

# The Construct of Extension from the University Faculty Perspective

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**Abstract** – *This study aimed to determine the construct of extension from the university faculty perspective and the relationship between demographic profile and extension involvement. Twenty-eight faculty members were purposively selected with considerations such as employment status (contractual, temporary and permanent), at least four years in service, and present on that day of distribution of questionnaire forms. Both descriptive and inferential statistics using SPSS program and Wordle application were used to analyze data. Results showed that 58% of the respondents are female; 54% are contractual; 1-10 years in service; 1-5 years in doing extension with 1-5 extension involvement commonly gift-giving and clean-up drive; gender is related to extension involvement; there is a substantial positive relationship between employment status and extension involvement; only 41% of the variance in extension involvement can be attributed to the combined effect of years in service and years in doing extension; nature of extension is service; the purpose of extension is formative; and the level of engagement is already engaged. Based on the obtained results, the study concluded that there are more female contractual faculty members involved in extension activities; gender, employment status, years in service and years in doing extension are related to number of extension involvement of faculty members; the construct of extension is perceived as HEIs' function to help the needs and in the development of the community since extension is still on the nature of service with formative purpose. Yet, they agree that university extension is already engaged.*

**Keywords** – *extension, nature, purpose and level of engagement of extension, university extension*

## INTRODUCTION

The concept of extension is open to a wide variety of interpretations because it is evolving as a result of tradition and policy context which is reflective of institutional goals. The term *extension* presages various understanding and it means different things in different places [1]. For example, for the Dutch, extension is *voorlichting* which means lighting the path, for the French, it is *vulgarisation* which means simplifying message, and for the Spanish, extension is *capacitacion* which refers to training. As Baker [2] puts, it is the transfer and spread of technology and technical information or know-how from information sources or developers through those who communicate it to those who receive it. Its definition varies considerably from knowledge and technology transfer from universities to enterprises, to a broader concept to serve community needs in urban planning, health services, legal advice or topics of environment or energy [3]. Therefore, extension is a dynamic concept.

The aim of extension is to help people through education to recognize their own problems and work out their solutions [4]. Known extension efforts emerged as a step to help farm people adjust to societal condition and needs. Roling[5] conversely states that extension is not a special pedagogy of agriculture. It can be successfully used by different types of organizations to reach different groups of people with different messages [6] like the University of Nebraska's urban outreach programs [7].

From then on, different higher education institutions (HEIs) recognized extension as one of the three major functions. Aniedi and Effiom [8] assert "Universities all over the world are mandated to perform three core functions consisting of teaching, research and extension. From the traditionally serving communities Magrath [9] proposed that the 21<sup>st</sup> century university adopts one general mission: service to the public, supported by teaching, learning, and new research discoveries. In addition, multiversity unveils a new vision of scholarship that generally

pursues the threefold mission of teaching, research, and public service [10], [11]. Preece [12] mentioned that after the long journey of educational revolution, universities have supported three strands to their mission: research, teaching and community service. It can be argued that the third mission is the potential bridge between the university as an ivory tower and the communities whose development needs it should be prioritizing. Likewise, Preece [13] reiterated that the third mission of universities – community service – provides the space to address such a challenge in a way that can refocus its research and teaching missions to transform and revitalize the relationship between higher education and national development needs. Thus, there is a need to stimulate the linkages among teaching, research and extension; as the relationship between higher education and society is generally understood as the “third mission” that is extension [3].

In the Philippines, RA 8435, an act prescribing urgent related measures to modernize the agriculture and fisheries sectors of the country, stated that extension program of state colleges and universities shall primarily focus on the improvement of the capability of the local government unit (LGU) extension service by providing: a) degree and non-degree training programs; b) technical assistance; c) extension cum research activities; d) monitoring and evaluation of LGU extension projects; and e) information support services through the tri-media and electronics [14]. Therefore, extension advocacy is particularly expressed as a function of state universities and colleges (SUCs) to assist the local government units in improving their effectiveness through capability-building and complementary extension services [15]. An example of this is the Agro-Industrial Development Program, UPLBCA (University of the Philippines Los Banos College of Agriculture), aimed to operationalize partnerships within agricultural communities for the effective and efficient delivery of agricultural extension services. It involves the binding of the different levels of LGUs, local SUCs and other stakeholders through activities such as participatory planning, institutionalization of monitoring and evaluation systems, resource mobilization, and institution building and strengthening [16].

Likewise, Commission on Higher Education (CHED) has defined extension as the act of communicating, persuading and helping specific

sectors and target clientele to enable them to effectively improve production, community and/or institutions, and quality of life [17]. CHED, in its involvement in agriculture development, awards outstanding extension programs from different HEIs in the country. This is the first nationwide recognition program for extension. It aims to recognize the HEIs and implementers for their outstanding extension programs; encourage conduct of extension work that is relevant and responsive to the needs of the community and society; and promote appreciation of the importance of the extension function of HEIs [18].

Batangas State University (BatStateU) is one of the HEIs in Batangas. BatStateU-Malvar was created on March 21, 2001 through RA 9045 [19], integrating Jose P. Laurel Polytechnic College as one of the autonomous campuses of BatStateU. From then on, BatStateU is committed to implement its mandates by translating corporate values in instruction, research, extension and production towards the making of the Filipino.

However, as one of the thrusts mandated by CHED, extension is least emphasized among the core functions may be due to the absence of a clear and common mandate for extension of HEIs [20]. In addition, Alcalá [21] claimed that the concept of academic extension is misunderstood by many universities in the country. Extension as the third mission receives lower status than the other two missions [13]. Because of this, HEIs in the country like Batangas State University (BatStateU), view extension in different ways with the most common form as dole out assistance to communities struck by calamities and other community outreach activities like coastal clean-up, blood-letting, and tree planting. These various views on extension imply that extension as a function of HEIs is not well-infused into the consciousness of the entire institution as Lero [20] claimed. In addition, university community engagement through service learning fails to impact on community change because insufficient attention is paid to genuine engagement (listening to the community; enhancing local resources, critiquing power relations, reciprocity) [22].

This further leads to the confusion as regards what extension should be and how extension ought to be performed. The gap appears to be between what is currently being practiced in HEIs and the true meaning of extension which is participatory in nature as popularized by Robert Chambers [23].

On the other hand, there is limited published literature on HEIs' extension in the Philippines; yet foreign literature is abundant. The study of [24] explored on the extent of extension services delivery among all faculty members and extension staff who were serving the teacher education programs of selected state technological institutions in Region VIII. It also determined the relationships between profile characteristics of the extension service program implementers in terms of age, educational attainment, length of service, relevant trainings and attitude towards extension service. For foreign literature, Berrio [25] described the dominant culture of Ohio State University Extension (OSUE) using demographic characteristics of job title, major program area, sex, age, and length of employment[26] also described the extent of information use by Extension agents in the United States and found significant differences between demographic characteristics (age, gender, education level, and primary are of program responsibility) and information sources used [27] assessed training needs of Extension agents relative to program evaluation and accountability and found out that majority of the respondents were male, averaged 16 years of work experience and family living/home economics as the primary area of program responsibility.

Thus, this study aimed to be added as it determined the construct of extension from the lens of BatStateU-Malvar faculty members. In order to do this, demographic profile in terms of gender, employment status, years in service and years in doing extension and its relationship to extension involvement were described.

#### **OBJECTIVES OF THE STUDY**

With this context, this study aimed to determine the construct of extension based on nature, purpose, level of engagement and definition from the university faculty perspective. Specifically, it determined the demographic profile (gender, employment status, years in service and years in doing extension) of the university faculty members and its relationship to extension involvement.

#### **MATERIALS AND METHODS**

The total population of faculty members in the campus was 96 and 30% or 28 of it was considered as the sample size. For the purpose of this study, 28 faculty members of Batangas State University Malvar

Campus were purposively selected with considerations such as at least four years in service, and present on the day of distribution of questionnaire. Demographic profile in terms of gender, employment status, years in service and years in doing extension was determined. Number and list of extension involvement were also identified. Of the 28 questionnaires, one was lost; three were not retrieved on the assigned date of collection despite effort of reminding and making follow-ups. Returned questionnaires were tallied and tabulated.

The standardized questionnaires had three parts: Nature of Extension, Purpose of Extension, and Level of Engagement. Nature of Extension refers to the overall characteristic and type of extension as practiced among higher education institutions in the Philippines. Gaffikin and Morrissey's [28] typologies refer to Ivory Tower (The institution is detached; no community involvement at all.); Non-partisan (There is involvement but the institution is cautious especially in divided communities to avoid accusations of bias.); Service (The program of service is seen as a limited and irregular involvement of the institution, only when a need occurs.); Outreach (A more regular and organized program of service to the community than the service type.); and Engaged (There is a formal form of partnership/collaboration between the institution and the community). Nature of Extension portion has five rows representing the five types. Using Likert Scale of five, respondents were asked to check (√) the column that corresponds to their answer. Weighted Mean is employed in this question using the following scale:

5 - Strongly Agree	4.2-5.0- <b>Engaged</b>
4 - Agree	3.4-4.19- <b>Outreach</b>
3-Disagree	2.6-3.39- <b>Service</b>
2-Strongly Disagree	1.8-2.59- <b>Non-Partisan</b>
1-Undecided	1.0-1.79- <b>Ivory Tower</b>

Purpose of Extension is the aim of extension program described as Informative (Providing information to enable people make informed decisions.); Persuasive (Securing people's support to certain programs, policies that protect public interests and achieve societal goals.); Formative (Enhancing the capabilities of the people to solve problems.); and Emancipatory (Engaging stakeholders to better understand their situations and come up with creative solutions to address concerns). Purpose of Extension

portion has four rows representing the four types. Using Likert Scale of five, respondents were asked to check (√) the column that corresponds to their answer. Weighted Mean is employed in this question using the scale:

<b>5-Strongly Agree</b>	<b>4.0-5.0-Emancipatory</b>
<b>4-Agree</b>	<b>3.0-3.99-Formative</b>
<b>3-Disagree</b>	<b>2.0-2.99-Persuasive</b>
<b>2-Strongly Disagree</b>	<b>1.0-1.99-Informative</b>
<b>1-Undecided</b>	

Level of Engagement refers to the seven guiding characteristics that defined an engaged institution, which constitute almost a seven-part test of engagement [29]. They are responsiveness (Listening to the communities, asking the right questions and offering services in the right way at the right time.); respect for partners (A joint academic-community definitions of problems, solutions and success; a recognition that the institution has much to learn – not only to offer - in the process.); academic neutrality (The university maintains the role of neutral facilitator and source of information when public policy issues, particularly contentious ones, are at stake.); accessibility (What the institution can offer is readily available to help inexperienced potential partners.); integration (Engagement offers new opportunities for integrating institutional scholarship with the service and teaching missions of the university.); coordination (A result of integration, coordination involves “making sure that left hand knows what the right hand is doing.”), and resource partnership (This involves sourcing of funds and strong partnerships especially with the government, business and the non-profit organizations.) Level of Engagement portion has 23 rows representing the seven levels. Using Likert Scale of five, respondents were asked to check (√) the column that corresponds to their answer for each statement. Weighted Mean is employed in this question using the following scale:

4.2-	5.0	- Strongly Agree
3.4-	4.19	- Agree
2.6-	3.39	- Disagree
1.8-	2.59	- Strongly Disagree
1.0-	1.79	- Undecided

Following the steps in SPSS, different statistical techniques were employed. For the descriptive, weighted mean was used to determine the type, purpose and level of engagement in extension. To determine the relationship between a dichotomous variable (gender) and an interval variable (number of

extension involvement), the best correlation analysis used was Point biserial coefficient ( $r_{pb}$ ). It is the coefficient describing the relationship between one interval and one dichotomous variable. To determine the relationship between employment status and number of extension involvement of faculty extensionists, there was a need for a different type of statistic to calculate the correlation between these two variables that used ranked data. In this case, the Spearman rho, a specialized form of the Pearson  $r$ , was appropriate.

For the respondents’ response on the open-ended question about the list of extension involvement and own definition of extension, Wordle application was used. Wordle is a web application tool readily available in the net. It is used in analysis of inputted words, phrases or even a whole article by determining the most dominant words presented in a number of templates to choose from.

**RESULTS AND DISCUSSION**

*A. Demographic Profile of the Respondents*

Table 1. Distribution of Respondents according to Gender

<b>Gender</b>	<b>f</b>	<b>%</b>
Male	10	58
Female	14	42
<b>Total</b>	<b>24</b>	<b>100</b>

It is shown on the table that 58% of the respondents are female. This is expected since there are really more females in BatStateU- Malvar Campus. In fact, out of the 96 members of the professoriate, 58 are female. This is also true not just in other local HEIs but also in Ohio State University Extension wherein there is 198 female compared to 96 male [25]. Female agents communicated more frequently than male agents with other community organizations [26].

Table 2. Distribution of Respondents according to Employment

<b>Employment Status</b>	<b>Frequency</b>	<b>Percentage</b>
Contractual	13	54
Temporary	2	9
Permanent	9	37
<b>Total</b>	<b>24</b>	<b>100</b>

Table2 shows that majority (54%) of the respondents are contractual. This is also expected since of the 96 full time faculty members, 73 is contractual,



*B. Demographic Profile and its Relation to Extension*

*1. Gender and Extension Involvement*

When gender is correlated to number of extension involvement, point biserial coefficient is employed using the SPSS program. Computing for the value of  $r_{pb}$ , using the mean from Table 6 and the standard deviation from Table 7, the value of  $r_{pb}$  is .42 which means a moderate positive relationship between gender and number of extension involvement (Female faculty members will likely have more extension involvement) while the t value is 2.58. With the decision rule of rejecting  $H_0$  (Gender is not related to number of extension involvement) if obtained t value is greater than the tabular t value. Given tabular t value of 1.717 from df 22 at .05, female faculty members have more extension involvement and is, indeed, true to all the population from which the sample is drawn.

Table 6. Computed  $M_p$  and  $M_q$  (Group Statistics)

	gender	N	Mean	SD	Std. Error Mean
number of extension involvement	male	10	6.1000	4.55705	1.44106
	female	14	3.0714	2.05555	.54937

Table 7. Computed Standard Deviation of Number of Extension Involvement Descriptive Statistics (N=24)

	Minimum	Maximum	Mean	Std. Deviation
number of extension involvement	.00	15.00	4.3333	3.58338

*2. Employment Status and Extension Involvement*

Table 8. Spearman rho value (Correlations)

		Extension Involvement	Employment status
Extension involvement	Sig. (2-tailed)	1.000	.530**
Employment status	Sig. (2-tailed)	.530**	1.000

\*\*Correlation is significant at the 0.01 level (2-tailed).

When employment status is correlated to extension involvement, Spearman rho is employed using the SPSS program. Table 8 shows the computed Spearman rho value of .530 while Table 9 shows the value of significance at .041. With the decision rule of rejecting  $H_0$  if p value is lesser than alpha at .05, the

decision is to reject  $H_0$  since p value (.041) is less than alpha value (.05). This means a substantial positive relationship between employment status and extension involvement.

Table 9. p (significance) value (Correlations)

		Extension Involvement	Employment status
Extension involvement	Pearson Correlation	1	.420*
	Sig. (2-tailed)		.041
	N	24	24
Employment status	Pearson Correlation	.420*	1
	Sig. (2-tailed)	.041	
	N	24	24

\*Correlation is significant at the 0.05 level (2-tailed).

*2. Years in Service and years in doing Extension and Extension Involvement*

Using Multiple Linear Regression (MLR) to determine the strength of relationship between the three variables (Table 10), with the regression equation of  $y = .033 + .086x + .682x$ , it is expected that number of extension involvement to increase by .086 for additional year in service. Likewise, it is also expected for extension involvement to increase by .682 for additional year in doing extension. Based on Table 11, computed R (.642) is substantial positive significance, with  $R^2$  (.41) which means that only 41% of the variance in extension involvement can be attributed to the combined effect of years in service and years in doing extension. Adjusted  $R^2$  (.356) means that only 36% of the variance is explained by years in service and years in doing extension. Still, 64% can be explained by other variables.

Tacbas, de Vera, & Romo [31] investigated the effectiveness of the extension programs of University of Northern Philippines (UNP) from 2005-2008. They revealed that extent of implementation of the Extension office programs was significantly related to administrative capability in terms of leadership, personnel and staff.

In addition, [24] found out that years in service is significantly related to the implementation of extension service programs and not significantly related to the adequacy of resources as perceived by all faculty members and extension staff who were serving the teacher education programs of the selected state technological institutions in Region VIII.

Table 10. Coefficient values of the independent variables (Coefficients<sup>a</sup>)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	0.033	1.281		0.025	0.980
	years in service	0.086	0.067	0.221	1.294	0.210
	years in doing extension	0.682	0.207	0.562	3.297	0.003

a. Dependent Variable: number of Extension involvement

Table 11. Variances (Model Summary)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.642a	0.412	0.356	2.87653	0.412	7.346	2	21	0.004

a. Predictors: (Constant), years doing extension, years in service

C. Construct of Extension

a. Nature of Extension

Garnering 3.35, university faculty members perceived that university extension is **Service**. This means that there is irregular extension. The program of extension service is seen as a limited involvement of the school, only when a need occurs, e.g. when calamities struck. Based on the typology of different kinds of university engagement activity of [32] and [33], service makes university assets and services open; encourages hard-to-reach groups to use assets; makes an intellectual contribution as “expert”; and contributes to the civic life of the region. However, [21] refuted the common notion that any community service done by the staff of a college or university is academic extension. Thus, this thinking is seriously flawed, and must be corrected.

Table 12. Nature of Extension

Nature of Extension	Weighted Mean
Ivory Tower	2.44
Non-Partisan	3.56
Service	3.00
Outreach	4.04
Engaged	3.72
<b>Average WM</b>	<b>3.35</b>

b. Purpose of Extension

Obtaining 3.84, respondents perceived that university extension is **Formative**. This means that the purpose of extension is to enhance capabilities of people to solve problems. Similarly, Guevarra &

Patella [34] asserted that effective extension activities tend to improve the standard of living of the people. Likewise, Fernan[35] argued that there is a chance to improve their quality of life once these people are empowered and technology is diffused in the community. Thus, effective extension programs aid in achieving desired social change through making people participate in utilizing fully their own resources and in solving problems relevant to changing social conditions [24].

In addition, Ponniah, [36] claimed that extension services must be judged against their proper goals, that is, extension which is not in touch with and does not significantly contribute to improving the life situation of its clientele, has lost its legitimization. Extension, therefore, is a decision-oriented discipline. It is the verbalization of the HEI’s guarantee to bring about progress and transformation in the dismal conditions of their extension stakeholders, for them to profit from the promises of fair living standards [20].

Table 13. Purpose of Extension

Purpose of Extension	Weighted Mean
Informative	3.88
Persuasive	3.80
Formative	3.88
Emancipatory	3.80
<b>Average WM</b>	<b>3.84</b>

c. Level of Engagement

With a score of 3.72, respondents agree that their university extension is already engaged as shown in Table 14. Respondents perceived that their extension



**CONCLUSION AND RECOMMENDATION**

Based on the obtained results, it is concluded that most of the respondents were female contractual faculty members who were 1-10 years in service, with 1-5 years in doing extension, having 0-5 extension involvement. Gender, employment status, years in service and years in doing extension were related to the number of extension involvement which was commonly gift-giving and coastal clean-up.

The nature of extension was service where involvement only occurs when need arises, while the purpose was formative in enhancing capabilities, yet they agreed that university extension was already engaged. In general, construct of extension was perceived as HEIs' function to help the social needs and development of the community.

It is therefore recommended for universities to be engaged, they must build up their capacity to deliver, accept, and embed community engagement within the core teaching and research activities; then, as Benneworth, et al. [33] stated "engagement would be the central of the university". University extension must be constantly monitored for success, and proactively implemented [40]; be regularly evaluated to ensure relevance and effectiveness [24]. To do away with community outreach and dole out programs, HEIs must strengthen and widen network with various governments and non-government organizations and must enhance instruction-research-extension linkage [20]. It would also be better if participatory extension be promoted to make extension programs emancipatory and sustainable. As Zamora [41] put: "It is through this manner that the academe's duty of ensuring efforts have significant impact or relevance to society's objective of alleviating poverty and equity and respond to current needs and priorities of the populace".

**REFERENCES**

- [1] Rivera, W. M. (1990). Future of Extension Worldwide. *Journal of Extension*. Volume 28, Number 3. <http://www.joe.org/joe/1990fall/fut1.html>.
- [2] Baker, H. R. (1984). A Proposal for a Canadian Study of Agricultural Transfer/Extension. Unpublished report to the Canadian Agricultural Research Council. Cited by Blackburn and Flaherty (1994) in *Extension Handbook: Processes and Practices*. Donald J. Blackburn. Editor. Toronto: Thompson Educational Publishing, Inc.
- [3] Goransson, Bo, Rasigan Maharajh and Ulrich Schmoch. (2009). New activities of universities in transfer and extension: multiple requirements and manifold solutions. *Science and Public Policy*, Vol. 36, Issue 2, pp. 157-164. DOI: 10.3152/030234209X406863
- [4] Fay, I. G. (1962). *Notes on Extension in Agriculture*. New York: Asia Publishing House.
- [5] Roling, Niels. (1990). *The Agricultural Research-technology Transfer Interface: A Knowledge Systems Perspective*. [pdf.usaid.gov/pdf\\_docs/pnabe269.pdf#page=15](http://pdf.usaid.gov/pdf_docs/pnabe269.pdf#page=15)
- [6] Kelsey, T. W. (2005). *Economic and Community Development: The Road Ahead*. *Extension Directions*. Pennsylvania Cooperative Extension Newsletter.
- [7] Schumaker, A., B. J. Reed and S. Woods. (2000). Collaborative Models for Metropolitan University Outreach: The Omaha Experience. *Cityscape: A Journal of Policy Development and Research*. Volume 5, Number 1.
- [8] Aniedi, Archibong Ijeoma and David Otu Effiom. (2011). Research Mandate of the University: An Assessment of Junior Academic Staff Participation. *Journal of Education and Sociology*, ISSN: 2078-032X, Vol. 4. No.2.
- [9] Magrath, C. P. (1999). Engagement and the twenty-first century university. *Journal of Public Service & Outreach*, Vol. 4, pp. 3-7
- [10] Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professorship*. Princeton, NJ: Carnegie Foundation for the Advancement of Teaching.
- [11] Scott, John C. (2006). The Mission of the University: Medieval to Postmodernism Transformations. *Journal of Higher Education*. Vol. 77, 1. Ohio State University Press.
- [12] Preece, Julia. (2010). Implementing the Third Mission of Universities in Africa. National University of Lesotho. A project funded by the Association of African Universities MRCI Cycle 3 Grant
- [13] Preece, J. (2011). Higher education and community service: Developing the National University of Lesotho's third mission. *Journal of Adult and Continuing Education – Vol. 17, Number 1, Spring issue*, pp. 81-97.
- [14] REPUBLIC ACT 8435. *Agriculture and Fisheries Modernization Act 1997*. p39.
- [15] Cardenas, V. R. (2005). Revitalizing the Philippine Agricultural Extension System: Proposed Pluralistic National Agricultural Extension policy and Program Framework: Los Banos: SEAMEO-SEARCA.
- [16] Velasco, L.R.I. and Zamora, O.B. (2000). Environmentally friendly technologies for the promotion of sustainable development: the role of agricultural universities and colleges in Asia. Presented in the Seminar-workshop with the same

- title organized by the International Society for Sustainable Agriculture in Asia, 27 October 2000, Continuing Education Center, College, Laguna, Philippines, and Bogor, Indonesia, November 2000.
- [17] CHED Memorandum Order No. 08 S. 2008. Guidelines for the CHED Outstanding Extension Program Award. Commission on Higher Education. DAP Bldg., San Miguel Ave., Ortigas Center, Pasig City.
- [18] CHED Memorandum Order No. 08 S. 2010. Revised Guidelines for the Outstanding Higher Education Institution (HEI) Extension Program Award. Commission on Higher Education. HEDC Bldg., Garcia Ave., UP Campus, Diliman, Quezon City.
- [19] RA 9045 (An act creating the Batangas State University by integrating Jose P. Laurel Polytechnic College in Malvar, Pablo Borbon Memorial Institute of Technology and Apolinario R. Apasible School of Fisheries in Nasugbu) [www.gov.ph/2001/03/22/republic-act-no-9045/](http://www.gov.ph/2001/03/22/republic-act-no-9045/)
- [20] Lero, Ruel, F. (2010). Deconstructing the Concept and Operationalization of Extension as a Function of Higher Education Institutions in the Philippines. Laguna: UPLB. Unpublished doctoral dissertation.
- [21] Alcala, A. C. (2011). Research and Extension in the Academe. *DumagueteMetroPost*. (downloaded on 9 Aug. 2012 from <http://dumaguetemetropost.com/research-extension-in-academe-p1185-98.htm>)
- [22] Mahlomaholo, S & T Matobako 2006. Service Learning in South Africa Held Terminally Captive by Legacies of the Past. *Alternation*, Vol.13, Number 1, pp. 203 - 217.
- [23] Chambers, Robert. (1994). The origins and practice of participatory rural appraisal. *World Development*. Vol. 22, Issue 7, pp. 953-969. DOI: 10.1016/0305-750X(94)90141-4
- [24] Quimbo, E. M. (2013). Extent of Extension Services Delivery in Tertiary State Technological Institutions of the Philippines. *IAMURE Multidisciplinary Research Journal*, Vol. 6.
- [25] Berrio, A. A. (2003). An Organizational Culture Assessment Using the Competing Values Framework: A Profile of Ohio State University Extension. <http://www.joe.org/joe/2003april/a3.php/pmc/a4.php>
- [26] Radhakrishna, R. B. & Thomson, J. S. (1996). Extension Agents' Use of Information Sources. *Journal of Extension*. Vol. 34, Number 1. <http://www.joe.org/joe/1996february/rb2.php>
- [27] Radhakrishna, R. & Martin, M. (1999). Program Evaluation and Accountability Training Needs of Extension Agents. *Journal of Extension*. 37(3), <http://www.joe.org/joe/1999june/rb1.php>
- [28] Gaffikin, F. & Morrissey, M. (2008). A new synergy for universities: Redefining academy as an “engaged institution”. *Education, Citizenship and Social Justice*, Vol. 3, No.1, pp. 97-116 DOI: 10.1177/1746197907086721
- [29] Kellogg Commission on the Future of State and Land-Grant Universities. (1999). *Returning to our Roots: The Engaged Institution. Third Report*. US: National Association of State Universities and Land-Grant Colleges. [http://extension.psu.edu/Newsletters/ExtDirections\\_Nov05.pdf](http://extension.psu.edu/Newsletters/ExtDirections_Nov05.pdf)
- [30] Prakongsri, P. (1985) *Operationalization and Expectations of Agricultural Extension as a Function of Universities in Thailand*. Laguna: UPLB. Unpublished doctoral dissertation.
- [31] Tacbas, L. B., De Vera, M. & Romo, N. C. (2003). The Effectiveness of the Extension Programs of the University of Northern Philippines SY 2005-2008. *UNP Research Journal*. Vol. 19, p.151-177.
- [32] Benneworth, P.S., Charles, D.R., Conway, C., Hodgson, C. & Humphrey, L. (2009). How the societal impact of universities can be improved both conceptually and practically. In *Sharing Research Agendas on Knowledge Systems: Final Research Proceedings*, Paris, France. <http://goo.gl/eXDSVU>
- [33] Benneworth, P.S., Charles, D.R., Conway, C., Hodgson, C. & Humphrey, L. (2013). The relationship of Community Engagement with Universities' Core Missions. In *University Engagement with Socially Excluded Communities*. Springer. pp. 85-101 [link.springer.com/chapter/10.1007/978-94-007-4875-0\\_5](http://link.springer.com/chapter/10.1007/978-94-007-4875-0_5).
- [34] Guevarra & Patella (2000). Effectiveness of the community extension program of Filamer Christian College as perceived by outreach clientele. *Research and educational training institute*.
- [35] Fernan, (2000)
- [36] Ponniah, A., Dijkman, J., Hoekstra, D. & Workneh, S. (n.d.). *Past, Present and Future of Extension*. Canadian International Development Agency.
- [37] Davidson, A.P. (2007). Participation, education, and pluralism: towards a new extension ethic. *Development in Practice*, 17: 1, 39 – 50.
- [38] Swanepoel, H. & de Beer, F. (2006). *Community development: Breaking the cycle of poverty*; Lansdowne, Juta and Company, Ltd.
- [39] Diem, K. G. (2004). *Measuring Impact of Educational Programs*. Fact Sheet. New Jersey: Rutgers Cooperative Research and Extension. NJAES.
- [40] Berrio, A. A., & Henderson, J. L. (1998). Assessing customer orientation in public, non-profit organizations: A profile of Ohio State University

Extension. *Journal of Agricultural Education*, 39(4), 11-17.

- [41] Zamora, Oscar B. (2009). Sustainable Agriculture Education and Research at the University of the Philippines Los Banos: Status, Challenges, and Needs. *Journal of Developments in Sustainable Agriculture*, Vol. 4, pp. 41-49. <https://goo.gl/VgwQRh>

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