ACTION RESEARCH

STREAMLINED MECHANISM FOR UTMOST RESEARCH FUNCTIONALITY (SMURF) IN IMPROVING THE SCHOOLS DIVISION PERFORMANCE

Proponents

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August 2021
Abstract

Research Title: Streamlined Mechanism for Utmost Research Functionality (SMURF) in Improving the Schools Division Performance
Research Design: Descriptive and Comparative Design
Sampling: Purposive Sampling
Research Instrument: Matrices and Forms
Data Analysis: Chi-Square and Simple Linear Regression

EXECUTIVE SUMMARY:

Project SMURF is an initiative of the Planning and Research Section (PRS) to uplift the performance of the Schools Division of Calapan City in research. Accordingly, this action research tested the effectiveness of the project and investigates further its possible contributions in attaining DepEd Goals.

Underneath the quantitative research method, the descriptive and comparative design was used to answer the posited questions of this research. Hard data sets from the PRS office were utilized through matrices and forms for chi-square and simple linear regression test statistics.

The study revealed that the Schools Division performed poorly having only an average of 13 researches from the years 2018-2020. Meanwhile, in the year 2021, 61 pieces of research were produced resulting in a very good performance of the Office. Furthermore, the study proved that project SMURF was effective gaining a p-value of 0.0013 which is way less than 0.05, and rejecting H_o. Correspondingly, a positive variance and a slope of 7.2 showed a direct and positive trend towards an increasing performance of the Schools Division in the years to come.

Based on the result of the study, it is recommended that the Schools Division continuously implement project SMURF since it is proven effective and can increase research production with quality for the upcoming years.

Keywords: Research, SMURF, SBM, SIP, DEDP, Performance

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Context and Rationale

Research whether an action or basic is a substantial and powerful tool in leading humans towards progress. New concepts, new facts, and new ways of doing things are being found due to significant researches. Research is responsible for correcting the present mistakes, removing existing misconceptions, and adding new learning to the existing body of knowledge.

Action research, also known as practitioner inquiry and teacher self-study, is the process by which practitioners systematically assess authentic problems of practice using the inquiry process of problem posing, data gathering, and data analysis to improve practices in the teaching profession (Cochran-Smith & Lytle, 2009; Dana & Yendol-Hoppey, 2013).

Furthermore, Tshomo and Lhaden (2015) used action research in finding ways on how to improve classroom reinforcement strategies and optimize pre-service student teachers’ learning, thus, providing fellow teachers with practical classroom management techniques in enhancing students’ participation in the teaching-learning process.

Similarly, Sherab (2015) utilized action research as a tool in examining his teaching practices in bringing about improvement to student engagement during the learning process. This practice helped him in decision-making what teaching strategies, approaches, and methods are appropriate for a specific group of students.

In a similar context, the study conducted by O’Connor, Greene, and Anderson (2006) titled “Action Research: A Tool for Improving Teacher Quality and Classroom Practice” attested that action research enhances teachers’ proficiency holistically in
the field of service. It impacts both the teachers’ daily and future instructional practices, empowers them to go beyond their comfort zone, and gives them new roles such as teachers as researchers and teachers as decision-makers.

Meanwhile, research culture is the structure that gives significance and that allows us to understand and evaluate the research activity. A culture of research is not simply a group of scholars who see the importance of research. It provides a supportive context in which research is uniformly expected, discussed, produced, and valued (Bennett & Starmar, 2017).

Corollary to these, the Department of Education (DepEd) is setting priorities on the conduct of research as this is seen to be a potent tool to solve gaps in educational services specifically on access, quality, and governance. DepEd is also at the forefront of enabling policies and mechanisms from which the delivery of quality basic education can be continuously improved in line with Republic Act 9155 in which Chapter 1, Section 7 (5) states that DepEd is mandated to “undertake national research and studies” from which it can become part of the basis for necessary reforms and policy inputs. This is also supported by the past and current administration which recognizes the need for evidence-based policy development by instituting reforms that strengthened transparency and accountability among government entities and encouraging teachers to write research.

Moreover, it is also attested by Jensen (2012) that one of the effective Professional Development (PD) strategies for teachers is conducting action research that centers on the teaching profession. The more a teacher is exposed to action research, the more he becomes objective in dealing with problem-solving in various areas of concern. Thus, improving his performance in dealing with real-life school
needs and demands. In addition, it is a good ground for dynamic and consistent mentoring among mentors in addressing problems and providing solutions in the form of innovations.

Furthermore, Smeed and Kimber; and Millwater and Ehrich (2009) mentioned that teachers’ engagement in research is one avenue of developing them in the leadership arena in improving instructions, making innovations in instructional methods, and making difference while coping with the global trends in education. They stressed that more teachers’ involvement in research is a good indicator that the educational institution is a high-performing school.

In support of these, DepEd has issued DepEd Order No. 13, s. 2015 establishes a systematic policy development process in the department. The said order explicitly promotes evidence-based policy formulation that can be supported by research institutions. The intent of the said policy can be best achieved when supported by a clear mechanism in conducting education research. This was further supported by DepEd Order No. 16, s. 2017 which articulates the Research Management Guidelines (RMG) to guide in managing research initiatives in the national, regional, schools division, and school levels.

However, in the past 3 years, there were only around 13 or 11% of research production per year considering the number of master teachers which is 117 in the Schools Division. For the past few years, the Schools Division ranked lowest in terms of research production. There were a handful of research proposals submitted and the majority of those did not complete their researches some reasons like lack of statistician available, a lot of activities and calamities, and lack of capacity building.
There was no training held in the Schools Division which could have capacitated the teachers in writing research (Accomplishment Report 2020).

Moreover, instead of grabbing the opportunity to use research as a tool for professional growth and personal empowerment, some are reluctant to contribute. Prominent among their reasons are time management due to hectic schedules and other responsibilities; no available step-by-step manual with concrete examples; limited knowledge on the technical process in writing the whole paper; and no immediate budget available (Castillo, Mendoza, and Caibigan, 2017).

Nevertheless, the Schools Division of Calapan City is currently taking bolder and massive efforts to establish a strong and stable culture of research in the Division. Indeed there are various activities to capacitate master teachers of all the schools within the Schools Division.

This study is limited only to research production or the number of researches approved by the Schools Division each year. Likewise, the project SMURF or Streamlined Mechanism for Utmost Research Functionality will be tested as to its effectiveness using the available hard data of the PRS.

Relatively, this study is anchored in the performance theory (Turner, 1988) which suggests that every one of us performs in our society, project SMURF pushes the performance of the Schools Division forward. More so, the theory explains that when an individual plays a part he explicitly requests his observers to take seriously the impression that is fostered before they might matter. Thus, everyone should function accordingly based on their mandated tasks.
Coincided with Kanter’s structural empowerment theory (1993), project SMURF is aligned with the four guiding concepts that support successfully shared governance structures. These concepts include equity (the integration of roles to achieve common goals and willingness of each member to contribute collectively toward a common goal), ownership (recognition by the individual of the connection between his or her job performance and the success of the organization), partnership (development of relationships to promote mutual respect, enhanced communication, collaboration to achieve organizational objectives), and accountability (willingness to invest in decision making and sharing a sense of responsibility for individual and collective outcomes).

Embracing the abovementioned principles, the planning and research section (PRS) is performing its tasks to contribute to the success of the Schools Division through research. The figure below illustrates the conceptual framework which served as the backbone of this research endeavor.
Innovation, Intervention, and Strategy

The conduct of research is found to help make sound decisions, especially in schools. Officials, teachers, and other personnel of the Schools Division of Calapan City were encouraged to conduct research that addresses issues and concerns on learners and gender and development through orientations, training, and other activities. Indeed, the conduct of research is one of the duties and responsibilities of master teachers, specialists, and supervisors though, in a more profound sense, it is considered to be an important aspect of every educator’s professional life.

Clearing the lines between researcher and practitioner, quantitative and qualitative methods, action research offers contextualized and localized approaches in problem-solving. Scholars have advocated the benefits of modeling research in the field of leadership education on practices common in teacher education (Carver C. & Klein Z. 2013) to come up with a relevant and timely solution to existing institutional or organizational problems. Through research, educators become empowered individuals in creating innovative solutions to the demands and needs of the times.

Moreover, research would not be functional if not disseminated and used by readers. One of the strategic ways of research dissemination is during the Management Committee Meeting where all the school heads are present who are tasked to improve their respective schools’ access, quality, and governance as SBM indicators. As part of the project, there should be at least one researcher to present and discuss his research with its corresponding output. The majority of research outputs submitted were enhancement programs, strategic intervention materials, modules, strategic plans, etc which could be used by schoolheads to increase their school performance.
Furthermore, the research office will track down the status of researches using an online and offline database called “Research Tracker”. The initiative of putting online database could be accessed at bit.ly/sdocalapanctyresearch where all of the necessary files in research are uploaded and can be downloaded by researchers such as research materials or references, research updates, and other communications.

The objectives of project SMURF are presented below.

a. Provide tools and templates in research writing  
b. Equip teachers with research writing skills  
c. Produce action and basic research  
d. Monitor the research status of all schools  
e. Disseminate research findings and output  
f. Establish a strong, functional, and stable culture of research

More so, project SMURF consists of different steps and activities which contribute to the attainment of the set objectives.

a. simplified process flow  
b. self-evaluation tool  
c. technical assistance form  
d. school visit  
e. online and face to face consultation  
f. capability building  
g. research journal  
h. constant monitoring

The main objective of project SMURF is to uplift the performance of the Schools Division in research production with quality. The project consists of a
demystified process flow for a smoother and clearer path to quality research. It simplifies the work of researchers by eliminating unnecessary steps. For the researchers not to submit the manuscript unevaluated, a self-evaluation tool is provided wherein they need to evaluate their work as to content and format for them to be more confident in their research works. After they thoroughly assess and revised or enhance their work, the researchers may submit their manuscript for SDRC evaluation. The SDRC will follow the process from initial screening to section by section evaluation using a programmed evaluation tool. After which the SDRC will provide a technical assistance form where all of their suggestions and comments are written in each research section. The researchers will consider the TA form and accomplish the action/response portion. Afterward, they will resubmit the paper ready for indorsement to the regional office or in the case of SEF in the Schools Division research section.

Aside from a series of capability building, there are also school-to-school visits for LAC sessions for a more detailed discussion of research. Online and face-to-face consultation is also provided using different platforms like google meet, zoom, and others. There is also an online and offline database in research so that the researchers can track their work and get appropriate references. This also serves as a monitoring tool for SDRC since updates are also provided.
**Action Research Questions**

This action research tried to measure the effectiveness of project SMURF which in turn could contribute positively to the Schools Division performance.

**General Question:** Is project SMURF effective?

**Specific Questions**

1. What is the status of research in the Schools Division before the implementation of project SMURF?
2. What is the status of research in the Schools Division after the implementation of project SMURF?
3. Is there a significant difference between the performance of the Schools Division before and after the implementation of project SMURF?

**Null hypothesis**

There is no significant difference between the status of research before and after the implementation of project SMURF.
**Action Research Method**

This action research used a quantitative method utilizing the descriptive-comparative design. Descriptive design was used in answering descriptive questions one and two regarding research data on production and activities. On the other hand, comparative design answered the inferential question which measured the difference between the previous and current data.

Descriptive research involves the description, recording, analysis, and interpretation of the data gathered and treated. It involves comparison or contrast and attempts to discover the relationship between existing variables (Viscarra, 2003).

Meanwhile, the comparative survey is designed to test the possible difference between two groups of phenomena (Calmorin & Calmorin, 2007). Its main objective is to analyze whether the degree of differences is significant or just due to sampling or distribution error.

This research utilized data available in the Schools Division specifically in the planning and research section. Data from plans and reports such as annual implementation plan, work, and financial plan, and annual accomplishment report were used as a source of data. Proper coordination with the concerned was considered for smooth data gathering and data accuracy.

Quantitative data was gathered through a template or matrix. Documents available in PRS served as hard data in research which was treated using appropriate statistical tools.

The data gathered was nominal and ordinal which requires a non-parametric statistical tool based on Calmorin & Piedad. (2009). Hence, descriptive statistics such
as frequency and percentage were used for descriptive questions whereas Chi-Square Test and Simple Linear Regression were used to test the significant difference and trend respectively as stated in the inferential question. A corresponding scale was also used following the steps of frequency distribution focusing on extremities.

Scaling and Quantification

Table 1

<table>
<thead>
<tr>
<th>Scale Range</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>49 - above</td>
<td>Very Good</td>
</tr>
<tr>
<td>37 – 48</td>
<td>Good</td>
</tr>
<tr>
<td>25 – 36</td>
<td>Acceptable</td>
</tr>
<tr>
<td>13 – 24</td>
<td>Poor</td>
</tr>
<tr>
<td>0 – 12</td>
<td>Very Poor</td>
</tr>
</tbody>
</table>

Statistical Tools

Chi-Square

\[ \chi^2 = \sum \frac{(O_i - E_i)^2}{E_i} \]

where:

- \( O \) = observed
- \( E \) = expected

\[ a = \frac{(\sum y)(\sum x) - (\sum x)(\sum y)}{n(\sum x^2) - (\sum x)^2} \]
\[ b = \frac{n(\sum xy) - (\sum x)(\sum y)}{n(\sum x^2) - (\sum x)^2} \]

where:

- \( y \) = dependent variable (number of researches)
- \( x \) = independent variable (year)

Simple Regression

\[ y = a + bx \]

- \( a = y \) intercept
- \( b = \) slope of line (model)
Results and Discussion

This chapter presents the analysis and interpretation of the data gathered. Data sets were analyzed and interpreted based on the problems raised in the study with corresponding tables presented sequentially to give clarity on data presentation analysis.

1. What is the status of research in the Schools Division before the implementation of project SMURF?

Table 2

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>Mean</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BERF</td>
<td>16</td>
<td>17</td>
<td>5</td>
<td>13</td>
<td>Poor</td>
</tr>
<tr>
<td>SEF</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 shows the number of researches produced from the years 2018 to 2020. The Schools Division produced a total of 38 pieces of research with an average production of around 13 per year which is interpreted as poor. The data also revealed a declining performance of the Schools Division. Meanwhile, data from the 2020 annual report revealed that there were 117 master teachers in the 58 schools within the Schools Division. This simply shows that only approximately 11% of the master teachers were engaged in research during those years.

Correspondingly, Castillo, Mendoza, and Caibigan (2017) found out that instead of grabbing the opportunity to use research as a tool for professional growth and personal empowerment, some are reluctant to contribute and engage themselves in research writing. Prominent among their reasons are time management due to hectic schedules and other responsibilities; no available step-by-step manual with concrete examples;
limited knowledge on the technical process in writing the whole paper; and no immediate budget available.

Knowing research as one of the KRAs of master teachers, it is very unfortunate that only a few of them are writing. Furthermore, they are mandated to conduct at least one action research to test the interventions or the programs and projects they crafted to uplift learners’ academic performance within every school year.

Similarly, Jensen (2012) stressed that action research is one of the effective measures of professional development. It is a good ground for addressing problems and providing solutions in the form of innovations. Yet, very few are engaged in such scholarly work.

Elsewhere, there was some research training conducted outside the Schools Division but no research training was recorded based on annual reports of previous years. Likewise, there was no system placed in the unit aside from the standard mechanism from BRF. Additionally, experts on different parts of research are nowhere to be found.

Researchers especially those using the quantitative methods needed advice from a statistician for an appropriate statistical tool for a reliable and valid result. In the same way, editors and proofreaders are needed to make the paper more scholarly. These posed problems to researchers resulting in a dropped in research production.

Despite the less production of research, the Schools Division got various awards like best research paper and best presenter. This implies that there are good researchers in the Schools Division who could be a part of the pool of researchers.
2. What is the status of research in the Schools Division after the implementation of project SMURF?

Table 3

<table>
<thead>
<tr>
<th>Fund Source</th>
<th>No. Researches 2021</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BERF</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td>SEF</td>
<td>15</td>
<td>Very Good</td>
</tr>
<tr>
<td>No Fund</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 displays the status of research after the implementation of project SMURF. In the year 2021, it is revealed that there are 61 pieces of research are coming from two different funding sources which are interpreted as very good. Among of which are 44 pieces of research funded by BERF, 15 funded by SEF, and 2 which opted to use no fund at all. This is 52.14% of the ratio of master teachers of the Schools Division compared to 11% in previous years. Noticeably, research results are incorporated with the plans of each school.

Consistent with this result is the study of Smeed and Kimber; and Millwater and Ehrich (2009) emphasizing that teachers’ engagement in research is one avenue of developing them in the leadership arena in improving instructions, making innovations in instructional method, and in making difference while coping with the global trends in education. They stressed that more teachers’ involvement in research is a good indicator that the educational institution is a high-performing school.
In the same way, Tshomo and Lhaden (2015) used action research in finding ways how to improve classroom reinforcement strategies to optimize pre-service student teachers’ learning, thus, providing fellow teachers with practical classroom management techniques in enhancing students’ participation in the teaching-learning process.

The magnitude of research production was made possible through a series of capability buildings. The training titled, “Intensified Research Mechanism and Format” and Research Forum with the theme, “Intensified Research Dissemination and Functionality” as part of project SMURF were given to teachers in all schools. Moreover, a research conceptual draft was the output of every researcher which served as their guide in doing their action or basic research.

More so, there was a series of school-to-school visits that provided LAC sessions on research to all the teachers and schoolheads. Data analysis was emphasized in a mini discussion specifically the quasi-experimental statistical tools that they might use in their action research. Thorough discussions of research parts were imparted with examples to motivate teachers to engage themselves in writing.

Moreover, technical assistance form as an innovation served as the key to passing the evaluation of the SDRC. It consists of comments and suggestions that the researcher should consider. It is incorporated with a self-evaluation tool wherein the researchers will know the weaknesses of their manuscript before submitting it to the SDRC. It is a good practice to assess your work first to make it more presentable resulting in a minimal error.
Online consultations were beneficial, especially during the pandemic. Online treatment of data was also given to researchers specifically in running statistical tools with results. The link bit.ly/sdocalapancityresearch, an online database of the Schools Division is crucial in monitoring, uploading, and downloading research data.

The untiring support of the SDRC chair and adviser is apparent in running the manuscript of the researchers which the SDRC members already reviewed and approved. All of the efforts combined result in a surprising rise in research production.

3. Is there a significant difference between the performance of the Schools Division before and after the implementation of project SMURF?

Table 4

<table>
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<tr>
<th>Test of difference between previous and current data</th>
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<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>Previous and Current Data</td>
</tr>
</tbody>
</table>

The result of the p-value of chi-square is way less than the set level of significance that is 0.0013<0.05 which results in a significant difference in research production. A huge gap between the previous and current data in research considering the number of production clinging to standards proves that SMURF as a research project endeavor is effective. Furthermore, the statistical result implies that all of the activities under the project are significant in producing quality research.
The positive variance of the statistical result also implies that Project SMURF will have a positive impact on the research products for the next years as supported by the x-variable or slope of simple linear regression of 7.2 showing a direct and positive trend. There is a need for innovation and exploration of a possible solution to problems just like this project since it brought positive results in the Schools Division. More effort with ingenuity needs to be done to accomplish plans just like the project SMURF which has proven to be effective in research production with quality.

Accordingly, project SMURF is aligned with Kanter’s structural empowerment theory (1993) which stressed four guiding concepts that support successfully shared governance structures. These concepts include equity, ownership, partnership, and accountability. Knowing the importance of SBM in schools, research as one of the potent tools will guarantee a higher level of implementation.

Likewise, a study titled “Action Research: A Tool for Improving Teacher Quality and Classroom Practice” conducted by O’Connor, Greene, and Anderson (2006) attested that action research enhances teachers’ proficiency holistically in the field of service. It impacts both the teachers’ daily and future instructional practices, empowers them to go beyond the comfort zone, and gives them new roles, teachers as researchers, and teachers as decision-makers. As a result, 21st-century educators become a holistic workforce prepared in any arena of specializations which is also one of the principles of project SMURF.

In consonance with the mentioned study, Sherab (2015) utilized action research as a tool in examining his teaching practices in bringing about
improvement to student engagement during the learning process. This practice helped him in decision-making what teaching strategies, approaches, and methods are appropriate for a specific group of students. In the same way, educators should also emphasize the importance of conducting research and making it functional.

The streamlined mechanism provides the teacher with a clear direction for doing the research process. It eliminates confusion by getting rid of overlapping processes that prolonged research approval. The functionality of research was made possible by creating a link between SIP and research. Priority Improvement Areas (PIAs) are now the source research topics of teachers engaged in action research. Likewise, the Schools Division provides avenues for research presentation which could be benchmarked by other researchers.

The initial step in writing research is to determine problems that you want to solve. Considering the three-year plan of the schools through its planning worksheet, the first step in research writing was addressed by the SIP. Along with this, is the DEDP which covers six years. Making this strategic plan more evidence-based and result-oriented, research findings should be incorporated to avoid unnecessary PPAs. Considering this mindset, research serves its purpose making it functional and usable in the schools and school division.

Hence, project SMURF must be continuously implemented in the Schools Division to improve access, quality, and governance of basic education.
Summary of Findings, Conclusions, and Recommendations

This chapter presents the summary of findings, conclusions, and recommendations drawn from the problems raised in this study.

Summary of findings

The findings of this research are the following:

1. The Schools Division performed poor as indicated by an average of 13 pieces of research per year from 2018 to 2020 before the implementation of project SMURF.
2. After the implementation of project SMURF, the Schools Division produced 61 pieces of research in 2021 which is interpreted as very good.
3. Project SMURF is proven effective since the result of the p-value of chi-square is way less than the set level of significance that is 0.0013<0.05 which results in a significant difference in research production. Moreover, the positive variance of the statistical result also implies that project SMURF will have a positive impact on research products for the next years as supported by an x-variable or slope of a simple regression of 7.2 showing a direct and positive trend.
Conclusions

The following are the conclusions drawn from the findings of the research:

1. There was a poor production of research from the years 2018 to 2020.
2. There was a very good production of research in the year 2021.
3. Project SMURF was effective in producing research with quality.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are hereby presented.

1. The Schools Division may encourage teachers to continue writing action or basic research.
2. The Schools Division may continuously support researchers who are writing action or basic research by offering various forms of technical assistance.
3. The Schools Division may continue implementing project SMURF since it is proven to be effective and could increase its performance for the upcoming years.
4. Researchers within the Schools Division may consider evaluating all the implemented PPAs through action research.
Action Plan

To make research more functional, it should be disseminated and used by others. Participation in research summits and fora are considered after completing this research. Results will be presented during the Management Committee Meeting and other conferences and avenues with the permission of the top management for proper dissemination. Research copies will be provided to different schools as their reference most especially the possible adaption of project SMURF which could be an initial step in building their own research culture. Online publication is also considered to cater to a larger group of researchers for possible replication of the project.
References


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Deped Memorandum No. 144, S. 2017. Supplemental Research Guides and Tools


