

E-government Program Implementation in Public Elementary Schools in Sorsogon, Philippines

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Abstract: E-government Program Implementation in Public Elementary Schools in Sorsogon, Philippines. Objectives: This study determined the e-government programs, extent, and challenges in Public Elementary Schools in Sorsogon, Philippines. **Methods:** This study utilized the mixed-methods sequential-explanatory design in which the major design is quantitative and minor is qualitative research where one thousand elementary teachers and sixty-eight elementary school heads at Sorsogon West District, Sorsogon City, Philippines were selected using stratified random (percentage) sampling. Data was collected through document analysis, survey questionnaire, and unstructured interviews. **Findings:** The results revealed that first, there were various e-government programs implemented across the identified variables in the study, second; the e-government programs are well-implemented; third, the school heads and teachers experienced challenges in the implementation of the programs; and fourth, a strategic plan will help strengthen and enhance the e-government programs implementation. **Conclusion:** Determining the extent of implementation of e-government programs and factors affecting its implementation provides basis to further develop and strategically improve its implementation.

Keywords: e-government, strategic plan, public elementary school

Abstrak: Implementasi Program E-government di Sekolah Dasar Negeri di Sorsogon, Filipina. Tujuan: Studi ini menentukan program, jangkauan, dan tantangan e-government di Sekolah Dasar Negeri di Sorsogon, Filipina. **Metode:** Penelitian ini menggunakan desain sequential-explanatory mixed-methods dimana desain utamanya adalah kuantitatif dan minor adalah penelitian kualitatif dimana seribu guru SD dan enam puluh delapan kepala sekolah dasar di Sorsogon West District, Sorsogon City, Filipina dipilih menggunakan stratified pengambilan sampel acak (persentase). Pengumpulan data dilakukan melalui analisis dokumen, kuesioner survei, dan wawancara tidak terstruktur. **Temuan:** Hasil mengungkapkan bahwa pertama, ada berbagai program e-government yang diterapkan di seluruh variabel yang diidentifikasi dalam penelitian ini, kedua; program e-government dilaksanakan dengan baik; ketiga, kepala sekolah dan guru mengalami tantangan dalam pelaksanaan program; dan keempat, rencana strategis akan membantu memperkuat dan meningkatkan implementasi program e-government. **Kesimpulan:** Menentukan sejauh mana implementasi program e-government dan faktor-faktor yang mempengaruhi implementasinya memberikan dasar untuk lebih mengembangkan dan meningkatkan implementasinya secara strategis.

Kata kunci: e-government, rencana strategis, sekolah dasar negeri.

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■ INTRODUCTION

The improved government's digital infrastructure, connectivity and ease of doing other connected digitized services has always been one of the essential factors leading towards good governance. The COVID-19 Pandemic halted the normal setting of how services were processed and information were disseminated. This highlighted the importance of applying information and communication technology (ICT) to government's functions and works which is known as e-government. The citizens demand for provision of an upgraded services, communications and connections increased since there's the pandemic happened.

The Information Technology Act of 2000 of India, provides legal recognition to all transactions done via electronic exchange of data or other electronic means of communication or e-commerce, in place of the earlier paper-based method of communication. It promotes efficient delivery of Government services by means of reliable electronic records.

Furthermore, Stoiciu (2021) states that there is a need to increase the level and depth of all stakeholders' participation in decision making and in the process of implementing e-government. This could help the issue of achieving an all-inclusive information society. Also, the provision of suitable e-services and the promotion of digital literacy should become a security matter and a top priority for Governments, in order to ensure their country or region a place in the future knowledge based society. It serves as a base of knowledge for a large number of graduates that participate in government digital transformation activities (Sarantis, Ben Dhaou, Alexopoulos, Ronzhyn, Viale Pereira, Charalabidis, 2019).

In the Philippines, Section 2 of the Constitution of 1987, declares the principle that the state recognizes the vital role of communication and information in nation-building. Likewise,

Section 2 of Republic Act No. 10844, enacted on 2016, declares the policy to ensure the provision of a strategic, reliable, cost-efficient, and citizen-centric information and communication technology (ICT) infrastructure, systems and resources as instruments of good governance and global competitiveness. Also, to promote the use of ICT for the enhancement of key public services, such as education, public health and safety, revenue generation, and socio-civic purposes.

It has been witnessed in the Philippine local government lately the significant rise in web presence of many cities, a development that was facilitated by the passage of the Electronic Commerce Act in 2000 and the implementation of subsequent programs to support the law's adoption by government. However, the under utilization of websites as e-government tools showed a clear absence of substantial information and resources that could enhance the quality and speed of service delivery, make government more transparent, facilitate public participation in decision-making and, ultimately, bring government, citizens, business, community organizations, and other groups in society together in the governance process (Siar, 2005).

Magno (2014) states that despite having a formal democratic system in the Philippines, there are social, institutional and political issues that bar citizens from getting equal access to Internet connectivity and capacity. The weak ICT infrastructure in the provinces is coupled with the poor functional literacy of low-income communities. There is also the absence of a Freedom of Information Law that would allow citizens to have easy access to government documents so that they can participate better in public affairs.

On 2019, DepEd issued Department Order No. 21, series 2019 entitled, Policy Guidelines on the K to 12 Basic Education Program. This order stated that the K to 12

graduate is a holistically developed Filipino that are equipped with information, media and technology skills and other mentioned skills that are prerequisite in tackling the challenges and take advantage of the opportunities of the 21st Century. The delivery mode of learning has always been provided with the integration of ICT tools that can be of help in developing the skills to be holistically ready for the challenges that life has to bring. Using ICT to improve the teaching and learning paradigms improves the concept and application of teaching and learning. The application of ICT tools in teaching and learning process has changed the total scenario of teaching and learning process. It's been making dynamic changes in the society.

On the other hand, the Local Government Units (LGUs) in the province of Sorsogon needs to exert more effort in order to provide more information and access to government services. It is important to strive harder to attain the higher stages of e-government specially in times of pandemic when physical movement are restricted not to hamper delivery and access to services (De Castro and De Castro, 2022). Particularly, in the government of Sorsogon City, they need to accelerate the implementation of digital technologies since these could lead to resilience of public services delivery.

The Department of Education of Sorsogon City Division school heads and teachers are still on the stage of coping up with all the new demands and challenges in distance learning (Reantaso and Digo, 2022; Mostera and Digo, 2022). The Department of Education aims of a paperless classroom and a paperless transactions of transferring data and information of the staff and learners from one place to another in a speedy delivery of it. However, it has always been a struggle to work through electronic tools and platforms specially with the poor internet connectivity and skills of the school heads and teachers in handling and providing services to the

center of the Department which are the learners. Electronic platforms has always been readily available for everyone but the participation of all the school heads and teachers are not guaranteed to be efficiently and effectively implemented in providing e-services to the concerned beneficiary of the department which are the learners due to the lack of an enhanced training to develop further the technological skills of the teachers and school heads.

The school head's management and supervision of the group of teachers on their respective schools and the teachers' way of delivering the lessons digitally needs to be developed. This study will determine the e-government programs, extent, and challenges in Public Elementary Schools in Sorsogon. This study may give light to the current situation of the Department of Education Sorsogon City Division teachers and school heads on how e-government programs are being implemented, managed, and supervised in providing e-services in terms of teaching-learning process, communication transactions, registration and enrolment. This study may help the current situation through the strategic plan that may be developed based on the findings of the study.

■ METHODS

Research Design and Procedures

This study determined the e-government programs, extent, and challenges of public elementary schools in the Department of Education Sorsogon City Division. The mixed method sequential-explanatory of research design was utilized in this study.

Participants

The respondents of this study were the public elementary school heads and teachers in the Division of Sorsogon City. The respondents were selected through the use of stratified random (percentage) sampling from the total population

of elementary school heads and teachers along the four (4) districts.

The data were collected primarily from the four districts and the identified respondents along Sorsogon East and Sorsogon West District, Bacon East and Bacon West District are 1001 respondents. Also, the qualitative data were gathered from the 10 informants from the four districts of the Sorsogon City Division.

Instruments

The data were gathered through the use of documentary analysis as the tool in identifying the e-government programs of DepEd Sorsogon City. The researcher formulated a questionnaire which was utilized in determining the extent of e-government implementation along e-participation in Teaching-Learning Process (TLP), Communication Transactions, Registration and Enrolment. The guide questions were utilized for the unstructured interview in identifying the challenges met by the school heads and teachers in the use of e-government programs as to the identified variables. The researcher prepared the draft of the questionnaire and guide questions that is submitted to the adviser and panel of evaluators for suggestions and approval.

Data Gathering Procedures

The research was carried out in several procedures. At first, the researcher wrote and sent letters to the PSDSs and selected school heads for the conduct of dry-run of the questionnaire

for validation to determine the accurateness and appropriateness of the prepared questionnaire. When permission was granted, the researcher administered the dry-run by sending digital and printed copies to selected elementary school heads and teachers. After the dry-run was conducted, the researcher made appropriate adjustments and produced the final instrument appropriate for use in collecting the data and submitted copies to the adviser and panel of evaluators.

The researcher secured permission from the Schools Division Superintendent in accessing necessary data for this study. The distribution and retrieval of the survey was conducted through the use of Google Survey form and printed copies for the respondents who were unable to access the form online. An unstructured interview was conducted in the distribution and retrieval of survey questionnaire.

Data Analysis

The researcher utilized varied statistical tools to tabulate, analyze and interpret the data such as documentary analysis and interview in identifying the recognized e-government programs used by public elementary schools

In determining the extent of implementation of e-government programs with the identified variables, weighted mean was utilized to acquire the needed information. The data attained were analyzed and tabulated through the employed Likert scale presented below.

Table 1. Likert scale of extent of implementation of e-government program

No.	Average Weighted Mean Range	Descriptive Equivalent
5	4.50 - 5.00	Very Well Implemented
4	3.50 - 4.49	Well Implemented
3	2.50 - 3.49	Implemented
2	1.50 - 1.49	Fairly Implemented
1	1.00 - 1.49	Poorly Implemented

Furthermore, the challenges met in the implementation of e-government programs along the identified variables were gathered and determined from the guide questions used in the unstructured interview to the informants and these data were summarized. The data gathered were analyzed and interpreted using thematic analysis.

■ RESULTS AND DISCUSSION

E-Government Programs Implemented in Public Elementary School in Sorsogon along e-Participation in the Teaching-Learning Process (TLP); Communication Transactions; and Registration and Enrolment

This study shows that there were various e-government programs implemented along the identified variables based from the documentary analysis and unstructured interview conducted by the researcher. It has been found out that the e-government programs implemented under the e-participation in the teaching-learning process (TLP): Virtual Brigada Pagbasa Program, Radio-Based Instruction (RBI), DepEd TV, Educational Blog, Educational Live Stream on Social Media, Online Quiz Applications, Learning Resource Management and Development System (LRMDS), DepEd Commons, DepEd TV, and DepEd ETUlay Tutorial.

The e-government programs that were recognized under e-participation in the TLP were considered by the teachers as one of the primary e-sources and platforms of learning, as well as supplementary materials even before the pandemic and today, in this new normal setting. These e-government programs are adopted or adapted in the context of local classrooms to be at par with international standards of education. Moreover, these are functional and useful as teachers carry out their teaching-learning process in the classroom. The adaptation of related technologies to the provision of learning

resources provides an online source of learning (Nurjaman & Sabilah, 2022).

However, there were factors affecting the implementation of these e-government programs such as when the learners were not able to access the tools for learning due to insufficient data and WIFI connections. Also, when the teachers and parents were not able to have time and have no knowledge of manipulating the tools.

The study implies that there is a need to strengthen the utilization of these primary e-sources, platforms of learning, and supplementary materials by conducting training orientation for the stakeholders to be oriented on how to operate, manipulate and utilize the learning tools as well as to establish the monitoring and evaluation in order to determine strengths and weaknesses of the e-government programs under participation in the TLP. Likewise, internet connectivity needs to be ensured in every geographical location in order to attain the purposes of the establishment of e-government programs as well as to expect a gradual transformation of the education system. This shares the same findings with (Heeks, 2003) as mentioned in the study of Luna-Reyes and Garcia (2011) stated that electronic government (e-Government) has been recognized as a powerful strategy for government transformation.

Furthermore, related to the e-government programs implemented under communication transactions: MS Teams, DepEd Information Help Desk Process Flow and Escalation Procedures, Program Management Information System (PMIS), and Electronic School Report Card (e-SRC) were identified. The data presented were some of the observations and experiences as expressed in the interview conducted by the researcher. They have said that “It is currently helpful to them since they have tested the transport and maintenance of the reliability and accessibility of their document, regardless of the availability of the electricity or WIFI connections.” Also, they

have said that “the e-programs had been designed for them to collaborate with one geographical workplace than the other by creating messenger account,” which means that their work or transaction must go on or continue even if they find their transaction away from their geographical location by making communication timely, reliable, and accessible.

This study implies that there is an urgent and emergent need for the improvement of WIFI connectivity, internet facilities, and more technical knowledge to better serve their purpose. Also, there is a need to allocate a specific and separate budget for the improvement of ICT facilities for better access to online platforms for communication transactions. This result is shared by the findings of (Bucata & Rizescu, 2017) that communication serves as one of the most essential levers of management that a company can implement for the formation of teams and achieving valuable performances. Communication facilitates clarifying information, generates enthusiasm for learning and creates positive relationships among learners (Shan, Li, Shi, Wang, & Cai, 2014) as mentioned by (Natividad & Ballena, 2021).

Related to the e-government programs implemented under registration and enrolment: Learner Information System (LIS), and Enhanced Basic Education Information System (EBEIS) were identified. The data presented means that e-government programs implemented helped establish collaboration and involvement between and among the stakeholders in managing the services to be provided to learners. However, based on the interview conducted by the researcher, during the height of the pandemic, one of the teachers said that “they observed parents’ reactions when they informed them the day of the registration, that parents said, they were still thinking whether to enroll their children or not.

However, in this New Normal, parents’ reaction was different then since they were insistent on enrolling and registering children due to their desire to return their children to school because of the difficulty they have encountered in teaching them be it modular or online. These can be conducted through meeting orientation, consultation

This study implies that when introducing e-government programs the need for the beneficiaries to be consulted as well as to orient them is necessary. Parents need to be properly well-informed and involved in every program that their children be benefiting from. The need to back up with policy since this is one way to improve the relationship between the school’s internal and external stakeholders as well as in achieving target goals. The success of e-Government initiatives depends on an engaged citizenry and, to that end, efforts to foster civic engagement are critical. In order to develop this citizen focused vision, policymakers must keep the ordinary citizen in mind when designing systems (Reffat, 2003).

Extent of Implementation of E-government programs along e-participation in the Teaching-Learning Process (TLP)

The table presents the e-government programs along e-participation in the teaching-learning process. It is shown that Virtual Brigada Eskwela, Radio-Based Instruction got the weighted mean of 4.02, Educational Live stream on social media 3.99, Educational Blog 4.01, Online quiz application 4.11, Learning Resources Management and Development System (LRMDS) 4.11, DepEd Commons 4.11, DepEd TV 4.11 and DepEd e-TUlay Tutorial 4.07. Although the results vary from 3.99 to 4.11, these are interpreted as well implemented. On the other hand, the overall weighted mean of e-participation in the teaching-learning process got 4.05 which is interpreted as well implemented.

Table 2. Extent of implementation of e-government programs along e-participation in the teaching-learning process (tlp)

No.	Program	Weighted Mean	Interpretation
1	Virtual Brigada Pagbasa	3.99	WI
2	Radio-Based Instruction (RBI)	4.02	WI
3	Educational Live Stream on Social Media	3.99	WI
4	Educational Blog	4.01	WI
5	Online Quiz Applications	4.11	WI
6	Learning Resources Management and Development System (LRMDS)	4.11	WI
7	DepEd Commons	4.02	WI
8	DepEd TV	4.11	WI
9	DepEd ETUlay Tutorial	4.07	WI
SUB-OVERALL		4.05	WI

Legend: WI- Well Implemented

The data means that these e-government programs were found to be helpful to teachers in making their teaching-learning process meaningful since these make the learners and teachers more engaged in the activity prepared for the classroom. These tools were designed as users friendly to motivate the learners to participate individually in the classroom tasks which led them to independent learning. However, there are factors affecting the process of developing these skills such as WIFI connections, the availability of electricity, and the mode of learning whether face-to-face or online.

The results imply that DepEd as the provider of these e-government programs needs to ensure the strengths and weaknesses of these programs by establishing a scheme of monitoring and evaluating in order for them to continue providing the learning opportunity. Also, the need to motivate both the learners and the teachers to continue despite the challenges encountered. The utilization of technology is necessary for the teaching-learning process; thus, it creates a more collaborative learning environment (Zain, 2019). ICT serves as a tool of e-government which created a positive impact on ICT development which resulted in an increasing growth of e-

participation (Avotra, Chengang, Marcelline, Asad and Yingfei, 2021). Using ICT and online learning applications, the teaching and learning process for teachers and learners become more independent, creative, flexible, and encourage students to increase their academic product (Nurjaman & Sabilah, 2022). Also, web-based instructional tool could improve students' sociability, grades, motivation to learn, and curriculum delivery when utilized technology-enabled learning (TLE) (Patalinghug & Patalinghug, 2022).

Extent of Implementation of E-government programs along Communication Transactions

Table 3 presents the extent of implementation in the communication transaction. The e-government programs under communication transactions are MS Teams, DepEd Information System Help Desk Process Flow and Escalation Procedures, and Electronic School Report Card (e-SRC) got a weighted mean of 4.29, 4.0, and 4.1 which are interpreted as well-implemented respectively. Its overall result got the weighted mean of 4.12 interpreted as well implemented.

The data means that these e-government programs under communication transactions had been implemented by the DepEd before and during the pandemic as well as in this New Normal since the respondents recognize them as well-implemented because these programs are becoming a key information channel among stakeholders of DepEd. As the communication and transaction programs are utilized these resulted in services and become information

services that can be downloaded, and uploaded. It becomes the platform where teachers can create collaborative classrooms, connect in professional learning communities, and communicate with school staff and other forms of online experiences. While the face to face and online, these promote transparency and participation since learners still need guidance in the utilization of these programs.

Table 3. Extent of implementation of e-government programs along communication transactions

No.	Program	Weighted Mean	Interpretation
1	MS Teams	4.29	WI
2	DepEd Information Help Desk Process Flow and Escalation Procedures	4.0	WI
3	Program Management Information System (PMIS)	4.1	WI
4	Electronic School Report Card (e-SRC)	4.1	WI
SUB-OVERALL		4.12	WI

Legend: WI- Well Implemented

On the other hand, it enables more efficiency, cost-effectiveness, and participation since the majority of stakeholders have the chance to avail of the services, allows greater public access to information, and makes them learn to be responsible. These become common communication platforms as they deliver their tasks. However, the performance of these different platforms in sending and receiving communications may vary according to the geographical locations of school to school, administrators to teachers, school to the stakeholders, and teachers to teachers.

The study implies that communication transactions of the DepEd need to strengthen the e-government programs along its usability and the accessibility of WIFI connections and ICT infrastructures in order to increase the engagement of the users according to their purposes. Also,

ensure the online identity and affiliation with the users, although well implemented this means no factors affecting the utilization, particularly in transacting such as Wi-Fi connections, ICT infrastructures, and limited technical skills of the users. Likewise, DepEd needs to create more innovation to increase orientation, WIFI connectivity, and other factors.

Establishing connections and building rapport is important in strengthening working face-to-face but it's more difficult when there is not the immediate two-way communication (Richardson & Alsup, 2015). The utilization of any information and communication technologies help facilitate the administration of government and it is acknowledged to be a viable solution to the problems that the organizations experience such as inefficient operations, slow services and lack of accountability (Sanchez, Kappelman, Koh, & Prybutok, 2003).

Extent of Implementation of E-government programs along Registration and Enrolment

Table 4 presents the extent of implementation in registration and enrollment. The e-government programs implemented under registration and enrolment are Learner

Information System (LIS) and Enhanced Basic Education Information System (EBEIS) got a weighted mean of 4.23 and 4.18 respectively, interpreted as well implemented. The overall weighted mean of registration and enrolment got 4.21 which means well implemented.

Table 4. Extent of implementation of e-government programs along registration and enrolment

No.	Program	Weighted Mean	Interpretation
1	Learner Information System (LIS)	4.23	WI
2	Enhanced Basic Education Information System (EBEIS)	4.18	WI
SUB-OVERALL		4.21	WI

Legend: WI- Well Implemented

The data means that respondents acknowledged the program for the purpose it served such as enrolment and registration. However, during the pandemic, the intention of this e-government program on registration and enrolment to reach out to the learners was affected by no assurance that the linear lists of enrollees were given attention in terms of providing quality education. This had been found in the interview conducted, where some parents expressed their gratitude to the DepEd that despite challenges caused by the pandemic, they continue reaching the beneficiaries of education. However, some of them disclosed their doubts about the intention of DepEd to provide a quality education through distance learning and whether they can really achieve it or not. This means that parents are the most important partner of DepEd in establishing education since learners are not yet mature to create decisions for their studies.

The result of the study implies that DepEd needs to generate more strategies for reaching the stakeholders to ensure trust and solicit their support and participation through meetings and various orientations since their partnership is essential in building quality education. Parental Involvement is an Important Factor for Successful

Education (Đurišić, and Bunijevac, 2017). It is worthwhile for school heads and teachers of schools to invest in strengthening relationships with parents in order to enhance their involvement in their children's education as parental involvement matters for children's achievement, motivation, and well-being (Menheere and Hooze, 2010).

The Challenges Met by the School Head and Teachers in the Implementation of e-government programs along the identified variables

The challenges met by the school heads and teachers in the implementation of e-government programs. In this section, the data were classified as the top five (5) and bottom five(5) challenges such as unstable internet connection ; poor ICT infrastructure; limited technological training training given to teachers and administrators; insufficient ICT resources; and unskilled technologically. On the other hand, the bottom five (5) challenges were lack of proper control and accountability to implement e-government initiatives; lack of high prioritization of e-government; uncertainty about data privacy and data security; no participation in policy implementation; and different security models.

The data means that the respondents experienced challenges as considered as the primary problems in carrying out their teaching-learning process, communication transactions, and registration and enrolment. However, since the pandemic, these affect their day-to-day functions as the frontliners of the education services rendered to their beneficiaries. These require the professional competencies of teachers, and administrators in accomplishing their daily tasks. It is expected that teachers as professionals are proficient in computing, and communications, and knowledgeable on the internet. However, even though teachers are proficient, the ICT infrastructure in the locale is not stable since they always experienced low bandwidth. Nevertheless, the occurrences of these top five (5) problems had been existing and evidential before and during ~~the pandemic~~.

In the interview conducted by the researcher, the groups of teachers attested that “most teachers in the delivery of their primary tasks had been affected such as manipulating computers, communicating as well enabling the internet where their computing and communicating were affected because the internet connectivity and broadband access are low and unstable. Also, some parents said that “they have no internet connection. Others told that they have only limited data for internet connection.” While some teachers asserted that “they were using data in order for them to have internet subscriptions.”

According to the interview, teachers expressed that “this occurrence of technological deficiency was natural among old teachers.” Likewise, they added that “the older the teachers the deeper the effect on them since they were requesting the newly hired teachers to coach them on how to manipulate technologically their laptop. Also, they have said that “as teachers, it is expected that they should have a high-end laptop or computer desk, but as to their experiences, the laptop that had provided to them is not with

quality.” Also, some of them said that “carrying out our professional competencies in the classroom is not a problem when the ICT resources are all provided.” In this sense, they refuted that “they were spending their money just to be able to provide education services to learners.”

The result of the study implies that teachers need to be equipped technologically by giving them regular training workshops on computing, communicating, and manipulating the internet related to teaching. Moreover, to ensure high-quality results from the implementation of the e-government programs the need to have stable internet connectivity, providing them with high-end computers, and ICT resources need to work on proper planning and budgeting for better results of productivity in the teaching-learning process and economy in general.

ICT can be an important source of market information. It can provide consumers with information on the lowest prices of products or on the lowest and different sources of supply, help reduce transaction costs and barriers to entry, and improve market efficiency (Quibria, Ahmed, Tschang & Reyes-Macasaquit, 2003).

While the bottom five (5) identified problems were perceived as the found solutions to the top five (5) identified problems. This means that the existing challenges or problems may be rooted in the absence of comprehensive policy and legislation, internal management, technical ability, proper control and accountability, and high prioritization of the implementation of e-government programs. Some teachers and administrators in the interview conducted said that “they continue reminding their school heads regarding the reality of their experiences. Likewise, school heads to their administrators.

The result of the study implies that teachers and administrators need to look into the impact of e-government programs in the development or in achieving high-quality education in the

provinces by considering the pandemic and the New Normal time conditions as factors in the development of education. More so, on the inevitable trend of e-government programs in achieving the DepEd's long-term plans and targets.

E-government implementation challenges can be technological; a country's infrastructure and economic problems can often derail e-government services initiatives and lack of funding, for implementation, and/or cultural problems (Rahman, Naz, & Singh, 2016). The development of basic infrastructure to capture the advantages of new technologies and communications tools is essential for implementing e-government (Nduo, 2004).

Proposed Strategic Plan

The strategic planning is needed in fostering more effective government actions (Bryson, Edwards, Van Slyke, 2018). The world of teaching is rapidly evolving, and many teacher education programs are rendered inappropriate by the political, legal, economic, ecological, social, and technological advancements. To keep up with this educational evolution, teacher education and basic education programs needs to meet the new standards through the development of strategic plans (Digo, 2021; Digo, 2022). This, therefore, calls for the attention of school leaders and teachers in keeping abreast of the advancement in their strategic planning skills.

With the level of the of implementation of e-government programs of teachers and school heads, the proposed strategic plan was prepared with the primary objective of improving and sustaining the e-government implementation in Public Elementary Schools in Sorsogon. The proposed three-year strategic plan consists of six (6) parts. The Key Result Areas (KRAs), targets, strategies, PPAs, resources and expected output. The strategic plan was based on the SWOT

analysis of the data gathered from the study conducted. The strategies were crafted from the SWOT Analysis.

CONCLUSIONS

This study determined the e-government programs, extent, and challenges in Public Elementary Schools in Sorsogon. Based on the study results, the overall extent of implementation was "well-implemented". The implementation of e-government programs helped bridge the gap across all areas in education; increased connections and relationship which built strong ties to all school stakeholders; and provided a good service quality to all. It is clear that the e-government program initiatives of the DepEd brought sustainability, however, there were still challenging barriers towards its successful implementation and that should become part of the priority in its implementation. Hence, a strategic plan was proposed. Based on these conclusions, other strategic interventions may be implemented so maintain and strengthen its implementation.

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