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The Dynamics of Research Culture Development

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ABSTRACT

This paper sought to discuss the activities facilitating the development of research culture. A narrative inquiry was done with fourteen key informants from seven reputable teacher education institutions in Region VII. Interview transcripts were coded with the aid NVIVO 11.3.2. It is found that research culture, being a process, is dynamic (systemic and developmental in nature) as manifested in its internal and external activities. Within the institution, internal dynamics begin in the acknowledgment of the need to do research as the individual goes to fulfill a duty while the institution establishes systems to support such function. It expands when it is given emphasis and the researcher experiences a paradigm shift and research permeates all the other functions in the institution. Maturation is reached in the prioritization of research where the environment is acclimatized and the role of the faculty as a researcher is internalized. The external dynamics move from benchmarking, simply identifying standards and meeting the fundamentals of research as required, to being able to build partnerships. Fostering affiliations go together with the institution's ability to determine its niche in the knowledge economy leading to leadership where it is able to demonstrate expertise and pioneer development.

Keywords*: research culture, internal and external dynamics, process*

INTRODUCTION

Research undertakings are considered vital and meaningful in the overall operations of an educational institution. Evans (2012) defines research culture as shared values, assumptions, beliefs, rituals and other forms of behavior geared towards the acknowledgement of the value and significance of research practice and its outputs. Though culture is an abstract concept, it can be established from this definition that research culture encompasses observable activities that can serve as indicators of its presence in an academic institution. The investigation of the development of research culture finds its merit in that in the international arena, and that research is a key in identifying quality higher education institutions. Laliene and Saklasa (2014, 2012) in Regardio and Tullao (2015) state that a society that puts premium on knowledge and innovation, universities are now faced with the important task of pursuing research and putting significant findings to use in their respective communities and fields of discipline.

To take a more specific example, *Times Higher Education World University Rankings* judge research-led universities across all their core missions - teaching, research, knowledge transfer, and international outlook. Consistently, when one takes a close look at the top performing universities in the world, the value and quality of research productivity is associated with quality university education. In the Philippine context, the Commission on Higher Education (CHED) issued Memo No. 46, s. 2012 that calls for the typology of higher education institutions. This quality assurance system puts into place horizontal typology wherein a higher education institution can be classified as a professional institution, college or university, in order to be better equipped and positioned

to address the needs and challenges of the changing educational landscape in the local, national and international scenario (Commission on Higher Education, 2014).

Not all universities in the country are research-intensive. This concern is attributed to the historical traditions of Higher Education Institutions (HEIs) of having been established to focus on teaching and the tremendous resources it would demand in order to build a research culture in them (Salazar-Clemeña and Almonte-Acosta, 2007). On top of this, the faculty can view research as an "additional task and burden". However, if an HEI seeks to be recognized in the international arena as of quality and relevance, an investment in research culture is necessary.

Culture is defined as 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). Research then as a way of life implies that a research culture is built through a series of activities and interactions within and outside the institution. There are key interactions that can be identified when building a research culture that is **initiated**. After a period of time and with the goal of achieving a mature research culture, it is not just put into place but is continually **nurtured**. In international and national evaluations, research institutions are evaluated through their outputs and thus highlighting that a research culture is considered **established** in such a way that research results are disseminated and utilized to contribute to the growing body of knowledge, development and innovation.

The above studies support that a research culture in higher education institutions is initiated, nurtured and established in various phases**.** The concept of development suggests that it undergoes a process that begins with the setting up of the requisites that are necessary for its growth. This paper opines that research culture admits to different stages of development: 1) Gestation (initiating stage), 2) Expansion (developing stage) and 3) Maturation (flourishing stage). **Gestation** is the period of setting up on what would serve as the foundation of the teacher education institution's research culture. When an institution reaches a period of stability and steady increase in quality research activity and output, it has reached **Expansion**. **Maturation** of the research culture is reached when the TEI consistently takes on research activities and produces quality outputs and it reaches a period of the establishment of its standing in the academic community. Figure 1 reveals how the development of research culture can be attributed to people, resources and research activities.

Development begins with the period of setting up on what would serve as the foundation of the teacher education institution's research culture or Gestation. In this phase, the institution asks: What does an institution need in order to have a good foundation for a strong research culture? When an institution reaches a period of stable and steady increase in quality research activity and output, it is said to reach the stage of Expansion. The question to answer now becomes: What does an institution need to build on the good foundation set for a strong research culture? This is the period wherein existing practices (policies, programs and the like) are nurtured and other elements are added in order to continually expand. Maturation of the research culture is reached when the institution consistently takes on research activities, produces quality outputs and reaches a period of the establishment of its standing in the academic community. It is at this point when the question takes on the form of: What does an institution need to build credibility in the academic community as a reputable enduring research institution?

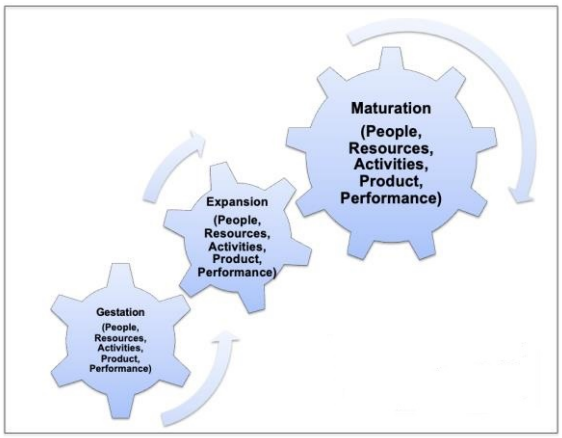

Figure 1. The Gestation-Expansion-Maturation Stages on the Development of Research Culture

The answers to these questions include human and non-human resources (inputs) and the performance and products (outputs). However, culture being defined as a 'way of life' suggests that there are activities and interactions (dynamics) internally in the institution and externally with other stakeholders that contribute to the achievement of a mature research culture. This paper sought to discuss the activities facilitating the development of research culture including its attributes and characteristics.

METHODOLOGY

The qualitative research methodology was used in this research. Specifically, a narrative inquiry was used as a method of investigation as the development of research culture happens over a period of time as a form of narrative in the context of the experience of a higher education institution. Using purposive sampling, seven reputable teacher education institutions (TEIs) in Region VII were selected. Four of which are state universities while three are private higher education institutions. Semi-structured interviews were conducted with the Vice-President for Research or Research Director (whichever is applicable) and Dean of the College of Education with the goal of capturing how research culture is developed in their context. Permissions were sought from the heads of agency and the participants of the study and informed consent was requested. As part of its 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 as to ensure confidentiality. Data was gathered in SY 2015-2016 in teacher education institutions in Region VII that have a College of Education with at least Level II Accreditation.

To analyze the data, thematic analysis using Braun & Clarke's (2006) approach was done to capture the development of research culture in the context of teacher education institutions. First, the researcher went into the familiarization of data which involved transcribing the interviews in verbatim, reading and reviewing the data, taking down initial ideas. Second, the generation of initial codes and the searching for themes were done. Third, themes were reviewed in relation to the coded extracts (Level 1) and the entire interview (Level 2), generating a thematic map of the analysis. The researcher did these three times with the aid of NVIVO 11.3.2. All the names of people, institutions, events and other data that might be used to track the informants have been coded as to ensure confidentiality. The researcher sought for themes as to the activities that facilitate the development of research culture including their attributes and characteristics as given by the different informants. This was done by reviewing the transcripts, assigning preliminary codes and searching for patterns or themes. These themes were reviewed and the researcher identified the "narrative" that can be drawn out from them. Mind maps were drawn until the last step, and themes were finally defined, named and reported in the next section of this paper.

Research Culture as a Process

An analysis of the interviews conducted revealed six overarching themes on how research culture as a **process** is characterized in the teacher education institutions.

Operating on the assumption that the development of research culture is **dynamic** and consists of **internal** and **external** interactions, which are developmental and systemic in nature. These themes are reported in milestones and key action points (Table 1 and 2). However, it should be taken into consideration that these themes are not to be taken separately but are interconnected aspects of the process of developing research culture under study.

The human capital and resource allocation needed for the development of research culture and the performances and products that are produced as outputs and therefore evidence of such culture does not come all at once in a teacher education institution. Thus, revealing another dimension in the definition of research culture in which it is a process. All the participants of the study agree that research culture is dynamic in nature and is a result of a series of actions or changes in the institution (systemic) over a period of 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).

Internal Dynamics of Research Culture

In the development of research culture when viewed as a process in terms of internal dynamics, an institution moves from acknowledgement to emphasis until it reaches prioritization. At each milestone, key action points are done at the level of the individual and that of the institution.

Table 1. Milestones and Key Action Points on the Internal Dynamics of Research Culture as a Process

Research as a Process: Internal			
Stage	**Milestone**	**Institution**	**Individual**
Gestation	Acknowledgment	Establishing Systems	Fulfilling Duty
Expansion	Emphasis	Permeating Functions	Shifting Paradigm
Maturation	Prioritization	Acclimatizing Environment	Internalizing Role

Gestation

At the onset, acknowledgment in teacher education can translate to the individual going into research as a simple way of fulfilling duty while in a larger scale, the institution begins establishing systems to cater to this function. A faculty member in a teacher education institution goes into research because it is a requirement by the Commission on Higher Education (P1, P5, P6, P8, P11, P12, P14) for accreditation (P3, P4, P5, P7, P8, P10, P13), typology (P2, P4, P7, P10) and to be credited as Center of Development or Center of Excellence (P1, P2). This is evident in the statement of P2,

> *"All of us are required to do research, especially that the change in the College of Education, part of the requirement for being the Center of Excellence, that is the faculty members will be having research that is published in local, national and international journals. That's really part of the requirement."*

At gestation, researchers do it as a requirement for clearance (P1, P4, P7) and to survive with the publish-or-perish ideology (P4). However, there are informants who identify that even at gestation, a researcher should be mindful that research is a parameter for quality (P7), indicator of global competitiveness (P2) and thus stems the sense of accountability for research productivity in every member of the institution (P4, P8, P9). P4 shares an experience in this statement:

> *"It takes passion to do research. The question starts with you."*

The challenge identified in this level is that it is observed that the same people are doing research (P3, P9) when it is considered as a deliverable for all as the institution seeks for a return of investment (P4, P8 and P12). P3 shared,

> *"One is very candid: the same people are doing research. Yes, we can do accreditation. Yes, we can pass. But if you take a look at it, it's the same people that are doing…"*

When the paradigm of faculty members continues that they are pursuing this academic undertaking to fulfill a requirement, it is clear that productivity can't be sustained.

In the level of the institution, internal activities largely revolved on building the systems governing research. The faculty's mindset of research being a requirement is related to the move of the institution to require research from them (P1, P2, P3, P4, P7, P8, P12, P14) in recognition of the role of research as a parameter of quality higher education (P7, P12, P13, P14) and thus is something that has to be complied with (P10, P1, P13). In this stage, the informants highlight that administrators need to demonstrate value for research (P14, P3, P4, P5, P7, P8, P9, P11, P13), which can be translated to budget allocation (P5, P8, P9, P11, P12, P13, P14) in the pursuit of sustainable capability building activities (P2, P4, P5, P7 P8, P9, P10, P11, P12, P13) and other activities relating to it (P7, P13). This highlights the investment in human resources (P11, P13, P14) even if many informants assume research experience from higher education faculty members (P5, P11, P13, P14). P11 answers,

> *"With that human resources available, you can easily gather them together and try to mold them together also. So, a school who has not started in doing research, I think what I could advise the school is to look for somebody that will guide their faculty in doing it. Somebody who is already into that kind of work. Researcher, we should choose this person. He should be a researcher not just merely a teacher… If you are in a university or in a school where no one could lead, look for somebody that could lead. Not putting anyone doesn't have an idea also or who doesn't have knowledge about research."*

All of these revolved on the idea that in order for a research culture to be built, research policies need to be put into place (P3, P4, P5, P7, P8, P10, P14), revisited and revised when necessary (P5, P6, P7, P9, P13).

Some key activities as identified by the informants in building research culture include: assigning research mentors (P1, P2, P3, P4, P8, P12), establishing incentive schemes (P3, P4, P5, P13), giving provisions for research in the faculty work schedule (P1, P2, P7, P8, P9), providing deloading schemes for faculty members (P1, P5, P7, P8, P9, P12, P13, P14), providing venues for research dissemination (P3, P4, P5, P8, P9, P10, P11), putting up a recognition scheme for outstanding research work (P10, P14) and systems for checking accountability among stakeholders (P12, P13) and quality control of work (P11, P13). They further add that an institution should include research activities in the academic calendar (P1, P12), direction of the university (P2, P7, P8, P11, P12, P13), faculty promotion criteria (P2, P5, P8, P10, P11) and key personnel for research (P2, P4, P5) should be identified in the organizational structure with consideration for context (P5). Evidence to this is the statement of P3,

> *"One would be the institutional support that is very basic. The institution should have a very very good sound policy of supporting research. Sound policy means budget allocation, incentivization --- if there is such a word. Incentives and the third should be a constant system of mentoring that is very important. And fourth, those who are doing research should have a venue for a research presentation. There should be a proper research presentation and networking.*

These four are very important in establishing a research culture."

The value placed upon research should permeate instruction (P2, P9, P12) and extension (P8, P12). Some insights shared by the informants in this stage are how academic leaders should be researchers as well (P2, P3, P5, P9, P14) and how there is need for a paradigm shift on how research is seen in the academe (P7, P13, P14). Also, though there are many demands in internal dynamics for a research culture to be built, the informants have shared that research stakeholders should work together (P8) including that of research agenda formulation (P10). As practiced, P10 shares,

"Part of our research agenda is the gathering of the various stakeholders including those from DOST and SUCs. So, this includes agencies wherein we presented it to them with the students, alumni, other school officials."

These 109 codes are part of what is considered by the informants to be the basic foundation of building a research culture. To expand, other activities were identified.

Expansion

Building a research culture begins in the acknowledgement of the task at the level of the institution and that of the individual. When it expands, this acknowledgement turns into emphasis, which translates to the shifting paradigm of the individual and the permeating of functions of the institution. The shift in the paradigm is the faculty's way of adapting to the changing demands of higher education (P2, P4, P5, P7, P8, P11, P13, P14) and is seen when they take on the posture of learning to do research (P2, P3, P7, P11, P13, P14) until it becomes automatic to the faculty (P3, P7, P12, P13). The administrators should also move from implementing what is required to taking on research initiatives (P2, P7, P10, P12, P13). R7 shares,

"But, right now, the paradigm shift is very clear because in the support system and even in the indicators, in the parameters of quality, research is a major component. And so, people also work hard for that, I would say that although the travel/journey might not be really that easy, but we have been part of this paradigm shift and I think we have leveled up the culture of the university especially in the college of Teacher Education."

It is necessary then for the researcher to overcome their fear of doing research (P7), develop not only persistence (P3, P5, P7, P13) but also a sense of responsibility for producing knowledge (P11, P5, P13, P14). At this stage, there is a conscious effort to develop a love for research (P7, P12) and the struggle involves having it compete with the other functions of the faculty (P12). This very relevant concern is shared by P12 in this statement,

"But then I came to realize that even with such effort, research is not really much appreciated. Number one reason why teachers were not so engaged in research is because we were all overloaded. Our teaching, I don't know if you have experienced that, but here definitely, most of us have 24 units. How can you also focus (on) research when you also have this?"

On the level of the institution, the establishment of systems now takes into consideration how research should be part of the overall function of the teacher education institution (TEI) in that it permeates all the other functions. The TEI emphasizes research through its inclusion in its vision-mission (P2), graduate attributes (P2), faculty promotions (P2, P11), structure (P4, P5, P7(2), P12, P13) and highly evident in its evidence-based culture (P13). At this stage, research is highlighted to be part of the trifocal function of HEI faculty members (P7, P8, P10, P12, P13) and has clear inclusion to instruction (P4, P9, P12, P14) and extension (P14, P2, P4, P8, P10, P11) to the point that it can be said that quality instruction and extension stems from quality research (P12). The institution does not only demand research from the faculty and becomes

responsive to their research needs (P4). P7 puts it as,

> *"But here, that's not enough, you are now abnormal if you don't have research which I like because the discomfort is there, and then the system-wide shift is there that you become abnormal when you don't follow the journey."*

At this juncture, it is vital to reiterate that the themes are not separate from each other but they come together to create a picture of the journey of teacher education institutions. It can be noted that only a few codes are in expansion. This could be because many of the informants have an idea of what is needed and where the institution needs to go but how to get there can remain to be a challenge. P3 expressed this in the statement,

> *"Although we tried very hard to really mentor, I don't know… Incentives are already there. You really can't blame the institution for not supporting because the support is there. Even the policies to support traveling abroad. I really can't point the problem now. Before it is easy to pinpoint the problem but now, I cannot. Mentoring, support, and financial is already in place. Most of the things are already covered. Maybe it takes time, 2-3 or five years."*

Maturation

All of the informants shared that their institutions have not yet reached maturity but all of them have an idea of what it means to have a mature research culture. From emphasis, internal dynamics reveal that there is now a prioritization of research in the teacher education institution. The faculty has internalized his role as a researcher while the institution has acclimatized its environment to highlight research. At the level of the faculty member, there is a strong assertion among the informants that maturity is reached when research is seamlessly integrated in the work the person does (P2, P3, P7, P11, P9, P12, P13, P14) with a wider perspective in the purpose of research (P2, P3, P5, P7, P9, P12, P14) because research productivity goes back to the individual (P4, P5, P7, P9, P12, P14) and so there is a need to find significance in the research work a faculty does (P12, P14, P1, P2, P3, P5, P7, P11, P9, P21). P3 states,

> *"If it is already impossible, they have to be very candid about it. They really have to appoint somebody who will lead the research. Because I have never seen a research institution whose leaders are not researchers themselves. That is the reality. Powerful role modeling."*

It is at this level where there is a more prevailing thought that research institutions needs to have leaders who are researchers as well (P3, P5, P9, P13, P14) and they are people who have vision for the maturity of the research culture (P2, P3, P7, P9, P13, P14).

At this stage, the researcher has constant motivation to pursue research endeavors (P3, P5) not only because there is a recognition that research is a rewarding endeavor in itself (P3, P5, P7, P9, P12, P14) but also because the people in the system have a growth mentality (P2, P3, P7, P11, P9, P13, P14) and they take the initiative to improve current practices (P2, P3, P7, P9, P13, P14). One idea that can be highlighted in this level is that the researcher in a mature research environment do not wait for what the institution can do for them but they themselves seek mentors (P2, P7, P9, P12) and in turn, the researchers who internalize their roles become powerful role models (P3, P5, P7, P10, P9, P13, P14). P5 highlights,

> *"When you are already mature, you don't mind about accreditation, that is the most ideal when you do research, it's because of the craving for new knowledge and the craving for contributing new ideas to the world."*

When the researcher has internalized the role of being a researcher, the institution in turn should have acclimatized its environment in that prioritization of research cascades in all levels of the educational institution (P2, P5, P7, P8, P12, P13, P14) as manifested in the following: clear compensation for research functions (P2,

P13), high impact factor (P11), presence of patents (P11, P14), established quality assurance systems (P12, P13), curricular integration (P2, P13), clear research direction (P2, P3, P5, P7, P8, P13, P14) with inclusion in the vision-mission (P2, P3, P13), well-defined research structures (P2), well-established key research offices (P3, P5, P8)and sustainable research activities (P2, P7, P8, P12, P13) and productivity (P3, P7, P13) in an environment where research integration is a given (P2, P7, P14). R5 describes this in the following statement:

> *"I would say that it must really be considered a big business. When I say "big business", it should be really a major part of the organization. Because right now, the research center is under the office of the Vice President for Academic Affairs. To really enhance it, there must be a VP also for research, innovation, and so on."*

The internal dynamics of a mature research culture revolves around the concept that the institution now consists of a community of researchers (P11, P12) wherein the researcher is now part of a norm in the institution to the point that even their graduates are trained to be researchers (P2, P8, P13, P14). Four of the fourteen informants say that this is the point wherein the research culture speaks of the identity of the institution (P5, P12, P13, P14). Research is not separate to what the teacher education institution is. It is also during this discussion that even as the informants describe what is happening inside the institution in a mature research culture, when there is recognition that for this to be achieved, there must be an outward dimension to the dynamics. When the informants speak of how research is development-oriented (P2, P3, P5, P11, P12, P13, P14), there is an acknowledgment that research seeks to contribute and is therefore not limited to the confines of the institution. P2 highlights that partnerships are vital to the development of research culture as one can continue to learn from the best practices of others (P2, P7, P13). When higher education institution fully embeds research into its identity then it is more capable of building a niche in the academic community (P3, P12, P13) then implying that there must be external recognition for the institution's valuable contribution to knowledge generation (P3, P5, P11, P12, P13). This then leads to the external dynamics of research culture development.

External Dynamics of Research Culture

If the internal dynamics of research culture development focus on the interactions and activities inside the institution, the external dynamics look into how the institutions work with people outside their institution. In the beginning, an institution works with other academic institutions or with the industry for benchmarking, which expands to partnerships until it reaches leadership. This reveals 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 (Table 2).

Table 2. Milestones and Key Action Points on the External Dynamics of Research Culture as a Process

Research Culture as a Process: External			
Stage	**Milestone**	**Push**	**Pull**
Gestation	Benchmarking	Identifying standards	Meeting fundamentals
Expansion	Partnership	Determining niche	Fostering affiliations
Maturation	Leadership	Demonstrating expertise	Pioneering development

Gestation

At the gestation level, teacher education institutions work with others to benchmark from their practices. The two action points at this stage are going out to identify standards and meet fundamentals. The "push" to do researcher largely comes from the Commission on Higher Education (CHED) and so it is but fitting that the informants recognize that they go out to look into the standards set out by CHED (P1, P3, P4, P7, P8, P10, P11, P12, P13, P14). This can be gleaned from the answer of P2:

> *"When did the change happen? It happened when there were also changes in the educational system. It all started with the outcomes based. It all started with ASEAN integration, although ASEAN integration has been long time discussed since 1998, as far as I could remember... CHED, TESDA and DepEd have been working together to achieve the aim for internationalization and research was really part of it. That's why when the university got the awareness, the university embraced (it) and became open to such changes, then research became really part of the strategic directions, part of the main focus of the university's direction."*

The institutions look into accreditation standards as well that change to answer changes in the educational system. For some, global and international standards are being studied and benchmarking is done of other institutions for best practices. It is in this stage where the teacher education institution tries to learn all that it can from others. An example is the sharing of P1:

> *"... our research schedule has the adoption of the best practices of other universities as far as research is concerned."*

Going deeper into the interviews reveal that once these standards are identified, the institution goes out to help meet it. The more they work with agencies, the more was it emphasized that leveling up required research (P3, P4, P5, P6, P7, P8, P10, P12, P13) at the same that it should be considered basic to higher education (P2, P4, P6, P7, P9, P12, P13, P14). P3 shares,

> *"Again, sad to say, it was more of a need to sustain our level of education… You need to do research in order to achieve and maintain the level of accreditation and the center of excellence. Research is a major component."*

In some institutions, they recognized the presence of their researching faculty (P1, P4, P5) in these benchmarking endeavors while there are those that highlight that the faculty is forced to take on research (P10, P11, P4). Part of the external dynamics in the early beginnings of research culture includes external support coming in (P7) and the invitation of consultants to guide them in their research undertakings (P7, P12, P13). All of these activities cultivate the research culture in an institution as it learns from others.

Expansion

Benchmarking activities, when given follow-through can lead to partnerships. This milestone is reached in expansion as the institution goes into determining its niche and fostering affiliations. As a teacher education institution benchmarks from other researching institutions, it can slowly build research interests and expertise (P2, P3, P5, P11, P12, P13, P14) through assessing and improving its research practices (P13). P13 states,

> *"I suggest that they begin with a self-assessment and an acceptance of their weaknesses and lapses. They should also benchmark or look into valid standards to compare their achievements too. Any institution that is also serious in the maturity of their research culture development should also go for accreditation and even ISO. They should get external recognition because in doing these things, external standards will help you identify what to do and if you are doing a good job."*

At this juncture, the TEI can clearly see the knowledge landscape, identify the gaps and position itself where it can make the most contribution. This is evidenced by its ability to

submit research proposals for partnership (P2) thus acknowledging that it also has something to contribute to knowledge generation. Coupled with external recognition for research achievements (P14), these partnerships can lead to commissioned research (P3).

In the Expansion Stage, the teacher education institution slowly builds its identity as it interacts with other academic stakeholders (P5, P13, P14) including those in the international arena (P14, P7, P8, P12). Its awareness of what it can contribute together with its initiative to learn from others (P2, P7, P13, P14) leads it to build linkages with more accomplished educational institutions (P1, P2, P3, P7, P8, P9, P12, P14). These linkages allow them to not only adopt the best practices from other universities (P1, P2, P7, P13, P14), and build research networks for sharing results (P3, P7, P14) but also share its resources and best practices to others (P2, P9, P14). P2 shares,

> *"So, we do partnerships with other institutions, we report our findings and we publish it. That's what I've said that there are partner agencies, really, who are looking for institutions who can work for their research in their CSR activities. We have produced 4 published researches just for a company alone, different from the individual researches that we do. Teachers need to be instilled in their responsibility that it's not just for classroom, it's also for the community and for global practice also."*

This back-and-forth interaction recognizes that research cultures, though unique to the institution, is also a conglomeration of all the other institutions that it has worked with and has influenced it in one way or another.

Maturation

When asked about activities relating to a mature research culture, the teacher institution takes on leadership in its external dynamics. This is manifested in its ability to demonstrate expertise and pioneer development. In a well-developed research culture, research is so well established in the institution (P2, P7, P12, P13, P14) and the individual (P7, P23, P14) that researchers in the institution have built a name (P3, P7, P11, P23) and are recognized by reputable organizations (P3, P7, P11, P23) and other stakeholders (P2, P3, P5, P7, P11, P12, P13) for significant ideas (P3, P5, P7). These findings reveal that expertise can't be established in a TEI if it is not given due recognition by its peers in the academic community. This valuable insight is shared by P13 in this statement:

> *"Our journey in the development of our research culture is not an easy one but we are also taking the time to celebrate our small victories. Our journal is CHED-accredited and outside agencies are now recognizing the research performance of our faculty. This is evidenced not only from the recognition we received but also by the grant of projects given to us and research that we are doing in collaboration with other agencies like DOST, DAR, CHED, DLSU and NEDA."*

Although one has mentioned that expertise can be dependent on the indicators by which it is measured (P5), a prevailing notion is that these institutions should have patents (P3, P10, P11, P12) and clear indicators for contribution to the community (P2, P3, P4, P5, P7, P10, P12, P13). Ultimately, expertise is seen to translate to the impact of research done (P7, P12, P13) and thus necessitating that in the onset, research should be done with the concept of contributing to development (P5, P12). Mature researchers understand that with this in mind, there is always more to learn and more to contribute (P2, P3, P7, P12, P13).

It is enough that one claims expertise in a mature research culture. There should be evidence of utilization of outputs (P1, P2, P3, P4, P10, P12, P14) with an established contribution mindset (P2, P5, P14). Patents are seen as an indicator as well (P10, P11) and this necessitates necessary structures in the institution (P14). What can be taken as a valuable insight in this theme is how the informants, though highlighting external dynamics, note that being able to contribute will entail the researcher's ability to find meaning in what he does (P1, P5, P12, P14). For the case of this set of informants, there is

a mention of improved delivery of instruction (P2, P14). Ultimately, being able to take leadership in research is a return of investment (P14) as manifested in this answer:

> *"People are now becoming aware that it's not just instruction that we have to excel and focus in but we need to come up with researches that can aid instruction and it's not just the faculty who will be able to extend to the community but the students as well can now extend to the community what they have learned in the university. So hopefully, we would have a more developed economy and country. The research outputs can be a source of wealth creation also which would benefit the college and at the same time relate to the industry."*

Table 3 reflects the summary of the number of codes in the thematic analysis as reflected in this section.

Table 3. Number of Codes

Theme	No. of Codes
Fulfilling Duty	41
Shifting Paradigm	38
Internalizing Role	142
Establishing Systems	197
Permeating Functions	29
Acclimatizing Environment	103
Identifying standards	49
Determining niche	13
Demonstrating expertise	69
Meeting fundamentals	39
Fostering affiliations	43
Pioneering development	28

DISCUSSION

The development of research culture has a dynamic characteristic in it thus highlighting its nature as a process (Figure 2). The findings of this study reveal that in terms of internal dynamics, the milestones move from acknowledgment to emphasis until it reaches prioritization. In the level of the institution, it begins with establishing its systems until it permeates all the other functions and culminates in the acclimatization of the environment for research. The individual in the institution also begins conducting research for the sake of fulfilling a duty but later on shifts his or her paradigm until the internalization of roles as researcher is achieved. The achievement of an institution's fullest potential in research will not be achieved without the aid of its other stakeholders, thus, bringing into consideration the external dynamics. The milestones move from going out in order to do benchmarking activities to establishing partnerships and later on exhibiting leadership in the field of research. The 'push' to do research starts with identifying standards until slowly the institution is able to determine its niche and demonstrate its expertise in the wider academic community. The 'pull' in this interaction with other institutions finds its beginnings in meeting fundamentals until one becomes equipped to foster affiliations and, in the end, pioneer development in their field of discipline and expertise.

In the milestone of acknowledgment, the institution begins by establishing systems. Under this, the institutions pursue sustainable capacity-building research activities, allocate necessary support for research activities (policies, venues, funding, expertise, incentives, recognition scheme, opportunity to work with stakeholders), model out the valuing of research (administrators) with the necessary paradigm, require research from the faculty with a system of checking accountability and include research in the direction, faculty promotion, loading, organizational structure, instruction, extension and all other activities in the TEI. A major point that needs to be stressed is that even in its beginnings, there is a priority in sustainability and accountability within the institution. Pratt, Margaritis, and Coy (1999) support this idea when they identified decentralized management in the higher education institution's structure and strong leadership at the dean level to be vital considerations for the maturation of a research culture.

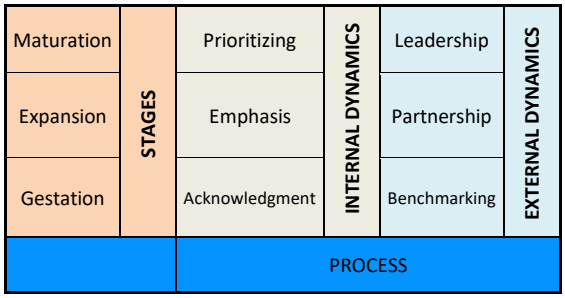

Figure 2. The Milestones of Research Culture as a Process

Still in the milestone of acknowledgement, the individual member in the academic institution begins by getting immersed in this scholarly undertaking to fulfill a duty. Individuals strive to meet the requirements of CHED and Accrediting Organizations, consider research as a parameter for quality and competitiveness, build a sense of accountability for research productivity and deliver outputs as a return of investment of the institution while addressing the concern of having the same faculty doing research. Although there is still an element of doing research for the sake of meeting requirements, the faculty still acknowledges that it is a necessary step for growth in the academe. As the individual and the institution continue to journey in the development of research culture, expansion can be reached. Quimo and Sulabo (2014) stressed that a strong policy environment that highlights robust faculty development programs, enhanced research collaboration, improved research productivity, and good incentive system is needed to promote and enhance the research culture in colleges and universities. This targets a focus on internal dynamics.

Emphasis to research can be observed at the level of the institution when it clearly permeates its other functions which can be manifested through the following specific steps: interweave with research and extension functions (trifocal functions), revise vision-mission, graduate attributes and structures to give provisions for research, build an evidence-based culture and respond to the needs of the faculty since research part of their function. It can be noted that research culture needs to be systemic in that it is all encompassing in an institution. This manifests a certain level of commitment to scholarly investigations.

When research culture expands at the level of the individual, there is a noticeable shifting of paradigm wherein the faculty learns to adapt to the changing demands of higher education and see research as automatic, take on the posture of learning to do research and effort to love research, develop persistence in the conduct of various research activities, manage demands of research in line with other tasks and acknowledge the need for administrators to take on research initiatives. At this point, research is perceived as more than just a requirement but something that a faculty member actively pursues in recognition of its value and thus the need for the administration to continually journey with them and anticipate the possible assistance that might be needed or required to sustain such development.

Maturity in terms of internal dynamics is achieved in the milestone of Prioritization wherein at the level of the institution, there is the acclimatization of the environment in that the following can be observed: cascading of the prioritization of research in all levels of the institution, possessing a clear research direction which translates to all functions in the institution, having research speak for the identity of the institution, acquiring a 'development' orientation and establishing a niche in the academic community. Research is not an afterthought but a driver of the functions of the institution. It is when you speak of the institution; you cannot do away with research.

At the level of the individual, he or she has internalized his or her role as a researcher such that the person possesses constant motivation, sense of purpose and significance for doing research, acquires a 'growth' mentality, acknowledge that research is a rewarding behavior which is now seamlessly integrated to one's functions and for those who are leaders, have a vision for the maturity of their research culture. Research is part of the faculty

member's persona such that his or her growth as a professional is entwined to his or her journey as a researcher. This is supported by the study of (Hill and Haigh, 2012) wherein literature reveals that teacher educators increase their research productivity and build their own identity as fully fledged researching academics when they are given opportunities to work with more experienced colleagues in a supportive academic environment.

External dynamics in the development of research culture begins with benchmarking. This involves identifying standards, which translate to looking into CHED, Accreditation and international standards, interacting with other institutions to learn from their best practices and identifying changes in the educational system. This is where the institution takes a look at the context they are in and evaluates what is demanded from them. At the same time, the institution seeks to also meet these fundamentals and see the necessity of research for leveling up, consider research as basic to higher education and seek support and expertise from others. This in turn leads us to the Expansion Stage.

If in the Stage of Gestation, the institution only seeks to benchmark, expansion now sees the institutions engage themselves in partnerships. The first key action point involves determining its niche which requires them to assess and improve research practices, build research interests and expertise, receive external recognition for research achievements, have commissioned researches and submit research proposals for partnerships. It is only by interacting closely with other academic stakeholders when the institution can spot where to best position themselves in the ever-changing educational landscape. This could not be achieved without the second key action point, which highlights the institution's ability to foster affiliations. At this juncture, the institutions get to adopt best practices from other universities and continue to learn from others, build linkages with more accomplished educational institutions, build research networks for sharing results, get support from the outside to build research expertise and share its resources and best practices to others. There is a mutually benefitting element to this milestone. Tynan and Garbett (2007) affirm the value of teams in their study, highlighting the need for collaboration in the higher education research landscape that may have put too much emphasis on individualism and competition between researchers.

Lastly, maturation is achieved when leadership is established. This is evidenced by the institution's ability to demonstrate expertise in that it is able to contribute to the community through its research expertise, develop a growth mentality, receive recognition from others for excellence in research, have research so established in the institution and the individual that it translates to impact, patents and contribution to the community and build a name for itself in the community. In pioneering development, the institution needs to build a contribution mindset, recognize that good research results to a return of investment and utilization of outputs, empower the institution to be equipped to support the generation of patents, have research that is meaningful to the researcher and to be able to translate research to improved delivery of instruction.

CONCLUSION

The development of research culture is a process and is therefore dynamic highlighting its systemic and developmental nature as manifested in its internal and external activities. Within the institution, internal dynamics begin in the acknowledgment of the need to do research as the individual goes into the activity to fulfill a duty while the institution establishes systems to support such function. As research culture expands, it is given emphasis as the researcher starts to have a paradigm shift and research permeates all the other functions in the university. Maturation is reached in the prioritization of research where the environment is acclimatized and the role of the faculty as a researcher is internalized.

The external dynamics move from benchmarking that is simply identifying standards and meeting the fundamentals of research as required to being able to build

partnerships. Fostering affiliations go together with the institution's ability to determine its niche in the knowledge economy leading to leadership where it is able to demonstrate expertise and pioneer development.

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REFERENCES

Braun, V., & Clarke, V. 2006. Using thematic analysis in psychology. Qualitative research in psychology, 3(2), 77-101. Chicago

Commission on Higher Education.2012. Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education Through an Outcomes-Based and Typology-Based QA. Retrieved May 12, 2015 from http://www.ched.gov.ph/wpcontent/uploads/ 2013/07/CMO-No.46-s2012.pdf

Commission on Higher Education (n.d.) Higher Education Institutions. Retrieved May 18, 2015 from http://www.ched.gov.ph/index.php /higher-education-in-numbers/higher-education-institutions/

Evans, L. 2012. Developing Research Cultures and Researchers in HE: The Role of Leadership) School of Education, University of Leeds Retrieved May 11, 2015 from http://www.education.leeds.ac.uk/assets/files/staff/papers/SRHE-paper-submission-0132.doc.

Hill, M. F., & Haigh, M. A. 2012. Creating a culture of research in teacher education: Learning research within communities of practice. Studies in Higher Education, 37(8), 971-988.

Hofstede, G. 1997. Cultures and Organizations: Software of the mind. New York: McGraw Hill.

Pratt, Michael, Dimitri Margaritis, and David Coy. "Developing a research culture in a university faculty." Journal of Higher Education Policy and Management 21.1 (1999): 43-55.

Salazar-Clemeña, R.M., & Almonte-Acosta, S.A. 2007. Developing Research Culture in Philippine Higher Education Institutions: Perspectives of University Faculty. Paper presented at the Competition, Cooperation and Change in the Academic Profession: Shaping Higher Education's Contribution to Knowledge and Research. Retrieved May 11, 2015 from http://unesdoc.unesco.org/images /0015/00 1578/157869e.pdf

Times Higher Education (n.d.). World University Rankings. Retrieved May 11, 2015 http://www.timeshighereducation.co.uk/world-university-rankings/

Tynan, B. R., & Garbett, D. L. 2007. Negotiating the university research culture: Collaborative voices of new academics. Higher Education Research & development, 26(4), 411-424.