

# **Instructional System of Research Education Program and Research Skills Productivity of Students in Science and Technology Oriented High Schools in Caraga Region**

**BENJIE P. JACOB**

<http://orcid.org/0000-0002-0977-9060>

[jacobbenjie0279@gmail.com](mailto:jacobbenjie0279@gmail.com)

Agusan National High School

Butuan City, Philippines

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## **ABSTRACT**

The research subject is one of the effective tools to equip secondary students under Science and Technology Oriented High School (STOHS) curriculum with the appropriate research skills that will capacitate students to prepare research reports, investigatory projects and research proposal utilizing information obtained from the library and online resources. This mixed method study aimed to determine the significant difference in the ratings of the 278 respondents on the extent of optimal functioning of the instructional system of the research education program and in identifying the significant relationship between the instructional system and the research skills productivity of teachers and student-researchers in Caraga Region, Philippines. The study revealed that the instructional system was at a moderate level while the research skills productivity was at a nadir level. Also, it was divulged that there was a significant difference in the extent of the optimal functioning of the instructional system in teaching research education. Using FGD, the facilitating factors were good academic qualifications of the teacher-researchers, sufficient school facilities, the standard form of assessment, and the existence of the reward system while the hindering factors were the

resource generation, absence of school's research journals and scholarships, and discouraging research environment. This paper suggested that schools should publish researches in journals, improve utilization of researches, look for potential sponsors and should tie up with external evaluators/organizations.

**Keywords** — Research Education Program, instructional system, research skills productivity, mixed method, Philippines

## INTRODUCTION

The Department of Education (DepEd) in the Philippines offers programs that develop the competencies of the youth and prepare them to face global competitions. As an enabling strategy, measures and actions are geared towards the institutional strengthening of the educational system and research program to enhance its capability to perform its role in the national development and to respond to the global challenges.

Cognizant of the need to strengthen the research program more particularly in Science and Mathematics Education, the Department of Education through the Bureau of Secondary Education under the Order No. 55 series 2010, pointed out that the Research subject is one effective tool to equip students of Science and Technology Oriented High Schools (STOHS) with research skills in preparing research reports, investigatory projects and a research proposal utilizing information obtained from the library and online resources. The order was espoused to develop scientific and technical writing skills and documenting research proposals and investigatory projects, among others (DepEd Order No.55 s, 2010).

The policies governing the delivery of Science and Mathematics are stipulated which focuses on 2010 SEC and relevant provisions of the DepEd Order 41, s. 2000, namely, the Organization of Classes, Participation to the Program, Teacher Selection, Instructional Materials, Financial Assistance and Course description of additional subjects. Each of the 197 Type A schools shall receive Php 300,000.00 (6,000 USD) from the total financial assistance to be appropriated and Type B schools shall receive Php 83,000.00 (1,660 USD) from the appropriation for the establishment of Special Science Classes, both subject to the release of funds for the said purposes by the Department of Budget and Management (DBM).

In Caraga region, it has been observed that there is a scarcity of studies on the recent status or situation of the research education program starting from the

query on how the program is being implemented, the sufficiency and availability of facilities, materials or equipment in laboratories, qualifications, trainings and competence of the faculty members who handle the program, the competitiveness of the research outputs of the students and teacher researchers, utilization of researches, skills training for student-researchers and lastly, the financial support for the activities primarily related to research.

Students need research skills to shape their search for answers. A systematic approach to the development of these skills will yield students ready for independent problem solving and lifelong learning. The key idea is to teach a process that can be transferred to any research situation. Moreover, researchers are part of the worldwide discourse on the evidence-based aspect, establishment of required standards and guidelines in managing and accessing qualitative inquiry (St. Pierre, 2005). This conversation turns on issues surrounding the politics and ethics of evidence, and the value of qualitative work in addressing matters of equity and social justice (Lather, 2005).

The results of this study provide a strong basis to address the encountered pressing problems regarding the instructional system as well as the productivity skills of the learners under the STOHS program in the region.

## **FRAMEWORK**

This study focused on the instructional system of research education program and research skills productivity of students in Science and Technology Oriented High Schools in Caraga Region.

This study was primarily anchored on the theory of Jean Piaget (1970) on constructivism that is based on observation and scientific study about how people learn. It says that people construct their understanding and knowledge of the world, through experiencing things and reflecting on those experiences.

Similarly, the theory of Piaget was supported by the interpretivist/constructivist paradigm which grew out of the philosophy of Edmund Husserl's phenomenology and Wilhelm Dilthey's and other German philosophers' study of interpretive understanding called hermeneutics (Mertens, 2005).

With the existence of research education program embedded in the curriculum of the Science and Technology Oriented High Schools (STOHS), the researcher has the strong desire and passion to know the real status of the instructional system of research education program and research skills productivity of students in the Science and Technology Oriented High Schools of Caraga Region, Philippines.

The study included independent and dependent variables. The independent variables focused on the instructional system which includes Teacher Preparations and Qualifications, Instructional Resources, Faculty Research Opportunities, Measurement of Teaching and Learning, Teacher Reinforcement for Slow and Advanced Learners Impairments and Evaluation of Research Specimen.

On the other hand, the dependent variables concentrate on the research skills productivity and utilization of research outputs.

## **OBJECTIVES OF THE STUDY**

This study aimed to: 1) identify the extent of the optimal functioning of the instructional system in teaching research education; 2) determine the level of research productivity of students and teachers in STOHS in the region; 3) identify the significant relationship between the instructional system and the research productivity of teachers and students; 4) determine the degree of manifestation of the instructional skills of the teachers; and, 5) find out the facilitating and hindering factors in the Instructional System, Research Productivity and Utilization of Research.

## **METHODOLOGY**

### **Research Design**

The researcher utilized the mixed method or a combination of descriptive comparative, descriptive-correlational and qualitative designs with the Science Oriented High Schools in Caraga Region as the main unit of analysis. The comparative survey was used in the sense that this study endeavors to compare the ratings of the respondents on the extent of optimal functioning instructional system in the teaching of research education. The study was correlational because the paper also attempted to test the significant relationship between the instructional system and the research productivity of teachers and student-researchers. It is qualitative because to achieve its objectives; target respondents were asked to present their observations concerning the instructional system and research skills productivity in their respective schools specifically on the best practices, the facilitating, and hindering factors. In particular, teachers were the main respondents about the instructional system and research education program, research skills productivity and its utilization. Moreover, they were also observed in their actual classroom discussion of the subjects they handled using a

standardized rubric for observation. In addition, the existing research specimens were evaluated by the researcher and that the ratings were reviewed by experts and the student-researchers involved people for the focused group discussion in identifying the facilitating and hindering factors of the instructional system and research skills productivity in their respective schools.

### **Respondents**

The participants of the study comprised the two 265 student-researchers and 13 teacher-researchers from the following Science Oriented High Schools of Caraga Region. In particular, these student researchers and research-teachers were the individuals directly involved in the research endeavors in their respective schools.

### **Instrument**

A researcher-made instrument in identifying the instructional system of the research education and research skills productivity of the students was used and underwent face and content validation by experts, namely, the selected research-teachers excluded from the actual respondents, statistician and the adviser of the article. The instrument was subjected to reliability testing and obtained the coefficient 0.95 Cronbach's Alpha indicating a very reliable instrument. Moreover, a standardized evaluation form was used to assess the research specimen of the students and teacher researchers. Likewise, a teacher observation sheet was used to identify the degree of manifestation of the instructional skills of teachers in the research education program.

The following scale parameter and descriptive meanings were used for measuring the instructional system and research skills productivity of the researchers in the eight (8) STOHS in the region.

Scale	Responses	Descriptive Meaning
5	Strongly Agree (SA)	If the instructional system of research program is highly extensive
4	Agree (A)	If the instructional system of research program is extensive
3	Neutral (N)	If the instructional system of research program is somewhat extensive.
2	Disagree (D)	If the instructional system of research program is fairly extensive.
1	Strongly Disagree (SD)	If the instructional system of research program is not evident.

On the other hand, below were the parameter and descriptive meanings used by the teacher-observer during the observation of teacher-researchers in actual classroom discussion of the research subject.

Scale	Responses	Descriptive Meaning
001-1.00	Not Observed (NO)	If the instructional dimension is observed
1.01-2.00	More Emphasis Recommended (MER)	If the instructional dimension needs emphasis
2.01-3.00	Accomplished Very Well (AVW)	If the instructional dimension is very well accomplished

Finally, below were the parameters and descriptive meanings used to evaluate the research specimen of the researchers.

Scale	Responses	Descriptive Meaning
5	Strongly Agree (SA)	If the aspect of research is highly evident
4	Agree (A)	If the aspect of research is very evident
3	Neutral (N)	If the aspect of research is partially evident
2	Disagree (D)	If the aspect of research is fairly evident
1	Strongly Disagree (SD)	If the aspect of research is not evident

### Data Gathering Procedure

After subjecting the questionnaire to validity and reliability tests, the researcher personally distributed the questionnaires to the respondents, particularly to the

randomly selected teacher and student researchers of the eight schools under Science Technology Oriented High Schools curriculum in Caraga Region. Prior to the distribution, permission was sought from the Regional Director, Schools Division Superintendent and School Heads to float the questionnaires to all the respondents. The instructions were explicitly written such that items will be answered properly and correctly. All instruments were collected, checked, summarized and interpreted under this study.

### **Ethical Consideration**

The participants of this study were informed that their engagement was voluntary, the revelation of their identities was optional, and all their answers were held confidential. The researcher obtained an Ethics Clearance from the Ethics Review Committee and also got signed informed consent from the respondents.

### **Statistical Treatment**

Before dealing with the answers of the respondents, the instrument used was double-checked for consistency and accuracy. Codes were assigned to identify the responses of the respondent easily. The researcher utilized correct and suitable statistical tools to analyze the data and the data gathered were collated, treated and analyzed in accordance with the objectives of the study.

## RESULTS AND DISCUSSION

Table 1. Extent of Optimal Functioning of the Instructional System in Teaching Research Education

<b>I. INSTRUCTIONAL SYSTEM</b>		
<b>A. TEACHER PREPARATIONS AND QUALIFICATIONS</b>	<b>MEAN</b>	<b>DES.</b>
1. Has sufficient knowledge of the subject.	3.92	H
2. Attends and presents certificates of national and international seminars related to research	3.23	M
3. Receives awards and certificates (national or international) related to research.	3.08	M
4. Finishes his/her master's or doctorate degrees.	3.38	M
5. Publishes research papers in either national or international journals.	1.00	VL
<b>Sub-mean</b>	<b>2.92</b>	<b>M</b>
<b>B. INSTRUCTIONAL RESOURCES</b>		
1. Sufficient laboratories and equipment for research.	3.77	H
2. Adequate books, textbooks, and modules related to the research program.	3.77	H
3. High-speed Internet connection availability	3.54	H
4. Enough functional computers for the production of the papers	4.15	H
5. Sufficient number of classrooms to accommodate the student researchers and have pleasant atmosphere.	4.38	VH
6. Abundant in chemicals or substances for the experiments related to the research program	3.23	H
7. Availability of agreements (Memorandum of Agreement or Memorandum of Understanding) with external evaluators for research.	1.00	VL
<b>Sub-mean</b>	<b>3.41</b>	<b>H</b>
<b>C. FACULTY RESEARCH OPPORTUNITIES</b>		
1. Attends seminar/workshop in the:	2.37	M
<i>a. division level aimed of updating on innovation and strategies relevant to their teaching assignment.</i>	2.85	M
<i>b. regional level aimed of updating on innovation and strategies relevant to their teaching assignment.</i>	2.77	M
<i>c. national level aimed of updating on innovation and strategies relevant to their teaching assignment.</i>	2.69	M



<i>d. international level aimed of updating on innovation and strategies relevant to their teaching assignment.</i>	1.15	VL
2. Receives scholarships related to research program.	1.23	VL
3. Receives financial assistance in the conduct of research projects.	2.54	L
4. Support to teachers in presenting research projects in conferences.	3.00	M
5. Support for publication of research projects.	1.54	VL
<b>Sub-mean</b>	<b>2.13</b>	<b>L</b>
<b>D. MEASUREMENT OF TEACHING AND LEARNING</b>		
1. Uses a standard tool or rubric l in assessing outputs.	4.38	VH
2. Gives regular quizzes, examination, and assignments	4.54	VH
3. Provides and evaluate activities related to the program.	4.23	VH
4. Checks, reviews and recommend solutions on a regular basis using the outputs of the learners.	4.38	VH
<b>Sub-mean</b>	<b>4.38</b>	<b>VH</b>
<b>E. TEACHER REINFORCEMENT FOR SLOW AND ADVANCED LEARNERS</b>		
1. Provides an extra set of texts or materials for home use	4.15	H
2. Uses peer tutoring for review	3.85	H
3. Uses pairs for groupings	4.08	H
4. Conducts remedial teaching for slow learners and enrichment for advanced learners.	3.69	H
5. Uses cooperative learning group of 3-5 students	3.92	H
6. Gives students a modified version of the assignment to different level of learners.	3.77	H
7. Uses praise and reward contingencies	4.23	VH
8. Gives verbal reminders for tasks, schedule or assignments	4.15	H
<b>Sub-mean</b>	<b>3.98</b>	<b>H</b>
<b>F. EVALUATION OF RESEARCH SPECIMEN</b>		
	<b>2.51</b>	<b>L</b>
<b>Overall Mean</b>	<b>2.76</b>	<b>M</b>

The overall mean rating for all areas is 2.76 which implies a moderate level of the instructional system of research education program in the region. In the case of teacher preparations or qualifications area, the indicator under it which has the lowest mean of 1.00 was the absence of publishing the research papers in different journals either local, national or international setting. However, in this area, the highest mean of 3.92 reveals that those teacher-researchers have possessed highly sufficient knowledge in handling the subject.

In terms of teacher preparations for research classes, undoubtedly, they were articulate about the topic discussed during the on-the-spot observation of their respective classes, they were even using necessary instructional materials that reinforced their lessons about research and the strong rapport with the student-researchers were explicitly noticed. Also, the majority of the teacher-researchers have proven their worth as the appropriate person for the job aside from the national seminars and competitions, qualification wise, they too have attended and won in some international gatherings for research specifically in Korea, Hongkong, Canada, Indonesia, Macau, and Japan, respectively which were availed by Surigao Norte National High School and Agusan del Sur National High School teachers and student researchers. Moreover, teacher-researchers are holding either masters or doctorate degrees for their professional enhancements, however, they have low published researches.

On the other hand, the area of instructional resources has a sub-mean of 3.41 which is very high. Noticeably, there is a sufficient number of conducive classrooms to accommodate the teacher and student researchers having a very high rating of 4.38 which is quite the opposite to the very low rating of 1.0 specifically in the unavailability of agreements like Memorandum of Agreement or Memorandum of Understanding with external evaluators for research.

The instructional resources in the eight schools were impressive because no matter how distant the place, the technological advances are available. Almost all schools have internet connection in their computer laboratories used in research classes; they have conducive classrooms, enough substances or chemicals in chemistry laboratories and enough references were present in their libraries. However, the only thing that is absent in all schools is the unavailability of Memorandum of Agreements or Understanding with external evaluators for research. Most of the research-teachers mentioned that they do not have the allocated budget for this aspect and they too have less connection to experts.

Moreover, on the part of faculty opportunities, statistics shows that there are very low scholarship programs offered related to the research program in the region getting only a mean rating of 1.23. Likewise, there is a very slim chance of getting to the moderate level regarding the support to teachers in presenting projects to conferences or conventions. These scenario ends up on the sub-rating in this area of 2.13 which is very low.

It is very true that teacher-researchers have attended only a few seminars and workshops in the division, region and national levels in updating on innovative strategies in teaching research because of financial constraints of the school. Also,

most of the schools have few scholarships for the research program, projects, and publication except for Surigao Norte National High School and Agusan del Sur National High School which received strong support from PTA and private agencies/organizations in all their research endeavors either local or international settings.

In the case of the measurement of teaching and learning area, data reveal that all indicators get a very high rating that led to the sub-mean rating of 4.38 which is also very high. In all schools, this component was never an issue for the teacher-researchers for they religiously followed and used the standard tool or rubric in assessing outputs mandated by the department. Teacher-researchers too gave regular quizzes, examinations, and assignment to student-researchers. Constant evaluation of research outputs with appropriate recommendations was also given by teachers to student-researchers.

Moreover, in the area of teacher reinforcement for slow and advanced learner impairments, the result discloses the overall rating of 3.98 which is high. The data divulged that teachers are so generous in giving praise and reward contingencies to researchers having the mean of 4.23 which is very high while the indicator under remedial teaching for slow learners and enrichment for advanced learners needs more emphasis having the rating of only 3.69. For this category, teacher-researchers in the region were efficacious in giving praises and reward contingencies. Teachers were also rated well in giving constant reminders, appropriate groupings and follow-up to those considered slow learners in the subject.

Regarding the area of evaluation of research specimen, it shows the rating of 2.51 which is low. Notably the areas of content and scope together with methodological got the high rating while findings, conclusions and interpretations and writing areas both earned a low rating. The indicator under this component has meticulous criteria which revealed that the eight STOHS schools in the region need to work out on the methodological aspects for there was vagueness of the research designs in its articulation and description of details so that studies will be brought down to its operational terms. There were also problems encountered in some statistical tools employed for the study that should provide correct justification and it was found out that there is a necessity that the study should explicitly describe the process of sampling, data gathering, and instrumentation.

Accordingly, the instructional systems consist of decisions on what should be the lessons/topics to be delivered to the learners and prepares mechanism on how to measure the learning of the students after the implementation of the lesson.

It is even relevant to find out what teachers and students do under the system (Petrina, 2004). It is important to address individual components of the system and the components to an effective standards-based system are: first, the standards that describe what a student should know and be able to do at the end of a given grade level ; second, the curriculum and instruction which are composed of daily learning targets, teacher instruction, and learning activities that help students to become proficient at the grade level standard; Third, the assessments which are used throughout the year to provide teachers and parents with information about how a student is progressing towards proficiency (Kenosha Unified School District, 2014).

Moreover, Onyekuru and Ibegbunam (2013) highly emphasized that teachers' qualification is very vital to the success of student learning in the classroom while teacher's experience is another factor that concerns the magnitude on the performance of the students in their subjects. In this case, if the teacher is seasoned, more likely it hastens the productivity of the students. However, if teachers are greenhorns, expectedly it affects the academic performance of the students.

Also, one factor that matters in the teaching of research is also the efficacy of the teacher. Necessarily, a teacher of research should be adroit of the discipline for it requires in-depth knowledge towards the subject, socially, and emotionally stable, experienced, and has the ability to inspire learners for research itself is complex that should be dealt accordingly (Afe, 2003).

In addition, the responsibility of the teacher is extensive aside from proper classroom management, intensive planning, and evaluation. Teachers should conscientiously choose the appropriate instructional materials to be used in delivering the lessons so as to address the various needs of the diverse learners. With the use of suitable materials, there is an assurance that students will be enthusiastically engaging during the discussions of the instructional materials which are considered as relevant mechanisms in giving quality learning to students (Machnaik, 2002).

Kemuma (2013) highly stressed that the availability of the instructional resources enhances the effectiveness of schools as these are basic things that can bring out good academic performance on the learners. Learning through the interaction of instructional resources is an important issue although most of the people in the society feel that the problem is insignificant. It was concluded that children's low performance in number work was contributed to the lack

of adequate instructional resources. The inadequacy of instructional materials implies that unless the provision of these resources is improved and used sufficiently, children will continue to perform lowly in number work even to the higher levels of education.

In the evaluation of the research specimen, the overall rating was 2.51 which means that there is a low level of the quality of research outputs made by the researchers. Among the four (4) major areas, it was the methodological area where the research specimen got the 2.58 while, in the area of findings, conclusions and recommendations were rated only 2.36.

The indicator under this component has a meticulous criterion which revealed that the eight STOHS schools in the region need to work on the methodological aspects for there was vagueness of the research designs in its articulation and description of details so that studies will be brought down to its operational terms. There were also problems encountered in some statistical tools employed in the study that should provide correct justification, and it was found out that there is a necessity that the study should explicitly describe the process of sampling, data gathering, and instrumentation.

Table 2. The level of research productivity of student and teacher researchers in Science and Technology Oriented High Schools in Caraga Region

<b>II. PRODUCTIVITY SKILLS</b>		
<b>F. PUBLICATION</b>	<b>MEAN</b>	<b>DES.</b>
1. Publishes research papers in print journals.	1.00	VL
2. Publishes research papers in online journals.	1.00	VL
3. Publishes research papers in national journals.	1.00	VL
4. Publishes research papers in international journals.	1.00	VL
<b>Sub-mean</b>	<b>1.00</b>	<b>VL</b>
<b>G. PRODUCTION</b>		
1. Printed several copies of researches.	1.00	VL
2. Provides the school libraries with the copies of the researches.	1.46	VL
3. Applies patent for inventions.	1.00	VL
<b>Sub-mean</b>	<b>1.15</b>	<b>VL</b>
<b>Over-all Mean</b>	<b>1.08</b>	<b>VL</b>
<b>III. UTILIZATION</b>		
1. There is an established a mechanism of the school that disseminated researches which appropriately utilized and implemented.	0.00	VL
2. The school has established mechanism to monitor the effectiveness of the utilized findings of the various researches.	0.00	VL
3. Feedback mechanism on the implementation of the utilized research findings is evident between the department and /or among individuals or sectors	0.00	VL
<b>Sub-mean</b>	<b>0.00</b>	<b>VL</b>
<b>Over-all Mean</b>	<b>0.00</b>	<b>VL</b>

Noticeably, the eight STOHS in the region have less published outputs either in print, online, national, and international journals and in terms of production, they have produced only copies for school libraries as a reference, but they have not applied for any patent of their inventions.

The above-scenario is also similar to utilization. In terms of utilization, the eight STOHS in the region is in very low status for there was lack of an established mechanism of the school that disseminated various researches which utilized the findings and implemented it appropriately. Even the schools in the region have not established a mechanism to monitor the effectiveness of the utilized findings of the various researches so with the feedback mechanism on the implementation

of the utilized research findings was not evident in the department and /or among individuals or sector.

According to Creswell (2008), research productivity includes research publications in professional journals and in conference proceedings, writing a book or chapter, gathering and analyzing original evidence, working with post-graduate students on dissertations and class projects, obtaining research grants, carrying out editorial duties, obtaining patents and licenses, writing of monographs, developing experimental designs, producing works of an artistic or creative nature, engaging in public debates and commentaries.

Matin (2009) said that writing is essential to research productivity: papers and books need to be completed. He added that the publication is a key measure of research output because it is the way findings are communicated and placed on the record. Bloedel (2001) cited that most of the research productivity of academics is disseminated via publications. Research publications enable academics to earn recognition in academic circles locally and internationally.

Moreover, it is always essential in the world of research the consideration of the presence of reviewers. In particular, peer review refers to a process whereby one or more qualified persons professionally review a person's work, generally for publication purposes in a scholarly journal or book (Jayasinghe, Marsh, & Bond, 2003).

On the other hand, Table 3 illustrates the significant relationship between the instructional system and the research productivity of teachers and students. With the revelation of 0.61 having a positive linearly correlated result, there is a significant relationship between the instructional system and the research productivity of teachers and students.

Nuqui and Cruz (2012) found consistent with some previous studies that the researcher's characteristics and research competence are closely associated with research productivity. The effects further suggest that research competence may have more influence than the researcher's characteristics on individual productivity. However, according to Kotrlik, Bartlett, Higgins, and Williams (2002), research confidence explains a major proportion of the variance in students and faculty research productivity.

Table 3. Significant Relationship between Instructional System and the Research Productivity of Teachers and Students

Area	Instructional System	Productivity	DECISION	CONCLUSION
Instructional System	1		<i>Reject Ho2</i>	<i>Significant</i>
Productivity	0.606916614	1		
<b>r=0.61 positive linearly correlated</b>				

Using FGD, the facilitating factors were good academic qualifications of the teacher-researchers, sufficient schools’ facilities, the standard form of assessment, and the existence of the reward system. While, hindering factors mentioned were the resource generation, the absence of school’s research journals and scholarships, and discouraging research environment.

### CONCLUSIONS

Through research, students can hone their skills not only in thinking critically but as well as exercise their analytical and communication skills which are necessary for global competition. In fact, research plays a relevant role in social and economic development especially in establishing policies all over the world. Likewise, Meek, Teichler, and Kearney of UNESCO (2009) cited that knowledge generated by research is the basis of sustainable development, which requires that knowledge should be placed at the service of development, be converted into applications, and be shared to ensure widespread benefits. Moreover, research enhances the capacity of students through exposures to its latest trends, acquaints them on the evolution of theories and models the and of course directly give them the opportunity to demonstrate the skills themselves which most often not meet in some instructions in the classroom setting.

It is, therefore, very essential that academic institutions should underscore on the correct delivery of instructions in research education program as well as take into consideration the productivity of student and teacher researchers since instructional system and productivity are significantly related. Schools must also establish strong linkages to the existing research organizations which are competent and credible in reviewing researches at the same time a potential provider of conferences/fora where papers can be presented either national or



local settings. Furthermore, schools should allocate sufficient budget for research so that researchers will be enticed more in engaging and producing quality researches of which these researches could be properly utilized to create impact not only in schools but to the community as well.

### **TRANSLATIONAL RESEARCH**

The results of the study could be translated into a journal article for international publications, newsletters, radio, social media, and other media for information dissemination. Additionally, the results can be used for teachers and administrators in designing an intervention program and finally encourage professionals towards further studies.

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