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Developing a University Extension Programs Gateway Services Information System: A Baseline Survey

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A B S T R A C T

Universities are increasingly adopting and engaging in social responsibility awareness activities. University Social Responsibility (Hollister, R. 2016) are manifested in universities through implementing extension programs that enable them to associate with different beneficiaries. With the help of technology, people are able to access enormous amounts of information in a more convenient way. Thus, the use of technology would be able to address the need for social responses of the university to be more effective. The main objective of the study is to develop a system gateway for universities, beneficiaries, and sponsors of extension services. The research design used in the study is quasi-experimental design. The proponent conducted this study among the faculty members of Quezon City University totalling to 50 respondents. Whereas the proponent applied the Agile Development Model in building the prototype of the Gateway Services Information System, and used PHP and MySQL to develop the software. Based on the findings, the study concluded that: the respondents agreed that the continuous engagement of social responsibility programs provide a positive impact on both the university and the beneficiaries, and recommended that such usage of a gateway system will bring more ease and effectively of the process, resulting to a more positive impact. Overall, the respondents find the extension programs as effective. The findings suggest that respondents perceive capability training program, community outreach program, and high-impact, long-term integrated community-based development program as effective for the beneficiary, and it is recommended that such programs should be expanded to a more sets of program options and types. The respondents also agreed that strategies in implementing extension service programs are successful, and it is suggested that the gateway information system should have a more complex communication capable of catering such preparation activities for implementation. The respondents also strongly agreed that the key factors are critical and important for sustainability and is recommended that such complex planning and management of an extension program should be catered by the system. Overall, the assessment of the respondents agreed that the gateway software is capable of addressing the needs of both universities and beneficiaries, and it is recommended that the gateway information system will be accessible to all possible educational institutions which seek to give aid to beneficiaries.

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RESUMO

As universidades estão cada vez mais adotando e se engajando em atividades de conscientização de responsabilidade social. A Responsabilidade Social Universitária (Hollister, R. 2016) manifesta-se nas universidades através da implementação de programas de extensão que lhes permitem associar-se a diferentes beneficiários. Com a ajuda da tecnologia, as pessoas podem acessar enormes quantidades de informações de maneira mais conveniente. Assim, o uso da tecnologia seria capaz de suprir a necessidade de respostas sociais da universidade serem mais efetivas. O principal objetivo do estudo é desenvolver um sistema de gateway para universidades, beneficiários e patrocinadores de serviços de extensão. O projeto de pesquisa usado no estudo é um projeto quase-experimental. O proponente conduziu este estudo entre os membros do corpo docente da Quezon City University, totalizando 50 entrevistados. Considerando que o proponente aplicou o Modelo de Desenvolvimento Ágil na construção do protótipo do Gateway Services Information System, e utilizou PHP e MySQL para desenvolver o software. Com base nos resultados, o estudo concluiu que: os entrevistados concordaram que o engajamento contínuo de programas de responsabilidade social proporciona um impacto positivo tanto para a universidade quanto para os beneficiários, e recomendaram que tal uso de um sistema de gateway trará mais facilidade e eficácia do processo, resultando em um impacto mais positivo. No geral, os entrevistados consideram os programas de extensão eficazes. Os resultados sugerem que os entrevistados percebem o programa de treinamento de capacidade, o programa de alcance comunitário e o programa de desenvolvimento comunitário integrado de alto impacto e longo prazo como eficazes para o beneficiário, e recomenda-se que esses programas sejam expandidos para mais conjuntos de programas opções e tipos. Os respondentes também concordaram que as estratégias de implementação de programas de serviços de extensão são bem-sucedidas, e sugere-se que o sistema de informações do gateway tenha uma comunicação mais complexa, capaz de atender a essas atividades de preparação para implementação. Os entrevistados também concordaram fortemente que os fatores-chave são críticos e importantes para a sustentabilidade e recomenda-se que esse planejamento e gerenciamento complexos de um programa de extensão sejam atendidos pelo sistema. No geral, a avaliação dos respondentes concorda que o software gateway é capaz de atender às necessidades tanto das universidades quanto dos beneficiários, e recomenda-se que o sistema de informações do gateway seja acessível a todas as possíveis instituições educacionais que buscam prestar auxílio aos beneficiários.

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Introduction

Organizations are increasingly adopting and engaging with social responsibility awareness and practices in which they act in the best interest of their society – engaging environmental efforts, philanthropy, ethical labor practices, and volunteering. Social responsibility is perceived as a way of achieving and maintaining sustainability. Universities, particularly higher education institutions, have begun embracing sustainability by engaging in community services which potentially lead to relationship growth with their stakeholder. Referred as university social responsibility, it aims to educate students to become a transformative leader, and to mobilize the person power and expertise of universities to address challenges in the society. Although, university social responsibility has often ruled by the perspective from the Global North, several Asian countries have been shifting this domination of perspective and correcting the imbalance – promoting university social responsibility not only within the region but as well as globally (Hollister, 2016). University social responsibility is manifested by universities through different means. This includes implementing extension programs that enable the university to associate with different beneficiaries such as charitable organizations and local government units. Universities have adopted the principle of social responsibility. In facing the new environment and challenges such as massive expansion of higher education, internationalization, diversification of financial resources, changes brought by the development of information and communication technology among others, universities are moving toward corporatization and one of the best approaches for universities to achieve that is by adopting social responsibility (Alzyoud, & Bani-Hani, 2015). In the Philippines, the principle of social responsibility has already been demonstrated through implementation of extension programs and services. Extension programs and services have already been exercised by different universities in serving the underprivileged, the deprived, and the oppressed. This is to respond to the call for societal transformation which is mandated by the Commission on Higher Education (CHED) for higher education institutions, which include State Universities and Colleges (Bidad & Campiseño, 2010).

According to Geryk (2016), it is sometimes perceived that social responsibility is an unnecessary effort for the universities. If the universities have given excessive amount of effort and resources, it could mean disadvantages to the universities. However, if social responsibility is implemented properly, this may be perceived as a cheapest form of promotion. As such, universities would be able to promote themselves through creating more social connection, establish relations with the environment, and disseminating information related to the activities of the university. Glavič et. al (2007) stated that sustainable development and social responsibility points out the importance of nature-friendly economic development that meets the needs of the present without compromising the capacity of the future to achieve their own needs. For Quezada (2014), extension service is considered as one of the four-fold functions of

higher education institutions. With the help of the current technology, people are able to access enormous amount of information in a faster and more convenient way. Technology helped people to communicate easily despite being far from one another. These technological advantages have brought benefits not only for personal purposes but also for purposes of helping the community. Thus, the use of technology would be able to address the social responses of the university to be more effective. In addition, Weiss (2016) discussed that the number of universities incorporating social responsibility into their mission statements have been increasing. It is argued that a higher education institution is more adept when giving back to the society which is responsible for funding it. The researcher studied how the technology will help in the improvement of the relationship between universities and the society. This is through designing and developing an information system that would serve as solution in promoting social responsibility to universities. The information system is designed to encourage universities to engage more on activities that would improve their relationship with the society.

Materials and Methods

The research design that is used in the study is quasi-experimental design. The researcher used the propensity score matching technique of the design, which undertakes to estimate the conditional probability of assignment to a particular treatment given a vector of observed covariates (Rosenbaum & Rubin, 1983). The researcher used a non-probability purposive sampling method in selecting the respondents. The researcher conducted this study with the faculty members of Quezon City University (formerly Quezon City Polytechnic University). The reason is that faculty members are the ones who often engage in extension services. A total of fifty (50) faculty members participated in the survey. The researcher gathered and analyzed the data in order to construct conclusions that will provide answers to the research problem. These data were gathered from the related literature and studies, as well as from the results of the research instrument which is in a form of a survey questionnaire. These gave the researcher such insights regarding extension services, providing an initial foundation for developing the gateway system. The results of the survey questionnaire that was distributed to respondents were analyzed through a given Likert Scale. The Likert Scale measures the level of effectiveness and level of agreement of the respondents. These are shown in the table below:

Table 1

Likert Scale

Range	Scale	Interpretation
4.51 – 5.00	5	Strongly Agree
3.51 – 4.50	4	Agree
2.51 - 3.50	3	Slightly Agree
1.51 – 2.50	2	Disagree
1.00 – 1.50	1	Strongly Disagree
Range	Scale	Interpretation
3.51 – 4.50	4	Very Effective
2.51 - 3.50	3	Effective
1.51 – 2.50	2	Slightly Effective
1.00 – 1.50	1	Not Effective

Results and Discussions

For the researcher to assess their level of agreement on concerns related to problem of the study, a survey has been conducted, by which a total of fifty (50) faculty members participated. Of this total number of respondents, only one (1) respondent indicated that he/she has less than one (1) year of working at the university, having the 2% of the overall percentage of respondents, by which sets its place on the fifth and last rank. On the other hand, there are five (5) respondents who are working at the university for 1-3 years, having the 10% of the overall percentage of respondents, setting the frequency to the fourth rank. Eleven (11) respondents indicated that they had greater than 3-5 years of working experience at the university, having the 22% of the overall percentage of respondents, placing it to the third place. Thirteen (13) respondents indicated that they have worked for the university for less than 10 years, having a 26% on the overall percentage of respondents, having the second rank. Lastly, twenty (20) respondents indicated that they are working for the university for greater than 5-10 years, having the 40% of the overall percentage of respondents, placing it at the first and top rank. Based on the extension program participated in by the respondents, 28% described that they have rendered services for livelihood, 26% described that they have rendered services for literacy, 20% described that they have rendered services for environmental purposes, 16% described that they have rendered services for nutrition improvement, 14% described that they have rendered services for medical purposes, and 16% described that they have rendered service on other areas that were not mentioned or not in the choices.

Based on the services they have previously rendered, 76% of the respondents said that they have done volunteer services in the extension program they have participated, 34% said that they have given donations, and 4% said that they have extended services other than volunteering and giving donations. With regards to the fund source, 20% of the respondents said that most of the fund sources of the extension program they have participated are from private institutions, 42% said that it came from private individuals, 34% said that it came from government, and 12% said that it came from sources other than those mentioned. Sixty percent of the respondents described the community extension service as a regular activity, while 40% described it as an activity for accreditation purposes only.

Such analysis and calculation of the collected data using statistical tools generated the following interpretations:

1. Respondents' level of agreement on the effect of continuously engaging in Social Responsibility programs

Table 2.

Respondents' Level of Agreement on the Effect of Continuously Engaging in Social Responsibility Programs

STATEMENT	MEAN RESPONSE	VERBAL INTERPRETATION	RANK
1. A more empowered workforce of the university	4.56	Strongly Agree	1
2. Reputational risk is reduced	3.96	Agree	7
3. Improved quality of life of communities	4.54	Strongly Agree	2
4. Empower people's organizations and human resources development	4.36	Agree	4
5. Facilitates diffusion of technology to the target clients	4.06	Agree	6
6. Help improve the general well-being of the rural poor	4.42	Agree	3
7. Improve the capabilities of local governments in their planning and management aimed at poverty alleviation	4.26	Agree	5
Overall Weighted Mean	4.31	Agree	

Source: Own authorship.

As seen on Table 2, the respondents agreed on the effect of continuously engaging in Social Responsibility programs; this is revealed by the obtained overall mean assessment of 4.31. Thoroughly, the respondents "agreed" that university's reputational risk is reduced when engaging in social responsibility programs with a total mean response of 3.96, being the last and seventh in the overall rankings. Also, the respondents "agreed" that engaging in social responsibility programs facilitate diffusion of technology to the target clients, with a total mean response of 4.06, placing it on the sixth rank. Moreover, the respondents "agreed" that engaging in social responsibility programs improve the capabilities of local governments in their planning and management aimed at poverty alleviation, with a total mean response of 4.26, having the fifth rank. In addition, the respondents "agreed" that engaging in social responsibility programs empower people's organizations and human resources development, having a total mean response of 4.36, being placed at the fourth rank. The respondents also "agreed" that engaging in social responsibility programs help improve the general well-being of the rural poor, having a total mean response of 4.42, placing it on the third rank. On the other hand, the respondents "strongly agreed" that engaging in social responsibility programs improves quality of life of communities, having 4.54 as its total mean response, placing it at the second rank. Lastly, the respondents "strongly agreed" that engaging in social responsibility programs empowers the workforce of the university more, having a total mean response of 4.56, and the first in rank.

2. Respondents' perception of the level of effectiveness of the following community extension programs of their school. The respondents' perception on the level of effectiveness of the following community extension programs of their school; 1) capability training program, 2) community outreach program, and 3) high-impact, long-term integrated community-based development program.

2.1 Capability Training Program

Table 3

Capability Training Program

STATEMENT	MEAN RESPONSE	VERBAL INTERPRETATION	RANK
1. Agricultural/ Environmental Training for Farmers/ Barangay Officials	2.60	Effective	4

2. Livelihood/ Technical-Vocational/ Skills Training	3.36	Effective	1
3. Continuing Education for Professionals	3.24	Effective	3
4. Basic Education/ Information Technology Literacy Training	3.34	Effective	2
Overall Weighted Mean	3.14	Effective	

Source: Own authorship.

As seen on Table 3, the respondents find the capability training program of their school "effective"; this is revealed by the obtained overall mean assessment of 3.14. Specifically, the respondents find the capability training program of their university "effective" when it comes to agricultural and environmental training for farmers and barangay officials, having a total mean response of 2.60, being the last or fourth in the overall ranking. Also, the respondents find the capability training program of their university "effective" when it comes to providing continuing education for professionals, having a total mean response of 3.24, placing it on the third rank. Also, the respondents find the capability training program of their university "effective" when it comes to providing basic education and information technology literacy training, having a total mean response of 3.34, and at the second rank. Lastly, the respondents find the capability training program of their university "effective" when it comes to providing livelihood, technical-vocational, and skills training, having a total mean response of 3.36, and being on the top or first rank.

2.2 Community Outreach Program

Table 4

Community Outreach Program

STATEMENT	MEAN RESPONSE	VERBAL INTERPRETATION	RANK
1. Food and Nutrition/ Health and Sanitation/ Maternal and child-care	2.98	Effective	9.5
2. Medical/ Dental/ Optical Mission	3.10	Effective	7
3. Blood Donation	3.48	Effective	1
4. Clean and Green Community/Coastal Cleanup	3.24	Effective	4
5. Tree Planting	3.22	Effective	5

6. Nursery & Vegetable Garden Establishment	2.98	Effective	9.5
7. Relief Goods Operation	3.42	Effective	2
8. Gift Giving Activity	3.38	Effective	3
STATEMENT	MEAN RESPONSE	VERBAL INTERPRETATION	RANK
9. Youth and Sports Development/ Environmental Camp	3.18	Effective	6
10. Visit to orphanages/ prison camps/ rehab center	2.82	Effective	12
11. Provide counseling/ legal advice	2.86	Effective	11
12. Fund raising for Community Development	3.08	Effective	8
Overall Weighted Mean	3.15	Effective	

Source: Own authorship.

As presented in Table 4, the respondents find the community outreach program of their school "effective"; this is revealed by the obtained overall mean assessment of 3.15.

Thoroughly, the respondents find the community outreach program of their university "effective" when it comes to nursery and vegetable garden establishment, having a total mean response of 2.98, placing it in the last rank. Similarly, the respondents find the community outreach program of their university "effective" when it comes to food, nutrition, health, sanitation, maternal and child-care, having a total mean response of 2.98, being on the same rank as the previous at 9.5. Also, the respondents find the community outreach program of their university "effective" when it comes to fund raising for community development, having a total mean response of 3.08, placing it on the eight rank. In addition, the respondents find the community outreach program of their university "effective" when it comes to providing medical, dental, optical missions, with a total mean response of 3.10, being on the seventh rank. In addition, the respondents find the community outreach program of their university "effective" when it comes to youth and sports development and environmental camp, having a total mean response of 3.18, placing it on the sixth rank. Also, the respondents find the community outreach program of their university "effective" when it comes on tree planting, having a total mean response of 3.22, being placed on the fifth rank. Likewise, the respondents find the community outreach program of their university "effective" when it comes to clean and green community and coastal clean-up, having a total mean response of 3.24, placing it on the fourth rank. Moreover, the respondents find the community outreach program of their

university “effective” when it comes to gift giving activities, having a total mean response of 3.38, placing it on the fourth rank. Likewise, the respondents find the community outreach program of their university “effective” when it comes to relief goods operation, having a total mean response of 3.42, being on the second rank. Lastly, the respondents find the community outreach program of their university “effective” when it comes to blood donation, having a total mean response of 3.48, placing it on the top or first rank.

2.3 High-Impact, long-term Integrated Community-based Development Program

Table 5

High-Impact, Long-term Integrated Community-based Development Program

STATEMENT	MEAN RESPONSE	VERBAL INTERPRETATION	RANK
1. Adopt-a-Barangay Program	3.10	Effective	1
2. Adopt-a-School Program	3.04	Effective	2
3. Barangay Integrated Development Approach in Nutrition Improvement	3.00	Effective	3
4. Agro-industrial Community-based Technology Center	2.84	Effective	4
Overall Weighted Mean	3.00	Effective	

Source: Own authorship.

As seen on Table 5, the respondents find the high-impact, long-term integrated community-based development program of their school “effective”; this is revealed by the obtained overall mean assessment of 3.00.

Categorically, the respondents find the high-impact, long-term integrated community-based development program of their school “effective” when it comes to providing assistance in establishing an agro-industrial community-based technology center, having a total mean response of 2.84, having the last or fourth place in the overall rankings. Likewise, the respondents find the high-impact, long-term integrated community-based development program of their school “effective” when it comes to barangay integrated development approach in nutrition improvement, having a total mean response of 3.00, being placed at the third rank. Also, the respondents find the high-impact, long-term integrated community-based development program of their school “effective” when it comes to providing an adopt-a-school program, having a total mean response of 3.04, having the second rank. Lastly, the respondents

find the high-impact, long-term integrated community-based development program of their school “effective“ when it comes to adopt-a-barangay program, having a total mean response of 3.10, being placed at the top or first rank of the overall rankings.

3. Respondents’ level of agreement on the strategies of implementing a successful extension services program

Table 6

Respondents’ Level of Agreement on the Strategies of Implementing a Successful Extension Services Program

STATEMENT	MEAN RESPONSE	VERBAL INTERPRETATION	RANK
1. Develop a networking system among the colleges that will facilitate planning, implementation, monitoring and evaluation of the extension program	4.46	Agree	4.5
2. Conduct needs assessment to target community beneficiaries of the community extension service	4.46	Agree	4.5
3. Assist communities by providing technical, vocational and educational services	4.56	Strongly Agree	1
4. Assist target beneficiaries in putting up home industries and cooperatives	4.36	Agree	7
5. Utilize research-based technologies for sustainable development	4.40	Agree	6
STATEMENT	MEAN RESPONSE	VERBAL INTERPRETATION	RANK
6. Establish and maintain strong linkages with public and private organizations/agencies and industrial establishments for fund generation and job placement	4.54	Strongly Agree	2
7. Provide continuing program for upgrading the capabilities of	4.52	Strongly Agree	3

extension workers through scholarship grants and training			
Overall Weighted Mean	4.47	Agree	

Source: Own authorship.

As seen on Table 6, the respondents "agreed" on the strategies of implementing a successful extension services program; this is revealed by the obtained overall mean assessment of 4.47. Distinctively, the respondents "agreed" on the statement "assist target beneficiaries in putting up home industries and cooperatives as a strategy on implementing a successful extension services program", having a total mean response of 4.36, being placed at the last or seventh rank. Also, the respondents "agreed" on utilizing research-based technologies for sustainable development as a strategy on implementing a successful extension services program, having a total mean response of 4.40, being placed at the last or sixth rank. Likewise, the respondents "agreed" on developing a networking system among the colleges that will facilitate planning, implementation, monitoring and evaluation of the extension program of the university as a strategy for implementing a successful extension services program, having a total mean response of 4.46, being on the rank of 4.5. Similarly, the respondents "agreed" on conducting needs assessment to target community beneficiaries of the community extension service as a strategy for implementing a successful extension services program, having a total mean response of 4.46, being on the same rank of previous stated strategy of 4.5. Also, the respondents "strongly agreed" on providing continuing program for upgrading the capabilities of extension workers through scholarship grants and training as a strategy for implementing a successful extension services program, having a total mean response of 4.52, being in the third rank. In addition, the respondents "strongly agreed" on establishing and maintaining strong linkages with public and private organizations/agencies and industrial establishments for fund generation and job placement as a strategy for implementing a successful extension services program, having a total mean response of 4.54, being second in the overall rankings. Lastly, the respondents "strongly agreed" on assisting communities by providing technical, vocational and educational services as a strategy for implementing a successful extension services program, having a total mean response of 4.56, having the top or first rank.

5. Respondents' level of agreement on the key factors of extension services' programs as critical and important for sustainability

Table 7

Respondents' Level of Agreement on the Key Factors of Extension Services' Programs as Critical and Important for Sustainability

STATEMENT	MEAN RESPONSE	INTERPRETATION	RANK
1. Relevance to the community	4.66	Strongly Agree	1
2. Planning	4.54	Strongly Agree	4
3. Implementation	4.64	Strongly Agree	2.5
4. Funding and Resources	4.48	Agree	5.5
5. Community Involvement	4.64	Strongly Agree	2.5
6. Monitoring and Evaluation	4.48	Agree	5.5
Overall Weighted Mean	4.57	Strongly Agree	

Source: Own authorship.

As seen on Table 7, the respondents strongly agreed on the key factors of extension services' programs as critical and important for sustainability; this is revealed by the obtained overall mean assessment of 4.57.

Specifically, the respondents "agreed" that funding and resources are critical key factors of extension services' programs and are deemed to be important for sustainability, with a total mean response of 4.48, having a ranking of 5.5. Similar with the previous, the respondents "agreed" that monitoring and evaluation are critical key factors of extension services' programs and are deemed to be important for sustainability, having a same total mean response of 4.48, being the ranking similar to the previous with 5.5. On the other hand, the respondents "strongly agreed" that planning is a critical key factor of extension services' programs and is deemed to be important for sustainability, with a total mean response of 4.54, being fourth in the overall ranking. Also, the respondents "strongly agreed" that implementation is a critical key factor of extension services' programs and is deemed to be important for sustainability, with a total mean response 4.64, having a ranking of 2.5. Likewise, the respondents "strongly agreed" that community involvement is a critical key factor of extension services' programs and is deemed to be important for sustainability, with a same total mean response as the previous factor with 4.64, having the same ranking also with 2.5. Lastly, the respondents "strongly agreed" that relevance to the community is a critical key factor of extension services' programs and is deemed to be important for sustainability, with a total mean response 4.66, being the top or first rank among all the stated factors.

5. Respondents' level of agreement on the capability of a gateway software in addressing the needs and concerns of both the universities and recipients/beneficiaries of extension services

The respondents' level of agreement on the capability of a gateway software in addressing the needs and concerns of both the universities and recipients/beneficiaries of extension services in terms of 1) Registration of organizations, communities, or groups, 2) Registration of member universities and 3) Other Required Features.

5.1 Registration of organizations, communities, or groups

Table 8

Registration of Organizations, Communities, or Groups

STATEMENT	MEAN RESPONSE	INTERPRETATION	RANK
1. Paper accreditation process is strictly implemented on organizations, communities or groups as recipients of the extension services	4.44	Agree	1.5
2. Investigation results are being placed in the system	4.44	Agree	1.5
Overall Weighted Mean	4.44	Agree	

Source: Own authorship.

As seen on Table 8, the respondents "agreed" on the capability of a gateway software in addressing the needs and concerns of both the universities and recipients/beneficiaries of extension services in terms of registration of organizations, communities, or groups; this is revealed by the obtained overall mean assessment of 4.44.

Specifically, the respondents "agreed" on both stated capabilities, which include the strict implementation of paper accreditation process on organizations, communities, or groups as recipients of the extension services, and the presence of the investigation results, as capabilities of a gateway software in terms of registration of organizations, communities or groups respectively, having both a total mean response of 4.44.

5.2 Registration of member universities

Table 9

Registration of Member Universities

STATEMENT	MEAN RESPONSE	INTERPRETATION	RANK
1. Paper accreditation process is strictly implemented	4.36	Agree	3
2. Validate status with CHED	4.48	Agree	1
3. Background check results are placed in the system	4.46	Agree	2
Overall Weighted Mean	4.43	Agree	

Source: Own authorship.

As seen on Table 9, the respondents “agreed” on the capability of the gateway software in addressing the needs and concerns of both the universities and recipients/beneficiaries of extension services in terms of registration of member universities; this is revealed by the obtained overall mean assessment of 4.43.

Individually, the respondents “agreed” on the strict implementation of the paper accreditation process on organizations, communities, or groups as recipients of the extension services as a capability of the gateway software in addressing the needs and concerns of both the universities and recipients/beneficiaries of extension services in terms of registration of member universities, having a total mean response of 4.36, being third in the ranking. Likewise, the respondents “agreed” on the presence of background check results in the system as a capability of the gateway software in addressing the needs and concerns of both the universities and recipients/beneficiaries of extension services in terms of registration of member universities, having a total mean response of 4.46, being the second in the overall ranking. Lastly, the respondents “agreed” on the presence of validation status with CHED as a capability of the gateway software in addressing the needs and concerns of both the universities and recipients/beneficiaries of extension services in terms of registration of member universities, having a total mean response of 4.48, being the first and top rank among the three stated capabilities.

5.3 Other Required Features

Table 10

Other Required Features

STATEMENT	MEAN RESPONSE	INTERPRETATION	RANK
1. A detailed presentation of the organizations, communities or groups as recipients or a link is available in the system	4.36	Agree	4
2. Each university is given a dashboard that shows previous projects, and current status of the sponsorship	4.42	Agree	1.5
3. The system is capable of displaying an urgent need for sponsorship	4.40	Agree	3
4. The system has features on notifying both parties	4.42	Agree	1.5
Overall Weighted Mean	4.40	Agree	

Source: Own authorship.

As seen on Table 10, the respondents "agreed" on the capability of a gateway software in addressing the needs and concerns of both the universities and recipients/beneficiaries of extension services in terms of other required features; this is revealed by the obtained overall mean assessment of 4.40.

Thoroughly, the respondents "agreed" on the availability of a detailed presentation of the organizations, communities, or groups as recipients or a link in the system as a capability of a gateway software in addressing the needs and concerns of both the universities and recipients/beneficiaries of extension services in terms of its other required features, with a mean response of 4.36, being the last and fourth rank. Also, the respondents "agreed" on the displaying of an urgent need for sponsorship as a capability of a gateway software in addressing the needs and concerns of both the universities and recipients/beneficiaries of extension services in terms of its other required features, with a mean response of 4.40, having the third rank. Lastly, the respondents "agreed" on both having a dashboard that shows previous projects and current status of the sponsorship, and notifications for both parties, as a capability of a gateway software in addressing the needs and concerns of both the universities and recipients/beneficiaries of extension services in terms of its other required features, respectively, with both a mean response of 4.42, having both a 1.5 ranking.

The researcher aims to improve relationships between universities and society, and also, have the privilege to create new relations at ease and convenience for both parties. On that note, the researcher sought to conduct a study to design an information system to encourage universities to engage more in activities that would improve their relationship with society. The gateway information system to be developed is conceptualized to be centralized meeting points that are both accessible to universities and beneficiaries, by which they can plan and communicate to build projects that will aid corresponding recipients of the created project. This can be accomplished by building such gateway information system as a web-based type, where it can be accessed through the internet, and also be a robust and accurate medium for such exchange of information between entities.

The research design that is used in the study is quasi-experimental design, which is most frequently used when it is not feasible for the researcher to use random assignment (Gribbons and Herman, 1997). In particular, the researcher used the propensity score matching technique of the design, which undertakes to estimate the conditional probability of assignment to a particular treatment given a vector of observed covariates (Rosenbaum and Rubin, 1983). The researcher conducted this study with the faculty members of Quezon City Polytechnic University. The reason is that faculty members are the ones who often engage in extension services. The study used a survey questionnaire as a research instrument. The questionnaire is composed of questions that were constructed based on the statement of the problem. This was distributed to the respondents. The survey results were analyzed along with the reviewed related literature and studies in order to generate a more precise answer. These gave the researcher such insights regarding extension services, providing an initial foundation for developing the gateway system.

Conclusion

In lieu of the analysis of the founded results, the following conclusions has been derived: The respondents agreed that the continuous engagement of social responsibility program provides a positive impact on both university and beneficiaries. They strongly agreed on the positive impact of having a more empowered workforce of the university and improved the quality of life of the communities. Overall, the respondents find that extension programs are effective. The findings suggest that respondents perceive capability training program, community outreach program, and high-impact, long-term integrated community-based development programs as effective for the beneficiary. They find livelihood/ technical-vocational/ skills training, blood donation, and adopt-a-barangay program as favorably effective among the other programs.

The respondents agreed that strategies for implementing extension service programs are successful. They strongly agreed on having a strategy of assisting communities by providing

technical, vocational, and educational services. The respondents strongly agreed that the key factors are critical and important for sustainability. They strongly agreed on the key factors such as relevance to the community, community involvement, implementation, and planning. Overall, the assessment of the respondents agreed that the gateway software is capable of addressing the needs and concerns of both the universities and the recipients and beneficiaries. They favorably agreed on the capabilities such as the paper accreditation process, communities or groups as recipients of the extension services, investigation results being placed in the system, validation status with CHED, a dashboard that shows previous projects, the current status of the sponsorship, and features on notifying both universities and beneficiaries.

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