



Effectiveness of the Extension Programs of the BS Mathematics Program of Pangasinan State University – Lingayen

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Abstract – This paper aimed to assess the effectiveness of the implemented extension activities of the BS Mathematics Program of Pangasinan State University Lingayen in different partner barangay high schools, Salomague National High School and Polong National High School, in Bugallon, Pangasinan. This descriptive research study used survey questionnaires. A 5-point Likert scale was used to assess the opinions of the respondents. The respondents' answers were tabulated and then averages were taken to determine the satisfaction of the respondents on the effectivity of the conducted extension activities. Results show that the beneficiaries, both the students and teachers, strongly agree that they have benefited from and been impacted by the Mathematics Department's extension operations.

Keywords – BS Mathematics, effectiveness, extension activities, extension program, impact assessment

INTRODUCTION

The key outcome area that makes the community feel the institution's presence is through the conduct of extension and community involvement. As students apply their disciplinary knowledge to help address real-world problems, there is a growing appreciation for the impact of higher education extensions in the teaching and learning process. This may be of interest to higher education institutions (HEIs) that are developing community extension programs with the goal of maximizing societal outcomes.

The conduct of extension activities and community involvement connects the BS Mathematics program to the community, especially to the two barangay high schools Polong National High School and Salomague National High School which are both located in Bugallon, Pangasinan. It is the channel through which a higher educational institution extends its expertise in accordance with its programs. It shares the transfer of skill, knowledge, technology, and other extension programs that would help to improve the economic situation of its beneficiaries. The extension activities and the development of linkages is done especially for the community that needs help in different aspects. In fact, extension activities are conducted with the goal of making and changing a part of the recipients' life for the better. In other words, extension activities must be responsive to the needs of the target recipients.

The BS Mathematics program, in order to sustain its extension activities, has formed a partnership with the Department of Education SDO1 as well as with the concerned barangay schools, which is done through a Memorandum of Agreement for the Adopt-a-School

Program as approved by the officials of Pangasinan State University – Lingayen.

Furthermore, with the given parameters of identified standards in the evaluation of curricular programs by different accrediting agencies such as the Accrediting Agency of Chartered Colleges and Universities in the Philippines (AACUP), Institutional Accreditation, International Organization for Standardization (ISO), and Institutional Sustainability Assessment, it is of importance that the extension activities conducted must bring about total human development geared towards the empowerment of the beneficiaries.

The BS Mathematics Program has been continuously implementing various programs in the two barangay high schools Salomague National High School and Polong National High School. With this, the researchers aim to assess the effectiveness of the extension activities that have been implemented in order to determine the strengths, weaknesses, and areas that need to be improved in order to properly address the needs of the beneficiaries..

OBJECTIVES OF THE STUDY

The main goal of this study is to determine the effect of the conducted Extension Programs of the BS Mathematics Program of Pangasinan State University - Lingayen to the beneficiaries, specifically the teachers and students, of the barangay high schools, Salomague National High School and Polong National High School, in Bugallon, Pangasinan. It aims to ascertain if the conducted activities made an impact, that is, if the activities changed their lives for the better.

Specifically, its purpose is to assess the level of the extension programs' outputs. That is, to determine if the beneficiaries are applying the lessons discussed during the seminar, if the acquired skill is useful in their studies/work, if the activities helped them increase their income or allowed them to find additional sources of income, if it increased their self-confidence in their studies/work, if the activities made them more productive, and if the activities gave them the chance to share their knowledge and skills to others.

MATERIALS AND METHODS

The descriptive survey method was used in the study. It was used to describe and analyze the current situation regarding the effectiveness of the College's extension programs. The researcher used a questionnaire and documentary analysis to collect relevant data for the study.

In total, there were 68 persons who participated in the study. These respondents were identified using data from the extension services who were recipients of the BS Mathematics program's extension services. Questionnaires were distributed to the recipients of the activities in the two barangay high schools. The averages of each item of consideration were taken. The following descriptions were used on a 5-point Likert scale: 5-Strongly Agree; 4-Moderately Agree; 3-Agree; 2-Disagree; 1-Strongly Disagree.

RESULTS AND DISCUSSION

Tables 1-5 revealed the level of effectiveness of the extension programs conducted by the Mathematics Department.

Table 1. Effectiveness of the extension service "Multimedia and Statistics Training for Secondary Teachers" (N=20)

Items	Average	Interpretations
I am applying lessons I learned from the training conducted.	3.88	Moderately Agree
The training helped me acquire useful skill for my studies/ present work.	4.38	Strongly Agree

The training helped increase my source of income.	3.50	Moderately Agree
The training increased my self-confidence in my studies/ present work.	3.88	Moderately Agree
The training made me more productive	3.94	Moderately Agree
The training gave me the chance to share my knowledge and skills to others	4.13	Moderately Agree
Overall Average	3.95	Moderately Agree

Legend: 4.3-5.00 Strongly Agree, 3.5-4.2 Moderately Agree, 2.70-3.40 Agree, 1.9-2.6 Disagree, 1.00-1.80 Strongly Disagree

Table 1 shows the general result of the monitoring on six(6) aspects. It presents the effectiveness of the Multimedia and Statistics Training to the teachers of Salomague National High School. Beneficiaries viewed this activity positively, with an overall weighted mean of 3.95. The teachers agreed that they were able to apply the lesson they learned from the training with an average of 3.88. The teachers overwhelmingly felt that the training "helped them acquire useful skills" and at the same time, it helped them increase their source of income with an average of 4.38 and 3.50 respectively. The training further increased their self-confidence and made them more productive in their respective posts. Additionally, they become socially responsive when it comes to sharing their knowledge and skills with others.

Table 2. Effectiveness of the extension service "Research Seminar on the Road Extension Program (Phase 2)" (N=12)

Items	Average	Interpretations
I am applying lessons I learned from the training conducted.	4.50	Strongly Agree

The training helped me acquire useful skill for my studies/ present work.	4.42	Strongly Agree
The training helped increase my source of income.	3.42	Agree
The training increased my self-confidence in my studies/ present work.	4.50	Strongly Agree
The training made me more productive	4.50	Strongly Agree
The training gave me the chance to share my knowledge and skills to others	4.58	Strongly Agree
Overall Average	4.32	Strongly Agree

Legend: 4.3-5.00 Strongly Agree, 3.5-4.2 Moderately Agree, 2.70-3.40 Agree, 1.9-2.6 Disagree, 1.00-1.80 Strongly Disagree

With an overall average of 4.32 (strongly agree), Table 2 shows the success of the extension activity named "Research Seminar on the Road Extension Program (Phase 2)". With a mean score of 4.50, the factor "The seminar give me the possibility to share my knowledge and abilities to others" demonstrates that participants firmly believe that the seminar will have an impact on their social relationships by encouraging them to share what they learned. Due to the fact that the majority of respondents are still students, the third aspect has the lowest average (3.42), indicating that it has a minimal impact on their financial situation. However, when it comes to the items "applying lessons I learned from the seminar conducted" and "The seminar helped me acquire useful skill for my studies," the beneficiaries overwhelmingly felt that the seminar was beneficial to them.

Table 3. Effectiveness of the extension service "Statistical Package for the Social Sciences (SPSS) Tutorial" (N=14)

Items	Average	Interpretations
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I am applying lessons I learned from the training conducted.	4.79	Strongly Agree
The training helped me acquire useful skill for my studies/ present work.	4.43	Strongly Agree
The training helped increase my source of income.	3.86	Moderately Agree
The training increased my self-confidence in my studies/ present work.	4.50	Strongly Agree
The training made me more productive	4.43	Strongly Agree
The training gave me the chance to share my knowledge and skills to others	4.64	Strongly Agree
Overall Average	4.44	Strongly Agree

Legend: 4.3-5.00 Strongly Agree, 3.5-4.2 Moderately Agree, 2.70-3.40 Agree, 1.9-2.6 Disagree, 1.00-1.80 Strongly Disagree

Table 3 displays the calculated overall average for the "Statistical Package for the Social Sciences (SPSS) Tutorial" extension service's effectiveness. According to the data, participants overwhelmingly agree that they were able to put what they had learned to use and that the seminar had assisted them in developing useful abilities, scoring an average of 4.79 and 4.43, respectively. Since they can now impart their knowledge on others, it can be claimed that the extension program that was put into place helped to improve their self-confidence, productivity, and socializing. Therefore, the extension program has an impact on their way of life.

Table 4 Online Teaching of Probability and Statistics with the Aid of Microsoft Excel (Teachers in Salomague National High School) (N=7)

Items	Average	Interpretations
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I am applying lessons I learned from the training conducted.	4.7	Strongly Agree
The training helped me acquire useful skill for my studies/ present work.	4.8	Strongly Agree
The training helped increase my source of income.	4.1	Moderately Agree
The training increased my self-confidence in my studies/ present work.	4.7	Strongly Agree
The training made me more productive	4.7	Strongly Agree
The training gave me the chance to share my knowledge and skills to others	4.7	Strongly Agree
Overall Average	4.62	Strongly Agree

Legend: 4.3-5.00 Strongly Agree, 3.5-4.2 Moderately Agree, 2.70-3.40 Agree, 1.9-2.6 Disagree, 1.00-1.80 Strongly Disagree

Table 4 presents the effectiveness of the extension service “ Online Teaching of Probability and Statistics with the Aid of Microsoft Excel “rendered in the adopted school Salomague National High School. Findings showed that beneficiaries recognize the impact of the programs on them since they strongly agree that were able apply the lessons they learned from the training conducted with an overall weighted mean of 4.62 , which was verbally described as strongly agree.

Table 5: Online Teaching of Probability and Statistics with the Aid of Microsoft Excel (Students in Polong National High School) (N=15)

Items	Average	Interpretations
I am applying lessons I learned from the training conducted.	4.53	Strongly Agree

The training helped me acquire useful skill for my studies/ present work.	4.67	Strongly Agree
The training helped increase my source of income.	4.07	Moderately Agree
The training increased my self-confidence in my studies/ present work.	4.73	Strongly Agree
The training made me more productive	4.47	Strongly Agree
The training gave me the chance to share my knowledge and skills to others	4.47	Strongly Agree
Overall Average	4.49	Strongly Agree

Legend: 4.3-5.00 Strongly Agree, 3.5-4.2 Moderately Agree, 2.70-3.40 Agree, 1.9-2.6 Disagree, 1.00-1.80 Strongly Disagree

The overall findings of the six (6) aspect monitoring are displayed in Table 1. It illustrates the efficiency of online probability and statistics instruction using Microsoft Excel for students. Beneficiaries had a favourable overall weighted mean opinion of this activity, which was 4.49. With an average score of 4.53, the teachers concurred that their students were able to apply what they had learnt in the course. With an average of 4.07 and 3.50, respectively, the students believed that the training "made them learn useful abilities" and at the same time, it helped them realize that Math is an enjoyable topic. They became more self-assured and productive in their different efforts as a result of the instruction. When they impart their knowledge and abilities to others, they also develop social responsiveness.

CONCLUSION AND RECOMMENDATION

According to the study’s findings, The Salomague National High School and Polong National High School adopted schools' students and teachers have



benefited from and been impacted by the Mathematics Department's extension operations.

The extension services had a good effect on the knowledge and abilities of students and instructors, as well as to some extent on their livelihood plans, which equipped and enabled them to be independent learners and educators. They became more self-assured as a result of the training, and they were more effective in their various positions. When they impart their knowledge and abilities to others, they also develop social responsiveness.

Moreover, the Salomague National High School and Polong National High School adopted schools' students and teachers have benefited from and been impacted by the Mathematics Department's extension operations.

The extension services had a good effect on the knowledge and abilities of students and instructors, as well as to some extent on their livelihood plans, which equipped and enabled them to be independent learners and educators. They became more self-assured as a result of the training, and they were more effective in their various positions. When they impart their knowledge and abilities to others, they also develop social responsiveness

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