

Journal of Global Management Research

Vol. 13 No. 1 Juin2017



International theoretical
and applied perspective

Research conducted
throughout the world

On management, social,
and technology issues



www.gmrJournal.com

ISSN 2367-962X

Journal of Global Management Research

This journal strives to publish original articles of major interest to academicians, managers, consultants, politicians, teachers, and students. This journal is published twice a year, in December and June. Special issues are released following an international conference or devoted to a special theme. All papers submitted to the journal are subject to strict review by the Editor followed by double blind peer review.

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PUBLISHER:

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CP 32089 Montréal, H2L 4Y5
URL=<http://fidal.qc.ca>

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THE ESSENCE OF PROOF IN THE DISCIPLINE OF MATHEMATICS

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ABSTRACT

The role of proof in mathematics education has significantly contributed to the higher order thinking skills of every individual. Although there are massive extensive studies about the students' conceptions on proofs and their abilities to construct proofs, but still there are substantial evidences that most of the students have difficulties in constructing mathematical proofs. Thus, our concern is to provide students' opportunity to illustrate their views and difficulties towards proof construction and may contribute to the improvement of substantial knowledge of their understanding about mathematical proofs. All data were collected among 33 college students who participated through interviews and Classroom observations and analyzed through coding data and identifying common themes. The main finding shows that majority of the students are struggling in constructing proofs since they have not encountered or given emphasis during their secondary math subjects. This is the main reason that most of them could not start and make their own proofs. It was noted that proof is the central part of mathematics; it should be embedded and can never be detached from the curricula at all levels. But numerous claimed that it is necessary to reassess the existing curriculum to give emphasis the essence of proof in the discipline of mathematics. Thus, this paper could be evidence that we really need to review and reform the existing curriculum at all levels especially in the K-12 curriculum.

KEY-WORDS: K-12 Curriculum, Mathematics Curriculum, Mathematics Education, Mathematical Proofs, Role of Proof

INTRODUCTION

The role of proof in mathematics education has significantly contributed to the higher order thinking skills of every individual. The absence of proof makes mathematics incomplete. It is a crucial process that needs major attentions specially in improving students' understanding about mathematical arguments and proof construction. So there is a need to concentrate in enhancing the critical minds of the students. Although there are massive extensive studies about the students' conceptions on proofs and their abilities to construct proofs, but still there are substantial evidences that most of the students encountered difficulties in constructing mathematical proofs. Even the university students cannot formulate a mathematical argument by their own (Mariotti, 2006).

There are many considerations that are essential that may lead to discover the reason behind these difficulties. For us to determine, we need to examine the students' views about the nature and importance of proof. The students' perceptions towards proof may serve as a prerequisite in designing and developing an applicable instructional tool. In fact, as educator, we need first to diagnose our learners about their experiences, attitudes, and strengths towards the subject. Thus, our concern is to provide students' opportunity to illustrate their views and difficulties towards proof construction and may contribute to the improvement of substantial knowledge of their understanding about mathematical proofs.

Researchers revealed that the value of proof and proving during elementary and high school was not given emphasis in the process of teaching and learning mathematics. As a result, students and including teachers could not validate arguments and construct proofs (Janelle, 2014). The elementary and secondary school teachers are struggling in teaching proofs since during their high school and college days; they have few proof related subjects. So therefore they are not prepared and fully equipped in implementing activities that improves the reasoning skills of the students (Knuth, 2002b). In addition, the problem arises, given that the students only encountered proofs and proving during their high school geometry subjects. Even in an Algebra class, there is a less attention given on mathematical proof exercises and in most cases there is no exposure to proofs at all (Thompson, 2012).As consequence, majority of them had a hard time in understanding and generating proofs when they are in college. Considering the fact that, the mathematics in undergraduate is concentrating on making correct arguments in constructing mathematical proofs.

It was emphasized that reasoning and proving should always be part on the K- 12 mathematics classroom and any related proof activities must always incorporated in the learning experiences of the students at all times (National Council of Teachers of Mathematics, 2000)(National Council of Teachers of Mathematics, 2009). With this process the learners would be able to appreciate and understand the essence of proof.

It was noted that proof is the central part of mathematics; it should be embedded and can never be detached from the curricula at all levels (Schoenfeld, 1994). Yet, the nature and function of proofs serves as a vital role in shaping the analytic minds of the learners. And numerous claimed that it is necessary to reassess the existing curriculum to give emphasis the essence of proof in the discipline of mathematics. Thus, our concern is to provide students' opportunity to illustrate their views and difficulties towards proof construction and may contribute to the improvement of substantial knowledge of their understanding about mathematical proofs.

METHODOLOGY

2.1 Research Design

A qualitative research design was employed to make inferences about students' views and difficulties towards proof construction. All data were collected through following the proper protocol in conducting interviews and classroom observations for record keeping. Then it was analyzed through coding the data and identifying common themes. The basis for interpretation was on a combination of researcher perspective and data collected.

2.2 Participants

This study was composed by 33 volunteered students who were actively participated during the interviews conducted by the researchers at Surigao State College of Technology, Surigao City. They were enrolled in Logic and Set Theory during the 1stSemester, SY 2015- 2016.

2.3 Measures

The instrument of the study was a researcher made five open- ended questionnaires and classroom observations to identify students' views and difficulties towards proof construction.

RESULTS AND DISCUSSIONS

3.1 Students' Views and Difficulties

The role of proof in mathematics education has significantly contributed to the higher order thinking skills of every individual. But as observed during the secondary levels, mathematical proofs were not given emphasis in the mathematics curricula (Janelle, 2014). Considering that most of the secondary school teachers admitted that they have limited views and insufficient ideas about the importance and definition of proof. And note that they are the one to shape and sharpen the minds of their learners (Knuth, 2002). Although there is proving and reasoning in high school math subject which is Geometry, but still it cannot suffice the needs of the students for the improvement of their critical thinking. This is the main reason that majority of the students could not prove theorems by their own.

Out of 33 volunteered students who actively participated during the interviews, 30 of them admitted that they have no idea on how to construct a proof. They have just encountered it when they are in college. They are not aware of the use and importance of it. Even to give definition they have no idea what a proof constitutes and look like. They think that mathematical proof is not necessary and it is only intended for the group of students who are taking advanced mathematics. This negative conception is common to all undergraduate students particularly to those who are taking mathematics subjects (Varghese, 2009).

The students' difficulty on proofs is a result from their negative conception about proofs. They are not motivated to deal with proofs since they have poor backgrounds and inadequate understanding. As a result, they are struggling on how to start and conceptualize a proof. This is because they are not familiar with all the definitions and theorems that are necessary in constructing a proof. In which they have not encountered it during their secondary math subjects.

3.2 Students' Methods or Strategies to Overcome these Difficulties

Based on the interview results, most of the students are doing online researches to explore some techniques and methods on how to construct proof. They prefer to do it online since the availability of the books at the library is

limited. Then, they do some practice exercises to enhance their knowledge and skills to improve their understanding on proofs. Sometimes they do it collaboratively with their classmates to feel at ease. Unfortunately, majority of them are doing memorization of proofs. They tend to memorize the flow of the proof without understanding because this is their last resort to pass the subject. This happens because they cannot relate and connect the ideas to come up with a valid proof. Thus as a result, they fail to justify and construct a valid proof because they do not have enough syntactic knowledge to validate a proof (Weber, 2001). Although there is nothing wrong with these practice but the essence of proof was not justified. Knowing that memorization is less effective than understanding. If you just memorize the concepts, you cannot grasp the important details that are needed for you to work on or construct proofs by your own (Hollenbeck, 1997).

CONCLUSION

Based on observations and experiences most of the students are still struggling in coping and understanding of mathematical proofs. Based on findings this problem arises because of insufficient background and knowledge of high school teacher and lack of emphasis of proofs in mathematics curriculum at all levels. Although high school math teachers have adequate teaching experience but in imparting instruction of their knowledge and understanding to their students about proving is quite superficial (Bied, 2010). So it is necessary to conduct training- workshops on how to construct proofs to upgrade the knowledge and understanding not only for high school teachers but throughout all levels. We also suggest and recommend that the curriculum makers should reassess and give more emphasis on the role and essence of mathematical proofs and to be reflected in the K- 12 Mathematics Curriculum at all school levels. It is a way of cultivating the critical minds of the students and applies it to the real life situation. In fact that the concepts and all the activities that involves about proving should be part on the learning process and mathematical experiences of the learners starting from elementary until the end of the educational career of the students (Stylianides, 2007).

In the process of learning, memorization is essential to be familiar on the concepts and ideas to upgrade our knowledge and for better understanding. In mathematics, memorization is important; we need to memorize formulas and equations for us to solve problems (Kloosterman, 2002). In constructing mathematical proofs most of the students is doing purely memorization (Schoenfeld, 1989). Although many researchers claimed that memorization is commonly used and necessary in constructing proofs, but we believe that memorization is less efficient if there is no depth understanding. So as mathematics educators we need to find ways and strategies on how our students appreciate and understand the role and essence of mathematical proof.

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CARE OF OLDER PEOPLE IN INDIAN SOCIETY: THE PSYCHOSOCIAL INTERVENTION FROM SOCIAL WORK PERSPECTIVE

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ABSTRACT

The elderly population is increasing rapidly all over the world. Providing care for the elderly members of the family involves a wide range of tasks. However, family has become the basic institution who plays an important role in geriatric care. Family assists the elderly population for the most part, whereas, the formal institutional care has become significantly demanding. This emphasizes the importance of considering the psychosocial intervention of the worker working for the elders. From the perspective of a developing country, it is important to understand the crucial role of the social worker in area of gerontology and geriatric care. The paper is based on in-depth interviews and focus group discussions from the Indian urban scenario, covering different support and assistance provided to the elderly as a part of family care giving to society. The paper also attempted to analyze the situations while considering the cultural perspective where religious beliefs and value system plays a crucial role. It also tried to identify the special needs of the elderly, explored the challenges faced by them and recommended the possible intervention by the social workers in the field of ageing.

KEY-WORDS: Older population, gerontology, psychosocial intervention, social work, evidenced-based practice.

1. INTRODUCTION

The elder population constitutes a large portion of the global population. Care of the elderly is not a sheer responsibility of family rather it has become a worldwide concern. However, the magnitude of the problem and its manifestation are not the same in every part of the sphere. Modernization and globalization override the situation where the average life expectancy of the individuals has increased along with medical advancements. Moreover, the demographic, social and economic factors lead to a situation where family is no more the basic institution to provide care and support to these elderly populations. From the analysis of the trend in the urban context, the vulnerability grows to be manifold when individuals as well as the community lack commitment towards the older population. India, as a developing country needs to emphasis on the problems of the elderly and requires urgent intervention for the same. Indian cultural heritage and the way of life always created a place of respect for the elderly. Though there are various policies and programmes on the aged in India, the paper tried to bring out the challenges faced when it comes to the individual facing the problems and the common practices in this regard. Therefore, social workers working in the area of gerontology or geriatric care have a crucial role to play.

2. REVIEW OF LITERATURE

2.1 Aging-a worldwide challenge

Ageing is a biological phenomenon but has large implication on the social, financial and health infrastructure of a country. According to different global statistics, it is eminent that the world is ageing fast. Moreover, World Health Organization reported that the number of older population will double by the year 2050; additionally, it has been accounted that the number of older population is even higher in developing countries. According to the United Nations, Department of Economic and Social Affairs, Population Division (2015), the worldwide older population is about 901 million and is estimated to be about 1.4 billion by 2030 and almost 2.1 billion by 2050. This leads to an alarming situation worldwide where the area of gerontology gains its importance.

2.2 Aging in India- an understanding from the perspective of cultural assumptions and values underlying

India has a large segment of older population and constitutes the second position after China. According to the Global Age Watch Index (2015), India is in the 71st position among 96 countries (Balan, 2015). Under the umbrella of this index, there are four main components, namely, income security, health status, capability and enabling environment, to capture the multidimensional nature of the quality of life and wellbeing of older people and to provide a means by which to measure performance and promote improvements of the elderly. According to United Nations, Population Division report, the percentage of elderly population in India will be 20 percent of the total population by the year of 2050 which is an alarming situation for our country.

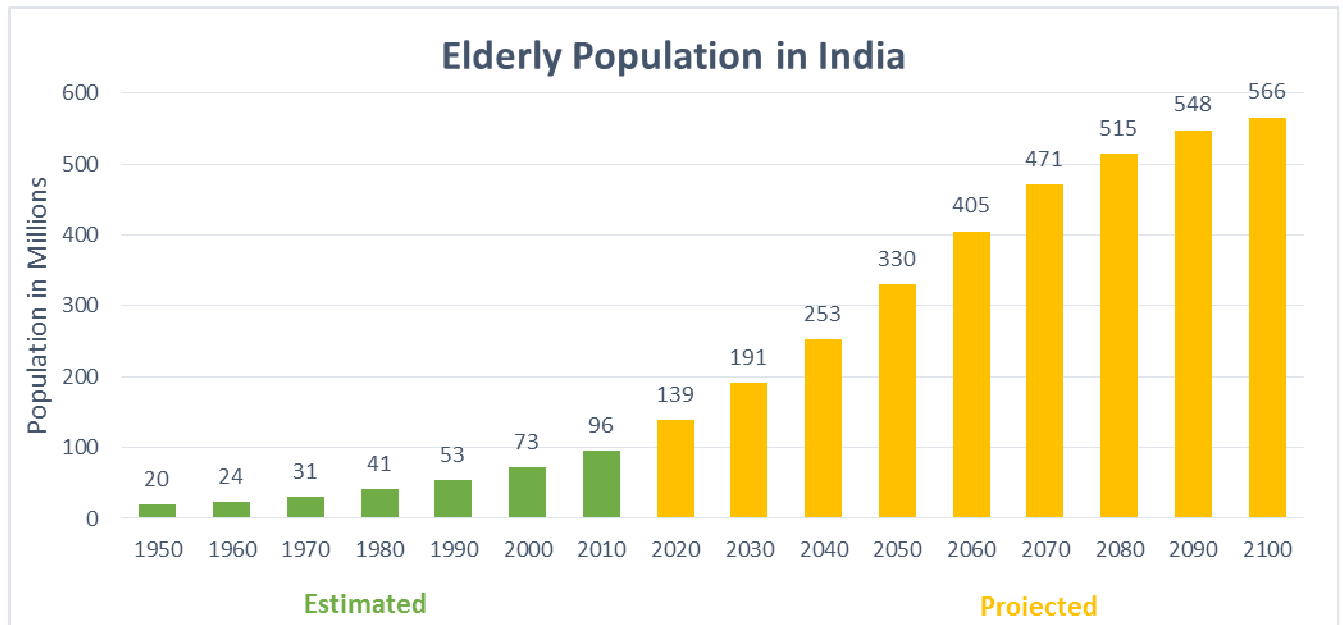


Fig. 1: No. of people aged 60 years and above, estimated (1950-2010) and projected (2020 – 2100)

(Source: Population Division, Department of Economic and Social Affairs, United Nations)

Older people in India enjoyed power over their families, therefore enjoyed better status and were respected as these actions are linked to Indian culture, heritage, and religion. This ultimately resulted in a tradition where elderly people always played a key role in the family by transmitting experiences and ideas and therefore was considered as the transmitter of traditions. The concept of 'patient autonomy' was not familiar as they tend to view themselves as part of a family unit (Capezuti, 2008) and considered themselves to rely more on family. A study conducted in the Southern part of India pointed out the changing scenario in the Indian context; the study clearly showed how the elderly people face miserable condition in their life as they cannot look beyond the family system even in the changing socio-economic condition (Helpage, 2016). In India the past culture and the way of life always created a place of respect for the elderly. But unfortunately, with the passage of time, the Western life style adopted by the Indian urbanites has considerably altered the situation at the grass-root level.

While analysing the care giving process, traditionally, the family and the extended family were the structure and source for the elderly care and support. Family was considered as the unit to share values and cultural traditions of looking after these people. Moreover, the Hindu religion believed that the position of the parents comes next to God. But today, Indian society is under a rapid change due to urbanization and modernization. The value system is degrading as people tend to be materialistic; the care giving is becoming a burden to the families. In the context of industrial urban-based society, the traditional roles of individuals in the family is also undergoing a drastic change. The elderly population in India is no longer enjoying the privileged place because of the changing value system of

late. Their social security which was previously within the domain of four walls of their respective households has been largely eroded. The reason may be pointed out as the change in the mind-set of the younger generation. This has created a space for the larger society including the state to play a role to protect and ensure quality of life for the aged in India.

2.3 Older people and social work

The WHO has looked ageing as an opportunity at the individual level and a society's attainment from a larger perspective. Ageing also has its challenges where it has a massive impact on society. This can be met by both the initiatives of private as well as public sectors. Gerontological social work thus have an enormous role to play. Social worker needs to work in various settings and at different levels of practice (micro, mezzo and macro) while dealing with this segment of population. Moreover, the social worker needs to be culturally competent, should be empathetic and deal the situation based on the value system by respecting the elders. The fundamental principle working behind this context is the promotion of client's right to dignity and self-determination. Social workers also deal with different situations of elderly clients. For example, supporting the individuals as well as the family to copes up with a range of difficult situations, getting involved in the problem solving process etc. Against this backdrop, social work turns to work better and meet the demands for the elderly by making use of the psychosocial approach. It helps to build and strengthen the informal and formal support system, focuses on various unmet needs of the elderly, tries to make appropriate linkages to different resources, builds a strong network to work better in life etc, (Capezuti, 2008). All these discussions make it evident that problems, need and care of the older people in India needs to be jointly addressed and the social worker has a significant position in the area.

3. STUDY OBJECTIVE

The paper aimed to understand the Indian urban scenario of the elderly population and the role of social work in gerontology and geriatric care. The specific objectives were-

- To identify the special problems and needs of the elderly
- To understand their coping strategies for ageing in the current context.
- To know about the care system prevailed in the study area.
- To propose more formalized framework to combat various crisis of the elderly through social work practice at different levels.

4. METHODOLOGY

The paper identified the special needs of elderly persons and explored the different challenges faced by them in the urban context. The study was conducted in the area of Chinsurah, district of Hooghly, West Bengal, India by relying primarily on qualitative methods namely, focused group discussions (FGDs) and in-depth interviews (IDIs) to collect data from both men and women aged not less than 60 years. Almost 17 men and 18 women who have not been related to each other have been taken into considerations. The sampling procedure adopted was purposive sampling method. FGDs were conducted with a different group of participants from the same area while they came to the recreational clubs and morning walks. Secondary data were also used while analyzing the role of social worker in the area of gerontological social work. The names of the clients have been used pseudonymously.

5. THEORETICAL FRAMEWORK

There are three prominent psychosocial theories of ageing, namely, the disengagement theory, the continuity theory and the activity theory. This study draws on continuity theory where it states that older adults will usually maintain the same activities, behaviours, relationships as they did in their earlier years of life. It claims that elders should try to maintain this continuity of life style by adapting strategies that are connected to their past experiences (Schroots, 1996). Therefore, coping strategies and personality patterns determine how well a person moves along with ageing. This global issue of ageing can be better dealt if the ageing population is kept healthy and productive. This theoretical framework has been found as the best suit while looking and intervening in the present context.

6. FINDINGS AND DISCUSSIONS

6.1 Problems and needs of elderly population in India

Findings from the in depth interviews reported here yield considerable insight into the context of the problem of ageing and its related issues in the study area. Contrary to general impressions about the problems, needs and care of the elderly, the study evidenced a deterioration of the social position of the elderly within an institution and emphasised on the role of formal as well as informal care.

6.1.1.Socio-economic background

The study revealed that majority of the respondents belonged to the age group 60 years to 92 years and almost all of them had either pension or fixed deposits and house on rent as their source of income. Majority of the respondents were married but few of them were either never married, widow or widower. All of the respondents were literate ranging their education from primary pass to master degree holders.

6.1.2.Identified problems and needs

The problems of elderly that were identified while conducting the study were deterioration of health condition, negligence of the family, loneliness, poor quality of life, insecurity regarding social and economic condition etc. It became eminent from the study that elderly women and elderly who have chronic diseases were more vulnerable. The health issues varied from hypertension followed by diabetes, eye problem, knee pain, arthritis, cancer etc. The denial to seek psychiatric help was identified as one of the major challenges. Moreover, interview with the respondents revealed that in most of the cases, the problems were not addressed properly and were treated on a temporary basis or through over the counter medications or alternative cheaper way (shifting to homeopathy treatment). During FGDs, an old woman said, 'It's all about getting old. It is common to have more critical health issues as we get older, it's understandable. Why to spend so much money and put an obligation on my son?' Most of them felt sad because of their deteriorations in health and economic conditions. Almost half of the respondents felt that they were no more a part of decision making processes at home. They felt they were ignored and abused by family members due to various reasons. In spite of being unhappy these people preferred to stay back with their families rather than choosing a formal set up, like, old age homes or seek professional help.

6.1.3. Coping strategies

IDIs and FGDs indicated that sharing with family and friends were their main coping strategy while they dealt with problems or crisis. Other strategies, such as, engaging in different recreational activities, getting more involved with the family with most preference as spending time with grandchildren, making time for themselves, going for a regular walk or exercising, listening to music or reading books and above all, actively participating in religious and spiritual activities, were also reported as some of the coping strategies.

6.1.4. Prevailing care system

From the IDIs, it was observed that most of the elderly population were in denial where they believed that their way of life was their '*karma*'(fate) as compared to every elderly. The denial of the client involved cultural influences. It was evident that even though they face an extreme situation, they hardly think about moving out of the houses. Most of them reported that family was their only place to get support at any circumstances. Sometimes, they thought about formal care but felt dishonoured to approach. While conducting FGDs, one of the women who lived with his son, daughter-in-law and her grandchild said, 'It is like stigmatizing my own family. If I choose to go to the 'Oldage Home', the situation may leave people to think that I am not a successful parent, I have not been able to build a value system for my child, I am not successful in life, I do not have to disclose about the family situation to everyone. How about my social prestige? Another respondent who's both the sons were living abroad, raised her voice and said 'As a couple we have thought about shifting to an Oldage Home. Thinking about the environment of the Home and its infrastructure prevented us to move ahead. It is better to face the situation as it comes'. To add contextuality to the problems of the elderly, three different case studies have been presented below.

Case Study -1

Mrs. Tara Sunadri, a 92 years old widow who lives with her daughter-in-law in a small town of Hooghly district, West Bengal, India. She lived with her elder son throughout her life and shared the same kitchen. Last year her elder son died of prostate cancer. Her only daughter lived far away and the youngest son migrated to another state for job. Indians do not prefer staying with their married daughters, thus support provided from her side is minimal.

Mrs. Tara has been diagnosed with cancer in 1980. She had to undergo a several surgeries and is supposed to take routine medications and checkups. The loss of her elder son had enormous psychological impact on her; as a result she started feeling melancholic. She also exhibited symptoms of forgetfulness, feeling of insecurity, loss of hope in life, feeling unwanted etc. She has no housing issues and is dependent on her savings and her family for financial assistance. Mrs Tara Sundari had never been for any professional help. Her family reported that she exhibited minimal expression of emotion and is often preoccupied with death. She felt herself over-burdened on her family and did not like to pose financial liability to her family members. As a result, she changed her line of treatment to a cheaper option where the family members also supported and accepted as a best option. She is currently living in a state of mind where she counts her days every day. Her religious beliefs and spirituality are her main coping strategies. Her daughter-in-law who is the secondary line of care-giver has no option but to live with her.

Case Study -2

Mr.Sukhdev,a 63 years old never married, lived in Chinsurah, Hooghly district, West Bengal, India. He was working in a national bank and has retired three years ago. Currently he lives with his elder brother and his family. Mr.Sukhdev likes to talk to people, goes for morning walks and keeps himself engaged by looking after the studies of his brother's children. Mr.Sukhdev is a healthy person where he does not need to take any medications on a regular basis. Mr.Sukhdev felt lonely at times and has adjustment issues with his brother's wife. Many times he thought of leaving the house but the feeling of insecurity had prevented him to do so. He has a peculiar habit of travelling 2 to 3 hours daily by local train to Kolkata along with his ex-co-passengers and sits in the stations for hours and chitchat. This is his way of coping with his present retired life.Mr.Sukhdev did not have an opportunity to plan for his retired life. He worked very hard for his entire life without even thinking of having his own family. Professional intervention may help him to cope up with his environment and accept his retired life.

Case Study -3

Mrs.Seema who is 64 years old married woman living with her husband, two sons, one married and the other not yet married. She is from Chinsurah, Hooghly district, West Bengal, India. Mrs.Seema has never worked outside her house and always kept herself engaged in household chores and confined in the kitchen. After her elder son's marriage, she had to step back and make way for her daughter-in-law. The situation became worse when she was denied to enter the kitchen and a new cook was appointed. She is dependent on her husband financially and also for housing provision. Mrs.Seema has been recently diagnosed with diabetes. She has started to feel neglected and is seldom considered as a part of decision making process.Before, she has never been to theatre to watch movies. Nowadays to make her husband and son happy, she accompanies them to the theatre but does not enjoy it.

Even though her physical health issues are taken care from time to time, nothing has been done with her psychological well-being. Moreover, coping with her changing environment needed proper attention. Her husband at time feel neglected in his own house and had made recent visit to an Oldage Home. Lately she has started to feel anxious about death where she thinks that her husband would die and she has to be 'alone.' 'When I think of shifting to an Oldage Home, I start to feel depressed about leaving this house. Till my son got married, I looked after every corner of the house just by myself. But when I rationalize my thinking, it's better to shift in that small room with attached bathroom and verandah, it's a better option for me to stay by myself.'All the above mentioned case studies give a picture where special attention and urgent intervention is required at all levels.

6.1.5. Identified key areas and intervention

The problems, need and the coping strategies were somewhat overlapped. Therefore, the psychosocial intervention has to use an overlapping conception in dealing with the elderly population. The researcher has tried to recapitulate the concepts in the table below.

TABLE I: Problems of elderly and their intervention

Perspectives	Problems of elderly	Needs of elderly	Psychosocial interventions	Level of intervention
Curative	Financial insecurity, housing problem	Fulfilling financial needs , addressing housing issue	Cognitive Behavioral Therapy, psycho education, supportive counseling, resilience therapy, family counseling, crisis intervention	Individual, family, group level
	Health (physical health issues -minor to chronic and mental health problems- loneliness, feeling of insecurity, fear of death, grief etc.)	Professional treatment		
	Crisis situation	Providing psychosocial support		
	Deteriorating social and economic conditions	Changing outlook towards elderly		
Preventive			Strengthening community resources, increase level of awareness	Community level

Social work intervention

Psychosocial intervention is one of the significant parts of social work intervention. Psychosocial intervention plays a vital role while dealing with the older population at different levels, such as, at the micro level while dealing with individual client, mezzo level while dealing with the family of the client and ultimately at the macro level while dealing with the community. This intervention can have both preventive and curative perspectives. The curative perspective focuses on individual clients as well as the community to overcome and deal with various psychosocial problems. However, the preventive perspective can be practiced at the community level. These altogether may contribute to build resilience framework of practice and may enable individuals as well as the community to face challenges and crises in varying circumstances.

Evidence-based practice, on the other hand, has become popular in social work for delivering quality services to the persons in need. Its demand has grown fast enough to be utilized it in the field of gerontology. Older persons and their family members make use of various psychosocial interventions to adjust well in the changing environment. This EBP tried to address the varied physical as well as mental health issues and problems related to conflicting social roles faced by older people and also emphasized their family as a care giving unit. Among different psychosocial approaches, cognitive behavioural therapy and psycho-educational intervention have the most empirical support. Moreover, psychosocial approach utilizes a variety of individual and group activities that may incorporate psycho-education, family counselling (problem solving, social support enhancement), resilience therapy etc. Literature supports that evidence-based practice needs relatively lesser training and ensures good outcome but it has not been operationalized well. Definition of evidence-based practice from different background talked more or less about utilizing existing studies, combining both evidence and practice by using own clinical expertise and ultimately become persuasive regarding the assessment, diagnosis and treatment of the client (Dominelli, 2009) . Therefore, the social worker who applied EBP should be competent enough to work in a changing environment, focus on the needs of her clients and become a 'resilient self-manager' to better deal with circumstances and consequences (Horner, 2012).

At the end, this study has developed a practice guideline for the social workers by combining the use of psychosocial intervention through EBP. Even though psychosocial interventions may move on without any time limit and are mostly difficult to evaluate the effectiveness (DharChakraborty, 2004), in a developing country, like, India where human capacity and infrastructure are limited for the social sector, EBP could be a best-fit and economical option. However, proper cautions should be taken to face the challenges where there are limited

resources, where the social worker is not culturally competent or may be where the social worker is not at par with current information.

7. CONCLUSION AND LIMITATIONS OF THE STUDY

In conclusion, it can be said that the proposed practice guideline for caring of the elder population is a possible plan of action from the social work perspective. Indian society which is undergoing a rapid change, needs to address this issue on a priority basis. Promotion of professional help and strengthening family as a care-giving unit, combined with family and community work, may build the pillar to handle the situation potentially. This should be based on 'multi-professional' arrangements based on sensitivity towards the situation besides considering socio-economic condition, cultural preferences etc (Cummings, 2009).

The paper highlighted mainly on the psychosocial intervention and EBP at different levels from the outlook of social work theory and practices. The paper hardly focused on few important parts, like, the right based approach and the role of other stakeholders dealing with the older population. Also the paper did not get an opportunity to explore about the 'promoting graceful ageing' in practice (Lindsay, 2009). Gender differentiation was not considered in this paper which should be considered as a vulnerable part within the vulnerables.

8. FUTURE RESEARCH POSSIBILITIES

There is much scope to undertake research to suggest means and ways to make social work as a more effective discipline while dealing with the elderly population. Gerontological social work is an area which has a lot of scope to promote for the voice while addressing the urgent needs of the elderly. Gender sensitization among older people and filial support for the elderly are yet other areas which need to be focused on. Another possibility may be researching and developing different models which have been already deliberated for the elderly based on the context of rural and urban population, gender, physical health vs. mental health etc.

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IDENTITY, CULTURE AND IDEOLOGY

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ABSTRACT

The purpose of this article was to propose reflections on the theme of identity in the current networked society, considering real-time social media communication and strengthening of capitalism, transformations in socialist countries, and intensification of migrations, mainly to Europe, that have caused problems both for migrants and for the receiving countries. That set of factors is supposedly generating, for post-modern individuals, a set of multiple identities, often contradictory, in their own identification, and in the identification of the relation with others and with the world. Also, if such scenario is confirmed, we propose that, in the sum of those identities, class consciousness is not diluted as well as the positioning in the productive activity, relationship with production means of the capitalist society, to the extent that capitalism advances on all dimensions of human existence, transforming human life into a business, health, and leisure matter from birth to death.

KEY-WORDS: Culture, Identity, Ideology, Capitalism

1. INTRODUCTION

The identity issue seems to be taking significant importance at this time of the networked society (Castells, 2008) or post-modern society (Dumazedier, 2004). Real-time, fast, and practically universal communication, the social media, the advance of capitalism and transformations in many socialist countries are part of a scenario that exposes different and contrasting manners of being, values, attitudes, cultures. Cultures or “culture” is herein understood (Frederico, 2017) as an integral process of life or as a general process of a social nature that emphasizes both the interdependence of all aspects of social reality and the importance of social change dynamics. It is in the perspective of the cultural dimension that the identification of individuals is processed in relation to themselves, to others, to the world that surrounds them, and especially in the case of migrants in general (whose movements have generated a numbers of difficulties, mainly in Europe). Today, the issue of identity faces so many problems that post-modern individuals are not characterized by a fixed, permanent and essential identity, but by several identities, often contradictory. And those identities are also connected to the issue of ideologies, defined (Harnecker, 1973) as systems of social ideas or representations that include relatively autonomous political, legal, religious, esthetic and philosophical ideas, existing in a certain society that function as adjustment to reality, operating as a cement that gives cohesion to said society. Ideologies also include (Harnecker, 1973) systems of attitudes, i.e., behaviors that refer to habits, behaviors and trends, and that between both social representations and attitudes, relations are established that may present a total, partial or even contradictory identity. It is practically in this direction that this article is developed, to the extent that it proposes that, without denying those identification processes related to ethnic groups, gender or religion, one recognizes the role of capitalistic ideology, economic systems that are more and more strengthened and cover all spheres of human life. This article was grounded on analyses of a theoretical nature, without an empirical research study and sought to point to the relation between identity and culture, interweaved by the dynamics of capitalistic ideology.

2. IDENTITY AND NETWORK SOCIETY

Contributions The issue of identity is maybe one of the most complex problems of today, and post-modern individuals (Dumazedier, 2004) are connected to several contradictory and moving identities; post-modern individuals would be fitted into one of the three simplified conceptions that help develop the analysis: Centered and unified Enlightenment individuals, with an interior core that remained the same throughout their existence, and sociological individuals that advance from the notion of such individuals thought as autonomous and self-sufficient to another that was defined by the relation with others that transmitted values, senses and symbols, i.e., the culture of the worlds where they inhabited. What happened was a passage from the Enlightenment individual to the

sociological individual and finally to the fragmented post-modern individual, characterized by open, unfinished and contradictory identities (Dumazedier, 2004).

Five decentering movements (Dumazedier, 2004) were set up in the social theory and in human sciences in the second half of the 20th century that affected the conceptions of individual and identity; the first refers to the Marxist theory that, among other things, placed social relations rather than an abstract notion of man at the center of its theoretical system. The second was provided by Freud, and the discovery of the role of the unconscious in the formation of identity, always incomplete, in formation; the third decentering interfering with the formation of identity refers to language and the theory of Ferdinand Saussure, because language is a social system rather than an individual system that exists before us, and words convey several meanings, in spite of efforts to restrict those meanings. The fourth refers to Michel Foucault and to the issue of the disciplinary power on the individual and on collectivities, and that, the more organized and collective the institutions in the late modernity, i.e., in the second half of the 20th century, the more the individual is subjected to isolation and more vigilance, and to an even greater individualization. The fifth and last decentering refers to feminism, a social movement that started by contesting the social position of women and expanded to the issue of sex and gender identities. It is hard to disagree that those five decentering movements influenced the conceptualization of individual, identity and late modernity (Dumazedier, 2004).

Although from the perspective of this article one can also accept the role of those decentering movements for the conceptualization of the post-modern individual, fragmentation of identities, what we intend is go beyond that idea or, in a certain sense, reinforce the role of the first decentering mentioned that refers to the Marxist theory, to the extent that the capitalistic structuring of society still remains, capitalism is more and more strengthened, advancing on all dimensions of human life, whether individual or collective, from birth to death, from health to leisure, to free time.

Marxism is not “dead” as many would say, singing to Marx a funeral chant, after the end of the experience of ‘real socialism’, celebrating relativism and impossibility to explain reality in a rational manner (Hall, 2006). The same author also points out that the Marxist theory was conceived as a scientific theory for change, for social emancipation, but was assumed by many, without having its meaning clearly understood, and that after the Russian revolution, Marxism eventually became a State ideology that was disseminated throughout the world by Marxism-Leninism manuals, such term not being created by Lenin. In addition, the Marxist theory, or the political economy criticism, was conceived by Marx for the reality of the proletariat of developed countries, but ended by inspiring social revolutions both in underdeveloped countries and in peasant movements in those same countries, where the greatest difficulty would not be the capitalist development, but rather the national issue. Still in the second half of the 20th century, the Marxist theory underwent several developments, according to different theoretical experts, including Raymond Williams, of Cultural Studies, that integrated the spheres of economic infrastructure with the political-ideological superstructure, and pointed out the presence and the meaning of culture in material production (Hall, 2006).

Capitalism, in turn, is increasingly strengthened (Hall, 2006) with privatizations both of essential services such as health, education and social security, and of strategic and lucrative sectors such as telecommunications and ore-mining exploration, for example; and, with the support of IT tools, its impersonal and abstract logic is disseminated worldwide, not to mention the polarization of society into two classes and the advancement of the proletarianization process in post-industrial societies; in fact, it dominates all spheres of social life, showing that culture and economy are completely interconnected. The advancement of capitalism and its values, ways of being, and attitudes may be also identified in leisure activities, for example, in principle, of free choice, by pleasure, and not for profit; research studies that were developed in municipal districts of the City of São Paulo, SP – Brazil, in 2014 and 2015, among others, by students of the Leisure and Tourism Course of Universidade de São Paulo, found that many people say it is impossible to practice leisure without spending money, therefore pointing to a process of commercialization of leisure, in that leisure is transformed into mere merchandise that may only be bought with money.

The reason is that the industrial work in the 20th century is so fragmented and fast that it imposes to workers very significant weariness and tiredness and ends by causing a need for escape, flight; in reality, work, in turn, would be reduced to “making a living” or only ‘making leisure’ (Marx, 2013). Therefore, something very different from Marxist theory ideas (Stavenhagen, 1977) as a process between man and nature, to the extent that by man’s action, man controls and regulates his metabolism with nature, at the same time as he modifies nature, modifies himself; and what distinguishes man’s work from that of bees or spiders, for example, is that man has always in mind, ideally, the result he intends to achieve. Based on this idea, we can conclude that there is a significant gap between

human work performed in an instinctive manner and that offered by the market, when the worker sells his labor force, and what is important, what differentiates the several economic periods is not what is produced, but how it is produced, in what social conditions man works (Stavenhagen, 1977).

In other words, in fact, the two sides lose, always favoring a process of alienation: on the one hand, the repetitive and monotonous work of the urban-industrial society, and on the other, the possible escape to leisure practices that the work product can buy. Everything then seems to be reduced to the market domain: the workforce that sells itself and the leisure that is bought. We wonder if today we are showing an exaggerated concern with the professional training of children for the work market since early childhood. Or even cognitive limits of intellectual and cultural development, that precarious material conditions impose on people. Therefore, isn't society supporting Marx ideas? It seems that the economic conditions not only structures society but also irremediably determines the destiny of human beings.

In this item, we sought to point out the issue of identities in the current information society or post-modern society, stressing the agreement with the decentering theory, that the post-modern individual does not have a permanent identity, assuming different identities, neither fixed nor unified and sometimes contradictory. , However, without abdicating the Marxist conception of class identification through the advancement of capitalism, mainly with disaggregation of real socialism in most countries where it had been implemented. And that advances in almost all dimensions and actions of human life, seeming to orient everything and everybody to production and consumption as an exclusive motivation for human existence, and ignoring such reality is to permit being led, without noticing, by such overwhelming wave. For this reason, in the item below we will address the issue of ideology and culture.

3. CULTURE AND IDEOLOGY

Please From the historical point of view, one can recognize that the term culture (Frederico, 2017) refers to a type of individualized body of intellectual and moral activities, being practically a type of human "court of appeals"; but, one can associate another meaning to this, to the extent that culture is a way of life that includes manners of being, acting, traditions, behaviors, etc., not only to confront totality, but also to analyze common experience and then transform it. And if, differently from capitalism, one thinks of culture in a socialist society, one has to assure that basic qualifications for culture should be broadly formed and communication channels should be equally abundant and fertile (Frederico, 2017). And if culture refers entirely to a way of life, it also includes the ideological level, (Harnecker, 1973) constitutes an objective and indispensable reality for the whole society that covers the systems of ideas – social representations or ideologies, per se, and the systems of attitudes, social behaviors or traditions. Social representations refer to political, legal, moral, religious, esthetic and philosophical ideas of people in a certain society; they do not have an objective or scientific nature; they are full of imaginary elements and relate more to desires, hopes and nostalgia; and although they may contain elements of knowledge, what predominates are elements with the function of adaptation to reality (Harnecker, 1973).

On the other hand, the systems of attitudes – behaviors, (Harnecker, 1973), refer to habits, behaviors and trends of reacting in a certain manner and are more difficult to change than ideas; therefore, not always is a relation of identity identified between both (ideas and attitudes), and may even show some contradiction. In all societies, ideology assures relations of people among themselves, adapting them to the tasks imposed by such ideology, and in the society of classes, those tasks are determined based on the division of people into classes, and ideology is not invented by those who dominate, but justifies as natural the condition of both; the dominant and the dominated, the explorer and the explored (Harnecker, 1973); dominants and dominated integrate dialectically, are complementary, and participate in a certain socioeconomic system. Classes are not immutable; they are formed and developed within society, result from contradictions and at the same time contribute to the development of those same contradictions; in addition, the conscious action of a certain class may be the radical transformation of social structures or maintenance of such structures, and this is related to particular historical circumstances, and only empirical research may describe/explain such particularities (Williams, 1969).

Therefore, what we intended to address in this item about culture and ideology was to point connections between both, stressing that ideology is present in all societies, functioning as a link that provides cohesion to participants or people belonging to it, because ideology defines roles, functions and social relations. Ideology happens mainly in the

field of ideas (religious, esthetic, political, etc.), social ideas or representations that not always coincide with attitudes and behaviors. The totality of such social representations defines and interferes with the process of our personal identification, in the identification in relation to others and to society. And ideas and social representations that are imposed belong to the dominant group mainly when one thinks that in our times almost all media vehicles are subjected to market functioning and those who pay more disseminate or publish ideas. With the technological advancement that enabled real-time communication and the strengthening of capitalism, what matters is to produce and consume, in an intensely competitive condition.

Finally, this article discusses some statements on personal identity and otherness, the latter very difficult, because it is the recognition of difference that enables the conscience of alterity, and the other attracts and frightens because of the difference, and sometimes when the other reflects a mirrored image, it is then that people see themselves better, because the difference existing between the 'self' and 'other' becomes clear. However, the difference that is necessary for understanding is also the reason for conflict, often created because in the conflict between different people, one understands their power on others and treats others as different to make them an enemy and dominate them, obtaining from them the material advantages of dominance.

4. CONCLUSION

The purpose of this article was to raise questions referring to the process of identification of the individual, the person, in regard to himself, to others and to the world surrounding him, in the condition of the current networked society and technology, real-time communication, social media and strengthening of capitalism, in view of problems in the socialist countries and recently intensified migration process.

In view of the strengthening of capitalism that advances on all spheres of human existence, this is a system of social representations or ideas oriented to dissemination of values such as the act of producing, consuming, being included in the labor market, gain and productivity. As if, by being human, no other possibility could be contemplated, except working, making money, having possessions and even 'selling' one's free time, buying leisure, according to market laws. And childhood itself, in large cities, seems to have succumbed to this dominance, deprived from spontaneous child play, children interacting on the streets with other children, because the streets are now crowded with cars.

And if today, one interacts with many and sometimes contradictory identifications, one should not forget that there is a common identification, resulting from participation in a capitalist society that imposes on us all its production and consumption values and that this imposition often happens through a dominance that differentiates to subjugate and take material advantage, whether for political, ethnic and religious motivations and even by the use of military force.

More than presenting relevant conclusions, our proposal was to reflect on that process of identification, in that universe of information, virtual contacts and images, where the notion of person, identity, self-awareness in relation to others and to the world seems to get diluted, fragmented. What is the direction to take? The empirical research and the scientific knowledge may give new directions to the actual society, about her culture, values and her capitalist structure. Because social relationships, that establish parameters for our identities, are not easy to understand: they are intertwined in economic issues, and, it seems the technology and businesses constitute the unique priority of the moment. Changing that may be the great challenge of Humanities and Social Sciences.

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THE BLOGGING SKILLS AND WRITING ATTITUDES OF PRE-SERVICE TEACHERS OF MINDANAO STATE UNIVERSITY-GENERAL SANTOS CITY

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ABSTRACT

In this milieu, technology has altered the teaching-learning landscape. With the presence of various educational paradigms and innovations, the employment of blogging can usher convergence in education that can pave a way to the collective formation of students' initiatives and creativity. Thus, this study determined the blogging skills and writing attitudes of the students. The respondents were the fifty-four (54) junior pre-service teachers of Mindanao State University (MSU), School Year 2013-2014. The researchers utilized a modified and validated rubric. The results disclosed that students have moderate blogging skills. Moreover, it was found out that they have positive writing attitude. The study contributes to the body of new knowledge since it revealed that even though blogging does not affect students' writing attitudes, it enhances students' 21st century skills at the same time enrich their power of creativity and adaptability.

KEY-WORDS: blogs, blogging, blogging skills, writing attitude

1. INTRODUCTION

The proliferation of Information Communications Technology (ICT) has changed the educational landscape and standards. New trends and innovations were catered to meet the challenges of the 21st century learners. Hence, the complexity of these needs calls for a timely response, especially in the teaching and improving students' writing. Learners before use paper and pen in writing, but today, they enjoy using a laptop, netbook, tablet, iPad, and other electronic gadgets. Weblog or blogging is one of the innovations in technology that may be utilized by English teachers to improve students' writing. Several authors claimed that blogging can be used in various ways. References (Kelley, 2008; Armstrong & Retterer, 2008; Morley, 2007) posited that students and teachers should maintain a regular online journal or blog to enhance their creative writing skills. One of the avenues to help students properly organize their ideas, which is integral to communication is through blogging activities. Reference (Khampusaen, 2012) revealed that blogging helps students: organize their thoughts, follow the convention way or proper usage of words, present clear ideas, and improves vocabulary. It is noteworthy to mention that blogging was found not only in a productive and fruitful project but also as a tool in improving students' attitudes towards writing.

Moreover, Heinitz (2012) stressed that student's attitudes toward writing are enhanced when they see the value of their writing beyond the classroom. Though earlier literature shed light on the benefits of blogs to improve students' skills, limited empirical researches have been done in MSU to examine whether blogging skills have effects on students' writing proficiency. Thus, this study was undertaken to determine the blogging (online writing) skills and writing attitudes of the Pre-service teachers of MSU. Almi Love A. Sibag and Ava Clare Marie O. Robles, are with Mindanao State University, Philippines. Specifically, this study determined the extent of students' blogging skills relative to ideas, organization, style, convention way of writing. Likewise, it identified the writing attitudes of the Pre-service teachers and determined if there a significant relationship between blogging skills and students' writing attitudes. It is hoped that this endeavor may be of help to individuals as it provides insights to the administrators, teachers and other researchers on how to employ innovations attuned to the learning needs of the 21st century students.

2. LITERATURE REVIEW

The increasing usage of ICT in Education made a change in the teaching of English, particularly in writing. Teachers tend to innovate to be responsive to their students' needs (Robles, 2013). Blogs are now used as a medium for dialogs among bloggers, readers, teachers, students worldwide (Nowson, 2006). Specifically, blogging is used as a means to improve: students' writing aptitude (Roth, 2007; Kelley, 2008); attitudes towards writing (Fageeh, 2011; Madalina, 2010); and capacity to evaluate others' writing (Jones, 2006). Additionally, blogs were used as a platform

to enhance students' writing skills, particularly in ideas/content, organization, and grammar (Mabuan, 2015). Moreover, the study of Simsek (2009) revealed that blogging or online writing skills of students affect the students' writing performance positively to a great extent.

The study of Harwood (2010), however, showed that blogs are very useful to converge students ideas at the same time promote students' editing skills requisite to 21st century learning. He added that with this innovation, a student blog their buddies, which gave them opportunities to correct others and be corrected. This mechanism helps them improve their skills in sentence formation and convention (usage of standard word forms). Furthermore, (Gersten et.al 2001) posited that improving students' writing attitudes may be addressed through various interventions, such as feedback, and making instruction engaging and "fun." (Zumbrunn, 2010) high lighted that students' writing attitudes influence their writing self-efficacy. Thus, students with positive attitudes toward writing tend to attain higher efficacy than those who have negative attitudes. Writing attitudes subsume affective dispositions involving how the act of writing makes the author feel, ranging from happy to unhappy. Finally, (Pajares and Johnson, 1994) asserted that confident students tend to feel less apprehensive about their writing. Given this, blogging can serve as an avenue to love students' ideas as well as raise students' confidence in writing.

3. METHODOLOGY

This study utilized a descriptive-correlation method. It described the extent of blogging skills of Pre-service teachers in terms of idea generation, organization, style, convention. Additionally, it identified the significant relationship between the blogging skills and writing attitude of the Pre-service teachers. Fig.1 shows the research design of the study.

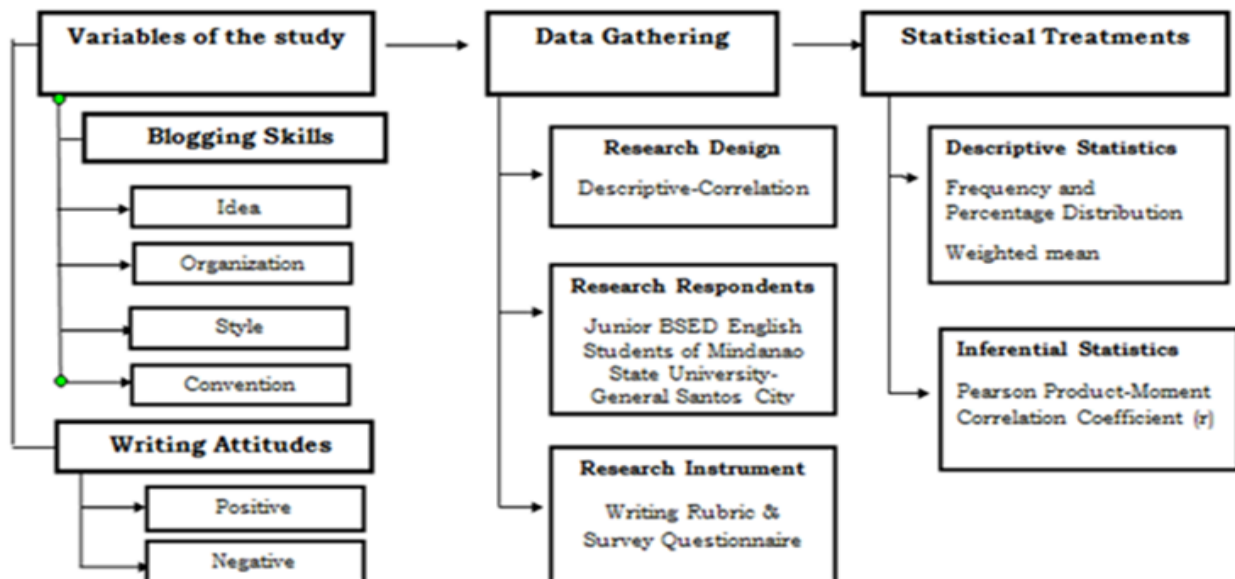


Fig.1. Research Design

The respondents of the study were the whole population of fifty-six (56) Junior Pre-service teachers major in English, enrolled during the Academic Year 2013-2014. These respondents had undergone online writing or blogging as one of the activities in their English subject. The researchers utilized an adapted and modified rubric of (Buford High School, 2012) which was used to determine students' blogging skills. It also adapted and modified the survey questionnaire of (Rafanello, 2008) to identify the writing attitude of the students. The instruments used were validated by a panel of three experts who have Master's degree in English. The researchers employed frequency count and mean percentage to interpret the extent of the blogging skills of the Pre-service English teachers. They also utilized Robert Ebel's criteria of mastery to in interpreting the blogging skills of the students. In addition, Cronbach alpha was used to ensure the internal validity and consistency of the instrument utilized in the study. Correlation analysis was made to test the relationship between blogging skills and students' writing attitudes.

4. RESULTS OF THE STUDY

Table 1 presents the blogging skills of the Pre-service teachers. In terms of organization, they have very high blogging skills ($w_m = 85.62$), for ideas and style the Pre-service teachers have low blogging skills ($w_m = 5.66$).

TABLE I
THE BLOGGING SKILLS OF PRE-SERVICE TEACHERS OF MINDANAO STATE UNIVERSITY-GSC

Variables (Cronbach alpha=.802)	Mean Percentage	Description
Ideas or content	5.66	Low
Organization of ideas	85.62	Very High
Style	5.66	Low
Convention	3.06	Very Low
Mean Score=14.06	56.24	Moderate

Legend: 86% - 100% Very High; 71% - 85% High
40% - 70% Moderate; 15% - 39% Low; 1% - 14% Very Low

However, relative to convention (proper usage/mechanics), their skills were considered very low ($w_m = 3.06$). The overall mean score of 14.06 showed that the students had moderate blogging skills. Data disclosed that students had reasonable writing skills although the use of blogs was newly introduced to them. The result also implies that even though they were beginners, they can highly organize their ideas, which is an integral ingredient in developing students' 21st century learning skills. This result further indicates that blogging, when properly conducted, enhances students' 21st century skills. This result is consistent with the findings of (Cequena and Gustilo, 2016; and Mabuan (2015) that as blogging reduces students' writing anxiety, in effect, it enhances students' 21st century skills specifically on writing and organization of ideas. This result also affirms the findings of (Khampusaen, 2012) that blogging improved students' writing skills to a great extent ($w_m = 3.8$).

Table 2 shows the writing attitudes of Pre-service teachers. Based on the table, it revealed that most of them have a positive attitude in expressing their ideas in a productive manner ($w_m = 4.28$); writing down ideas ($w_m = 4.26$), and using imaginative mind when writing ($w_m = 4.08$). However, they were neutral or uncertain in submitting their writings to magazines for evaluation and publication ($w_m = 3.19$). The overall mean of 3.81 implies that the students have a positive writing attitude, which is a potential ground to introduce innovative teaching strategies necessary in enhancing their 21st century learning skills. The result implies further that by sustaining the positive attitude of the students, teachers can further enhance their creativity and adaptability to any forms of innovations requisite to 21st century skills of the students.

The result of this study is in conformity with the findings of (Cequena and Gustilo, 2016) that blogging (weblog) encourages them to be more creative as they experience positive feeling and excitement while blogging. These findings also affirm the conclusion of (Clark and Dugdale, 2009) that there is a close link between and among creativity, enjoyment and attitudes. According to them, bloggers tend to be more adaptive and creative in writing short stories, lyrics, plays/screenplays and poems than those who do not own any blog. They further stressed that bloggers tend to have a positive attitude towards writing when technology or any forms of innovations are properly given to enhance the 21st century skills of students.

TABLE 2
THE WRITING ATTITUDE OF PRE-SERVICE TEACHERS OF MSU-GSC

Items (I...)	(Cronbach alpha=.802)	WM	Description
1. can express ideas through writing in a productive manner.		4.28	Positive
2. like writing down ideas.		4.26	Positive
3. use imaginative mind when starting to write.		4.08	Positive
4. like seeing thoughts on paper.		4.06	Positive
5. think writing is much fun.		4.00	Positive
6. brave when the output is evaluated.		3.91	Positive
7. can do writing whenever possible.		3.87	Positive
8. feel confident in expressing ideas in writing.		3.85	Positive
9. enjoy discussing the writings with others.		3.74	Positive
10. think she/he can write as well as most people.		3.68	Positive
11. can construct grammatically correct sentences.		3.68	Positive
12. can write down ideas clearly.		3.64	Positive
13. think that people seem to enjoy what he writes.		3.57	Positive
14. want his/her friends to read what he has written.		3.34	Neutral / Uncertain
15. like submitting the writings to magazines for evaluation and publication.		3.19	Neutral / Uncertain
Overall		3.81	Positive

On the other hand, correlation analysis was done to test the association between blogging skills and writing attitudes of Pre-service teachers of MSU-GenSan. The extent of the relationship was determined by the coefficient (r) as shown in Table 3.

TABLE 3
CORRELATION RESULTS ON THE BLOGGING SKILLS AND WRITING ATTITUDES OF PRE-SERVICE TEACHERS

Indicators	Mean	Coefficient (r)	Extent of Rel.	p-value	Remark
ideas	7.06	.056	negligible correlation	.690	NS
style	3.43	.086	negligible correlation	.539	NS
organization	3.33	.028	negligible correlation	.842	NS
convention	3.24	.072	negligible correlation	.607	NS
Overall	17.06	.071	negligible correlation	.614	NS

Data revealed that there was no significant relationship between the said variables as supported by an r -value of .071 with a p -value of .614. A p -value of greater than .05 ($p=.614 >.05$) indicates that the relationship between the two variables is not significant. This finding implies that blogging skills will not influence the writing attitudes of the Pre-service teachers since blogging skills were not significantly related to students' writing attitudes. Hence, the

assumption of no relationship is rejected. Moreover, the extent of the relationship between variables was negligible. The result of this study confirms the study of (Clark and Dugdale, 2009) that writing behavior does not affect the blogging skills of the students.

5. CONCLUSIONS

In the light of the findings, the following were the conclusions:

First, the blogging skills of the majority of Pre-service Education teachers are moderate. Secondly, most of the students were found to have a positive attitude towards writing. Hence, blogging may serve as a potential tool for teachers develop students' creativity and adaptability requisite to improve their 21st century skills. Thirdly, there is no significant relationship between the blogging skills and writing attitude of the Pre-service teachers of MSU-GSC. The results indicate that the blogging skills will not affect students' writing attitudes. However, it is important to note that blogging enhances students' ability to organize ideas, which is central to the advancement of students' 21st century skills. For these reasons, teachers are encouraged to employ this type of innovation in their teaching methodology.

6. IMPLICATIONS AND RECOMMENDATIONS

Several implications with corresponding recommendations are drawn in the study.

As dispensers of new knowledge, teachers are encouraged to use blogs as their teaching strategy to ignite students' eagerness. In this manner, students may enhance their 21st century skills particularly in converging and communicating their ideas. Nonetheless, before the conduct of the blogging activity, English teachers should emphasize the importance of checking the accuracy of students' work particularly on the: subject-verb agreements, word formation, and mechanics while blogging.

Secondly, the findings of the study imply that blogging is a useful activity that enhances students' ability to organize their ideas, which is crucial to the development of students' 21st century skills. In view of this, teachers may consider the use of weblogs as a group activity to help students not only to master their academic writing skills but also to improve students' 21st century skills (e.g. communication skills, collaboration skills), and attitude. In fact, this innovation lessens students' anxiety, which is a barrier to good writing performance.

Thirdly, peer feedback is highly encouraged. This mechanism will help Pre-service teachers gain more confidence and equipped for their future teaching tasks. With this, students must be properly trained before the commencement of the blogging activities to enhance the 21st century skills and enrich their creativity and adaptability.

Lastly, the experimental and mixed method may be done to investigate the effectiveness and usefulness of blogging in improving students' writing skills. Furthermore, error analysis may also be made to identify students' academic needs and difficulties in English.

ACKNOWLEDGMENT

THE AUTHORS WISH TO THANK, JIOHARIANICART, PH.D., DEAN OF THE COLLEGE OF EDUCATION, MINDANAO STATE UNIVERSITY, FOR HER SUPPORT IN COMPLETING THIS ENDEAVOR. ALSO, THEY WISH TO THANK ALL JUNIOR PRE-SERVICE TEACHERS FOR THEIR SHARED EFFORT, TIME, AND COOPERATION IN PROVIDING THE NEEDED DATA FOR THIS STUDY.

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INDIGENOUS AGRICULTURAL KNOWLEDGE SYSTEM OF THE PALA'WAN TRIBE IN SOUTHERN PALAWAN

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ABSTRACT

This study was conducted in order to document the indigenous cultural management practices in crop production, post-harvest practices and plant materials used in pests' management among the Pala'wan tribe in Southern Palawan, Philippines which could be used as basis in policy making and in planning practical intervention for small upland farmers. This is an anthropological study of which data were collected through personal interview technique, community immersion and triangulation method. The results of the study indicate that the tribe's indigenous cultural management practices in crop production are sustainable as they are anchored on the philosophy of sustainability worldview. From the selection of potential kaingin farm down to harvesting, for instance, the Pala'wan tribe observed eco-friendly criteria in doing their farming activities, e.g., potential kaingin farm should have rested in fallow for, at least, three years. The tribe's post-harvest practices are also sound and practical as they minimized post-harvest related losses of crops. They are using facilities which ensure proper storage of crops, e.g., the storage hut (*legkew*). Though, the tribe started dropping their indigenous practices in pest management using indigenous materials due to acculturation, they still have knowledge of some indigenous materials used in the management of agricultural pests; locally available plants with bio-pesticidal properties are still used.

KEY-WORDS: Cultural management practices, indigenous knowledge, pest management, post-harvest practices, Pala'wan tribe

1. INTRODUCTION

The province of Palawan of the Philippines is considered the Last Frontier in the country. However, its rich fauna and flora are in the verge of deterioration as its forest covers are eroding at the rate of 5,500 hectares per annum (PCSDS, 2010). The problem on the degradation of its forests is coupled with its increasing population. Migrants contributed much of its escalating population. In fact, the province has the highest migration rate in the country; and, its population is increasing annually at 3.92 per cent (<http://chette.tripod.com/id1.html>). It is estimated that the total population of the province in 2020 will be 1.2 million. Most of these migrants coming from the different parts of the country are farmers who seek available lands to cultivate for agriculture. Available forested lands or even forest reserves are the targets for cultivation. These migrant-farmers practiced clean culture type of farming system. This type of farming system contributes (and had contributed) to the rapid loss of forest diversity and denudation. C. N. Bernadas, Jr., Faculty Member, College of Agriculture, Forestry and Envi. Science (CAFES), Western Philippines University – Quezon Campus, Quezon, Palawan, Philippines, bernadasjun38.jb@gmail.com (Bernadas, 1995). With this fast deforestation and rapid increase of population, Palawan forest ecosystem and the indigenous knowledge systems of its indigenous people would ultimately lost without notice. The sustainable upland farming system practiced by the indigenous tribes would be forgotten. Their environment-friendly practices of cultivating crops, especially rice would be forgotten as well; together with the loss of their sound pest management system, post-harvest practices and food crops, fruits and vegetables. FAO (2009) underscored the need to document such knowledge system before these would be forgotten. Hence, based on these premises, this study was conducted in order to identify the (a) indigenous cultural management of crops; (b) indigenous post-harvest practices; and, (c) indigenous plants used in pest management before these knowledge systems are forgotten and lost.

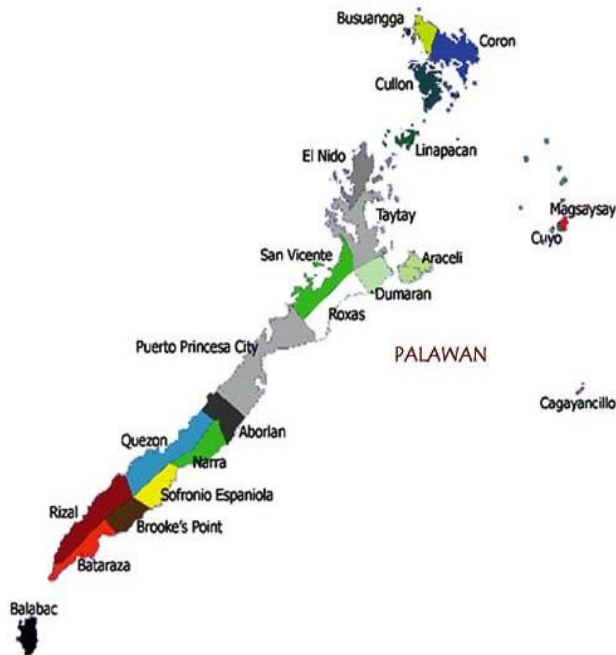
2. METHODOLOGY

The data needed in the study were collected through community immersion, indirect participant-observations and personal interview using guide questions with the chieftain and elders in the municipalities of Rizal and Quezon, Palawan (Fig. 1). Then, the collected data were validated through triangulation method with the tribal members.

3. RESULTS AND DISCUSSION

This section is organized according to the issues the research aimed at determining vis-à-vis with its objectives: identification of indigenous cultural management of crops, indigenous post-harvest practices and indigenous plants used in pest management

Indigenous Cultural Management of Crops. There are 10 major indigenous cultural management practices employed by the Pala'wan tribe in their slash-and-burn farming system. In doing these practices, rituals are always associated based on the belief that gods/spirits are living in the ecosystems; hence, such systems should remain balanced. These cultural and management practices are the following:



Study sites



Figure 1 Map of Palawan Showing the Study Sites

1. Identification or selection of potential kaingin farm. A potential kaingin farm would only be opened for cultivation when it satisfied a given criteria or indicators; e.g., presence of earthworm excreta in abundance, absence of weeds - especially *Imperatocylindrica*, the plot has rested for fallow for five years, not "sacred" (considered habitat of gods/spirits), etc. This activity is done late December of the previous year to early January of the coming year.
2. *Ririk* (Under-brushing). To facilitate felling down of big trees and to ensure that all undergrowth is cleared, under-brushing is done. Bolo is used.

3. *Tumbada* (the actual felling/cutting down of trees). The felling down of trees using axe and big bolo. This is usually done in January to February.
4. *Ramat* (Cutting the felled trees into pieces to facilitate drying and burning)
5. Burning the dried felled down trees and litters.
6. *Durok*(Gathering and re-burning of un-burnt litters) and *Teltal* (dividing the field into partition in preparation for planting/seeding). The farmers planted several lines of rice, both sticky and non-sticky, to avoid mixing-up of the crops, *teltal* is done.
7. Seeding/Planting of upland rice and other crops. This is done usually April to May.
8. Weeding. Mechanical weeding using short bolo is done usually in June to July.
9. Insect and vertebrate pests control and management. With the influence of the settlers, young generation of Pala'wan farmers started using chemical pesticides in managing pests. However, using indigenous materials are still observed.
10. Pre-harvesting/Harvesting. Pre-harvesting ritual is done; then, harvesting the panicles is done with the use of *kayeg* (a hand-held bladed knife). Straws are left in the field to decay.



An upland farm left to rest in fallow: a sustainable practice of rejuvenating the farm.



Standing cassava plants after the plot is left forest in fallow. They do not leave the plot bare.

Indigenous Post-Harvest Practices. For the Pala'wan farmers, post-harvest practices and facilities are very important considerations in their effort to have enough food before the next cropping season. Post-harvest practices are not only applied to rice, their main crop, but also to other secondary crops: corn, cassava, sweet potato and other grains.

Harvested rice panicles are dried under the sun, transported and deposited in a storage hut (*legkew*) and other storage facilities which ensure the freshness and viability (for planting materials in the next cropping season) of the stuffs.

These facilities do not only protect the stuffs from storage pests' infestation but also provide the appropriate ventilation and physical considerations which ensure proper storage of such stuffs.



Legkew; posts are fitted with round slab to protect rodent to get into the storagehut.



Inside the *Legkew*: pile of dried rice panicles. When used, these panicles would be threshed.



More storage facilities: *Tabungos* & *Rubo* (B). *Rubo* used as storage of seeds for planting materials.



Hauling/transporting facilities: *Kekolwan* (C) and *Tabig* (D). *Tabig* is used in transporting grain stuffs

Indigenous Plants Used in Pest Management. With the coming of the settlers and in the opening of puddled rice farming, pests abound in the area. With the high incidence of pest's infestation and the influence of the settlers, the young generations of Pala'wan farmers started dropping the use of indigenous materials in managing pests and use commercial agro-chemicals. Nevertheless, the following materials are still used to control insect pests: *tuba* (*Derris eliptica*), *pangi* (*Jatropha curcas* Linn.), *kedot* (*Dioscorea hispida*), *kenomey*, *banga* (*Oraniapalinda*), *besak/olam* (*Barringtonia racemosa* L.), *megelsa* (*Croton tiglium* Linn.), *kulapo* (*Sargassum* sp.), *luyangdilaw* (*Curcuma longa*), *kakawate* (*Gliricidia sepium*), *tagbak*

(*Kolowratiaelegans*C.Presl), cashew(*Anacardiumoccidentale*) seeds and *batbat*(*Arengaundulatifolia*Becc). These are some of the common indigenous plants they used in pest management. The most common methods used in the administration of these plants materials are through smudging, spraying (sap is extracted), and scattering/placing the plant parts on and around the field. They reported that such plant materials are effective in managing pests.



A. Tuba

B. Megelsa



C. Potat

D. Kedot (9)

4. CONCLUSION

Based on the results of the study, the following conclusions could be postulated: (a) the Pala'wan cultural management practices in crop production are sustainable, (b) locally-made post-harvest facilities are appropriate and cost-efficient, (c) though they started dropping the use of indigenous plant materials in pest management, they still are knowledgeable and using such materials, and (d) fallow method of farming is still practiced.

5. RECOMMENDATION

The results of the study indicated that the indigenous cultural management practices in crop production, post-harvest practices and the use of locally available plant materials in the management of pests are sound and sustainable. However, the Pala'wan farmers started to abandon their IKS as influenced by the settlers. Hence, the following are recommended: (a) identification and documentation of their knowledge systems relative to environment-friendly agricultural development, (b) indigenous plants with bio-pesticidal properties shall be collected and conserve *ex situ*, (c) appropriate post-harvest facilities could be disseminated to other farmers and commercialized (as handicrafts), (d) fallow method of farming could be introduced to other farmers, (e) an in-depth research be conducted to assess the potency of indigenous plant materials used in the management of pest vis-à-vis with commercial agro-chemicals, and (f) collection, propagation and conservation of indigenous food crops foraged from the wild in an *ex situ* environment.

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