

Digital Governance Implementation and Institutional Performance of State Universities and Colleges (SUCs) in the Philippines

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Abstract

Many governments around the globe have adopted digital governance as a strategy to promote public service. State-owned higher learning institutions particularly in the Philippines are seen investing on this kind of technology. This paper examines the digital governance implementation and institutional performance of State Universities and Colleges (SUCs) in the Philippines. Data regarding digital governance are obtained from the respective website of each SUC through the use of a questionnaire. Websites are evaluated in terms of content, usability, services, citizen participation and privacy/security. Institutional performance is obtained through the CHED Memorandum Order (CMO) No. 60, series of 2007. A total of 107 SUCs are subjected in this paper. It is found out that digital governance in SUCs was on its early and middle stages of digital governance with focus on content and usability features. SUCs advocates instruction, research, extension and production as their major functions with varying levels. There is a positive substantial relationship between digital governance and institutional performance of SUCs. Digital governance is seen being adopted by some SUCs as an innovative tool in learning, promoting citizen participation and advocating peace.

Keywords: digital governance, SUCs, institutional performance, e-governance

1. Introduction

The Philippine government has given considerable attention in digital governance when it passed Republic Act No. 8792 otherwise known as the E-commerce Act on June 14, 2000. The Act requires all agencies of government, including SUCs to become e-commerce ready. This can be accomplished by establishing their official website in which government agencies like SUCs may improve services offered to clientele.

SUCs in the Philippines are focused on its four-fold functions as institutions of higher learning. These functions are instruction, research, community service and production. The primary function which is instruction deals with the delivery of the knowledge and skills to the students. Research deals with the development of new theories and practices to be used by the university and society. Service to the community is another function of a university which intends to achieve total development of the community. Lastly, production services are now being strengthened to augment the resources and revenues of a SUC.

The Commission on Higher Education (CHED) and the Department of Budget and Management (DBM) have issued joint Circulars No. 1 dated May 29, 2003 and No. 1-B dated June 21, 2007 citing the four Key Result Areas (KRAs), namely, (1) Quality and Relevance of Instructions; (2) Research Capability and Outputs within the last 3 years; (3) Relations with and services to the Community and (4) Management of resources. The mentioned areas represent the major indicators that would measure the stages of development and institutional performance of the respective SUCs. Moreover, the level of the SUC shall be determined on the total points earned by the institution in the four KRAs as follows; Level IV – 28-35 points, Level III – 20-27 points, Level II – 11-19 points, Level I – below 11 points.

Meanwhile, the National Computer Center (NCC) in the Philippines issued Memorandum Circulars (MC) No. 2002-01 and 2003-01 prescribing all government departments and agencies to comply with the E-commerce Act by creating their official website and to advance up to stage three of the United Nations – American Society for Public Administration (UN-ASP) five stages of e-government. Both Circulars contained the necessary components and features to be followed by government agencies in their respective website.

There are several studies conducted in line with digital governance in the Philippines. However, none of them directly addresses its implementation in SUCs. In this view, the author finds the necessity to conduct an analysis

of the implementation of digital governance among SUCs. Specifically, this paper examines the digital governance implementation, institutional performance, the relationship of the two and the best practices in digital governance among SUCs.

2. Conceptual Framework

As shown in Figure 1, digital governance in a university setting includes: university-to-university (U2U); university-to-students (U2S), university-to-community (U2C) and vice versa. The external objective of digital governance is to satisfy the needs and expectations of students and community (parents, government, NGOs, industries, businesses, other stakeholders, etc.). On the other hand, the internal objective is to facilitate a fast, accountable, transparent, effective and efficient process for performing university administrative functions. Digital governance as shown in Figure 1, is equated to institutional performance of the university along with the four-fold functions namely; instruction, research, extension and production.

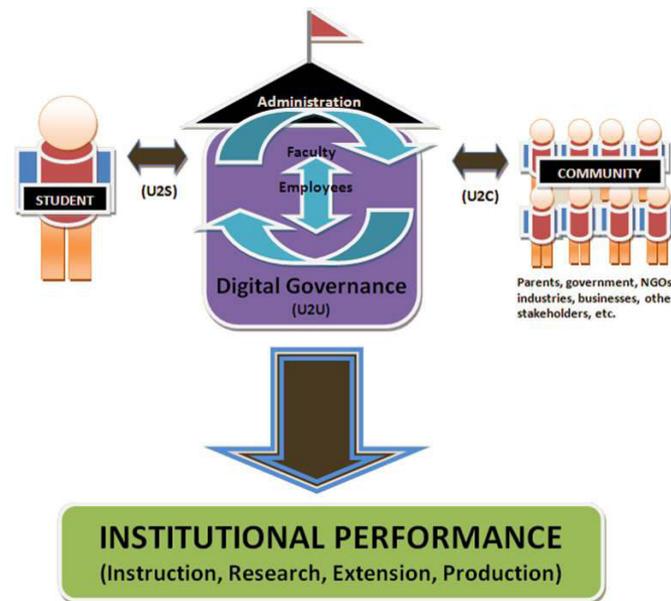


Figure 1 – Digital Governance in SUCs

3. Methodology

This paper utilizes the descriptive-correlational design coupled with documentary analysis technique. The emphasis is on the evaluation of each website in terms of digital governance, the assessment of institutional performance of SUCs, the establishment of the relationship of the two variables and the digital governance best practices of SUCs. Official websites of SUCs were considered as documents and were evaluated using a researcher-made questionnaire.

The questionnaire was made after an initial survey to familiarize with the components that should be available on each SUC website. Readings about e-governance models authored by Wescott (2001), NCC circulars and studies conducted by Dey and Sobhan (2007) and Holzer and Kim (2006) are all integrated in the questionnaire. The questionnaire was based on binary values (availability/non-availability of a service) to have a basis for quantitative analysis. Websites are evaluated in terms of content, usability, services, citizen participation and privacy/security. The maximum possible score for each measure are: content (16), usability (7), service (15), citizen participation (7) and privacy/security (2). A SUC website can have an overall possible score of 48. The official websites of SUCs were located using the Yahoo and Google search engines. In this paper, the main SUC home page is referred to as the official website where information and services are provided by the SUC. Every links on the home page and other pages of the SUCs' websites were visited one by one and evaluated using the questionnaire. To ensure reliability, each SUC website was assessed by two evaluators. Evaluators consisted of the author and assisted by faculty members from the field of Information Technology. Evaluation was done between January and March 2009.

On the other hand, institutional performance of each SUC was obtained through the CMO No. 60, series of 2007 which provides the result of leveling done by the CHED. The overall institutional performance is measured in terms of instruction, research, extension and management of resources. Based on the CMO, a maximum score of 17 is allotted for instruction, 8 for research, 5 for extension and 5 for the management of resources. The maximum overall score that a SUC may obtain is 35. This paper involves 107 SUCs enumerated in the mentioned CMO.

4. Result and Discussion

Initial finding reveals that 48 out of 107 SUCs are found with no websites or were not accessible during the survey period. This finding is different from the NCC-MC No. 2003-01 which stated that SUCs in the country have 100% web presence.

Digital Governance Implementation

Figure 2 shows the number of universities which used the five features as indicated in the questionnaire on their respective website. Fifty-nine SUCs have content and usability features on their website. Majority of the components found under the content feature include; agency name, logo, vision, mission, goals statements, course offerings and information on admission policies. In terms of usability, common components which are available in the websites include navigation bar, links and fonts color consistency. It can be assumed that content and usability features are considered by SUCs as an important determinant of user satisfaction similar to the study of Sindhuja and Dastidar (2009).

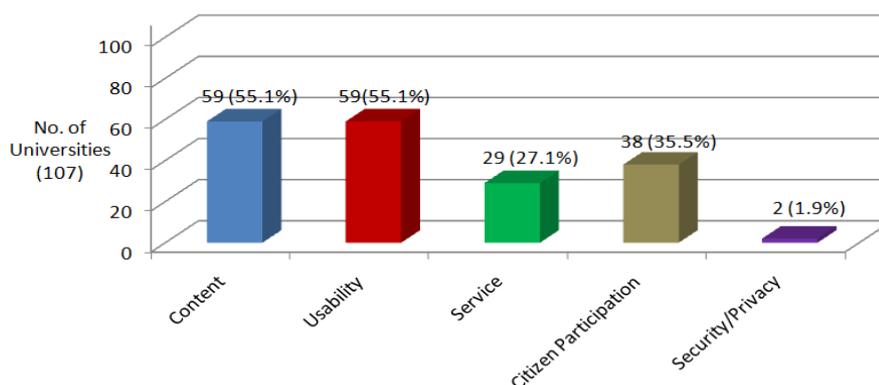


Figure 2 – Distribution of SUCs According to Website Features

Twenty-nine SUCs are revealed having services incorporated in their website. Common services found are searchable alumni database, online alumni registration and personalized faculty/students email account. Very few of the mentioned services by Dey and Sobhan (2007) are found in the websites. This denotes that SUCs in the country are not yet determined in implementing digital governance. This may be due to the high cost of developing and maintaining online services in the website.

Thirty-eight SUCs employ features which encourage citizen participation in ways like having a discussion forum, online voting as well as guestbook for comments and feedbacks from visitors of the website. Chadwick (2009) mentioned that these features particularly e-forum is one of the important forms of civic engagement to have political communication. Through this, citizens and stakeholders can express their critical, self-reflective and tolerant feelings regarding a certain university policy.

Only 2 SUCs have security/privacy feature which is shown by having a privacy statements in their website. This finding denotes that SUCs are not paying much attention in the privacy of their website. This is parallel to the findings of Nirmaljeet and Ravi (2013) that there is a need to improve the security guidelines of e-governance among 10 states in India.

It can be seen that digital governance among SUCs focuses on content and usability. The websites provide

adequate information and allow interaction with limited capabilities to the visitors. Majority of SUCs websites fall on stages 1 to 2 of the UN-ASPA stage of e-government. As cited by Mirandilla and San Pascual (2007), UN classifies the information found in the first stage as limited, basic, and static. In this stage, contact information is provided as well as some Frequently Asked Questions (FAQs). On the other hand, users can access specific updated information in Stage II website. Online services are also enhanced through the use of databases. Current and archived information can be accessed and downloaded from the database by users of the site.

Table 1 shows the top 14 SUCs with their corresponding overall score and rank in terms of digital governance implementation.

Table 1 – Top 14 SUCs in Digital Governance

Name of University	Content (16)	Usability (7)	Service (15)	Citizen Participation (7)	Privacy/ Security (3)	Overall Score (48)	Rank
Polytechnic University of the Phil.	13	6	6	1	3	29	1
Nueva Vizcaya State University	12	4	7	1	3	27	2.5
Batangas State University	14	5	6	2	0	27	2.5
Western Mindanao State University	14	4	7	1	0	26	4.5
North. Min. State Inst. of Sci. & Tech.	12	6	7	1	0	26	4.5
University of Southeastern Philippines	14	6	2	3	0	25	6.5
Aklan State University	14	5	4	2	0	25	6.5
Bicol University	15	5	3	1	0	24	8
Technological University of the Phil.	15	6	1	1	0	23	9
Western Visayas State University	12	6	3	1	0	22	11
Pangasinan State University	14	2	5	1	0	22	11
Bataan Peninsula State University	14	6	1	1	0	22	11
Tarlac College of Agriculture	13	3	3	2	0	21	13.5
Catanduanes State College	13	6	1	1	0	21	13.5

Note: Complete ranking of SUCs can be found on <http://xypher0409.blogspot.com/2010/01/ranks-of-sucs-in-terms-of-digital.html>.

() denotes the maximum points allotted for the measure.

As can be gleaned in Table 1, Polytechnic University of the Philippines ranks first with an overall score of 29. Knowing that the highest possible overall score is 48, the obtained overall scores of the evaluated websites are seen far from the highest possible overall score. Findings also reveal that the official websites of SUCs have limited features particularly in service, citizen participation and privacy/security. This means that SUCs are still in its infancy stage of digital governance implementation. The finding is analogous to the study of Castano and Cabanda (2007) who mentioned that only few SUCs showed technological progress and the rest are experiencing technological regression.

Institutional Performance

Data shown in Figure 3 came from the tabulation of the information found in the CMO No. 60 series of 2007. As shown in Figure 3, twenty-one out of 107 SUCs have attained Level IV status. Based on the SUC leveling instrument, they were interpreted as good in undertaking the full range of functions of a state university/college, namely, instruction, research and extension as manifested through demonstrated teaching effectiveness, research competence, active community service, and efficient management of resources. Thirty-six SUCs are classified in Level III. They are believed to be effective in undertaking the functions of state university/college but fall short of the qualities of a Level IV SUC. This level covers SUCs that have teaching as their core business or by nature of their accredited programs as indicated by their charter, are considered as research-oriented colleges and universities in their areas of specialization. Thirty-six SUCs are assessed with Level II status. SUCs in this level are still in the early stages of their development as an institution of higher learning. Fourteen SUCs are classified under Level I status pending the required points set by the CHED on each key result areas.

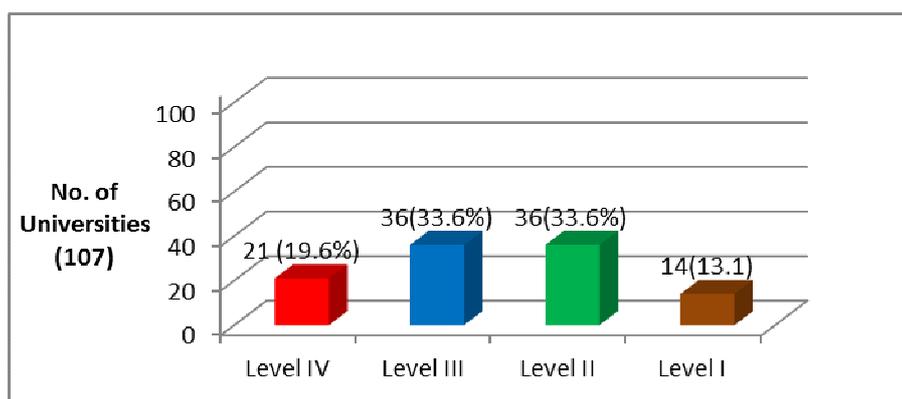


Figure 3 – Distribution of SUCs According to Institutional Performance

Table 2 presents the top 12 SUCs with their corresponding scores and rank in terms of institutional performance. Mariano Marcos State University and Benguet State University ranks 1.5 with an overall score of 33. It can be seen that these SUCs have high marks along the four-fold functions of a university. The result is parallel in the study of Castano and Cabanda (2007) who concluded that majority of SUCs are efficient. High scores in instruction reflect the SUCs quality of education and signify above-average performance in licensure examinations as well as good quality of faculty as mentioned by Manasan (2012). Research among the top 12 SUCs is deemed to have provision for reasonable budget, quality of outputs, publications and measurable impact on the community. Extension services are believed to be continuous and have reached out for the sustainable development of the community as recommended by Bidad and Campiseño (2010). As for production function, Malate (2009) cited corporatization schemes adopted by SUCs were mainly from income from education and a fraction from use of economic assets or income generating projects.

Table 2 – Top 12 SUCs in Institutional Performance

Name of University	Instruction (17)	Research (8)	Extension (5)	Production (5)	Total Score (35)	Rank
Mariano Marcos State University	16	8	5	4	33	1.5
Benguet State University	16	8	5	4	33	1.5
Central Luzon State University	16	8	4	4	32	4
Bicol University	16	8	5	3	32	4
Western Visayas State University	15	8	4	5	32	4
University of Northern Philippines	15	7	5	4	31	6.5
Isabela State University	15	8	4	4	31	6.5
Pangasinan State University	15	7	4	4	30	10
Cavite State University	14	7	4	5	30	10
Cebu State Coll. of Sci. & Tech.	15	8	4	3	30	10
Leyte State University	15	6	5	4	30	10
Central Mindanao University	15	6	5	4	30	10

Note: Complete ranking of SUCs can be found on <http://xypher0409.blogspot.com/2010/01/rank-of-sucs-in-terms-of-institutional.html>

() denotes the maximum points allotted for the measure.

Figure 4 shows the scatterplot of the relationship between digital governance and institutional performance scores of SUCs. The data follows an uphill trend or a linear relationship between the two variables is revealed.

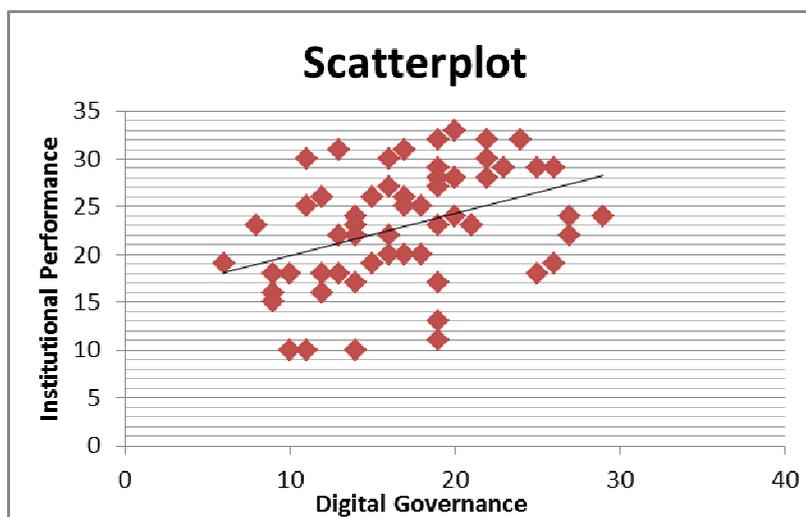


Figure 4 – Scatterplot of the Relationship Between Digital Governance and Institutional Performance

Test of Relationship Between Digital Governance and Institutional Performance

Table 3 shows the test of relationship between digital governance and institutional performance. The null hypothesis tested in this study is: there is no significant relationship between digital governance and institutional performance of SUCs in the Philippines. For the variables Instruction, Research, Extension and Production the computed Rho values show slight to substantial relationship. The computed t-values for all the mentioned variables are greater than the critical tabular value of 1.983 thus, the null hypothesis is rejected. There is a significant relationship between digital governance implementation and institutional performance of SUCs.

Table 3 – Test of Relationship Between Digital Governance and Institutional Performance

Variables	R value	DIGITAL GOVERNANCE		
		Interpretation	T value	Decision
Instruction	0.493	Substantial Relationship	5.047	Reject Ho
Research	0.488	Substantial Relationship	4.990	Reject Ho
Extension	0.387	Slight Relationship	3.959	Reject Ho
Production	0.380	Slight Relationship	3.892	Reject Ho
Overall Institutional Performance	0.516	Substantial Relationship	5.279	Reject Ho

Legend:

- ±0.0 to ± 0.20 – negligible relationship
- ±0.21 to ±0.40 – slight relationship
- ±0.41 to ±0.70 – substantial relationship
- ±0.71 to ±0.90 – high relationship
- ±0.91 to ±1.00 – very high relationship

Degrees of Freedom = 105
 Level of significance = 0.05
Critical Tabular Value = 1.983

Best Practices

Majority of the evaluated SUC websites are found to be in the early and middle stages of digital governance. In

particular, they are in the Stages I and II of the E-governance model proposed by the UN-ASP. The following are the best practices of four SUCs websites.

1. Polytechnic University of the Philippines (PUP)

PUP website ranks first among the 107 SUCs evaluated in this paper. PUP has a well-developed website in the three digital governance categories namely; content, usability and privacy/security. The website provides detailed information about the university as well as important forms available for download which every visitor of the site will seem to look for. Several important forms can be downloaded at the website. The website offers user-friendly functions such as site map, advanced searching options, pages for targeted audience, consistent navigation bars, links and font colors. It also has services for internal operations as proven by the cashier, registrar and faculty modules. Furthermore, the PUP website is one of the two websites evaluated having a comprehensive page pertaining to security and privacy of individuals transacting on the website. Through this, the website lends its role in advocating the promotion of human rights, which is a fundamental aspect of the wellness of human beings.

2. Batangas State University (BatSU)

The BatSU website ranked 2.5 in the evaluation conducted. The website focuses on content, usability and services. It provides a guestbook for visitors similar to the PUP website. It has a link to the BatSU peace website which made it unique from all the websites evaluated. The peace website hopes to utilize the internet in providing information on the subject peace. In particular, access to articles and studies relating to peace and peace education via numerous links to published and unpublished materials are also provided in the site. The BatSU peace website is believed to be a useful instrument in promoting peace not only for the country but to the billions of people connected to the world wide web across the globe.

3. Nueva Vizcaya State University (NVSU)

NVSU website ranks 1.5 together with the BatSU website among the 107 SUCs. NVSU has a website with focus on three digital governance categories namely; content, services and privacy/security. In particular, it is one of the three top-ranked websites in terms of services offered and one of the two websites which advocates privacy/security. The MyNVSU Student Information System (SIS) which is present in the website allows student with proper authorization to access class schedules, grade reports, transcripts, and remaining balance for the semester as well as perform class registration online. The MyNVSU SIS intends to provide better quality data to drive more enlightened policy decisions. This will result to enhancement of educational opportunities for all students. In addition, the system is a tool for parents in monitoring the academic performance of their children. Moreover, the website is enhanced through services like e-learning and online library. Through e-learning, one can obtain knowledge without physically being present inside a classroom where classes are conducted. This is done by sending modules or lessons via e-mail or by posting it through a secured website needing authorized access for every users.

4. University of Southeastern Philippines (USEP)

USEP obtained a rank of 6.5 among the evaluated websites. The website has focused on content and usability features. Several documents like annual report, strategic plan and USEP brochure are available for download from the website. The website obtained the highest score of 3 out of 7 in the citizen participation feature. The website advocates citizen participation via discussion forum, newsletter and online voting system on minor issues concerning the university. These components provide citizens with several opportunities like; to understand policy issues and to facilitate discussions, to encourage citizen participation in university administration and to obtain feedback about policy issues, and to reflect citizens' opinions in university policies and produce more tailored policy solutions for the community. The website also offers e-learning feature similar to the NVSU website.

5. Conclusion and Suggestions for Future Work

This paper concluded that digital governance implementation among SUCs in the Philippines is still on its early and middle stages focusing on content and usability features. The level of instruction, research, extension and production functions vary among SUCs. A positive substantial relationship between digital governance and institutional performance is established in this paper. This indicates that as digital governance implementation

progresses, institutional performance level increases. Digital governance is seen being adopted by some SUCs as an innovative tool in learning, promoting citizen participation and advocating peace.

There are several future research directions that can be derived in this paper. The established relationship of the two variables suggests that digital governance should be integrated in the SUC's overall strategies. The strategies may include a provision to strengthen the weak areas (services, citizen participation and security/privacy) as revealed in this study. It may also be useful to focus digital governance implementation on diversity, multiculturalism and environmental protection. SUCs, through collaboration may come up with a universal template for digital governance.

In addition, similar studies can be conducted focusing on the comparison of private and public Higher Educational Institutions (HEIs) situated in other countries. Lastly, a study regarding cost-benefit analysis of digital governance is encouraged.

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