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.

Maturation	STAGES	Prioritizing	INTERNAL DYNAMICS	Leadership	EXTERNAL DYNAMICS
Expansion		Emphasis		Partnership	
Gestation		Acknowledgment		Benchmarking	
PROCESS					

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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