Typology of Bukidnon State University Using the Commission of Higher Education Standards

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Abstract

This study examined the horizontal and vertical typology of Bukidnon State University in line with the paradigm shift of the private and public Higher Education Institutions (HEIs) in the Philippines to enhance the quality assurance system. This shift intends to rationalize distribution and operation of HEIs in the country. Data were taken from the last five years including 2014 on enrolment, undergraduate and graduate degree program offering, thesis requirement, involvement in research and annual research cost expenditure. This is a descriptive study whereby the criteria set by the Commission on Higher Education's Policy Standard to Enhance Quality Assurance in Philippine Higher Education through an Outcomes-based and Typology-based Quality Assurance (CHED Memorandum Order of 2012) on horizontal typology whether professional institution, college or university found that the horizontal typology of Bukidnon State University is university but with weaknesses in research funding, physical facilities such as laboratories, research linkages abroad, and invented technologies. In the three types of higher education institutions (HEIs) according to vertical classification of autonomous HEI, deregulated HEI and regulated HEI, Bukidnon State University has yet to pass most of the criteria for the vertical typology and hence, it is still regulated by CHED.

Keywords: Rationalization, typology, graduate and undergraduate programs, professional programs, non-professional programs

Introduction

The education landscape of the Philippines is impacted by globalization and the looming ASEAN (Association of Southeast Asian Nations) 2015. Higher Education Institutions (HEIs) will have to compete with other HEIs in the global and regional arenas. There are also mounting financial and sustainability pressures brought about by these changing realities which are quality, relevance, efficiency, and effectiveness which are challenges and opportunities for higher education. Thus, the survival of HEIs and the competitive advantage of college graduates against their counterparts within the region depend on degree programs of world standards (Macabangun-Milla, 2014).

The Commission on Higher Education (CHED) was mandated by Republic Act 7722 to improve the relevance and quality of HEIs through rationalization of Philippine higher education system. According to CHED, the objective of the rationalization of HEIs and programs is to lay the foundation for a more efficient and effective system that will deliver quality public higher education services. It will also ensure a more flexible regulatory framework for private higher education provision. Rationalization includes (1) aligning HEI programs with national development goals through job-skills matching project, relevant and responsive research, development and extension, and gender and development programs; (2) typology and mapping of HEIs

and programs means there is a system of classifying HEIs based on their mandates and functions vis-à-vis national development goals. And (3) amalgamation of HEIs and programs by restructuring the higher education system specifically the public component consisting of State Universities and Colleges (SUCs)/Local Universities and Colleges (LUCs), and other government schools to improve efficiency in the delivery of quality programs, minimize duplication and promote complementation (CHED Strategic Plan 2011-2016). It is within the second objective that this study is anchored because it analyzed the typology of Bukidnon State University particularly that CHED has required all SUCs to determine their vertical and horizontal typologies.

To rationalize the distribution and operation of HEIs in the Philippines through a typology Congressman Marcelino R. Teodoro introduced House Bill No. 363 of the 15th Congress explaining typology as a system for classifying higher education institutions that shall guide policy makers in rationalizing distribution and operation of higher education institutions (HEIs) in the Philippines. More particularly, typology is aimed at determining the number and distribution of different types of HEIs in the country as well as per region and province; guide researchers, students, policy- or decision-makers in analyzing and making decisions regarding the higher education sector; and provide basis for the rationalizing standards for allocating resources and for targeting development interventions for different types of HEIs (Teodoro, 2009). Higher education institutions will be classified into a horizontal typology differentiated according to professional institutions, colleges and universities. In terms of the vertical typology HEIs are classified as autonomous, deregulated and regulated.

Conceptual Framework

Typologies and classification of higher education institutions allow for better understanding of the various types of institutions, their different missions, characteristics and provisions. These may support mobility, inter-institutional cooperation and the recognition of degrees that according to Bartelse and Van Vught (2007) international competitiveness and attractiveness of the higher education are required. At the institutional level, it will allow individual institutions to design their own missions and profiles more effectively while at the same time offering various stakeholders greater transparency (Bartelse & Van Vught).

CHED CMO No. 46 series of 2012 gives two typologies: the horizontal typology based on the functional differentiation of HEIs vis-à-vis their service to the nation, and vertical typology based on quality measures within each horizontal type. Functionally, it can be differentiated along (1) qualifications and competencies of graduates, (2) nature of degree program, (3) qualification of faculty members, (4) types of available learning resources and support structures, and (5) nature of linkages and community outreach. Vertical typology refers to three elements of quality: (1) alignment and consistency of learning environment, (2) demonstration of exceptional learning and service outcomes, and (3) development of culture of quality. The first one is related to the horizontal type and the last two are related to the level of program excellence and institutional quality. Program excellence is demonstrated through accreditation, Centers of Excellence and Development and international certification. Institutional quality is manifested through institutional accreditation, Institutional Quality Assurance Monitoring and Evaluation (IQuAME), or other evidences in the areas of governance and management, quality of teaching and learning, quality of professional exposure, research and creative work, support for students and relations with the community (CHED, 2012).

The overall quality is reflected in the vertical typology as (1) autonomous, (2) deregulated, or (3) regulated. For horizontal type, the HEI may be classified as (1) professional institution, (2) college, or (3)

university.

In this paper, the researchers obtained the following information so that it can determine the typology of Bukidnon State University (BSU) where the horizontal typology looks at the graduate and undergraduate programs by academic programs (professional and non-professional programs, thesis/project, enrolment data by year levels, the average enrolment and Center of Development (COD). For the vertical typology, it will get the number of Center of Excellence/Development, local and international accreditation, international certification, and whether BSU passed the criteria for institutional sustainability and enhancement.

Research Questions

1. What is the horizontal typology of BSU according to program offerings categorized into (a) professional and non-professional programs in the undergraduate and graduate levels and (b) enrolment in the last five years?
2. What is the vertical typology of BSU in its (a) commitment to excellence specifically its Center of Excellence (COE)/ COD, local accreditation, international accreditation, and international certification, and (b) institutional sustainability and enhancement specifically Institutional accreditation, IQuAME, institutional certification and type-based additional evidence?

Literature Review

By 2015, ASEAN aims to integrate the whole Southeast Asia region into the 'ASEAN Economic Community (AEC)', with free movement of goods, services, investment, labor, and capital. Higher education will play a crucial role in supporting the continued economic integration of ASEAN by 2015. An ambitious plan was set up in 2009, aimed at creating a systematic mechanism to support the integration of universities across Southeast Asia. Student mobility, credit transfers, quality assurance and research clusters were identified as the four top priorities to harmonize the ASEAN higher education system, encompassing 6,500 institutions of higher learning and 12 million students in 10 nations. The ultimate goal of the scheme is to set up a Common Space of Higher Education in Southeast Asia. Individual ASEAN governments have increased public investment in universities to support the ASEAN Higher Education Area, and the region's burgeoning knowledge economy. Measures have been set up to strengthen the performance of Southeast Asian universities across a broad range of indicators such as teaching, learning, research, enterprise and innovation. These initiatives also pave the way for further collaboration and integration between universities in the region, enhancing the overall reputation of Asian universities compared to their competitors in the West and elsewhere in the world. It is not surprising to see the improved performance of many ASEAN universities in this year's British Quacquarelli Symonds (QS) University Rankings: Asia. At the moment, Singapore is the only ASEAN country whose universities are operating at the forefront of Asian higher education. But if Asia continues on its current path and emerges as a genuine competitor to the West in the coming years, the increased financial power of a unified ASEAN could start to have a significant impact on global higher education. And glocal students in the region would be among the foremost beneficiaries, according to Zhang (2013).

All these plans imply that with ASEAN Community by 2015 the country sees a free flow of qualified labor in the region bringing with it acceptance of internationally agreed upon frameworks and mechanism for the global practice of professions. This entail a "critical mass of drivers HEIs offering quality programs meeting national and international standards (Risonar-Bello, n.d.). This further means that the mobility of students and faculty coming from the ASEAN region will be easy because they have access to educational institutions

where there are amalgamation and alliance.

Bartelse and Van Vught (2007) in their article on institutional profiles argued that typology contributes to the needs of the different stakeholders. The advantages are: (1) Transparency for students where the necessary information about the type of programs by an institution can be derived from its position in the typology and thence students can identify categories of institutions and relate this information to their preferences and their abilities; (2) Transparency for business and industry and other organizations where a typology will reveal which types of institutions are of particular interest for them, hence mutual partnerships and stronger relationships are created more easily; (3) consortia formation between institutions are created because a typology facilitates the identification of potential partner institutions. Within a typology segment, the institution can more readily associate and form consortia in which mobility, benchmarking, joint degrees may thrive. (4) Enhance system transparency through a typology where institutions of higher education will be stimulated to clarify their missions and choose appropriate profiles. As a result the overall higher education system will become transparent, and policy instrument can be better targeted. (5) A basis for diversified policy approaches with policy makers in governmental and other contexts are benefitted from a deeper insight into institutional diversity. (6) A methodological and analytical tool for research with researchers, analysts and other experts facilitated in their policy analysis, international comparative studies, and also institutional benchmarking, by more insight into institutional diversity in both methodological and analytical way (Bartelse & Van Vught).

An article written by Padua (2012) analyzed CHED's typology. He wrote that the proposed two-dimensional approach to Quality Assurance in higher education was the first comprehensive, detailed and well-studied document for ensuring quality in Philippine higher education. It attempted to simplify the conceptual presentation of the two-dimensional (horizontal and vertical typologies) quality assurance space of HEIs to appreciate better the beauty and logic of the approach. The simplification highlights the shift from pure quality control (QC) perspective to a more comprehensive quality assurance (QA) view of managing quality in higher education. Underlying the QA system is the radical shift towards competency-based curriculum for all higher education programs. The system is shown to lead to four distinctive outcomes in Philippine higher education: (1) clarification of roles of Universities, Colleges and Professional Institutes, (2) motivation to gain prestige and status through the vertical typologies (regulated, deregulated and autonomous), (3) production of competent graduates, and (4) efficient and effective higher education system that can globally compete. He presented some technical, administrative, political and economic challenges that the new system may encounter (Padua, 2012).

However, there are works of literature that show the push-and-pull of classification in the context of diversity measurement. Bartelse (n.d.) presented the pitfalls of classifying higher education institutions: (1) highly simplifying, (2) should not be based on quality assessment, (3) should not be used as ranking (4) should not be used for resource allocation, (5) should not be rigid, (6) the question on the HE as independent.

The debate about classifications in Europe is controversial. Ziegele (2013) presented the following objections against classifications that are given in the above arguments of Bartelse: The differentiation between vertical and horizontal diversity is clear in theory, but difficult in practice. Although in practice the identification of "types" of institutions (or institutional clusters of profiles) is meant to be neutral in terms of better-worse, there is an inherent danger that the profile of the research-intense university is always regarded as superior to other profiles. For some indicators

it is difficult to tell if they say something about horizontal or vertical diversity. If, for instance, we look at the number of incoming and outgoing students, is this just describing the relevance of internationalization for a university or does it say anything about performance because high levels of internationalization are seen as quality criteria? Is the measurement of the number of patents information about engagement in technology transfer or a performance indicator? In general, classifications will imply more input-oriented aspects and rankings more output-oriented indicators, but the borderlines are blurred. Hence it is difficult to use the different transparency instruments in a coherent way. There is some concern that classifications might come as "rankings in disguise".

Classifications are expensive and reliability of data is a problem. Empirically based classification systems, in particular multi-dimensional systems, depend on the collection and existence of a substantial number of data (in contrast legal classifications are cheap as they only have to specify certain criteria that define a particular type of institution). Data has to be provided in a comparable form. In a heterogeneous HE system this is not always easy because of a lack of common controlling standards. Sometimes there are doubts about the reliability of self-reported data.

HEI fear that classifications "put them into a box". Classifications run the risk of establishing once-and-forever typologies of institutions by defining fixed types of institutions ("the research university", "the community college", "the regional university for undergraduates"). In reality many institutions may perform on the edges of those types combining elements from different profiles. Also a classification may impede changes in the profile and strategy of institutions if they cannot leave "the box". This concern is closely linked to the typology approach and does not occur with the same intensity in the case of mapping.

Classifications are static. A classification represents a structure at a certain point in time. But profiles of HEI develop dynamically; static classifications might block such developments and endanger the flexibility of institutional diversity.

Classifications could create rigidity. If a classification develops into a static typology and if the state treats each type with specific funding and steering approaches the classification might hamper diversity instead of promoting it. Positioning as a particular type of a typology could lead to a self-fulfilling prophecy, raising the borders and lowering mobility between the types.

Bernardo (2003) conducted a study to develop typologies in the Philippine context for purposes of providing a system for rationalizing all HEIs. His study consisted of three parts. The first part attempted to apply the Carnegie classification system. Results suggested an overall face validity in the categories, but a need to reconsider the indicators of the HEIs' commitment to research and higher level scholarships. Further, the results indicated some egregious discrepancies between current "labels" of HEIs and their academic profiles and functions. The second part utilized the hierarchical cluster analysis to reveal possible dimensions for classifying Philippine HEIs. Results indicated the need to consider the breadth and bulk of the functions and operations of the HEIs in a classification scheme. The third part described the proposed typology that groups the institutions into graduate capable institutions and baccalaureate institutions. Finally, for purposes of rationalization, he came up with a simplified five-level typology, namely: (a) doctoral/research university, (b) master's college, (c) baccalaureate/teaching university, (d) baccalaureate/teaching college, and (e) specialized or community college. Issues regarding the effective utilization of the typology schemes were also discussed.

Methodology

This study is a descriptive study in which information is collected from Bukidnon State University itself using surveys and interviews

involving data collection of existing records.

Thus, the present study determined the vertical and horizontal typology of Bukidnon State University. It used CHED's criteria for determining the typology of SUCs to categorize HEIs into horizontal typology differentiated into professional institutions, colleges, and universities. For the vertical classification the categories are autonomous HEIs, deregulated and regulated HEIs. Data of BSU were used to determine the horizontal typology. For vertical typology points system is used.

The operational criteria for HEI types are: Professional institutions are those with at least 70% of the enrolment in the graduate and undergraduate levels is in degree programs in the various professional areas like Health, Law, Teacher Education, IT, Management, Communication and other fields; at least 60% of the academic degree program offerings are in various professional areas and have enrollees; there should be a core of permanent faculty members with at least 50% of full-time permanent faculty members having relevant degrees as well as professional licenses and/or professional experience in the subject areas they handle; learning resources and support structures are appropriate to the HEI's technical and professional programs; and there are sustained program linkages with relevant industries, professional groups and organizations that support the professional development programs and outreach programs develop in students a service orientation in their professions.

For colleges, the criteria are: at least 70% of the undergraduate programs have a core curriculum that develops thinking, problem-solving, decision-making, communication, technical, and social skills; there should be a core of permanent faculty members with at least 50% of full-time permanent faculty members having the relevant graduate degrees in the subjects they handle, licenses and/or experience in the subject areas they handle; learning resources and support structures are appropriate for the HEIs' programs; and outreach programs allow students to contextualize their knowledge within actual social and human experiences.

For universities, the presence of graduate students manifests the training of experts who will be involved in professional practice and/or discovery of new knowledge; academic degree programs should be comprehensive and demonstrate the pursuit of new knowledge where there are at least twenty (20) academic degree programs with enrollees at least six (6) of which is at the graduate level; there is at least one doctoral program in three different fields of study with enrollees; all graduate programs and at least 50% of baccalaureate programs require the submission of a thesis/project/or research papers; there should be a core of permanent faculty members with relevant master's degrees and where all faculty members teaching in the doctoral programs have doctoral degrees; at least thirty (30) full-time faculty members or 20% of all full-time faculty, whichever is higher, are actively involved in research; anyone of these conditions (annual research cost expenditure for the past five years is equivalent to at least PhP75,000 X the number of faculty members involved in research and at least 5% of full-time faculty members engaged in research have patents, articles in refereed journals, or books published by reputable presses in the last ten years; comprehensive learning resources and support structures allow students to explore basic, advanced and even cutting edge knowledge in a broad range of fields of study/disciplines or professions; links with other research institutions in various parts of the world ensure that the research activities of the university are functioning at the current global standards; and outreach activities allow students, faculty, and research staff to apply the new knowledge they generate to address particular social development problems.

Under the vertical typology, data include program excellence manifested through accreditation, Centers of Excellence and Development, and international certification; institutional quality is seen through institutional accreditation, IQuAME, or other evidences

in the areas of governance and management, quality of teaching and learning, quality of professional exposure, research and creative work, support for students, and relations with the community. From both program and institutional quality outcomes, three types of HEI result: autonomous HEI by evaluation which demonstrates exceptional institutional quality and enhancement through internal QA systems, and shows excellent program outcomes through a high proportion of accredited programs, the presence of Centers of Excellence and/or Development, and/or international certification; deregulated HEI by evaluation demonstrates very good institutional quality and enhancement through internal QA systems, and demonstrates very good program outcome though a good proportion of accredited programs, the presence of Centers of Excellence and/or Development, and/or international certification; and regulated HEI which still need to demonstrate good institutional quality and program outcomes.

Vertical classification is based on the assessment of the HEI's Commitment to Excellence (70%) with criteria on a) COE at 10 points per COE/COD at 5 points per COE, b) local accreditation with maximum points at 60, c) international accreditation (CHED recognized-mobility) at 10 points per program, and d) international certification at 10 points per program and Institutional Sustainability and Enhancement with criteria on ISA, IQuAME, Institutional Sustainability Assessment (ISA), ISO, and additional evidence which is type-based.

Results

Horizontal Typology of Bukidnon State University

There are two types of undergraduate and graduate programs that are classified by CHED into professional and non-professional degrees. Professional programs are those that contribute to nation building by providing educational experiences that develop technical knowledge and skills at the graduate and undergraduate levels which lead to professional practice, e.g., Engineering, Medicine, Law, IT, Management, Teacher Education, Maritime (CHED Handbook on Typology, OBE, and ISA, 2014).

Table 1 shows the programs classified according to professional undergraduate programs with a total enrolment of 12,817 and non-professional undergraduate programs at 1,288. Table 2 indicates the professional graduate programs with 653 total enrolment. The grand total for professional undergraduate and graduate programs is 13,470.

As shown in Tables 1 and 2, the five-year average grand total enrolment of Bukidnon State University is 14,766. Of this number, there were 13,470 for professional undergraduate and graduate programs while 1,296 were for the

Table 1
BSU Undergraduate Program Offerings and Average Enrolment Data in the Last Five Years

	A. Professional Undergraduate Programs	Five-year Average Enrolment	
College of Teacher Education		3,408	
1	Bachelor of Elementary Education	2,291	
2	Bachelor of Early Childhood Education	95	
3	Bachelor of Elementary Sports Program in Education	105	
4	Bachelor of Secondary Education	917	
College of Business, Accountancy, Hospitality & Public Governance		7,415	
5	Bachelor in Public Administration	1,980	
6	Hotel & Restaurant Management	876	
7	Bachelor of Science in Business Administration	4,043	
8	Bachelor of Science in Accountancy	516	
College of Arts and Sciences		400	
9	Bachelor of Science in Information Technology	234	
10	Bachelor of Science in Mathematics	50	
College of Nursing		268	
11	Bachelor of Science in Nursing	268	
College of Law		316	
12	Bachelor of Laws	316	
College of Community Education and Industrial Technology			
14	Bachelor of Science in Community Development	262	
15	Bachelor of Science in Development Communications	140	
16	Bachelor of Science in Food Technology	151	
17	Bachelor of Science in Automotive Technology	217	
18	Bachelor of Science in Electronic Technology	240	
	B. Non-professional Undergraduate Programs		
College of Arts and Sciences		1,288	
1	Bachelor of Arts in English	147	
2	Bachelor of Arts in Sociology	643	
3	Bachelor of Arts in Social Science	408	
4	Bachelor of Arts in Philosophy	90	
TOTAL		1,288	
TOTAL			12,817

non-professional undergraduate and graduate programs.

Since the total is13,470 which is 91% of the total enrolment in both professional and non-professional programs, then BSU has passed the CHED criterion A.1 Enrolment which is at least 70% of the enrolment (graduate and undergraduate levels), is in degree programs in the various professional areas. The University does not offer associate or technical-vocational programs which usually can be taken in two years. What it has are four-year baccalaureate degree programs.

Table 2
BSU Graduate Program Offerings and Enrolment Data in the Last Five Years

	A. Professional Graduate Programs	Five-year Average Enrolment
1	Master of Arts in Educational Administration	258
2	Master of Arts in Education major in English Language Tchg.	33
3	Master of Arts in Education major in Guidance & Counseling	26
4	Master of Arts in Education major in Math Education	28
5	Master of Arts in Education major in General Science	29
6	Master of Arts in Education major in Sociology	5
7	Master in Public Administration	161
8	Master in Business Management	54
9	Doctor of Philosophy in Educational Administration	24
10	Doctor of Philosophy in Science Education	24
11	Doctor in Public Administration	11
Total		653
	B. Non-professional Graduate Program	8
1	Doctor of Philosophy in Instructional Systems Design	8

From the enrolment trend of the University, the most popular programs are Business Administration in the College of Business Administration Hospitality, Public Administration and Governance (CBAHPG), Elementary and Secondary Education (College of Teacher Education), and Sociology (College of Arts and Sciences). The enrolment for B.S. Food Technology of the College of Community Education and Industrial Technology (CCEIT) has the least enrolment because prospective enrollees are afraid of the many science courses in its curriculum.

CHED Criterion A.1	Actual
At least 70% of the enrolment (graduate and undergraduate levels) is in degree programs in the various professional areas	91%

In terms of program offerings, CHED criterion A.2.1 at least 60% of the academic degree program offerings are in the various professional areas, BSU obtained 85%. In the number of programs in the professional area, there are 18 undergraduate and 11 graduate programs (Total 29), and in the non-professional area, there are five (5) undergraduate programs. The total number of program offerings is 34. Based on CHED Handbook, the formula is the number of programs in the professional area divided by the total number of program offerings. BSU passed this criterion because it has 85% of the degree programs in various fields.

CHED has defined professional area as the program that provides educational experience to develop the technical knowledge and skills at graduate and undergraduate levels which lead to professional practice, e.g., Engineering, Medicine, Law, IT, Management, Teacher Education and Maritime Education). BSU has four from this list. In addition, there are also other programs such as Food Technology, Development Communication, Automotive Technology, Electronics Technology and more (please see Table 1) that fall under the professional areas.

CHED Criterion A.2.1	Actual
At least 60% of the academic degree program offerings are in the various professional areas	85%

In the CHED criterion on enrolment B.1.1, there are graduate students who are being trained for professional practice and/or discovery of new knowledge. BSU passed with 653 students in the professional graduate programs. The master's programs include Educational Education, English Language Teaching (ELT), Guidance and Counseling, General Science, Mathematics, Sociology, Public Administration, and Business Management. The doctoral programs are Educational Administration, Instructional Systems Design and Public Administration. Graduate students discover new knowledge with the theses and dissertation studies they are required to conduct. In most of these programs there is also the application of the theories and principles in the workplaces.

For instance, students in ELT are required to go to the laboratory schools to demonstrate their prototype lessons, and Guidance and Counseling students conduct case studies.

Most of these graduate students are already practicing professionals who work as teachers and administrators in the Department of Education or private schools, bank executives, government employees, and heads of private and public offices. The degrees to which they are pursuing require theses or dissertations and hence, they discover new knowledge that contributes to the economic and social development of the country.

CHED Criterion B.1.1	Actual
There are graduate students who are being trained for professional practice and/or discovery of new knowledge	653

According to program offerings, CHED criterion B.2.1 there are at least 20 active academic degree programs, at least 6 of which is at the graduate level, BSU has 34 active academic programs, 12 of which are at the graduate level. For example, in the undergraduate level there are the programs on Bachelor of Science in Secondary Education and Bachelor of Elementary Education. In the graduate level are those vertically aligned programs such as Master of Education major in English Language Teaching, major in Math Education and many more. Hence, BSU passed this criterion.

With the recent addition of Ph.D. in English Language, the undergraduate program of Bachelor of Arts in English Language and the master's program in the Master of Education major in English Language Teaching are woven together.

CHED Criterion B.2.1	Actual
There are at least 20 active academic degree programs, at least 6 of which is at the graduate level	34 academic programs 12 programs at Graduate School

In terms of CHED criterion B.2.2 there is at least one active doctoral program in three (3) different fields (disciplines or branches of knowledge), BSU has doctoral programs, namely Doctor of Philosophy in Educational Administration, Doctor of Philosophy in Science Education, Doctor of Philosophy in Education major in Instructional Systems Design (ISD) and Doctor of Public Administration. In terms of this criterion, Ph.D. Educational Administration, Science Education and ISD belong to one program with three different disciplines. BSU passed this criterion with two (2) active programs. The Educational Administration program is usually taken by those who are interested to pursue public school administration. Most of the school principals, district supervisors and superintendents in the region and in Mindanao as a whole are graduates of BSU.

In the most recent development in the Graduate School, a program was opened in Ph.D. in English Language as it was granted by CHED Center of Development in English in the undergraduate level.

CHED Criterion B.2.3	Actual
All graduate programs and at least 50% of baccalaureate programs require the submission of a thesis/project	100% (master's and doctoral programs all require theses and dissertation) 85.57% (undergraduate)

In criterion B.2.3 all graduate programs and at least 50% of baccalaureate programs require the submission of a thesis/project. All graduate programs require master's theses and doctoral dissertations. There is a total of 21 undergraduate programs (excluding the College of Law from the professional undergraduate degree programs) where 85.57% (18) programs require theses. Thence, BSU passed this criterion. For instance in the College of Community Education and Industrial Technology (CCEIT), undergraduate students in Community Development, Development Communication, Food Technology, Automotive Technology and Electronics Technology are required to pass their thesis. This is also the same with the College of Arts and Sciences (CAS) where students who have majored in English Language, Sociology, Economics, Philosophy, and Mathematics are required to pass their theses. Information Technology which is another program in CAS also requires its students to make their theses.

For the College of Business Administration,

Hospitality Public Administration and Governance (CBAHPG), Hotel and Restaurant Management students are also required to submit their thesis. In some programs the curricula specify two semesters for thesis such as Community Development and Development Communication.

CHED Criterion C	Actual
At least thirty (30) full-time faculty members or 20% of all full-time faculty, whichever is higher, are actively involved in research	41%

Under research criterion C, at least thirty (30) full-time faculty members or 20% of all full-time faculty, whichever is higher, are actively involved in research, data show that there are 146 full-time faculty of BSU, with 60 actively conducting researchers. BSU passed this criterion with 41%. The faculty of the university is engaged in researches either as sole researcher or as a member of a research team. For example, various faculties had worked or currently working on multidisciplinary topics like climate change, social indices, higher education rationalization, and disaster mitigation. The mathematics faculty had also conducted researches on fractals.

Through the years researches conducted by the faculty had been on teaching and learning but with a research consultant whom the university engaged for the past several years, the faculty of the different colleges began embarking on topics other than those related to teaching and learning.

CHED Criterion C	Actual
At least thirty (30) full-time faculty members or 20% of all full-time faculty, whichever is higher, are actively involved in research	41%

Under research criterion C.2, annual research cost expenditure for the past five years is equivalent to at least P75,000 X the number of faculty members involved in research, data show that with 60 full-time BSU faculty actively conducting researches multiplied by CHED required amount the university funded studies should be P4,500,000.00. Actual annual average research cost expenditure of BSU is P3,622,816.82.00. Hence, it did not pass this criterion.

As observed the University has followed the Department of Science and Technology (DOST) memorandum circular 001 which is an amendment to the revised implementing guidelines on the grant of honoraria to personnel. It specifies amounts for the program leader, team leader, and members. Using the Research Task Assessment Checklist (RTAC) it gives the delineation of the tasks of the members of the team. Using the DOST memorandum, the University felt it was justified in the grants given to the researchers. However, using this CHED typology it is found that an amount of P75,000 is expected for every researcher. The University will have to discuss this amount in the months ahead.

CHED Criterion C.2	Actual
Annual research cost expenditure for the past five years is equivalent to at least P75,000 times the number of faculty members involved in research	P3,622,816.82.00

Another criterion is at least 5% of full-time faculty members engaged in research have patents, articles in refereed journals, or books published by reputable presses in the last ten years, and findings indicate that 68% (41) of the 60 faculty actively involved in research have published in the refereed journal of the university. But no patents have been applied for. There had been few books published by the faculty. Books authored by the faculty have not been published by reputable presses.

Under the criterion comprehensive learning resources and support structures allow students to explore basic, advanced, and even cutting edge knowledge in a wide range of fields of study/disciplines or professions, BSU has the laboratories in chemistry, biology, food technology, automotive technology, computer laboratories, speech laboratory, elementary and high school laboratories, math laboratory, anatomy and physiology laboratory, and nursing skills laboratory. The requisite equipment and supplies are present but have to be improved in order to become a source of cutting-edge knowledge. This means that the

laboratory equipment and support structures are the newest and most advanced gadgets and facilities in science.

In terms of the criterion, links with other research institutions in various parts of the world ensure that the research activities of the university are functioning at the current global standards, BSU just started links with the Field Museum of Chicago and the University of Illinois at Chicago which collaborated in a research activity. This implies that BSU will be able to learn from their counterparts, in the same way that colleagues from those institutions are able to get learning from the Philippines, hence enriching knowledge of both sides. There is however, a need for the faculties to team up with other academics from universities abroad in the same field of expertise. This also implies that BSU will be able to send faculties to do advanced education abroad. As of the present time, there is a need to increase the knowledge base of the faculties obtained by being educated and trained by top-notch universities abroad.

In the criterion, outreach activities allow the students, faculty, and research staff to apply the new knowledge they generate to address specific social development problems which are broadly defined, all extensionists apply their skills and knowledge to the identified communities. However, most of these are those related to teaching community residents literacy, numeracy, capability building in disaster risk management, conduct of forums and lectures, and the like. This is so because BSU's flagship is teacher education because historically it was opened in 1929 as one of the eight normal schools in the Philippines. Through the years the university has been known for producing graduates in education. However, in the more recent years it has opened other disciplines to meet the needs of its stakeholders like aside from the arts and sciences and business programs, it has opened nursing, community development, development communication and technology programs like information, automotive, electronics and food technology. Because of these new disciplines there is a felt lack of "hard knowledge" like machines, solar power gadgets, fuel economizer and other technologies because BSU has yet to create these electronic and automotive appliances, produce food products and help a community earn money from these food products, and IT software to address the specific needs of the stakeholders.

Vertical Typology of Bukidnon State University

Appendix A shows the program offerings and accreditation levels of Bukidnon State University with the points earned. The points for local accreditation takes into account several factors: proportion of accredited programs where the proportion of accredited programs in relation to the total number of programs covered by accreditation is measured; level of accreditation where increasing weights are given from Level 1 to Level IV; and undergraduate/graduate programs which are given weights depending on the HEI type and the proportion of programs at the two levels.

The points for accreditation are based on the sum of the ratios for the different accreditation levels, multiplied by a value for the level, as

Level IV	1.25
Level III	1.00
Level II	0.75
Level 1	0.50

Level 3 which is the highest accreditation level is achieved by College of Arts and Sciences with four (4) programs in BS English, BS Mathematics, AB Economics, and AB Sociology. College of Teacher Education has two (2) programs with Level 3 accreditation status in Bachelor in Elementary Education and BS Secondary Education. The Graduate School has five (5) programs with Level 3 status in MA Educational Administration, MA Education major in English Language Teaching, major in Guidance Counseling, major in General Science, and major in Mathematics.

Level 2 status is obtained by the programs in BS Information Technology, BS Business Administration, and BS Accountancy. Undergraduate programs Level 1 is obtained by Bachelor of Public Administration, BS Hotel and Restaurant Management, BS Automotive Technology, BS Electronics Technology, BS Food Technology, BS Community Development and BS Development Communication. In the graduate program, it is attained by Master in Public Administration.

There are a few programs in the undergraduate and graduate levels which still have to undergo Level 1 and these are BS Nursing, Bachelor in Early Childhood Education (BECE), Bachelor in Physical Education major in School Physical Education (BPESPE), Master of Business Management (MBM), Ph.D. in Educational Administration, Ph.D. in Science Education, Ph.D. in Instructional Systems Design, and Doctor of Public Administration. The above programs have not been included in the calculation of the points earned.

Appendix B shows the ratio of the graduate and undergraduate enrolment over the total enrolment. The total points for local accreditation are the sum of the undergraduate and graduate components where:

$$\text{Accreditation} = \text{UG Accreditation} + \text{G Accreditation}$$

UG (undergraduate)
G (graduate)

The weights for the UG and G components depend on the enrolment.

Equation 1

$$\text{UG Accred} = \left(\frac{UG4}{UG} \times 1.25 + \frac{UG3}{UG} \times 1 + \frac{UG2}{UG} \times 0.75 + \frac{UG1}{UG} \times 0.5\right) \times Wt$$

$$\text{UG Accred} = \left(\frac{UG4}{UG} \times 1.25 + \frac{UG3}{UG} \times 1 + \frac{UG2}{UG} \times 0.75 + \frac{UG1}{UG} \times 0.5\right) \times Wt$$

where:

Wt = Percentage of undergraduate enrolment (e.g., 90% = 90)
UG Accred = the points earned from the accredited undergraduate programs
UG = total number of UG programs offered
UG4 = number of UG programs accredited at level IV
UG3 = number of UG programs accredited at level III
UG2 = number of UG programs accredited at Level II
UG 1 = number of UG programs accredited at Level 1

Equation 2

$$\text{G Accred} = \left(\frac{G4}{G} \times 1.25 + \frac{G3}{G} \times 1 + \frac{G2}{G} \times 0.75 + \frac{G1}{G} \times 0.5\right) \times Wt$$

where:

Wt = Percentage of graduate enrolment (e.g., 10% = 10)
G Accred = the points earned from the accredited graduate programs
G = total number of G programs offered
G4 = number of programs accredited at Level IV
G3 = number of programs accredited at Level III
G2 = number of programs accredited at Level II
G1 = number of G programs accredited at Level 1

In terms of the ratio of graduate and undergraduate enrolment over total enrolment in 5-year average full time, BSU graduate enrolment got 9% WtG. This is taken from the graduate enrolment in a five-year full-time which is 661 divided by 7350 which is the total enrolment of both the graduate and undergraduate levels. For the ratio of undergraduate enrolment over total enrolment, it has 91% WtUG based from 6689 divided by 7350(See Appendix B).

Appendices C and D show the ratio of accreditable graduate and undergraduate programs to total "accreditable". Appendix E shows the local accreditation points earned. The ratio of BSU's accreditable graduate programs to total "accreditable" is 4.34 (Appendix C). Its ratio of accreditable undergraduate programs to total "accreditable is 48.68 (Appendix D). Thus, the local accreditation points earned by BSU is 53.02 (Appendix E).

In terms of Center of Development (COD), BSU has the English Language Program that is credited with 5 points. So the total number of points is 58.02. Using ratio and proportion, BSU is able to get 38.25 under Commitment to Excellence (Appendix F). COD is granted by CHED once an HEI passes its evaluation.

From CHED Handbook on Typology, Outcomes-based Education, and Institutional Sustainability Assessment, a maximum of 70 percentage points is awarded for Commitment to Excellence (Program Excellence = 70%). BSU obtained only 38.25 percentage points (Appendix G). In terms of Institutional Sustainability and Enhancement, BSU has not undergone IQuAME, ISA, ISO, and other type-based additional evidences. As of this writing,

the university is still preparing for ISO. This is why from a total of 70 percentage points BSU has only obtained 38.25 percentage points.

Conclusion

Bukidnon State University is categorized as University in the horizontal typology but its research funds did not reach the requirement, laboratory equipment still has to be improved, and innovation driven technologies have to be invented to be shared to the communities through its extension activities. It has not passed the 70 percentage points for Program Excellence in the vertical typology. Thus, BSU falls under regulated SUCs. But it still has two years before 2017 to answer to the various criteria.

Recommendations

In 2017, CHED is going to monitor the typology of the SUCs in the country. In order to pass CHED criteria of program excellence, BSU can improve from its present standing by having all programs locally accredited through AACCUP reaching Level 4, having enrollees in these programs, and increasing Centers of Development or Centers of Excellence; submitting itself to institutional accreditation especially like IQuAME, Institutional Sustainability Assessment, international institutional certification like ISO, and type-based additional evidences like governance and management, quality of teaching and learning, quality of professional exposure/ research/creative work, support for students, and relations with the community.

To meet CHED criterion on research the annual research cost expenditure for the past five years is equivalent to at least PhP75,000 x the number of faculty members involved in research. This ensures that 10% of the income of the university which is the research share will be used up for relevant studies. This can help enrich all the laboratories to come up with innovation- driven research and technologies.

Increase linkages with research organizations abroad to encourage exchange of ideas by having the faculties collaborate with colleagues. This can help BSU improve on its research linkages thereby increasing its reputation. As a result, agencies would be encouraged to link up with the university in teaching/learning, researches and extension projects.

By sending faculties abroad for advanced education and training to enrich the various programs, it can greatly help them acquire content and technical knowledge. The university must prioritize the faculty belonging to applied and social sciences, business and technology disciplines by sending them to master's and doctoral degrees. In order to meet the challenges of ASEAN integration and collaboration a big bulk of its budget must be for advanced education and training to encourage faculties and students of the region to study and work at BSU.

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