Intensification of Research Culture in Education towards Improved Organizational Learning Outcomes

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Abstract

The study aimed to determine the status of research intensification in DepEd Region IV- A Calabarzon. The descriptive method of research was utilized to gather the data from the 20 SEPS on Planning and Research, select EPSs and teachers as subjects for the survey through purposive sampling. The study used descriptive statistics and weighted mean as the statistical tools for the analysis of data.Most number of both completed and on-going research are under teaching and learning thematic area. There is an average of only 10 research papers published. Most of their research undertakings are on their own expense. An average of 5 training, seminar and workshop is attended related to research. Most of the localized outputs specifically learning materials focus on Math, Science and English. There is only one policy localized as a result of research study. Majority of the respondents were motivated to write action research because of the encouragement and support from their superior. This study limited the description of research initiatives in terms of action research conducted, attendance to training and conferences, learning materials developed, localized research- based policies, continuous improvement projects and the difficulties encountered in writing research paper.

Keywords: research culture; strategic interventions; learning outcomes.

1. Introduction

Teaching might not be the most popular profession in the world but it is undoubtedly the most populated. Over the years, the teacher and the teaching profession in the Philippines have been confronted by various issues and concerns that are directly or indirectly affecting them.

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The dynamics of the profession offers a fertile ground for debates and discussions. The Department of Education (DepEd) has attempted to implement educational reforms, programs and projects to address the key issues of access and quality of basic education, relevance and efficiency of the education system [1].

Through DepEd order, they adopt Basic Education Research Agenda in which it provides guidance to DepEd and its stakeholders in the conduct of education research and in the utilization of research results to inform the Department's planning, policy, and program development aligned with its vision, mission, and core values. Research serves as a solution to societal problems that are apparent from community level up to different government and non-government agencies. Thus, most government and nongovernment agencies are developing research agenda in order to find solutions to prevailing problems observed in the society. The Department of Education as an agency of the government take part in addressing problems particularly the teaching-learning process. In other words, the teachers conduct research relative to the solutions of the problems in their classrooms which will in turn improve the educational system of the country. Although there is no specific mandate coming from the higher authorities of the Department of Education requiring teachers to conduct research, conduct of research should be promoted by the middle level educational managers in order to make realistic decisions. To corroborate this concept, the DepEd issued DO No. 65, s. 2003 which institutionalizes the research-based decision and policy making in the department. This order stipulates that policies in the department should be based on research [2].

On the other hand, schools in the country have retained strong teaching functions and weak research functions [3]. Despite the DepEd initiatives, the current state of education research in the Philippines leaves much to be desired in terms of quantity, quality, thrusts, and contribution to national development. Because teachers are expected to be the primary producers of research in a school setting, it would be useful to enhance their research productivity as well as of their own ability to meet the expectations of their institution. Their voices must be heard as they contribute to the dialectic of research culture.

Moreover, DepEd has provided policies and mandates that are largely geared towards the improvement of research productivity. Therefore, providing teachers with the necessary skills, knowledge, and focus to engage in meaningful inquiry about their professional practice will effect positive changes concerning the educative goals of the learning community [4]. This research aims to determine the status of research intensification in the school/division level. Specifically, this paper aims to describe the research initiatives in terms of action research conducted, attendance to trainings/seminars/workshops research related activity, attendance to conferences/fora/symposia, learning materials developed, localized research-based policies, and continuous improvement projects. In addition, this determines the influence/motivation of the employee to conduct action research. Similarly, this paper identifies the difficulties encountered in writing action research. To assist the teachers-researchers, this paper proposed strategic interventions to sustain the culture of research in CALABARZON.

2. Materials and Methods

2.1 Brief Review of literature

This paper aims to determine the status of research intensification of teachers. Action research is an attractive option for teacher researchers, school administrative staff, and other stakeholders in the teaching and learning environment to consider. Specifically, action research in education can be defined as the process of studying a school situation to understand and improve the quality of the educative process. Within education, the main goal of action research is to determine ways to enhance the lives of children. At the same time, action research can enhance the lives of those professionals who work within educational systems [4].

The public secondary and elementary school teachers are moderately capable in writing a research proposal and publishable research paper or article. There is no other profile which affects the research capabilities of public secondary school teachers in writing a research proposal and publishable research paper or article except their position in the school. The research capabilities of public elementary school teachers with respect to writing a research proposal and a publishable research paper or article are affected by sex, civil status and research seminars/trainings attended and not age, position and by highest educational attainment [2].

In addition, it has been observed that numerous conferences, seminars and trainings are conducted on a national basis, thereby entailing large costs for travel and transportation, particularly for those coming from distant locations. In many cases, participants resort to solicitation of funds from local officials, congressmen, and other sources just to be able to fund these costs. In view thereof, the following measures shall be adopted to minimize the expenses associate with these national activities.

In the participating countries, an average of 89% of teachers in lower secondary education engaged in professional development. The 11% who did not are a source of concern. A significant proportion of teachers think that professional development does not meet their needs: over half reported wanting more than they received during the previous 18 months. Teachers who paid the full cost of professional development took part in more than those who received it free or at partial cost. This is partly because the more time-intensive development activities were more likely to be paid for by teachers themselves. There is a need not just for better support for teachers to participate in professional development, but for policy makers and school leaders to ensure that the development opportunities available are effective and meet teachers' needs [5].

Moreover, in learning materials, textbooks are critical inputs impacting student learning. Textbooks are more likely to improve student learning when they are based on a curriculum, when they employ a language that is easily understood and at an appropriate level for students and teachers, and when teachers adapt their pedagogy to achieve effective use [6].

Until 1987, the government directly managed and supervised the production and distribution of textbooks and manuals through the Instructional Materials Development Council (IMDC). However, this responsibility was transferred to private publishers with the passage of the Book Publishing Industry Development Act (RA 8047). This Act also provided for the adoption of multiple rather than single textbooks. Other teaching/learning support materials available in the schools include guides or manuals, teacher support/, workbooks for students, apparatus for science and technology, and home economics, video and cassette tapes, educational computer software, charts, maps and models [7].

In addition, the study of Selga [8] identified that there is a deficiency in the availability and adequacy of the instructional materials, hence, there is a need to develop a work text. Further, DO 13, s. 2012 serves as the guidelines on the allocation, delivery, and distribution of instructional materials (IMs) to support the K to 12 curriculum.

In an article written by Mateo [9], the Department of Education (DepEd) will produce updated learning materials as part of the continuing development of the modules used in the K to 12 program. Luistro said DepEd's use of modules, instead of books, will make it easier for the agency to update existing learning materials as they can reprint in parts. DepEd has a P502-million budget for printing and publication expenses this year under the General Appropriations Act.

Moreover, in the study of Pamatmat [10], the research attitude of the teaching personnel in a university with respect to relevant activities which reflect interest relative to research, including the rudimentary tasks that reveals their research competence, research efficacy, their belief in the usefulness of research in their lives and their involvement in research all contribute to the development and sustainability of the university towards excellence in terms of instructional quality, research and publication, institutional qualification and extension and linkages.

The respondents of the study were the school head or in-charge of research activities. The study employed purposive sampling in the distribution of questionnaire. With the objective to gather data and relevant information, the study utilized self-constructed questionnaire. The study used descriptive statistics and weighted mean as the statistical tools for the analysis of data.

2.2 Research Methods

This study assessed the status of research intensification in the department and aimed to propose strategic interventions to sustain culture of research among educators in the region. This research employed descriptive method of research. The respondents of the study were the select school head and in-charge of research activities. The study employed purposive sampling in the distribution of self-constructed questionnaire with the objective to gather data and relevant information. This research used descriptive statistics and weighted mean s the statistical tools for the analysis of data.
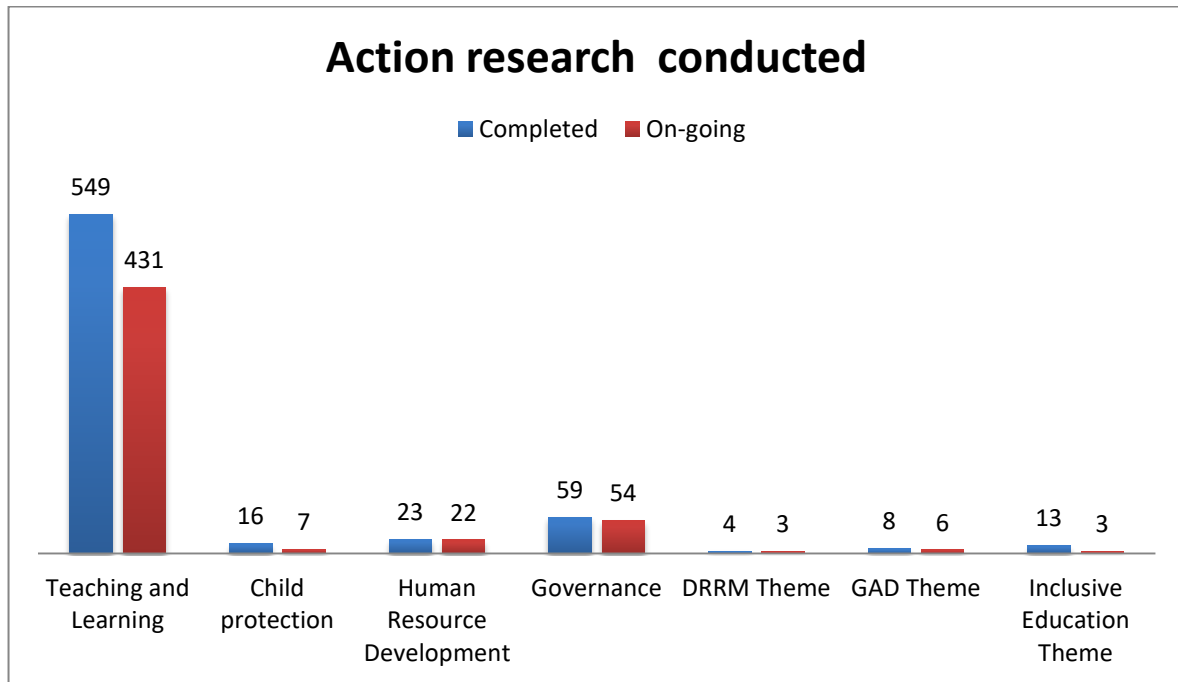
3. Results and Discussion

3.1 Research Initiatives in School/Division Level

3.1.1 Action Research Conducted

There are completed and on-going action researches in the school/division level. Thematic areas of these researches include teaching and learning, child protection policy, human resource development, governance, and cross-cutting themes such as DRRM, GAD, and inclusive education. Figure 1 shows the action research conducted in the school/division level. For researches conducted under teaching and learning, there are 549

completed researches and 431 on-going. Child protection researches have 16 completed and 7 on-going. In human resource development, there are 23 completed researches and 22 on-going. Under the area of governance, 59 are completed researches and 54 are on-going. In cross-cutting themes, there are 4 completed and 3 on-going under DRRM, 8 completed and 6 on-going under GAD, and 13 completed and 3 on-going under inclusive education.

Figure 1: Action Research Conducted in School/Division Level

Table 1 shows that the most number of both completed and on-going researches are under teaching and learning thematic area with 549 and 431, respectively. Meanwhile, the least researches were conducted under DRMM with 4 completed and 3 on-going. On the average with seven thematic areas, there are 96 completed and 75 on-going action researches conducted in the school/division level.

Table 1: Descriptive Statistics on the completed and on-going researches

Researches	N	Minimum	Maximum	Mean	Std. Deviation
Completed	7	4.00	549.00	96.0000	200.58415
On-going	7	3.00	431.00	75.1429	157.97619
Valid N (listwise)	7				

Table 2 shows the completed researches in which there are an average of 10 researches which are published while 22 were unpublished. With regards to funding sources, there are an average of 54 with own expense, 5 with DepEd support, and 17 with LGU support.

Table 2: Descriptive Statistics on completed researches

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Published	7	.00	61.00	74.00	10.5714	22.30738
Not published	7	1.00	110.00	156.00	22.2857	39.92791
Own Expense	7	1.00	305.00	384.00	54.8571	111.40531
With DepEd support	7	.00	36.00	37.00	5.2857	13.54885
With LGU support	7	.00	121.00	121.00	17.2857	45.73370
Valid N (listwise)	7					

Table 3 shows the on-going researches and their funding sources wherein there are an average of 57 with own expense, 103 with DepEd support, and 46 with LGU support.

Table 3: Descriptive Statistics on going researches

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Own Expense	4	1.00	186.00	228.00	57.0000	87.66223
With DepEd support	2	1.00	205.00	206.00	103.0000	144.24978
With LGU support	1	46.00	46.00	46.00	46.0000	
Valid N (listwise)	0					

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3.1.2 Attendance to Training/Seminar/Workshop Research Related Activity

Table 4 displays that an average of 5 training, seminar, and workshop have been attended. Respondent with the most number of attendance has 19 seminars while others have attended only one. Further, there were three seminars conducted in the division, five in regional, and one in national. With regards to funding, six researches have their own expense, 28 with DepEd support, and 6 with LGU support.

Table 4: Descriptive Statistics on attendance to training/seminar/workshop research related activity

Activity	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Seminar/Training/workshop	9	1.00	19.00	50.00	5.5556	6.67291
Valid N (listwise)	9					

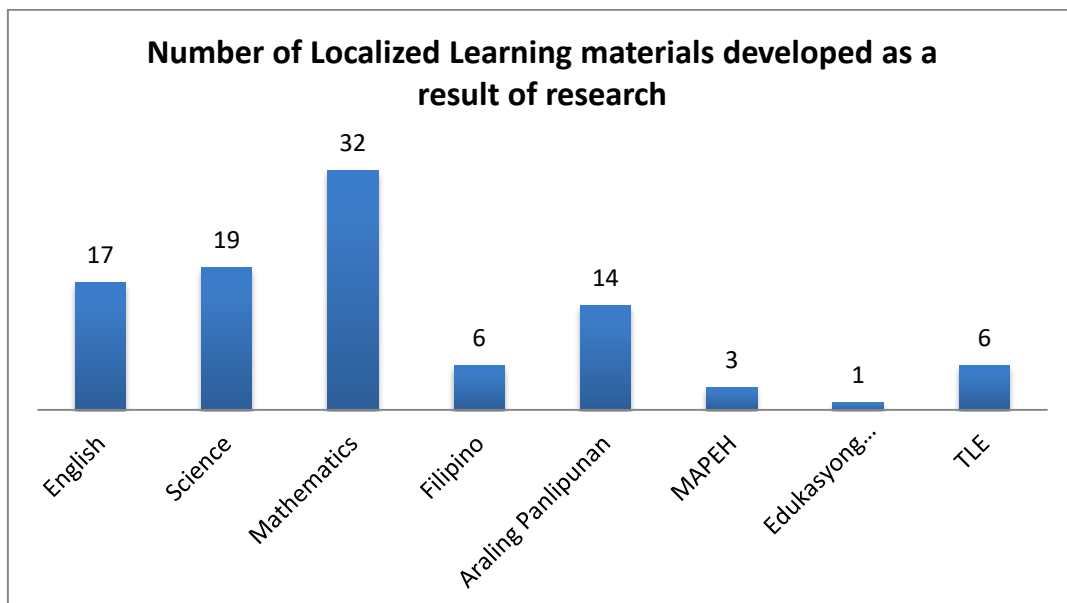### 3.1.3 Attendance to Conference/Forum/Symposium

Table 5 shows that respondents, on the average, have attended 4 conferences, fora, and symposia. Respondent with the most number of attendance has 12 conferences while others have attended only one. In addition, there was one conference conducted in the division, one in regional, and five in national. With regards to funding, 16 researches have their own expense, 17 with DepEd support, and 8 with LGU support. Also, a total of 387 researches were presented.

Table 5: Descriptive Statistics on attendance to conference/forum/symposium

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Conference, forum, symposium	9	1.00	12.00	42.00	4.6667	3.50000
Valid N (listwise)	9					

3.1.4 Number of Localized Learning Materials Developed as a Result of Research Output

Learning materials which were produced due to conduct of research is a highly productive academic activity. Figure 2 shows the localized learning materials due to research. In terms of the number of localized learning materials developed as a result of research output, most number are done in area of Mathematics which have 32 materials. Next, Science has 19 while English has 17. The least number of learning materials was in Edukasyon sa Pagpapakatao which has only one. In addition, there are 12 learning materials which were developed on the average.

Figure 2: Number of Localized Learning Materials from Research

Table 6: Descriptive Statistics on learning materials

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Learning materials	8	1.00	32.00	98.00	12.2500	10.36133
Valid N (listwise)	8					

3.1.5 Number of School/Division Localized Policies Based on Research Findings/Results

Research-based policy result to better and more effective implementation of programs and projects.

Table 7 reflects that with regards to the number of school/division localized policies based on research findings/results, there was an average of only 1 policy. There is a total of 7 localized policies.

Table 7: Descriptive Statistics on the number of school/division with localized policies based on research results

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Policies	4	1.00	3.00	7.00	1.7500	.95743
Valid N (listwise)	4					

3.1.6 Number of Continuous Improvement (CI) Project Conducted

Table 8 shows the number of continuous improvement project conducted wherein there are 44 average projects. Further, four projects are completed and 2 of them are still on-going.

Table 8: Descriptive Statistics on the number of continuous improvement (CI) project conducted

	N	Minimum	Maximum	Sum	Mean	Std. Deviation
CI project	9	.00	345.00	397.00	44.1111	113.03367
Valid N (listwise)	9					

3.2 Influence/Motivation of the School/Division Employee to Conduct Action Research

In the conduct of action research, it is important to consider the motivation of employees. Table 9 shows the reason of motivation to conduct action research wherein the encouragement and support from their superior and college achieved the highest weighted mean of 3.52 with verbal interpretation of strongly agree. Teachers and employees are mostly motivated when being valued and encouraged by the immediate supervisor. They feel the

need and importance of conducting action research when they receive different forms of support. Also, they agreed that directions provided by Basic Education Research agenda got another high weighted mean of 3.31. On the other hand, incentives that researcher may gain after accomplishing research work as a requirement for graduate school study got the lowest weighted mean of 2.36 with verbal interpretation of disagree

The respondents agreed on the influence and motivation of the employees to conduct action research which has a composite mean of 2.97. Teachers and employees are motivated to conduct research and they recognize the different sources of motivation.

Table 9: Assessment on the Motivation in conducting Action Research

The researchers are motivated to conduct action research because of:	Weighted mean	Verbal Interpretation
1. the directions provided by Basic Education Research agenda	3.31	Agree
2. the availability of Basic Education Research Fund	2.98	Agree
3. the encouragement and support from their superior and colleague	3.52	Strongly Agree
4. the status of school/division performance indicators	3.27	Agree
5. Incentives that the researcher may gain after accomplishing research work such as:		
f -self-fulfillment		
-for promotion	3.10	Agree
-attendance to research conference	2.95	Agree
-additional points on IPRCF	2.81	Agree
-budget allocation for school to school partnership		
	2.94	Agree
-Requirement for graduate school study	2.45	Disagree
	2.36	Disagree
COMPOSITE MEAN	**2.97**	Agree

3.3 Difficulties Encountered in Writing Action Research

Table 10 shows the difficulties encountered in writing action research in which it was found that unavailability of statistical software reached the highest weighted mean of 2.95 with verbal interpretation of encountered. The

teacher-researchers recognized the difficulty of finishing a research work without the technology to assist in the analysis of data gathered. Meanwhile, lack of administrative support got the lowest weighted mean of 1.97 with verbal interpretation of least encountered.

The assessment on difficulties encountered in writing action research has a composite mean of 2.39 with verbal interpretation of least encountered. These respondents assessed that in the conduct of writing their action researches, the identified possible areas of difficulties were least encountered.

Table 10: Difficulties encountered in writing Action Research

The following difficulties were encountered by the researchers in writing action research	Weighted mean	Verbal Interpretation
1. Lack of administrative support	1.97	Least Encountered
2. Insufficient knowledge and skills on research writing.	2.35	Least Encountered
3. Lack of awareness on Basic Education Research Agenda	2.25	Least Encountered
4. No idea on the availability of Basic Education Research Fund	2.21	Least Encountered
5. Fear on statistics	2.36	Least Encountered
6. Many tasks to accomplish	2.21	Least Encountered
7. No time to do research work	2.36	Least Encountered
8. Unavailability of statistical software	2.95	Encountered
9. Grammatical activity	2.90	Encountered
10. others	2.35	Least Encountered
COMPOSITE MEAN	**2.39**	Least Encountered

3.4 Proposed Strategic Interventions to Sustain the Culture of Research in CALABARZON.

The transformation of academic practices and supporting high quality learning and teaching has been an ongoing concern for the Academic Literacies Team.

Effective academic development needs to support educators to identify and examine their current understanding and approaches in order to enhance their professional knowledge and theory.

Enhancing teachers' understanding of theory leads to changes in classroom behavior that then results in improved student learning

Strategic Intervention (also known as SI) is a project dedicated to extracting the most practical and effective forms of strategic action and communication from a variety of disciplines.

Table 11

Findings	Objectives	Strategic Interventions
1. Least researches were conducted under DRMM	To conduct more researches under DRMM	Identify which position should be encouraged to proposed research under DRMM
2. More researches are not published	To produce publishable researches	Provide wide dissemination of research results through publication, conferences, forums, and other platforms
		Conduct a training on publishable paper
3. Minimal researches are funded by DepEd	To propose researches qualified for funding of DepEd and other organizations	Identify an institutional facility to fund internal and external research studies on basic education through the Basic Education Research Fund (BERF)
		Conduct a training on capability building to propose a research with requested funding
4. Average of 5 seminars/conferences attended	To encourage more attendance to relevant trainings and seminars	Encourage teachers to identify and attend to more national and international trainings and seminars
		Conduct re-echoing of seminars attended
5. Only 1 Learning Material in Edukasyon ng Pagpapakatao	To produce additional materials	Conduct a capability building training for instructional material development
6. Only 1 local policy based on research findings	To propose more policy based researches	Identify specific research agenda and possible beneficiary/user of a proposed research with recommended inputs to policy
7. Respondents disagree on requirement for graduate school study as motivation to conduct research	To encourage teachers to pursue graduate studies and conduct research	Provide monetary/non-monetary research incentives
8. Lack of administrative support on difficulties encountered by the researchers in writing action research	To seek for assistance in the conduct of research	Seek the research collaboration of teachers and administrators
		Conduct empirical studies to better understand and advance basic education in the country

4. Conclusions

Based from the results of the study, the following conclusions are drawn:

1. As to research initiatives: most of the number of both completed and on-going researches are under

teaching and learning thematic area and the least researches were conducted under DRRM; researchers have their initiatives to attend training, seminar and workshop, conference/forum/symposium; most of the localized materials are done in area of Mathematics; only few are capable to localized policy, there are numerous number of CI project among schools and schools division offices.

2. Encouragement and support from superior and colleague was one of the reasons of motivation to conduct action research.

3. Unavailability of statistical software was recognized as teacher-researcher's difficulty of finishing research work.

4. The identified strategic interventions will focus on proposing research agenda, capacity building, provision of research dissemination, searching for institutional facility to fund internal and external research study, and conduct of empirical studies to better understand and advance basic education in the country.

Acknowledgment

References

[1] Philippines: UNESCO.

http://www.ibe.unesco.org/fileadmin/user_upload/archive/Countries/WDE/2006/ASIA_and_the_PACIFIC/ Philippines/Philippines.pdf.[Retrieved from UNESCO: August, 2006].

[2] J. O. Abarro, & W. P. Mariño. "Research Capabilities of Public Secondary and Elementary School Teachers in the Division of Antipolo City". International Journal of Scientific and Research Publications, pp. 407-410, 2016.

[3] R. S. Clemeña & S. A. Acosta."Developing Research Culture in Philippine Higher Education Institutions: Perspectives of University Faculty". UNESCO, 2007.

[4] G. S. Hine. "The importance of action research in teacher education programs. Issues in Educational Research", 151-163, 2013.

[5] The Professional Development of TeachersOECD. https://www.oecd.org/berlin/43541636.pdf. [Retrieved from OECD:2017]

[6] IIEP Learning Portal: UNESCO. https://learningportal.iiep.unesco.org/en/improve-learning/curriculum-materials/textbooks-and-teachers-guides-availability-and-use, [Retrieved: September, 2017]

[7] B. O. Mariñas & M. P. Ditapat (2017). International Bureau of Education: UNESCO. http://www.ibe.unesco.org/curriculum/Asia%20Networkpdf/ndrepph.pdf. [Retrieved from UNESCO:May, 2017].

[8] M. C. Selga. "Instructional Materials Development: A Worktext in Science, Technology and Society". LCCB Development Education Journal of Multidisciplinary Research, 71-95. http://lcc.edu.ph/assets/images/research/pdf/Instructional%20Materials%20Development_%20A%20Worktext%20in%20Science,%20Technology%20and%20Society.pdf?id=uploads/archive/LCCB/Vol.%202%20No.%201%20(2013)/Articles/01_Wa-Mbaleka.pdf&di=6625 [Retrieved from La Consolacion College Bacolod: 2013.]

[9] J. Mateo ."DepEd updates K to 12 learning materials". The Philippine Star, [14 January, 2016].

[10] F. V. Pamatmat. "Research Attitudes of Teaching Personnel in one Philippine State University: Basis for Development and Sustainability towards Excellence". Research Journal of Language, Literature and Humanities, 12-17, 2016.