Community Participatory Action Research Approach as an Effective Tool Towards Adoption of Corn-Based Farming System Technologies by Libona, Bukidnon Farmers

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Abstract

Community Participatory Action Research (CPAR) approach was utilized as a tool to diffuse the developed Corn-Based Farming Systems (CBFS). Limitations commonly encountered by farmers thru Participatory Rural Appraisal are low farm productivity, profitability and non-application of appropriate farm technologies identified. Consultation and planning, strategies were developed for effective integration and intervention to solve identified problems by farmers. From monocropping farming, farmers learned to shift to diversified farming like crop relay and rotation, livestock integration, Integrated Nutrient Management (INM), a high yielding variety of seeds and Integrated Pest Management (IPM). Through the application of these technology, farmers produced 40% increase on yield and 111% increase on the income of . Further, through crop relay, corn-cassava increased 245% ROI, and corn-peanut crop rotation increased 195% ROI. Since 100% farmer members and 85% non-members adopted CBFS, CPAR approach proved to be effective. The 100% repayment was an achievement, and the success was a product of strong support through input and technical assistance from DA and its collaborators. Thus, CPAR concepts demonstrated a significant impact on the social, economic, technological and environmental aspects of farming communities.

Keywords
participatory, community, technologies, adoption, sustainability

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INTRODUCTION

In the province of Bukidnon, corn is the primary commodity followed by rice and sugarcane. Still, the yields of corn, both yellow and white, were still below the expected magnitude that could cater its domestic demand. This was because corn farmers face challenges such as lack of capital and lack or no application of appropriate technologies that eventually results to low yield and reduced farmers' income which caused them to till their farms for other purposes.

For decades, agricultural technologies were developed by research to improve farmers farming systems and the focus was to obtain low-cost farming and high yield. Despite research efforts to develop technology, it was observed that most farmers were still tied with using inorganic pesticides, inappropriate application of fertilizer and mono-cropping system that produce low yield and low income. Traditional farmers' practice of monoculture system was appealing to them because of its simplicity. Moreover, this was because it was easier to practice, for it focused on one crop. But mono-cropping depletes soil nutrients and this results to the application of more fertilizers and pesticides. Aside from the alarming harmful effects of fertilizers and pesticides, the additional investments of farmers drain them due to high expenditures. These expenses bring about farmers income into a difficult state where poverty is the aftermath. Even with the researchers' efforts to mainstream these technology developments to farmers, awareness was not able to drag framers on performing agricultural technology developments on their farms.

Most probably, the previous diffusion for adoption attempts was ineffective since innovations were brought to farmers in a top-down model and the strategy used was not an effective tool to influence adoption. Moreover, the yield and income advantage of crop diversification such as crop rotation and the importance of shifting to high yield varieties technology need to be diffused to farmers. Although, farming activities depend on the specific manner that the farmers choose to pursue.

Community Participatory Action Research (CPAR) is an active engine that drives farmer to imitate the remodeled farming systems. Farmers' exposures to different trainings build character and provide skills that make them more productive. The principles of CPAR encourage farmers to experience individualized learning thru active participation and observation. Technical and farm inputs support from DA and other agencies were provided. Participation of Farmers brought them to an actual situation wherein they personally observe actual outcomes of the introduced technologies that eventually influence their decision towards the possibility of adopting the developed technology. The thoughtful policy responses encourage development and diffusion of appropriate agricultural technologies is crucial in enabling an effective technological response (Lybbert and Summer, 2010). CPAR is molded by organizing corn farmers in selected sites and brought partnerships by establishing a cooperative.

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The cooperative members will function in a participatory manner and motivate self with the sense of ownership. Thus, members act in accordance to commitment and effort towards project sustainability wherein the members themselves find ways on how they can contribute to the project's success as a result of personal involvement.

The Bureau of Agricultural Research (BAR) has funded and supported CPAR on Corn-based farming System in Libona, Bukidnon. It is a collaborative research project with the Department of Agriculture Northern Mindanao Agricultural Crop and Livestock Research Complex (NMACLRC) formerly known as NOMIARC as the implementer.

This project aimed to increase corn yield and income utilizing the introduced Corn Based Farming Systems (CBFS) technologies. It also endeavored to achieve farmers' adoption towards a sustainable agricultural production guided by the principles and influence of CPAR approach. It empowered and enhanced the capabilities of the community for agricultural production, and it established strategies that helped ensure project sustainability.

METHODOLOGY

Site and Farmer Cooperators (FC) Selection

The study was implemented in 2009 and ended five years after. However, farmers who planted corn in May of 2014 using crop diversification technology combined with all other technologies introduced reaped their harvest in March of 2015. In 2008, preliminary discussions on the project's rationale and objectives were done before its official implementation. Northern Mindanao Agricultural Crops and Livestock Complex (NMACLRC) researchers had project briefing, consultations, and coordination with the Local Chief Executives (LCE), Agricultural Extension Worker (AEW), Municipal Agriculturist Officer (MAO) and farmer leaders of Libona. The meeting agendum was regarding the selection process of the Municipality of Libona barangay sites. Another important concern discussed during the meeting was the setting of criteria on the process of site and farmer selection.

NMACLRC researchers with the help of LGU of Bukidnon agreed that Libona, Bukidnon was the best choice from among the corn-growing municipalities of Bukidnon province. It was required that the target site had at least two adjacent and homogenous barangays, had supportive LGU for financial and technical support, had existing active associations of farmers or cooperatives, must be accessible to ordinary modes of transportation, had electricity and access to mobile phone communication and a good peace and order situation. As for selecting the qualified farmer, the community members identified the qualified candidate Farmer Co-operators, and this was validated by MAO and AEWs guided by the criteria agreed. To qualify, candidate FC must be willing to cooperate in the process of project implementation, and this includes the willingness to pay the cost of inputs after harvest. They must also be willing to give a counterpart for the project of their land area and labor. Aside from that, they were expected to be willing to share their learning and share new knowledge with other farmer partners, and their area must be accessible to allow frequent visits during monitoring.

The LGU, MAO, and AEW of Libona took the lead in selecting the two barangay sites out of the fourteen barangays of Libona municipality and were in charge of selecting five qualified farmers per site. This provided a total of 10 CPAR members as FC. The active involvement and commitment of the project participants were emphasized for the project implementation to be successful. The sense of project responsibility and ownership was encouraged from each of the project participants.

Conduct of Participatory Rural Appraisal

To identify limiting factors that affect poverty and low income the corn farmers are facing on selected sites, Participatory Rural Appraisal (PRA) was conducted in 2008 before the official implementation of the project. This activity was vital to determine the landscape of selected areas, identify appropriate technology options, socio-economic status, socio-cultural aspects, and resources utilization to design a validated Barangay Development Plan (BDP). The two BDP formulated from each barangay were submitted to the Barangay Development Council (BDC) and farmer leaders for validation. Once validated, the BDP formulated was then consolidated to formulate a Community Development Plan (CDP). The CDP was again validated before the LGU executives on March 11-14, 2008. A vital development plan functions as a guide to the implementers and its collaborators as to how the project be conducted and what needs to be done to achieve a successful implementation.

Corn-Based Farming Systems (CBFS) Technologies Introduced to Farmers

The project team used training and seminar as a way to introduce CBFS technologies to farmers. From 2009 until 2014, a series of Training and seminars were gradually conducted prioritizing the most important topics. Learning the accurate knowledge about organic fertilization was one of those topics that were given priority. Hands-on training on bio-organic fertilizer and vermiculture making were also one of the first training conducted, in order to equip farmers with skills in organic fertilizer making. The farmers were trained in Integrated Nutrient Management (INM) a method wherein organic + inorganic + Bio N are combined. In relation to this, the team conducted soil analysis in April of 2009 as part of the land preparation and to identify site soil nutrient needs. Integrated Pest Management (IPM) such as the use of Trichogramma evanescens a form of parasitic wasps of Lepidoptera eggs, was also taught to farmer cooperators. Another significant technology introduced was the use of appropriate and improved high yield hybrid variety of seeds. Moreover, crop diversification system was also introduced through training. Farming systems that involve cassava relay planting were explained such as corn-cassava and corn-peanut cropping as technologies that were discovered as essential contributors to high yield.

Other activities that were included during the implementation were simple financial preparation,

bookkeeping, and farm recording. How to process value-added products like soybeans production, processing, and utilization, as well as corn wine making were included. Within the inclusive dates of implementation, NMACLRC as research implementer was always open to inviting Libona farmer cooperators to visit and observe on station during Farmers Field Days (FFD) to observe techno demonstrations.

Farmer Cooperator (FC) Field Establishment of Corn Production using CBFS Technology

To make the best of those CBFS technologies, ten farmer co-operators (five from Kinawe and five from Gango) were picked to establish corn production and apply the technological intervention in their one-hectare land. With the help of MAO and their AEWs, CBFS technologies that were introduced to Libona farmers through training and seminars were required to be followed with full assistance from NMACLRC, LGU-Libona, and other collaborators. FCs first applied corn mono-cropping with the use of high yield variety of seeds, INM and IPM technologies on their farms. The yield and income of corn were gathered and recorded by farmers themselves every harvest. The last technologies applied were the methods of crop diversification which were crop relay and crop rotation. Most farmers did the corn-cassava (crop relay) while some preferred the corn-peanut (Crop rotation). Either of the two was recommended, but most farmers' preferred the corn-cassava due to the availability of local market/processors of cassava in the area.

The significant support coming from LGU Libona, as well as farmers' compliance of requirements and assistance from NMACLRC and its collaborators, were ensured through the memorandum of agreement (MOA). The MOA stated the duties and responsibilities of all the parties concerned and ensured the smooth flow of implementation. Farmers were also required to practice farm management, farm accounting by keeping records and do simple bookkeeping for them to keep track of farm cost, yield, and income. The farmers were expected to gather their own farm data and report their updates during meetings done by AEWs from LGU weekly and Research Assistants from NMACLRC monthly.

Technical and Farm Input Assistance

To address the need of farming capital, NMACLRC distributed farm inputs such as seeds, fertilizers and corn inoculants as a form of assistance to each FC with a maximum of one-hectare allowable area to cultivate each farmer. Specifically, each farmer received 18 kilos of high yield variety corn seeds. Inorganic and organic Fertilizers, Bio-N, lime, and recommended pesticide were distributed based on the soil analysis recommendation. The input assistance was not given for free to the FCs. Instead, it was considered as a borrowed capital for upon harvest they need to pay the amount of that farm input received to the association(later became cooperative) and the committee appointed will release the collected repayments to members who were next priority members. The domino effect process will pass on and continue from one member to another.

Technical assistance was also provided to monitor and guide farmers. FCs will be visited from time to time for farmers to receive constant reminder and instructions from experts regarding the proper procedure of technology implementation. Research Assistant (RA) from NMACLRC does the site visit to gather data, bring updates and information, listen to farmers' feedbacks, and perform documentation tasks.

Integration of Livestock Production

In 2013, three years after CPAR was implemented, swine production was integrated into the system to maximize land utilization and income as well as ensure the supply of affordable meat to the family and community. NMACLRC as research implementers distributed five heads of ready to breed gilt and one boar that were improved breeds to first six farmers as their initial source for additional livestock production. The Farmers who received were required to give back two piglets to be dispersed to other members, and the procedure will continue in a rollover method. To keep farmers from spending for feeds, NMACLRC provided Madre de Agua and Rensonii for farmers and planted these for nutritive feeding.

Organization of a Cooperative

Farmer co-operators first organized themselves into a small association still guided by the Department of Agriculture (DA) and LGU Libona. The farmers appointed officers and committee to set policies and criteria in selecting priority farmers who will receive assistance. The loan committee and treasurer were assigned to facilitate the collection of loans. However, to have assistance that can access from both government and non-government aid/grants programs, either through monetary or in-kind support, the group decided to raise the organization to a higher level. Hence, a cooperative was organized. Two years after CPAR was implemented, the Gango-Kinawe (GK) CPAR Producer Cooperative was created under the Cooperative Development Authority (CDA) dated April 14, 2011.

Repayment in the form of rollover scheme was implemented to ensure sustainability. All assistance received by the farmer was not given for free. They were to pay it every harvest to the cooperative with the very low-interest rate to benefit other members. In case a farmer cannot make any payments due to unavoidable reasons, the cooperative will temporarily take over the farm for one cropping season. The cooperative will till the land, and when harvest time arrives, the net income of yield will be deducted with 500 pesos as interest and the remaining amount will be divided into two. The 50% income will go to the cooperative while the remaining 50% income will go to the farmer and the land will be returned to them.

RESULTS AND DISCUSSION

The Community Participatory Action Research CPAR) Site

Libona, Bukidnon is a first class municipality in the province with tropical rainforest climate. It is situated in the northern part and is approximately 92 kilometers from

Malaybalay, Bukidnon which is the capital city of Bukidnon Province.

Its total land area in hectares is 37,437.3175 which is the 11th largest in terms of area among the 20 municipalities and two cities of Bukidnon. The topographic characteristic of the area indicates that the municipality is potentially well suited for agriculture since 16% of the total land area is level to gently sloping that is best for intensive agricultural purposes. As for land classification, 53% of the area has been classified as alienable and disposable. Mostly, the central parts of the municipality were predominantly devoted to agricultural and commercial crops such as corn.

Barangay Gango has a total land area of 3,762 hectares and has a total population of 4,686 while Barangay Kinawe has a total of the land area of 1,983 hectares and a total population of 3,243. These two Barangays are homogenous as far as land classification and topographic characteristics are concerned, and both are major corn growing barangays of the municipality.

Participatory Rural Appraisal (PRA) Results and the Formulated Community Development Plan (CDP)

Based on the conduct of PRA, results showed problems and causes that resulted in low yield and income. Some of these constraints were financial related issues like high price and no capital to buy farm inputs while they had no access to credit for available loans and financial assistance. It was also found out during the PRA that farmers had limited or no knowledge of new farming technologies resulting in no appropriate application of technologies in their fields. They faced the inadequate source of livelihood while farm products are bought at a very low price.

Table 1 shows that Formulated Community Development Plan (CDP) worked as a guide to the research implementers on how to run the project that will cater farmers' needs. CDP was helpful enough to help the success of the project. Planned strategies were carefully followed, and researchers were able to reach out to the responsible agencies that provided their positive response to the aid requested. The presence of CDP showed that CPAR as a bottom- up approach worked by knowing the farmers' limitations and concerns first before jumping to solutions and assistance without the effort to identify whether or not strategies and approach were developed based on farmers' needs and constraints.

Trainings and Seminars

Table 2 shows the series of trainings and seminars

Table 1

Community Development Plan of Barangay Kinawe and Gango Libona, Bukidnon

PROBLEMS	STRATEGIES	RESPONSIBLE
POVERTY		
Lack of financial capital	Request for loan assistance	DA, LGU, Community
Inadeguate source of livelihood	Request for livelihood projects	DA, Community
Low wage rate	Family budgeting, Accounting skills	DA, Community
Inadequate food supply	Backyard gardening (vegetables and root crops); family budgeting	DA, Community
Absence/limited land area to cultivate	Crop Diversification and livestock integration	DA, Community
LOW FARM PRODUCTIVITY		
High cost of farm inputs	Request input assistance Request input subsidy	DA, LGU
No/lack application of appropriate farm inputs	Request for training on the utilization of existing/available resources of organic fertilizer Submit soil samples for analysis Timing of season for planting	DA, LGU, Community
Low Price of Farm Products	Price Monitoring	DA, MCO, Community
INFRASTRUCTURE		
No irrigation system Lack of solar dyer No area for the cemetery	Prepare Barangay resolution address to the Municipal Mayor through the Sangguniang Barangay for allocation of funds.	Barangay council, LGU DAR-ADB-ARCP

Note: DA Department of Agriculture
LGU Local Government Unit
DAR-ADB-ARCP Department of Agrarian Reform-Asian Development Bank-Agrarian Reform Communities Project

Table 2
Training/Seminars conducted for Community Participatory Action Research Corn-Based Project Libona, Bukidnon CY 2009- 2014

	Title of Training/Seminar	No. of days	No. of Participants	Resource Person
1.	Training on Corn Production & Management	1	30	CPAR Team, LGU
2.	Integrated Nutrient Management on corn and other crops	1	35	CPAR Team, LGU
3.	Integrated pests Management	1	35	CPAR Team, LGU
4.	Corn-Cassava relay farming system Cassava Cultural Management Practices	1	35	CPAR Team, NOMIARC expert, LGU
5.	Corn Wine Hands-on Training	1	25	CPAR Team, LGU & Wine Expert
6.	Hands-on Training on Bio-organic Fertilizer and Vermiculture making	1	25	CPAR Team, LGU
7.	Simple Financial Preparation, Bookkeeping and Farm Recording	1	25	CPAR Team, LGU
8.	Training on Soybean Production, Processing & Utilization (farmers)	1	25	CPAR Team, NOMIARC expert, LGU

Note: CPAR Community Participatory Action Research
LGU Local Government Unit
NOMIARC Northern Mindanao Integrated Agricultural Research Center

conducted that was attended by Farmer co-operators. These training provided the FCs an accurate know how about CBFS technology methods. The purpose was not only to create technology awareness, but it give lifelong learning that equipped FCs with lifelong skills and abilities essential to farming. The bio-organic fertilizer and vermiculture making hands-on training showed relevant for FCs were able to produce their own vermicompost that was useful to FCs farm.

All trainings and seminars conducted were helpful and useful to the FCs not only within the project implementation but its relevance showed to extend as long as it is needed on the field. Livelihood training such as corn winemaking and processing of soybean products that teaches how to convert raw materials to valuable products gave way to FCs additional income.

Furthermore, the simple farm accounting skills learned was an effective way to get the active involvement of farmers to the project for they were able to feel the sense of ownership as well as cultivate the sense of project responsibility. FCs were able to record all their financial transactions personally and these financial reports were submitted to either the farmer-leaders or project officers who were tasked to present the project accomplishments with considerations of the comments and suggestions from the evaluators. Thus, the exposure of the FCs to various training and other related activities taught them speaking skills. Farming training is an important tool widely utilized by development programs in developing countries.

Study on the effects of training and facilitation of farmers on livestock development revealed that in some ways training and facilitation are of advantage to the farmers, but sometimes other factors such as the farmers' resources are limiting to the farmers progress (Ampaire & Rothschild, 2015).

CPAR also conducted a postseason forum, congress, review and planning workshop that evaluated, reviewed and gathered feedback that aided in the plans for improvement. Either farmer leaders or project officers were tasked to present the project accomplishment with considerations of the comments and suggestions from the evaluators. Thus, it boosted their self –confidence that gave a good decision-making skills and benefited their organization to be more successful and productive.

The contribution of new technologies to economic growth can only be realized, if and when these are widely diffused and used. Diffusion itself results from a series of individual decisions. It begins with decisions which often result in a comparison of the uncertain benefits of new inventions with the uncertain cost of their adoption (Hall & Khan, 2002).

Corn-Based Farming Systems (CBFS) Technology Productivity and Profitability

Significant findings were noted by the FCs in terms of productivity and profitability. Farmers were able to observe that CBFS practice cost lower. Table 3 illustrates the soil analysis result that barangay Kinawe site contains 5.31 pH while barangay Gango has 5.16 pH. Identifying the soil nutrient needs was an effective way to avoid unnecessary fertilization which was the usual mistake done by farmers that caused overspending. Knowing what and how to apply is essential to achieve low-cost farming. Avoiding pure inorganic fertilizer prevented soil depletion and resulted to in healthier soil. The table shows INM application enhanced corn growth and gave better yield.

The IPM skill of FCs was an advantage for it gave them the ability to identify appropriate pest control and the reduced application of chemical pesticides eventually reduced pest control cost. Corn monocropping practice with CBFS technology applied such as INM, IPM, and the use of high yield varieties resulted in higher yield and better income brought by low-cost farming compared to farmers practice. Economic analysis showed that the average increase in yield for five years was 40% and income increase or its ROI was 111%.

Moreover, the application of Crop diversification together with INM, IPM and use of high yield varieties showed yield advantage than corn monocropping. Table 5 shows that planting corn and cassava (Corn+Cassava) gained an average ROI of 245.08% while planting peanut after corn gained ROI of 195.45%. Because of this, almost all members practiced crop diversification such as planting corn+cassava and corn-peanut. The corn+cassava crop relay was the most preferred systems by FCs mainly due to the availability of local market processors of cassava in the area. Other members continuously planted peanut after corn during the dry season.

Technical and Farm Input Assistance

It showed that providing farm input assistance

Table 3
Initial Soil analysis of Community Participatory Action Research Corn-Based Project Sites

Site	Soil pH	
Barangay	Before	After
Kinawe	5.31	5.83
Gango	5.16	5.60

Table 4
Economic Analysis of Corn Monocropping using Integrated Pest Management , Integrated Nutrient Management , and High Yielding Variety of Corn

PARTICULARS	YEARLY CROPPING					
	2010	2011	2012	2013	2014	AVERAGE
Baseline data on yield (t/ha)	8.88	8.89	8.88	8.88	8.88	8.88
Ave grain yield (t/ha)	12.49	11.95	12.37	12.75	12.62	12.44
Cost per kg	12.05	11.72	12.08	12.1	13.71	12.33
Gross Income (PhP)	150504.50	140054.00	149428.60	154275.00	173020.20	153456.66
Cost of Production (PhP)/ha	71520	68118	73264.5	74629.23	7578.5	72663.25
Net Income (PhP)/ha	78984.5	71936	76165.1	79645.77	97235.7	8079.41
ROI (%)	110.44	105.6	103.96	106.72	128.31	111
Yield advantage over farmers' practice (%)	40.65	34.42	39.3	43.58	42.12	40

Table 5
Economic Analysis Corn Diversification Corn-Cassava and Corn–Peanut CY 2014-2015

PARTICULARS	FARMING SYSTEMS			
	Corn-Cassava (PhP/hectare)		Corn-Peanut (PhP/hectare)	
	Corn	Cassava	Corn	Peanut
Actual grain yield (kg/ha)	4,820	11,019	6,500	915
Price/Kilo (PhP)	13.8	7.6	13.8	50
Gross Income (PhP)	66,516.00	83,744.40	89,700.00	45,750.00
Production Cost (PhP)	39,886.00	16,000.00	39,886.00	12,500.00
Net Income (PhP)	26,630.00	7,744.40	49,814.00	33,250.00
ROI %	66.77	423.4	124.89	266
Average ROI %	245.08		195.45	

helped farmers overcome financial constraints. Immediate and future problems related to crop production expenses were managed. As a result, farmers were able to focus on taking care of their farms without any distraction brought by financial worries in the presence of farm problems like disease and pest infestation. The giving of farm inputs was not to tolerate some farmers' behavioral problems such as laziness but to help them develop good character. The requirement to pay assisted inputs made farmers establish a sense of responsibility. It helped them realize the value of receiving and understand the importance of payments to avail the same benefits in their times of need.

Moreover, technical assistance contributed essentially to the project's success. The technical consultation and monitoring provided updates on new technologies. Farmers trusted technicians' opinions and were all willing to listen to suggestions provided to them.

Swine Dispersal

Swine dispersed produced a total of eight piglets and were also distributed to eight members who were not yet able to benefit. This livestock integration provided farmers additional income while waiting for harvest. Furthermore, swine raising was not an additional cost for FCs since swine were only fed with formulated feeds from cassava and corn stocks from the previous harvest and gave stem and leaf cuttings of Madre de Agua and Rensonii which are both good protein supplement for ruminants.

The GK CPAR MPC

Membership increased from 10 to 35 active members. The money received from their payment was further revolved among members with interest. One of the approved cooperative's policies was to minimize the acceptance of new members. Hence, all members were able to avail of the production loan from the project. As of December 31, 2015, the total seed money and interest income of the CPAR Coop had reached to PhP229, 990.00 from the initial seed money of PhP of 179,990 (CY 2010-2015), with an increment of 28%.

The manner of accepting new members of the GK CPAR cooperative supports the case studies of IFAD on sustainability. This project did not rush to create quick outputs but promoted engagements in a slow and patient process of group formation, as well as, to gain trust and encourage participants at the community level. Although this approach meant only minimal tangible progress during the early years, it has lead to a group of people with high potential for sustainability (Tango International, 2009).

It had an exceptional record as a cooperative. Gango-Kinawe (GK) CPAR producers cooperative was highly empowered and self-reliant that they were flooded with various support from LGUs and GAs through financial and technical assistance, farm facilities and equipment and farm inputs. The total assistance was worth 7 million pesos. All these support truly facilitated in the different farming activities that reduced yield loses during harvesting, improved the quality of harvested products and it helped enhance the financial capacity of the cooperative. Officers and members were committed and understood the concept of CPAR.

In practice, empowerment and participation are closely linked (Oakley, 2011). The UNDP Report (1995) claimed that empowerment does not only mean promoting

Table 6
Inventory of Swine Dispersal and its Offspring CY 2013-2014

	NUMBER OF SWINE DISPERSAL		
RECIPIENTS	1st Dispersal	Payment	2nd Dispersal
1	1	2	
2	1	2	
3	1*		
4	1	2	
5	1	2	
6	1**		
7			1
8			1
9			1
10			1
11			1
12			1
13			1
14			1
TOTAL	6	8	8

* Not productive

** Boar

Table 7
Farm Machinery and Equipment availed with GK CPAR Cooperative from Different Government Organization and Local Government Unit CY 2014-2016

Supporting Agency	Description	Quantity	Amount PhP	Form of
LGU-Libona	Tractor & Accessories (2015)	1 unit	2M	Paid by Cooperative (15% equity)
DA RFO-10	Tractor and Accessories (2015)	1 unit	2M	Paid by Cooperative (15% equity)
LGU-DOLE	Corn production	33 hectares	1M	Grant
LGU-Libona	Cassava Chopper	1 unit	120K	LGU-Libona
LGU-Libona DA RFO-10	Organic swine production	Gilts and Boar	30	Grant
DA RFO-10	Hammer Mill	1 unit	100K	Grant
DTI	Cassava Chopper	1 unit	45K	Grant
NFA	Tie-up with NFA			
DA RFO-10	Solar Dryer	2 units	240K	Paid by LGU (Equity)
DA RFO-10	Flatbed Dryer	2 units	1.24M	Paid by LGU (Equity)

participation and capacity building. Its most significant context is to provide access to essential economic resources and to improve people's opportunities for better income.

Repayment Success

A cooperative policy which was to take over members' farm in case of failure to make any payments resulted to a 100% repayment rate. The repayment showed that the CPAR COOP is unique and has effective strategies and policies in disbursing and collecting loan payments.

The empirical model of Paxton (1996) explained that homogenous groups with good leadership training and prior history of working groups have a higher probability of repaying loans. However, the domino effect and matching probability were significant factors that influenced loan default, creating a destabilizing effect. This empirical model suggests that modification of project designs could enhance recovery.

Technology Adoption

The GK CPAR Production Cooperative had positively responded to the technologies introduced. The integrated nutrient management (INM), i.e. a combination of organic and inorganic fertilizers was highly appreciated by the farmers. This was based on the initial results on crop yields and the reduction in the use of inorganic fertilizers in favor of organic fertilizers.

To date, this technology had been adopted by most farmers in three communities. The increased 35 FC members at present from the initial count of 10 chose to continue their membership and adopted the CBFS technology introduced. Members' adoption of technology was monitored through the cooperative since farmers application of technology introduced was the cooperatives top membership policy. Thus, there is a 100% technology adoption on CPAR farmer co-operators.

There were 137 corn farmers from Barangay Kiliog of Libona located adjacent to Kinawe and Gango who adopted the technology practiced by Gango and Kinawe CPAR FCs. There were also 261 non CPAR members from Kinawe and 204 non CPAR members from Gango who adopted the technology introduced. Out of the 708 non CPAR members from the three barangays (Kinawe, Gango

Table 8
Total Seed Money and Repayment Rate on CPAR Corn-Based Project CY 2010-2014

Particulars	Year/Cropping Season											
	2010		2011		2012		2013		2014		January 2015	
	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Total	Increment
No. of FPs served	10	10	10	10	10	10	10	10	10	10	30	
Seed Money (PhP)	179,990	184,990	189,990	194,990	199,990	204,990	209,990	214,990	219,990	224,990	224,990	25%
Repayment (PhP)	179,990	184,990	189,990	194,990	199,990	204,990	209,990	214,990	219,990	224,990	224,990	
% repayment	100	100	100	100	100	100	100	100	100	100		

and Kili-og), 602 or 80% of non CPAR members adopted the technology and eventually increased to 85% by 2015. As long as farmers continue to adopt the suggested and more appropriate technologies and apply these to their farms, the economic and environmental benefits are to be expected (Catacutan et al., 2004). The active involvement and commitment of the officers and members were significant.

CONCLUSIONS

From the previous practice, mono-cropping system, farmers learned to shift using diversified cropping systems, livestock integration, and value-adding technologies through the intervention of CPAR technologies. The adoption of integrated corn-based farming systems resulted in improved productivity (40%) and profitability (111%). The concepts of CPAR demonstrated a significant impact on the social, economic, technological and environmental aspects of farming communities. This also enhanced awareness on sustainable farming practices and climate change associated risks, provided more opportunities to sustain a productive and profitable farming enterprise. Since the project was sustained, it created a direct testimony on the feasibility of technology interventions resulting in 100% adoption among its members and 80% to 85% of adoption among the neighbouring farm areas.

The institutionalization of CPAR key elements, with the community's commitment and action, combined with innovations and suitable technologies through time served as proof of Suitable developmental interventions importance. Furthermore, farmers' involvement and participation in the CPAR project improved their income and uplifted their livelihood. Such progress turned their lives around that made them potential assets to the community.

RECOMMENDATION

This community project exhibited slow group formation but nonetheless, showed progress through time. Thus, this encouraged farmers to generate more ideas that could increase productivity and profitability. The value- adding interventions provided an opportunity to community members to be more productive. They could become entrepreneurs of their own demand-driven products of interest that could augment their family income. Poverty in the rural areas or countryside can be easily addressed and worked out if farming communities are equipped with accurate skills and dedication to achieve agricultural productivity, profitability, and sustainability.

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Research Article

The Law of Attraction: Positive Thinking and Level of Gratitude towards Happiness

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Abstract

Persons with positive thoughts and grateful minds create a happy disposition which further contributes to creating an emotionally and mentally healthy society. This study aims to establish the philosophy of the Law of Attraction which harnesses positive thinking and gratitude towards happiness and determine the level of gratitude and happiness of the experimental and control groups before and after the introduction of the Law of Attraction's 28 practical steps. This research is qualitative-quantitative quasi-experimental. There were two groups in this study – the experimental group and control group with 34 participants each. The experimental group underwent the 29-day lecture-training about the Law of Attraction's 28 practices. Findings revealed that during the pretest, the experimental group had a lower level of gratitude and happiness compared with the control group. During the three posttests, the experimental group consistently manifested a robustly higher level of gratitude and happiness compared with the control group. The significantly high level of happiness of the experimental group in three posttests may be attributed to its high level of gratitude. The high level of gratitude of the experimental group may be attributed to the lecture-training on the Law of Attraction's 28 practices to harness positive thinking and gratitude towards happiness.

Keywords
law of attraction, positive thinking, gratitude, happiness, social sciences

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INTRODUCTION

Everything in the world is governed by law, including the mind and thought. As Haanel succinctly puts it: "Thought is governed by law. The reason people have not manifested more faith is that lack of understanding. People have not understood that everything works in exact accordance with definite law. The law of thought is as definite as the law of mathematics, or the law of electricity, or the law of gravitation. When people begin to understand that happiness, health, success, prosperity and every other condition or environment are results and that these results are created by thinking, either consciously or unconsciously, they shall realize the importance of a working knowledge of the laws governing thought" (Haanel, 1922, p.17). How and what one thinks, therefore, have a direct link to the kind of life that he/she creates. One's thoughts shape the condition and environment that he/she experiences.

A study which dwells on a particular way of thinking that leads to happiness is expected to have a high carryover value since every person, after all, desires to be happy. On the whole, "thought is the energy which the law of attraction is brought into operation, which eventually manifests in abundance" (Haanel, 1912, p. 106; Haanel, 1922, p. 20). The researcher in this present study, therefore, sees great importance in bringing to the fore this phenomenal and universal claim on the creative power of thought which is also known as the law of attraction.

Gratitude, on the other hand, is the process of bringing more of what you want into your life; if you are grateful you will be given more, and you will have an abundance (Byrne, 2012). Innumerable studies about gratitude have already been conducted in other countries and these studies have found the relationship between gratitude and happiness (Froh et al., 2008; Sheldon & Lyubomirsky, 2006; Walker & Pitts, 1998 (as cited in Emmons & McCullough, 2003); Overwalle et al., 1995 (as cited in Emmons & McCullough, 2003); McCullough et al., 2001; Emmons & McCullough, 2003; Nelson & Lyubomirsky, in press; Elosua, 2015; Chen et al., 2015; Adler & Fagley, 2005; Watkins et al., 2008; Chan 2010; Wood et al., 2009; Emmons & Crumpler, 2000; Emmons & Shelton, 2002; Wood et al., 2010; Chan, 2013a; Chan, 2013b; and Marti et al., 2010).

This study attempts to contribute to the growing interest of humanity to explore definitive and scientific ways to harness positive thinking and gratitude and their relation to happiness. The gap of knowledge that the researcher in this study wants to fill in is regarding the claim of McCreaddie et al. (2010) who cited from the work of Wilkinson and Kitzinger (2000) that 'positive thinking' is a relatively ambiguous concept, that is, it may hold multiple meanings depending upon the participants' experiences and context.

This present study attempts to establish the philosophical foundation of the law of attraction. Further, this study seeks to: determine the level of gratitude and happiness of the participants (experimental group and control group) before the training about the Law of Attraction's 28 practical steps to harness positive

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thinking and gratitude; determine the level of gratitude and happiness of the participants (experimental group and control group) after the training about the Law of Attraction's 28 steps in three time periods (immediately after, one month after, two months after the training); and investigate whether or not there is a significant difference in the level of gratitude and happiness between the experimental group and control group during the pre-test and three post-tests.

METHODOLOGY

This qualitative-quantitative quasi-experimental research utilizes the descriptive-comparative design. The experimental group and control group comprise the two groups in this study. The control group continued to attend to its individual lives without receiving any inputs about the 28 practices of the Law of Attraction. The experimental group, on the other hand, underwent a lecture-training about the 28 practices for 29 consecutive days (1 to 2 hours per day). The lecture-training was about how to harness positive thinking and gratitude as ways to achieve happiness. There were activities that the participants were required to accomplish every day (e.g., writing journals, reciting affirmations, among others).

There were pre-test and post-tests to measure the participant-respondents' level of gratitude and happiness. There is no random selection of participants in this study since only those who volunteered and showed commitment to participate in the 29-day training (August 3 to 31, 2015 including Saturdays, Sundays, and Holidays) were considered. There were three sets of post-test: 1) immediately after the training, 2) 1 month after the training, and 3) 2 months after the training.

The participants were the 68 faculty members from a university – 34 members for each group. They manifested their voluntary participation in the study (either as part of the experimental or control group) through informed consent. Their privacy and anonymity were ensured, and they may withdraw at any stage of the study.

The levels of gratitude and happiness were measured by these questionnaires: Gratitude Questionnaire (researcher-made with 0.92 coefficient reliability), and Oxford Happiness Questionnaire or OHQ by Hills and Argyle (2002), respectively.

Majority of the experimental group participants were female (64.71%), single (67.65%), bachelor's degree holder (91.18%), had taught for less than two school years (82.35%), Guest Instructors (91.18%), and earning P10,001 to 15,000 per month (67.65%). The age of the experimental group participants ranged from 20 to 39-year-old. Majority of the control group respondents were also female (55.88%), married (61.76%), bachelor's degree holder (58.82%), had taught for two school years and one month to 10 school years (38.24%), Guest Instructors (52.94%), and earning P20,001 – 25,000. The age of the control group participants ranged from 40 to 64-year-old.

This study was conducted from July 31, 2015 (pre-test) to November 31, 2015 (post-test 3).

In analyzing the data gathered, the following statistical tools were used: percentage, weighted mean, analysis of variance, and t-test. The percentage was used in presenting the data about the respondents' demographic profile as well as of their level of gratitude and happiness in a tabular format. Weighted mean was utilized in determining the extent of the respondents' gratitude and happiness. Analysis of variance or ANOVA was also used to address the question on whether or not a significant difference exists between the level of gratitude and happiness of the experimental and control groups during the pretest and three posttests. Lastly, a t-test was employed as a follow test to ascertain which two of the three posttests of the experimental group in the happiness test significantly differ.

RESULTS AND DISCUSSION

Philosophy of the Law of Attraction

Haanel succinctly states that "when we begin to understand that happiness, health, success, prosperity and every other condition and environment are results and that these results are created by thinking, either consciously or unconsciously, we shall realize the importance of a working knowledge of the laws governing thought (Haanel, 1922, p.17). These laws "direct our thought consciously, systematically and constructively; when we do this, we place our mind in harmony with the Universal Mind, we come in tune with the Infinite, we set in operation the mightiest force in existence, the creative power of the Universal Mind. This, like everything else, is governed by natural law, and this law is the 'Law of Attraction,' which is that Mind is creative, and will automatically correlate with its object and bring it into manifestation" (Haanel, 1912, p. 12).

As Byrne would put it: "everything that's coming into your life, you are attracting into your life. And it's attracted to you by the images you're holding in your mind. It's what you're thinking. Whatever is going on in your mind, you are attracting to you (2006, p. 4). "... it is through the operation of this law (Law of Attraction) that each of us is attracting to ourselves the associates, experiences, circumstances, conditions, and environment by which we are related to the objects and purposes which we seek" (Haanel, 1927, p. 145). The Law of Attraction, therefore is obedient to the thought that you are holding in your mind, whether it is pleasant or not, whether you are conscious of it or not.

"The human race has been broadcasting and receiving, perhaps millions of years without knowing, but suffering all the while from bad thoughts sent" (Haanel, 1927, p. 31) so much so that "if we think distress, we get distressed; if we think success, we get success" (Haanel, 1922, p. 13). From this, we begin to realize that the future of the human race depends on the thoughts that we entertain or hold in our minds.

On Visualization or Imagination

The Law of Attraction views visualization or imagination and gratitude as two powerful processes. This

law is anchored on the belief that "the attitude of mind necessarily depends upon what we think. Therefore, the secret of all power, all achievement, and all possession depend upon our method of thinking (Haanel, 1912, p. 1). Further, Haanel claims that "you are a visualizing entity. Imagination is your workshop. It is here that your ideal is to be visualized" (Haanel, 1912, p. 115).

According to Genevieve Behrend, "everyone visualizes whether he knows it or not. Visualizing is the great secret of success" (as cited in Byrne, 2006, p. 86). "Imagination is the process of imagining these things in or on your mind, and this process is nature's method of creation" (Haanel, 1927, p. 148). "Visualization is the process of making mental images, and the image is the mold or model which will serve as a pattern from which your future will emerge" (Haanel, 1912, p. 37). Such a process, therefore, is ineluctably linked with the individual's life, future, and success. The more the mind visualizes the things that it wants to be, do and have, the more it attracts such things, thus leading to one's happiness.

More specifically, visualization or imagination should be one which is constructive. "Constructive imagination means mental labor, by some considered to be the hardest kind of labor, but, if so, it yields the greatest returns, for all the great things in life have come to men and women who had the capacity to think, to imagine, and to make their dreams come true" (Haanel, 1912, p. 45). What manifests as a product of constructive visualization or imagination is simply the exact equivalent of how a dream is specifically visualized in or on the mind.

On Gratitude

Concerning gratitude, Dr. John Demartini strongly believes that "whatever we think about and thank about we bring about" (as cited in Byrne, 2006, p. 75). This is further supported by Wallace Wattles who claims that "the daily practice of gratitude is one of the conduits by which your wealth will come to you" (as cited in Byrne, 2006, p.78). Albert Einstein knew a great deal of The Secret (Law of Attraction), and "he said 'Thank you' hundred times each day. He thanked all the great scientists who preceded him for their contributions, which enabled him to learn and achieve even more in his work, and eventually become one of the greatest scientists who has ever lived" (Byrne, 2006, pp.79-80).

The following passage comes from the Gospel of Matthew in the Holy Scriptures, and it has mysti fied, confused, and been misunderstood by many people over the centuries. "Whoever has will be given more, and he will have an abundance. Whoever does not have, even what he has will be taken from him" (as cited in Byrne, 2012, p. 5). The answer to the mystery that has eluded so many for centuries is in one hidden word: gratitude. "Whoever has gratitude will be given more, and he will have an abundance. Whoever does not have gratitude, even what he has will be taken from him" (as cited in Byrne, 2012, p. 6). In other words, gratitude multiplies what one has, just as ingratitude takes away what one has.

The Law of Attraction, therefore, is the "science which embraces all sciences. It is the art which, above all arts, is relevant to human life. In the mastery of this science and this art, there is an opportunity for unending progression. Perfection in this is not acquired in six days, nor in six weeks, nor in six months. It is the labor of life. Not to go forward is to go backward" (Haanel, 1912, p. 132).

Byrne aptly concluded that book by declaring that "the nations who will lead the world in the future are the ones whose leaders and people are the most grateful. The gratitude of a nation's people would cause their country to thrive and become rich, would cause illness and disease to drastically drop, business and production to escalate, and happiness and peace to sweep the nation" (2012, p. 252).

Level of Gratitude and Happiness of the Participants before the Training about the Law of Attraction's 28 Practical Steps

Table 1 *Distribution of Participants Regarding their Level of Gratitude (pretest)*

Range	Experimental	Control
	Pretest (%)	Pretest (%)
5.150-6.000	0 (0.00)	1 (2.94)
4.320-5.149	9 (26.47)	22 (64.71)
3.490-4.319	13 (38.24)	8 (23.53)
2.660-3.489	9 (26.46)	3 (8.82)
1.830-2.659	3 (8.82)	0 (0.00)
1.000-1.829	0 (0.00)	0 (0.00)
Mean	3.757	4.395
	(Slightly Agree)	*(Moderately Agree)*
	Somewhat grateful	Rather grateful

Legend:

Numerical Rating	Verbal Description	Equivalent Level of Gratitude
5.150 – 6.000	Strongly Agree	Very grateful
4.320 – 5.149	Moderately Agree	Rather grateful
3.490 – 4.319	Slightly Agree	Somewhat grateful
2.660 – 3.489	Slightly Disagree	Somewhat ungrateful
1.830 – 2.659	Moderately Disagree	Rather ungrateful
1.000 – 1.829	Strongly Disagree	Not grateful

Before the introduction of the Law of Attraction's 28 practices steps to harness positive thinking and gratitude towards happiness, the experimental group has a lower level of gratitude (mean=3.757 or slightly agree/ somewhat grateful) compared with the control group (mean=4.395 or moderately agree/rather grateful). Since the experimental group has a lower level of gratitude compared with the control group, the researcher observed this as a great opportunity to engage the experimental group in an intervention that aims to increase their level of gratitude because the experimental group needs the said intervention more than the control group.

Before the introduction of the Law of Attraction's 28 practices steps to harness positive thinking and gratitude towards happiness, the experimental group has a lower level of happiness (*mean=4.089* or *slightly agree/somewhat happy*) compared with the control group (*mean=4.413* or *moderately agree/rather happy*).

Since the experimental group has a lower level of happiness compared with the control group, the researcher observed this as a great opportunity to engage the experimental group in an intervention that aims to increase their level of happiness because the experimental group needs the said intervention more than the control group.

Table 2
Distribution of Participants Regarding their Level of Happiness (pretest)

Range	Experimental	Control
	Pretest (%)	Pretest (%)
5.150-6.000	0 (0.00)	2 (5.88)
4.320-5.149	12 (35.29)	17 (50.00)
3.490-4.319	17 (50.00)	15 (44.12)
2.660-3.489	5 (14.71)	0 (0.00)
1.830-2.659	0 (0.00)	0 (0.00)
1.000-1.829	0 (0.00)	0 (0.00)
Mean	***4.089*** *(Slightly Agree)* ***Somewhat happy***	***4.413*** *(Moderately Agree)* ***Rather happy***

Legend:

Numerical Rating	Verbal Description	Equivalent Level of Happiness
5.150 – 6.000	Strongly Agree	Very happy
4.320 – 5.149	Moderately Agree	Rather happy
3.490 – 4.319	Slightly Agree	Somewhat happy
2.660 – 3.489	Slightly Disagree	Somewhat happy
1.830 – 2.659	Moderately Disagree	Rather happy
1.000 – 1.829	Strongly Disagree	Not happy

Level of Gratitude and Happiness of the Participants after the Training about the Law of Attraction's 28 Practical Steps

Table 3
Distribution of Participants Regarding their Level of Gratitude (posttests)

RANGE	EXPERIMENTAL			CONTROL		
	Posttest 1 (%)	Posttest 2 (%)	Posttest 3 (%)	Posttest 1 (%)	Posttest 2 (%)	Posttest 3 (%)
5.150-6.000	29 (85.29)	28 (82.35)	27 (79.41)	4 (11.76)	0 (0.00)	5 (14.71)
4.320-5.149	4 (11.76)	6 (17.65)	7 (20.59)	19 (55.88)	4 (11.76)	13 (38.24)
3.490-4.319	1(2.94)	0(0.00)	0(0.00)	8(23.53)	26(76.47)	4(11.76)
2.660-3.489	0(0.00)	0(0.00)	0(0.00)	3(8.82)	4(11.76)	7(20.59)
1.830-2.659	0(0.00)	0(0.00)	0(0.00)	0(0.00)	0(0.00)	5(14.71
1.000-1.829	0(0.00)	0(0.00)	0(0.00)	0(0.00)	0(0.00)	0(0.00)
	5.556	5.494	5.556	4.539	4.238	4.050
Mean	Strongly Agree	Strongly Agree	Strongly Agree	Moderately Agree	Slightly Agree	Slightly Agree
	Very grateful	Very grateful	Very grateful	Rather grateful	Somewhat grateful	Somewhat grateful

Legend: Please refer to Table 1.

Based on the result of the pretest where the experimental group and control group got a mean of *3.757* (or *somewhat grateful*) and *4.395* (or *rather grateful*), respectively, the experimental group showed an increased level of gratitude than the control group. This increase in the level of gratitude can be attributed to the intervention given to the experimental group, that is, the 29-day lecture-training on positive thinking and gratitude which introduced the 28 practical steps to harness positive thinking and gratitude to the participants.

On the level of gratitude of the experimental group, the mean for posttest 2 (*5.494*) is lower than that of posttest 1 (*5.556*); the mean for posttest 3 (*5.556*) is higher than that of posttest 2 (*5.494*). Comparing the three posttests, posttest 3 has the highest mean. This implies that the experimental group was able to sustain their level of gratitude in two months' period.

On the other hand, the mean for posttest 2 (*4.238*) of the control group on the level of gratitude is lower than that of posttest 1 (*4.539*); the mean for posttest 3 (*4.050*) is lower than that of posttest 2 (*4.238*). Comparing the three posttests, posttest 1 has the highest mean and posttest 3 has the lowest mean. The result implies that the control group was not able to sustain their level of gratitude in two months' period since there is a decreasing pattern on the level of gratitude of the said group.

The result in this study lends support to the contention that gratitude produced the most purely joyful moments that have been known to man (Chesterton, 1924 as cited in Emmons & McCullough, 2003) and the research of Walker & Pitts (1998) (as cited in Emmons & McCullough, 2003) which showed that gratitude is a pleasant state and is linked with positive emotions including contentment. Gratitude is also linked with happiness, pride, and hope (Overwalle et al., 1995 as cited in Emmons & McCullough, 2003).

Table 4
Distribution of Participants Regarding their Level of Happiness (posttests)

RANGE	EXPERIMENTAL			CONTROL		
	Posttest 1 (%)	Posttest 2 (%)	Posttest 3 (%)	Posttest 1 (%)	Posttest 2 (%)	Posttest 3 (%)
5.150-6.000	23 (67.65)	32 (94.12)	33 (97.06)	2 (5.88)	3 (8.82)	2 (5.88)
4.320-5.149	9 (26.47)	2 (5.88)	1 (2.94)	16 (47.06)	14 (41.18)	13 (38.24)
3.490-4.319	2 (5.88)	0 (0.00)	0 (0.00)	14 (41.18)	16 (47.06)	11 (32.35)
2.660-3.489	0 (0.00)	0 (0.00)	0 (0.00)	2 (5.88)	1 (2.94)	8 (23.53)
1.830-2.659	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
1.000-1.829	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Mean	5.324 (Strongly Agree) *Very happy*	5.567 (Strongly Agree) *Very happy*	5.688 (Strongly Agree) *Very happy*	4.331 (Moderately Agree) *Rather happy*	4.405 (Moderately Agree) *Rather happy*	4.148 (Slightly Agree) *Somewhat happy*

Legend: Please refer to Table 2.

Based on the result of the pretest where the experimental group and control group got a mean of 4.087 (or somewhat happy) and 4.413 (or rather happy), respectively, the experimental group showed an increased level of happiness than the control group. This increase in the level of happiness can be attributed to the intervention given to the experimental group, that is, the 29-day lecture-training on positive thinking and gratitude which introduced the 28 practical steps to harness positive thinking and gratitude towards happiness.

On the level of happiness of the experimental group, the mean for posttest 2 (5.567) is higher than that of posttest 1 (5.324); the mean for posttest 3 (5.688) is still higher than that of posttest 2 (5.567). Comparing the three posttests, posttest 3 has the highest mean and posttest 1 has the lowest mean. This implies that the experimental group was able to sustain their level of happiness in two months' period as they practice the 28 steps to harness positive thinking and gratitude towards happiness.

On the other hand, the mean for posttest 2 (*4.405*) of the control group on the level of happiness is higher than that of posttest 1 (*4.331*); but the mean for posttest 3 (*4.148*) is lower than that of posttest 2 (*4.405*). Comparing the three posttests, posttest 3 has the lowest mean, and posttest 2 has the highest mean. This implies that the control group was not able to sustain their level of happiness over two months since there is a seeming decrease in the level of happiness of the said group.

Further, the increased level of happiness as attributed to the positive thinking and gratitude intervention is consistent with the findings of Catalino et al. (2014) and Marti et al. (2010) who concluded that people who regularly seek out positivity as they arrange their everyday lives might be happier.

From posttest 1 to posttest 3 of the experimental group, it is shown that the group has a significantly high level of happiness (with a *mean* of *5.324* in PT1, *5.567* in PT2, and *5.688* in PT3 which are all translated as *very*

Test of Difference in the Level of Gratitude and Happiness between Experimental Group and Control Group during the Pretest and Posttests (PT1, PT2, and PT3)

Table 5
Test of Difference between the Experimental and Control groups' Level of Gratitude and Happiness during the Pretest and Posttests

Variables	Mean		SD^2		df	T	P	Remarks
	Exp.	Con.	Exp.	Con.				
Gratitude Test								
Pretest Ratings	3.757	4.395	0.573	0.387	66	-3.793	0.000	Significant
Posttest 1 Ratings	5.556	4.539	0.213	0.417	66	7.473	0.32613E-10	Significant
Posttest 2 Ratings	5.494	4.238	0.208	0.948	66	6.806	8.77E-25	Significant
Posttest 3 Ratings	5.556	4.050	0.228	1.163	66	7.440	2.66E-10	Significant
Happiness Test								
Pretest Ratings	4.087	4.413	0.322	0.184	66	-2.668	0.009	Significant
Posttest 1 Ratings	5.324	4.331	0.171	0.234	66	9.088	3.03444E-13	Significant
Posttest 2 Ratings	5.567	4.405	0.110	0.283	66	10.812	2.99811E-16	Significant
Posttest 3 Ratings	5.688	4.148	0.054	0.518	66	11.873	4.91941E-18	Significant

happy). This is consistent with the following findings of other researchers: (1) over 90% of American teens and adults indicated that expressing gratitude helped them to feel "extremely happy" or "somewhat happy" (Gallup, 1998 as cited in Emmons & Shelton, 2002); (2) as cited in Emmons & Shelton (2002), gratitude is a pleasant state and is linked with positive emotions, including contentment (Walker & Pitts, 1998), happiness, pride, and hope (Overwalle, Mervielde, & De Schuyter, 1995); (3) grateful responses to life can lead to peace of mind, happiness, physical health, and deeper, more satisfying personal relationships (Emmons & Shelton, 2002); (4) people who engaged in positive intentional activities, such as thinking gratefully, optimistically, or mindfully, became significantly happier (Sin & Lyubomirsky, 2009 as cited in Lyubomirsky & Layous, 2013); (5) grateful people tend to be higher in well-being (Emmons & Shelton, 2002 as cited in Froh, 2009a); and (6) as cited in Froh et al. (2009b), grateful people tend to experience greater positive emotions, such as more frequent contentment, happiness, and hope, as well as fewer negative emotions (Overwalle, Mervielde, & DeSchyter, 1995; Watkins, Woodward, Stone, & Kolts, 2003).

Emmons & McCullough (2003) also noted that people in the gratitude condition experienced higher levels of positive affect during the 13-day period, and it appears plausible that this effect on positive affect generally was due to the intervention's effect on gratitude per se.

Finally, there is a robustly significant difference between the experimental and control groups' level of gratitude and happiness as manifested in the results.

The results in this present study may then be used by people who are willing to have positive thoughts and grateful minds which can help them create a happy disposition and eventually contribute in creating an emotionally and mentally healthy society and a better world.

Since this study relied on self-report of the participants, to further support the general recommendation in personality psychology to include external measures besides self-report, allowing external observers (e.g., close friends, marital partners, among others) to also rate the level of gratitude and happiness of a person may be considered for some future directions in the gratitude interventions research.

CONCLUSIONS

During the pretest, the experimental group's level of gratitude and happiness is lower compared with the control group. The experimental group consistently and significantly manifested a higher level of gratitude and happiness immediately after the 29-day lecture-training and during the one-month, and two-month follow ups. This increase in the level of gratitude and happiness of the experimental group can be attributed to the Law of Attraction's 28 practices/steps to harness positive thinking and gratitude towards happiness which the control group was not oriented with.

By inference, the 29-day lecture-training on the Law of Attraction's 28 practices/steps to harness positive thinking and gratitude towards happiness has caused the significant difference in the level of gratitude and happiness between the experimental and control groups. Therefore, the Law of Attraction's visualization or positive thinking and gratitude are conduits through which happiness is attracted by constantly holding into the mind the things that one wants to be, do and have, and by being grateful always.

The Law of Attraction, through visualization (or positive thinking) and gratitude, is essential to secure with mathematical exactitude the persons and circumstances necessary to build one's happiness.

RECOMMENDATIONS

The present study used only one population (university instructors) over a relatively brief period (3

months – this is longer though compared with other previous studies). The generalizability of the findings may be improved through replication in other diverse populations and much longer period Positive activities or interventions that have optimal features are more likely to promote durable happiness or well-being. However, attributes of the person engaging in the activity or intervention have also to be measured. Future research, at least in the Philippine setting, may focus on measuring: (1) the effort of the person to engage in the activity; (2) the motivation of the person to become happier; and (3) the belief that the person's effort will pay off.

In order to validate the findings of George (1995) as cited in Lyubomirsky (2005) that service departments with happy leaders were more likely to receive high ratings from customers, and that the positive affective tone of the sales force was an independent predictor of customer satisfaction, it is recommended that a study may be conducted to determine the ratings from students of faculty-participants who were part of the present study on positive thinking and gratitude towards happiness.

Lastly, to further support the general recommendation in personality psychology to include external measures besides self-report, allowing external observers (e.g., close friends, marital partners, among others) to also rate the level of gratitude and happiness of a person may be considered for some future directions in the gratitude interventions research.

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