have defined research culture to be a norm, thus revealing how the teacher education institution treats research as **standardized** (Table 7). The participants refer to this as the conduct of regular research activities (P1, P13) or having all activities geared towards a research component (P7), which signifies a desire to generate knowledge (P2). Some refer to it as a lifestyle, habit, requirement, and a "daily thing" (P3, P12), even to a point where it forms part of a passion that is continually reinforced (P10). One participant has used the metaphor of a virus spreading (P6), which can be taken to mean that for the individual, research is built in (P11) or part of their lives (P14),

while for the institution, it is part of the overall climate (P4) and entire environment (P5). P3 supports this idea in the following statement:

> *"The faculty and the students will already think that research is already part of their endeavors. In terms of the instruction side, the ultimate requirement is research vis-à-vis teachers delivering the instruction. They will have to understand that, if possible, they walk the talk, so if I will take a look at their references, it will be ideal that the references they use in instruction are also researches that are conducted by them."*

When an institution has clear direction and standards in all its research operations, the teacher education institution can now better position itself in the academic community by seeing how it can create an **impact**. P5 manifests it in the following statement:

> *"And then they are doing this not simply because of the money, because when you do research, there's money involved, so you get an additional honorarium. But it's because of the kind of knowledge that you're going to generate that you could use in classroom instruction. So when you are a researcher and you are specializing in a particular field and you are teaching that one also, you need not have to go to books. You have to make use of your findings and experience, and relate that to students. So it becomes so practical, up-to-date. It's also more relevant in present situations."*

Further analysis of the interviews reveals another dimension of research culture as a norm,

in that it is **contextualized** as to what culture should be. At some point, it becomes natural to the students (P3), faculty, the entire system (P5), and all that the higher education institution serves (P14). Moreover, there is a mention of perception (P14) and relevance to present situations, (P5) which dictate that research and the culture built for it should be responsive and in touch with realities. P14 explains this as follows:

> *"So that's how I define research culture, meaning the way people perceive research as part of their lives and as a very important part of their responsibility to the institution and to the students that they serve."*

Lastly, the interviews lead to the discussion that a mature research culture builds an **identity** for the teacher education institution. Identity is embodied in the attitude towards research the institution desires for its members to build (P1) to the point of love or passion for the academic undertaking (P10). The development of the research culture needs to start at the level of the individual and is then nurtured by external elements (P11). This is not to say that the institution plays a secondary role but that it can take leadership through highlighting research in the institutional goals, objectives, and future direction (P13). This should translate to the development of a research climate wherein the faculty are not threatened or forced to do research (P4), but there is already a willingness and desire to do it (P9), which is manifested in a positive behavior, specifically on conducting research and writing research papers (P9). P13 reveals this theme in the following statement:

> *"This is reflected in the institutional goals and objectives and provides it in its future direction. You will know when an institution*

has an established research culture when everybody in the institution values it, such that it cascades to the lowest level. Even the janitors know about it, maybe not in the technical aspects of research but that there are events like the research congress and that the administration and faculty are involved in research activities, which include traveling to do research presentations and the like."

4.0 Discussion

The interviews revealed that the configuration of the research culture covers three themes: an investment, a process, and a norm. As previously mentioned, these three themes are not to be taken separately but can be understood as interrelated aspects of a single experience shared by different institutions. When put together, these three characterize research culture as a phenomenon that now becomes an exceptional occurrence (Merriam-Webster, 2017) in a higher education institution.

Research culture is defined through observable and measurable indicators, which forms part of what a phenomenon is. In this case, this highlights the existence of investments to research culture. Research culture is evidence-based. Its existence can't be assumed, but it has to be proven. These pieces of evidence come in two major categories: inputs facilitated by research-driven policies, and outputs that reflect development-oriented outcomes).

Inputs as an investment to the development of research culture necessitate the harnessing of human capital accompanied by adequate resource allocation. Investing in research is affirmed by Hanover Research (2014) when they highlighted the necessity of allocating significant resources for faculty training and support, requiring open and collaborative personal relationships among faculty members, and tailoring resource allocations based on faculty members' current motivations and abilities. This finding reveals that in the context of research culture development, a teacher education institution needs to invest in people. The maturity of the research culture is measured by the following: level of involvement (from simple awareness to that of production) and the scope of those involved (from a majority to that of an entire population). Furthermore, the deliberate provision of resources for research is an indicator of the level of research culture development. Research culture then, to be fully established in a teacher education institution, needs not only to assume support to the research function but also has to make clear provisions to maximize productivity, thus the need for research-driven policies.

However, the presence of research-driven policies that maximize human capital and adequate non-human resource allocation is effective if the teacher education institution under observation has pieces of evidence of research productivity or outputs. Returns of investment are outputs which are generally classified into two: performance and product. There should be pieces of evidence on what higher education has done and what it has been able to produce to facilitate the development of research culture. In many types of research done, like that of Valencia (2004), the international standard for excellence in research is taken to mean a ratio of at least one international publication per faculty member in a year. Assessment of research productivity is vital for the development of research culture. Considering investments and the returns of investment, it can be said that the interaction of these inputs and outputs helps create the foundation of the research culture,

empower it once established, and pave the way for the achievement of maturation later on.

These investments (human capital and resource allocation) and its returns (performances and products) are part of various processes that facilitate the development of the research culture. This interaction reveals that research culture is dynamic in nature and is a result of a series of actions or changes in the institution (systemic) over time (developmental). The interview transcripts reveal two dominant components of research culture dynamism: internal (processes within the teacher education institution) and external (processes relating to entities outside the teacher education institution).

The internal dimension of the research culture can be discussed in the level of the individual or the whole institution. These findings reveal that research culture in teacher education institutions is complex as it is systemic without losing consideration for the individuals who contribute to the overall environment. How an individual grows in terms of research productivity can have effects on the research culture of the institution and vice versa. In the stages of development, it is important to capture how the internal dynamics can change over time to lead to a more robust research climate, which is what Marchant (2009) describes as the permeation of the culture of research in academic work, the "ideal" structure.

Developing an institution's research culture can't happen without the help of institutions outside of it. The interviews reveal an external dimension to the development of the research culture, which can be categorized as the "push" to do research and the "pull" to be recognized as a reputable research institution. A mature research culture necessitates collaboration and the need to work with others. The paper of Didegah and Thelwall (2013) contains

statistics that strongly support how, in the context of publishing high impact researches, the authors should consider engaging in the widest possible team working. The criterion for appropriateness should be considered in building these teams. While there is value in cooperative research work in the international setting, there seems to be no particular need to work with other institutions within the same country. These findings reveal that there are internal and external dynamics to the systemic and developmental facets of research culture.

The first theme on investment covers the elements that help create the research culture in the teacher education institution, while the second theme points out to the processes or dynamics that set these elements in motion. These elements and dynamics need to come together to become a "way of life" for an institution to claim the presence of any research culture. Bringing together the first two themes makes one teacher education institution distinct from another, which is the third facet of research culture.

All of the participants agree that the research culture in an institution is standardized. This finding reminds the research stakeholders that building a culture of research will require a set of protocols. Concerning the themes that were previously discussed, these protocols make use of the input and output components and guide the internal and external dynamics. It is in contemplation of this definition of research culture that individuals and institutions should define the practices they want to serve as a model in their practice of this academic undertaking. Like all standards, established protocols will be difficult to undo. Paradigm shifts will be a challenge once there is no set direction. Bland and Ruffin (1992), as cited in Jung (2012), identified intentional work

coordination, research emphasis, decentralized organization, participative governance, frequent communication, leadership with experience in both management and research, and distinctive culture as some of the factors present in high performing research environments.

When an institution has a robust climate for research, this translates to valuable contributions to knowledge generation, dissemination, and utilization (Valencia, 2004; Shamai & Kfir, 2002 as cited in Tan, 2007). All of these should lead to an impact. Impact requires the recognition that research is done with the motivation of producing something of value beyond the scope of the educational institution. Efficiency and, to some degree, the effectiveness of the educational institution defines the standards it has built in the conduct of research, but it is the impact of the researches that establish its reputation in the academe.

What a higher education institution brings outside as contribution is a reflection of what it already has inside it. This contribution brings to light that culture as a norm is contextualized, as is what culture should be. Perception is dependent upon the lens by which a person or an institution looks into and is, in turn, dictated by the sum of its characteristics that make it distinct from others. To achieve an established research culture, contextualization has to have a level of consistency from macro- to microlevels. This highlights how, in the process of developing a research culture, the institution should remain reflective of who it is in the academic community and how it sees itself contributing to knowledge generation, dissemination, and utilization.

The establishment of the research protocols, the contribution it makes in the community, and the ability to make itself distinct from others are not end goals, but rather, help the institution define its research identity. Identity is built such that research becomes part of whom the individual and institution see itself "becoming." Through understanding that the development of research culture is standardized and contextualized, one can resolve that no teacher education institution shares the same practices. It is vital to acknowledge that culture is constrained within the context of the academic institution, in that no matter how similar one institution of higher learning may be to another, there will be distinct characteristics. When one seeks to understand the research culture and its development in a teacher education institution, it is imperative to understand that the observable and measurable inputs and outputs used in internal and external dynamics are standardized in the context of the institution.

The variety of context and the standards these contexts dictate do not necessarily mean that comparisons can't be made between research cultures across teacher education institutions. This distinction serves as a reminder that learning from the journey of other educational institutions must be made in relation and in continuous reflection with the identity a university or college desires to build for itself and the impact it wants to create in the greater academic community.

In summary, research culture becomes a phenomenon in a higher education institution when human capital and resources are maximized, such that performance is optimized and quality products are created with the aid of established internal and external interactions. The goal is to create an impact in the academic community and the industries being served and for the TEI to establish its identity as a reputable research institution (Figure 1).
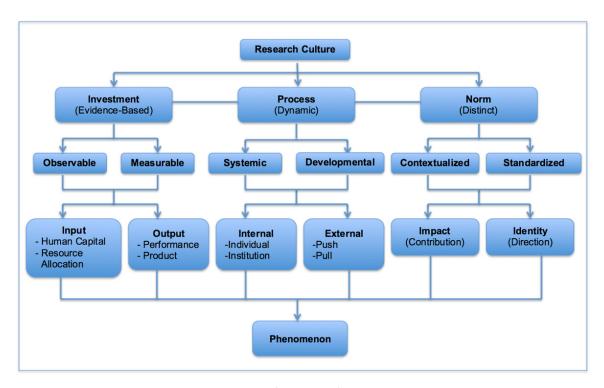
Figure 1. *The Configuration of Research Culture*

5.0 Conclusion

Research culture is an investment that consists of observable and measurable inputs and outputs that interact in internal and external dynamics. These are developmental and systemic in nature, which lead to standardized and contextualized practices in a teacher education institution. It can be defined as an investment, a process, and a norm, as it is evidence-based, dynamic, and distinct to the academic institution.

Recommendation

If a higher education institution seeks to build a robust research culture, it should undergo an intensive assessment of its vision, mission, and strategic directions. The institution should clearly define what possessing a robust research culture means and set indicators as targets to check if they are going in the desired direction. To develop a research culture, an institution needs to specify its research investments, strengthen its processes, and establish norms.

Acknowledgment

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