

Explore Challenges of Piña Growers in the Province of Aklan

Arlene B. De La Cruz¹

¹ School of Arts and Sciences, Aklan State University, Philippines

Abstract

This study described the challenges experienced by piña growers in the province of Aklan in areas where piña growing, and production activities were declining covering the from 2003 to present. Specifically, this study explored the problems encountered by the piña growers in piña fiber production, their views on the problems encountered and their coping strategies. The study used qualitative research design where phenomenology was used as research method. Data analysis was done using the process developed by Colaizzi's (1978) as cited by Shosha (2012) to provide assistance in extracting, organizing, and analyzing to explore and understand the challenges encountered by the piña growers. Findings revealed that the piña growers encountered problems such as difficulty in the maintenance and cultivation, longer gestation period, no sustained market and interference of middleman, lack of planting material, natural calamities, infestation, shifting to another variety and lack of support. These resulted to decreased motivation, financial instability, and feeling of neglect but still have the contentment. It is further recommended that information dissemination should be made among concerned agencies such as the Local Government Units (LGUs), Department of Trade and Industry (DTI), and Department of Agriculture (DA) for appropriate interventions in terms of market price of piña leaves, sustained market demands for piña leaves, and empowered piña growers, leaves processors, knotters and weavers through the formation of a cooperative. Future policies to address the dwindling piña growing activities and piña fiber production may use the proposed theoretical framework for relevant action.

Keywords: *piña growers, fiber industry*



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INTRODUCTION

Aklan is an agricultural province best known as the “Center of Piña Weaving in the Country” a title earned way back the Spanish era. Piña or the Spanish Red (SR) pineapple variety is one of the crops planted by farmers famous for its lustrous fiber usually obtained its leaves through hand scraping. The fiber possesses qualities having a fine texture with length usually reaches 0.60m, high moisture and dye holding capacity, excellent whiteness, brilliance, salt resistant and breaking strength (Medina and Garcia, 2005) processed by washing, drying, knotting and weaving into a fine piña cloth.

The popularity of Piña cloth is undeniable as it continuously conquers the local and international fashion scene due to its unique qualities and texture. The annual average production of bastos fiber from 2003 to 2012 was recorded at 1.859 T. Unfortunately, the production rate has dwindled at an average rate of 7.2 percent; while the average production of liniuan was recorded at 0.359 T per annum also dropped at an average rate of 5.0 percent annually. This predicament has affected the supply of piña cloth in Aklan noted to have decreased in recent years with the diminishing piña fiber and cloth productions (Yabut, 1991).

According to the Philippine Fiber Industry Development Authority (2013), the large-scale production of pure piña cloth from the year 2003 to 2012 presented a negative accomplishment. The Pineapple Commodity Profile (PCP) showed that the supply of planting materials and piña leaves are not enough resulting to inadequate fiber supply and shortage of capital necessary for the

establishment of large-scale piña growing for fiber production. The decrease in piña fiber production from the SR pineapple is a problem that requires immediate attention from concerned agencies overseeing the fiber production in the province.

This prompted the researcher to explore the challenges confronting piña SR growers in the province where SR pineapple growing has severely decline. It looks to document the problems encountered by participants in the production of piña SR pineapple, their personal views, and their coping strategies in facing the challenges. Based on the phenomenon, the researcher addressing three questions designed to explore on the challenges, views and coping strategies experienced by piña growers that would generate themes and possible substantive theory on the formulation of policies by concerned stakeholders to address the dwindling supply of piña fiber for piña cloth production:

1. What challenges did the participants encountered in piña production?
2. How do they view these challenges?
3. How did they cope with these challenges?

RESEARCH METHOD

The study is qualitative using phenomenology as research method as study requires contextualization various reactions to, or perception of, particular phenomenon. According to Creswell (1994), the idea of seeking understanding about this phenomenon is best supported by a constructivist, interpretive, and inductive perspective aligned with the post positivist paradigm. The phenomenological Approach Framework was used in this study to describe the concept of the phenomenon of dwindling piña fiber production. The research environments were the piña growing localities in the province of Aklan that had decreased their growing and production activities.

The participants in this study were selected based on the following criteria: 1) must be a resident of piña growing locality in the province of Aklan; 2) involved or engaged in growing piña for at least 10 years; 3) came from localities in Aklan province with notable decline in the growing and production activities of piña (SR). Number of participants was determined based on the “depth of strategies” rather than “sampling strategies.” In other words, the study relied more on the saturation of data (Holloway and Wheeler, 2002; cited in Driessnack, Sousa & Mendes, 2007).

Non-probability sampling, specifically criterion sampling was utilized in the identification of informants. The researcher was the main instrument and carried out the data gathering/collection through direct one-on-one interview using microcassette recorder. Follow-up questions were made relevant to the questions in the interview guide until the challenges they encountered in piña growing, their views of these challenges and coping to these challenges were captured.

In analyzing the data, the researcher utilized the process developed by Colaizzi’s (1978) in extracting, organizing, and analyzing to explore and understand the challenges encountered by the piña growers. The narrative was transcribed into verbatim in Aklanon dialect, then translated to English, summarized and organized into coherent story using the statement of the purpose as guide. Each statement was read several times to gain sense of the whole transcript. All the thoughts, feelings, and ideas experience by the researcher due to her earlier exposure to piña growing was added to the bracketing diary. This helped explore the phenomenon as experienced by the informants themselves.

The significant statements and phrases pertaining to body image changes and coping strategies were extracted from each transcript, written in separate sheets and coded in its corresponding "transcript, page and line numbers". The significant statements were extracted from these transcripts. Thirty-eight significant statements were extracted out of the 10 transcripts. Meanings were formulated from the significant statement. Each underlying meaning were coded in one category as they reflect an exhaustive description. The whole statement and their meanings were checked by the researcher to ensure the consistency and accuracy of meanings.

The meanings were categorized into clusters of themes and emergent themes were determined, and the final thematic map was derived. The researcher validated the study by sending the study results to the informants and all participants showed their satisfaction toward the results which entirely reflect their feelings and experiences.

FINDINGS AND DISCUSSION

Challenges Encountered by the Piña Growers

1. Difficulty in the Maintenance and Cultivation

The spines found on the leaves of the SR pineapple makes its maintenance a daunting task among SR piña growers. Normally, this variety of pineapple is often neglected where no administrations of appropriate cultural practices are employed. Most of them just grow their piña SR on their backyard instead of growing in a bigger plantation area. They considered that the amount of work involved in transferring the plants to a bigger plantation is expensive and laborious. Due to this, most growers preferred to establish calamansi and rambutan orchards, and banana plantation, specifically the arnibal or the señorita variety.

Elio, piña grower, plants Hawaiian pineapple rather than the SR variety. His plantation was also planted with cassava, banana (arnibal variety) in between. Hawaiian pineapple was ideal for intercropping while SR pineapple was not ideal due to its spiny leaves which makes it difficult to manage during cultivation until harvesting and processing. Ronnie, another piña grower did the scraping of the piña leaves before, but it was difficult for him to do this works so he just sells the leaves to scrapers but not in regular basis. Some of his produced leaves were just left in the field. So, he planted the Hawaiian pineapple instead only to sell the fruits and harvested the leaves for processing. With the Hawaiian variety he had better income compared to SR pineapple.

"Ro bisaya nga piña hay malisod itanum nga may kaibahang ibang tanum ay masiit. Manina kat-ing sa siit kon magturag ka ag mag ani ku ibang tanum". (It is difficult to grow piña by intercropping due to its spine. The spine is painful once you are stuck by it during harvesting of other crops.)

Emily's father used to grow piña in their backyard. She knew how to process the leaves into fiber and had woven the fiber into piña cloth. According to Emily, "Just plant piña and it would grow". They plant piña in the backyard and sold the leaves to scrapers for processing; they bought the fiber for knotting and then weave this to piña cloth and sold.

"Dugang pa maabu magsaha ro bisaya nga piña. Ngani ga gutok, maikit ro mga tanum ag mabudlay dayon mag tatap ag mag ani it tanum". (In addition, SR pineapple have plenty of suckers. It tends to be overcrowded and it is difficult to cultivate and harvest other crops planted).

She added it was painful to the skin once stuck by the spine of piña leaves. The spine was needlelike. It caused wounds on the skin. Rose, another piña grower was reluctant to grow more of SR pineapple due to its spiny leaves.

"Masiit ro bisaya nga piña. Nasakitan ako magbu-oe it dahon kon masiit ako. Gina pabay-an ko lang sa scraper mag buoe it dahon. Mayad man kon anda ako nga bayaran it kumporme. Kon amat gina pana-o ko lang". (SR pineapple is spiny. It hurts when I got pierced by its spine. I just allow the scrapers to harvest the leaves and just accept whatever amount they still give. Sometimes I just give it for free.)

Another piña grower, Theresa who was 72 years old now started with her parents when she was still young. They grow piña, the SR pineapple variety ever since. Until now, they were into piña growing but not only SR pineapple variety that they were planting but also the Hawaiian pineapple variety to sell the fruits.

2. Longer Gestation Period

Another reason why Girlie planted few piña, was due to its gestation period. It would take one and a half years to harvest the fruits and the leaves. It took her 18 months to harvest the leaves of piña. While root crops and other vegetables would not take that long period of time to harvest.

"Kabuhay mapuslan do piña. Kon magtanum ako it guyam-ot ag tinoean-on hay madali mapuslan". (It takes a long period before I can harvest piña. Whereas, growing root crops and vegetables takes a short period of time.)

3. No Sustained Market and Interference of Middlemen

There were some piña growers who continued their piña growing activity, but the issue was the marketing of the leaves. There was no sustained market or buyer of the piña leaves for processing. The pricing of leaves and fiber would usually depend on the scrapers, middlemen and the SMEs.

"Owa kami it sigurado nga manogbakae sa among mga dahon nga pwedeng makigi". Owa abi ga dungan ro pag ani it bunga it simuyaw ag ro pag ani it piña nga bunga ag dahon. Ginpundo ko ro intercropping." (We have no sure buyer of our piña leaves for processing. The harvest season for the calamansi do not coincide with the season for SR pineapple or piña leaves.

4. Lack of Planting Materials

They lack planting material. They just rely on the suckers, slips and crown of their existing grown piña plants in the backyard. They did not own a land, so the growing of piña was just on a backyard scale. They were not given any assistance financially and technologically.

"Indi kami kapa-abu gid it bisaya nga piña nga tanum ay gasalig man lang kami sa saha saliping ag korona it among tinanum nga dati para man itanum namon it uman. Owa ako it bastante nga eogta dahil bukon kami it tag-ana it eogta".(We could not propagate well our piña plants because we just rely on the suckers, slips and crown of existing piña plant as source of our planting material again. I do not own a vast land that's why we just planted piña in backyard scale.)

5. Inevitable Natural Calamities

Key informants narrated their experiences with Typhoon Frank in 2008 where most of their crops were damaged thick mud brought by heavy flooding in their area. Fields were covered by muds which made them difficult to recover their crops eventually losing their livelihood.

6. Infestation/Disease

One informant had been growing piña for so many years. He scraped the leaves and sold it to knotters and middlemen. In the past years he had a plantation of SR pineapple. At present, he had a 350 sq.m area planted to SR pineapple and a plantation of Hawaiian variety. The rest of his farm is planted with calamansi, rambutan and banana. He was aware that SR pineapple fiber was in demand and of good quality for piña weaving, and Aklan was known for this product. The fiber of SR pineapple is of good quality. It has high breaking strength. But as Ronnie keep on growing piña and scraped the leaves, he noticed that the fibers were darker to off white, quite reddish and had black spots. He had no idea what caused such problem.

"Manami ro linabag it bisaya nga piña. Matingting. Ro akon eang nga na notisyahan hay mapuea-puea, bukon gid it maputi ag may maitom nga parte. Indi ko masayran kon ano ro rason. Siguro makon hay sa sobra it gueang o may masakit ro piñatanum. Owa man abi kakon it naka estorya kon ano ro dahilan ag kon ano ro mayad." (The fiber of SR pineapple is of good quality. It has high breaking strength. Lately, I have noticed the fiber was quite reddish, not clear white and there are black spots in it. I do not know the reason. Maybe it is due to its over maturity, or the piña plant had been attacked by a certain disease. Nobody tells me what the reason is and what remedy will I do.)

7. Shifting to Another Variety

The growers shared their views on piña growing and shared that she started in the year by 2011 planting SR pineapple but engaged more on Hawaiian pineapple planting, banana and other root crops. The SR pineapple was not productive compared to the Hawaiian variety. Besides, the Hawaiian variety had bigger fruits which demand better price. They cannot cultivate the SR pineapple because it was difficult to apply compost to fertilize the plant. Because of this, they get rid of the SR pineapple and planted Hawaiian variety instead. Wena and other growers disclosed that they pulled the SR pineapple and throw it away. It is spiny and it is difficult to manage during the cultivation and harvesting. They just maintained the

backyard scale of piña growing. Another grower, Girlie mentioned that her parents were growing piña. They harvested the leaves and the fruits. The leaves were scraped into fiber while the fruits were consumed and sometimes sold at a very low price. The introduction of Hawaiian pineapple growing had influenced Girlie to shift in the planting of this variety.

"Mas maabu ro akong kita sa Hawaiian nga piña. Maikabaligya ko pa ro bunga ag may gabakae man it dahon nga gina kigi nanda. Sa bisaya nga piña dahon lang rang mapuslan. Bisan sayod ako nga ginapa kigi it Department of Agriculture hay piña nga bisaya, padayon ako nga nagapa abu it Hawaiian nga piña." (I had more income in growing Hawaiian pineapple compared to SR pineapple. I can sell the fruits and there are scrapers and buyers of leaves. In SR pineapple, I can only generate income from the leaves. Eventhough, I know that the Department of Agriculture recommends the SR pineapple variety for scraping, I still grow the Hawaiian variety.)

8. Lack of Support

The piña growers had experienced the feeling of neglect and unhappiness due to absence of assistance from concerned agencies. Marketing of their products for a sustainable venture was not explored. They just rely on somebody who came to buy the leaves or the scraped fiber and that is the time they sell the fiber. Since growers started growing SR pineapple, they had not received any technical assistance from any agency that takes care of the commodity. Ronnie disclosed:

"Ga hueat eang kami kon hin-uno hibakae ro among linabag". (We just wait until when our fiber could be bought.)

Participants

1. Decreased Motivation

The backbreaking, painstaking and difficulty in growing followed by a lengthy waiting to produce mature SR pineapple decreased the motivation of the piña growers to continue the production. The long of period of gestation discouraged the growers to concentrate on piña growing only. Also, the arduous intercropping with piña with other commodity hindered the growers to flourish in their piña growing undertakings. The piña growers are reluctant to grow piña because they find it difficult in the maintenance and cultivation due to spiny leaves. They forbid the pricking sensation of the needle-like spines of the piña leaves. The eagerness or intense to live through difficult times, the grower had grown other plants/crops. They engaged on farming and planting calamansi, citrus and rambutan and Hawaiian pineapple. Thus, informant A believed that diversified farming is another answer to overcome poverty.

"I did not want to grow the SR pineapple because of its spines. It takes a long period to utilize/ harvest piña only the leaves are useful. The income is not enough. It cannot compensate the labor. I am not sure of my income in piña growing " .

2. Financial Instability

The income was not wanting. There is insecurity in their livelihood in terms of economic stability. They could not provide the needs of the family because there was no definite buyer of the leaves. Worries for the unpromising livelihood to be fully relied as source of income but still grateful for the extra income it provided. Another informant desires to continue growing piña if economic or financial capital is available and there is captured market supply chain management or value chain.

"Desire to continue growing piña..if economic or financial capital is available...captured market.. supply chain management or value chain. We have to work hard to survive. Not only piña could give us livelihood. There are plenty of plants we can grow and utilize. Could not fully rely on piña growing...financially deprived!"

3. Displeasure and Feeling of Neglect and Unhappiness

Displeased on the issue that the middlemen or businessmen make money on piña but the grower remains to suffer poverty. There was a sentiment of misfortune. Piña growers remained financially deprived while the middlemen were potentially profitable.

"Owa kami it sigurado nga manogbakae sa among mga dahon nga pwedeng makigi". (We have no sure buyer of our piña leaves for processing. We stopped the intercropping scheme).

A piña grower explained that they did not hesitate to engage and flourish the piña growing activity if they were given assistance like new technology that could help them in the production and that it captured pricing that would compensate their labor. They felt sense of neglect by the concerned agencies that caused their unhappiness.

"Nobody approached us growers to give any assistance such as financial and technology assistance. We did not have enough budget to buy new planting material".

4. Contentment

The piña growers felt that they were able to send their children to school due to additional income out of part-time growing. They felt happy and contented of having supplementary income. They were aware of the excellent and high quality of piña, the strength of SR pineapple compared to other pineapple variety. They were optimistic for a development in economic aspect for the grower. Since piña cloth demands a high price in the market. Desire to push through the activity of growing piña if concerned agency will support the supply chain management. The keen interest to continue and support the piña growing because the informant clearly understands the need to support the industry. The willingness to keep on growing piña and let it flourish if some concerned agencies will extend assistance on technology and have a captured pricing. They were optimistic for a development in economic aspect for the grower. Since piña cloth demands a high price in the market.

However, hawaaiian was a threat to a quality fiber because that is not recommended by department of agriculture to be processed for piña cloth, it contributed to the decreased growing of piña or S R pineapple specifically for piña fiber or piña cloth of good quality.

Coping Strategies of the Piña Growers

1. Problem-Focused Strategy

This coping strategy relied on using active ways to directly deal with the challenges of the piña growers that caused the stress rather than must concentrate on the problem. Problem-solving strategies are efforts to address what is necessary and actively do certain things to lessen or eliminate stressful circumstances. Problem solving is a coping mechanism that aims to determine the source of the problem and provide solutions. This coping mechanism becomes helpful to the piña growers to provide their financial needs.

Modern Agricultural Technological Innovations

In agriculture, time and production were so important; they had to plant in time, harvest in time and deliver to the market in time. They shifted to other farming resources available such as diversified farming and engaged on other off-farm employment to augment their needs such as fishing, construction work and other services.

Time Management

Farmer growers used time management planners. These planners were daily, weekly, monthly schedules that help farmers allocate time to the most important priorities. They did not procrastinate. They looked forward for upcoming events and deadlines. They tried to stay in one task until it was done. They reviewed objectives, strategic and tactical plans. Brainstorm that comes to mind that needs to be done first and record on the activity or task. They maintained discipline. They worked smarter and harder.

2. Emotion-Focused Strategy

Emotion-focused coping strategies were used to handle feelings of distress on the challenges of the piña growers rather than the actual problem situation. Emotion-focused coping strategies involve efforts to regulate the emotional consequences of stressful or potentially stressful events. These were the major coping mechanism applied by the growers.

Wise Decision Making

It was the burning desire of the piña growers to seek for financial stability, so they resorted to thinking of ways how to uplift their economic status. The positive coping strategies were any actions the growers take to manage and reduce challenges, in a way that it was not going to be harmful or detrimental in the long term. Growers who used positive strategies were not only better able to tackle challenges and bounce back from tough times, but they were also much happier.

Social support

Social support is the key. Trusting somebody one trust. It can be a relief to share their thoughts with someone else, and it could be good to work through challenges with the help of another person. The growers shared ideas, sentiments to their co-growers. They got support from them. There was a strong bond among them. Asking for help, or finding

emotional support from family members or friends, can be an effective way of maintaining emotional health during a stressful period.

3. Optimism and Strong Determination

Optimism involves learning to think positively about the future even when things go wrong. That's not to say one should pretend that everything is fine when it isn't. Instead, it's about looking objectively at a situation, making a conscious decision to focus on the good. It can be hard to do, but if one practice, one likely to get better. In this vein, the growers looked at each challenge they encountered as a learning experience.

The first question asked the participants of the challenges they encountered in piña production. In this study, the participants were able to relate distinctive challenges: difficulty in the maintenance and cultivation, longer gestation period, no sustained market and interference of middlemen, lack of planting materials, inevitable natural calamities, infestation/disease, shifting to another variety and lack of support.

The second question was intended to determine how the participants viewed the challenges. The participants revealed the decreased motivation, financial instability, displeasure, feeling of neglect and unhappiness and contentment.

The third question probed on how participants cope with the challenges encountered. The participants dealt with the challenges through exerting efforts or actions both behavioral and psychological approach: problem-focused strategy by employing modern agricultural technological innovations and time management and, emotion-focused strategy through wise decision making, social support, optimism and strong determination.

After considering the possibility of merging similar themes together as well as checking for the frequency of each recurring data extract, a total of three (3) themes were identified. These were the following:

Challenges:

- o Difficulty in the maintenance and cultivation
- o Longer gestation period
- o No sustained market and interference of middlemen
- o Lack of planting materials
- o Inevitable natural calamities
- o Infestation / disease
- o Shifting to another variety
- o Lack of support by concerned agencies

Views:

- o Decreased motivation
- o Financial instability
- o Displeasure and feeling of neglect
- o Contentment

Coping:

- o Problem Focused Strategy
- o Modern Agricultural Technological Innovations
- o Time Management
- o Emotion Focused Strategy
- o Wise Decision Making
- o Social support
- o Optimism and Strong Determination

The piña growers were less motivated to grow piña due to the following reasons. The difficult maintenance and cultivation of the crop due to spiny leaves; the long period of gestation/maturity of piña resulting to lengthy waiting to produce mature leaves; the economic aspect/opportunity is uncertain, and the laborious activity to grow piña in large scale. Instead, the piña growers ventured on the growing of Hawaiian pineapple variety due to its profitability.

The piña growers were still motivated to grow piña despite of the challenges encountered in piña growing. These are the additional income they generate during their part-time activity. Their awareness of the excellent and high-quality piña fiber and their desire to push through on piña growing with the assistance of concerned agencies is still alive in the hearts of the growers.

The piña growers' plant/grow other commodities such as root crops, banana, citrus fruit trees, rambutan and many others for livelihood management. The piña growers engaged in other sustainable livelihood such as diversified farming, including off-farm employment such as fishing, construction work and other services.

CONCLUSION

The timeless and regal Barong Tagalog, wedding dresses and other traditional Philippine formal dress will not be a reality without the continued perseverance of the piña growers to continue the activities in spite of the many challenges they encountered. The less motivation to grow piña due to difficult growing activities, the long gestation/maturity of piña to produce mature leaves, the uncertainty in the economic side, the laborious activity that hinders them to grow piña in large scale, the preference to grow Hawaiian pineapple variety due to its profitability compared to SR pineapple, did not stop them to grow piña but just decreased their piña growing activity.

The piña growers were still motivated to grow the commodity even in small scale due to additional or supplemental income they can generate. The awareness of the excellent and high-quality piña fiber and the desire to sustain piña growing to support one of Aklan's pride; the piña weaving industry that needs piña fiber as raw material derived from the piña leaves. The piña growers firm determination and commitment to support their families pushed them to engage in other activities such as diversified farming to overcome poverty.

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REFERENCES

- Bello, M.R. (1996). The dynamics of crop infraspecific diversity: A conceptual framework at the farmer level 1. *Economic botany*, 50(1), 26-39
- Eriksen, S.H., O'Brien, K. (2007). Vulnerability, poverty, and the need for sustainable adaptation measures, *Climate policy*, 7(4), 337-352.
- Essence. 2015. In Merriam-Webster.com. Retrieved February 22, 2015, from <http://www.merriam-webster.com/dictionary/essence>
- Gonzales, R. (2009). *Violence against Women In The Province Of Aklan: A Case Study*
- Grimes, W. E. (1929). Diversification of Agriculture-Its Limitations and Its Advantages. *The ANNALS of the American Academy of Political and Social Science*, 216-221.
- Hathurusinghe, C. (2012). *A Study on value chain of Pineapple and Banana in Sri Lanka*, Hector Kobbekaduwa Agrarian Research and Training Institute: Colombo
- Hollway, T. & Jefferson, T. (2000). *Doing Qualitative Research Differently: Free Association, Narrative and the Interview Method*.
- Lunn, M. (2012). *Aklan Piña Cajoles French Fashion Designer*. Madyaas Pen, Retrieved from <http://madyaaspen.blogspot.com/2012/07/aklan-pina-cajoles-french-fashion.html>
- Morse, S., Acholo, M., & McNamara, N. (2009). *Sustainable livelihood Approach: A critical analysis of theory and practice*. University of Reading.
- Neto, A.R.S. (2015). Comparative study of 12 pineapple leaf fiber varieties for use as mechanical reinforcement in polymer composites. *Industrial Crops and Products*, 64. 68-78.
- Niehof, A. (2010). The significance of diversification for rural livelihood system. *Food Policy*, 29(4) 321-338.
- Oliver, P. (2013). Purposive sampling. In V. Jupp (Ed.), *The SAGE Dictionary of Social Research Methods*.
- Pineapple Production Guide* (December 9, 2014). *Business diary*. Retrieved from <http://businessdiary.com.ph/4473/pineapple-production-guide/>
- Ramo, R. (2004). *Socio-economic profit of fiber and cloth producers in the municipality of Balete, Aklan*.
- Saladar, R.L. (2000). *Rural barangay transformation and the adoption of agroforestry innovation in the Philippines*.
- Scoones, I. (1998) *Sustainable rural livelihoods: a framework for analysis*
- Shosha, G.A. (2012). Employment of Colaizzi's strategy in descriptive phenomenology: a reflection of researcher. *European Scientific journal*, 8, 27.
- Teodosio, L. (2007). *Field Evaluation Of Tissue-Cultured Spanish Red Pineapple (Ananas Comosus L.) Applied With Different Cultural Practices*
- Yabut, M. (1991). *Socio-Economic Status of Piña-Fiber and Cloth Production*
- Van Manen, M. (1990). Hermeneutic phenomenological reflection. *Researching lived experience: Human science for an action sensitive pedagogy*, 77-109.