Level of Effectiveness of In-House Production through Facility Management vs Outsourcing through Service Provider of Self-Learning Modules

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Abstract

The provision of learning resources at the onset of the COVID-19 pandemic has been the boiling point of the Department of Education's Basic Education Learning Continuity Plan (BE-LCP). This service should be geared toward achieving the strategic objectives of the organization, which largely aim at value creation. This study aims to compare and evaluate the level of effectiveness of in-house through facility management versus outsourcing through a service provider in the production of learning modules. The study employed a mixed method of research and was conducted in the four districts of DepEd Tandag City. Findings of the study revealed that teachers found the materials as a product of outsourcing to be more durable, appealing, and in conformance with the standards. It was also gleaned from the data that teachers were deeply engaged in the printing and sorting of materials during an in-house production. It was also found out that a significant relationship existed in the perception of teachers, school heads, and the Bids and Awards Committee members relative to the cost effectiveness of outsourcing versus in-house production. This cost ineffectiveness is attributed to the involvement of teachers in the in-house production instead of developing the modules or other teaching related tasks.

Keywords: Effectiveness; In-House; Facility Management; Outsourcing; Production; Service Provider; Self-Learning Modules

Introduction

The public health emergency brought about by COVID-19 calls for the Department of Education (DepEd) to be innovative and resourceful in delivering quality, accessible, relevant, and liberating education. In response to this emergency, DepEd developed the Basic Education Learning Continuity Plan (BE-LCP) to ensure that learning opportunities are provided to our learners in a safe manner through different learning modalities. Covid 19 has compelled the use of self-learning modules on a large scale. Considering the uneven access to technology among learners and the greater preference for modular learning as revealed from the responses to the learner enrollment and survey forms, SLMs will be the backbone of distance learning mechanisms to accompany textbooks, complemented by other distance learning modalities such as online and educational television and radio-based instruction. Along with this, DepEd Order No. 018, s. 2020, emphasizes the Policy Guidelines for the Provision of Learning Resources in the Implementation of the Basic Education Learning Continuity Plan. It pointed out that the learning resources serve as learning toolkits for learners where procedures, instructions, and other details are provided to aid the learning process, with the supervision of the responsible adults along with continuous monitoring and guidance from teachers. In addition, this policy reiterates the guidelines for the printing and delivery of Self-Learning Modules (SLMs). 5.4 of the said policy states that, in view of the extreme urgency to provide the minimum number of Quarter 1 SLMs to learners on or before the opening of classes for SY 2020–2021, the SDOs are given the flexibility to determine the standard technical specifications in the procurement or in-house production of Ready to Print (RTP) SLMs by the administration. In Quarter 1 of School Year 2020-2021,

the Schools Division of Tandag City has opted to reproduce self-learning modules in partnership with the City Government via in-house reproduction. The Special Education Funds of the Local School Board had purchased two heavy-duty machines to do the reproduction. In Quarter 2, another two (2) machine duplicators were procured through SEF by the LGU to augment the reproduction of modules to support the modular printed learning. While the pandemic worsened and movement restrictions were tightened in Quarter 2, the DepEd downloaded LR funds to support the BE-LCP implementation. The Division Office, through the Learning Resource Management Section, has outsourced the printing of modules via eligible service providers. It is from this context that this study sought to find the level of effectiveness between in-house production through facility management of the district offices versus the division's outsourcing through a service provider as to its procurement of materials and services, availability of printed SLM/SLAS, physical aspect of SLM/SLAS, and the delivery timeline of SLM/SLAS to the target users, the learners.

Methods

This research employed mixed method of research design. Mixed methods research is the combination and integration of qualitative and quantitative methods in the same study. Although researchers have combined qualitative and quantitative data for many years, current conceptualizations of mixed methods research did not emerge until the 1980s. Mixed methods research has developed rapidly in these last few years, emerging as a research methodology with a recognized name and distinct identity (Denscombe, 2008). The overall purpose and central premise of mixed methods studies is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems and complex phenomena than either approach alone (Creswell & Plano Clark, 2007). Better understanding can be obtained by triangulating one set of results with another and thereby enhancing the validity of inferences.

a. Sampling

A purposive sampling was utilized in the study. Purposive sampling is intentional selection of informants based on their ability to elucidate a specific theme, concept, or phenomenon. As utilized in qualitative and mixed methods research, purposive sampling involves an iterative process of selecting research subjects rather than starting with a predetermined sampling frame. Akin to grounded theory, the selection process involves identifying themes, concepts, and indicators through observation and reflection (Schutt, 2006: 348). Schutt places emphasis on the importance of each sampling element occupying a unique position relative to the research endeavor (2006: 155). Along these lines, researchers often utilize a purposeful sampling technique to select informants based on their particular knowledge of, and/or experience with, the focus of empirical inquiry. The set of criteria of the informants that this study primarily considers the following; for in-house through facility management are; 1. school head/teacher who directly manage the school and received the printed SLM/SLAS via in-house production; 2. school LR coordinators managing the LRs distribution of the school, while for outsourcing through service provider are; 1. Division Bids and Awards Committee; 2. Division Inspectorate, and 3. Division Asset Management Team.

b. Data Collection

This study focuses on using mixed methods to evaluate the level of effectiveness of in-house versus outsourcing in the printing of SLM and SLAS. It also aims to gather feedback from the teachers in the field, as they are the direct implementers of the materials being printed.

A survey questionnaire was the primary research instrument used by the researcher in determining the level of effectiveness, while a focus group discussion was conducted to validate the specific comments reflected in the questionnaire.

The study used two phases of data collection. The first phase was the distribution of the survey questionnaire to the target respondents following the research ethics. A letter of permission was given to the superintendent for her approval of the conduct of the study. After the data had been gathered from the respondents, another letter was also given to the school heads in the conduct of the focus group discussion as the phase 2 of data gathering. During focus group discussion, the respondents or key informants were oriented on the purpose of the study. The researcher ensured that research ethics would be observed. A non-disclosure agreement was signed by the researcher to assure the key informants of the confidentiality of their identity. Coding was used to determine each key informant. A recorded conversation was also part of the data collection, as approved by all key informants. A waiver agreement were signed by the key informants prior to the conduct of FGD to support that a recorded conversation was permitted. The informants were assured of their rights not to answer questions when they think it does not conform to their beliefs and principles, or whether the questions are beyond their knowledge**Findings**

Table I-A. What is the level of effectiveness of In-House Production by Administration (Districts/School) as to;

A. Procurement of Materials/Services	**Mean (X)**	**SD**	Focus Group Discussion Responses
1. The district has observed procurement process compliant to RA 9184	4.6	0.5	**KI-1- "**It took time for the procurement *activity to achieve timeline."* **KI-2. "**Some bidders will consider the *volume of printing supplies".* **KI-3**. *"The school BAC only knows the procurement process".*
2.The district has provided the printing materials such as; bond papers, master roll, and ink on time.	4.15	0.73	**KI-4. "**We were provided with printers *but we shoulder the repair"* **KI-5.** *"The LGU provided the Printing Equipment."*
3.The district is particular in the technical specifications of the printing materials.	4.31	0.62	**KI-1**. *"To save paper, some print the modules in A5 format."*
4.The district is fully aware of DepEd Order No. 18, s. 2020.	3.81	1.29	**KI-3.** *"Not all teachers, even school heads* are aware of DO 18, s. 2020. We are busy *doing the printing in the field."*
5. The district has monitored/tracked the progress of procurement delivery.	4.34	0.63	**All Key Informants.** *"No comments"*

Table 1-A shows that procurement of materials and services under in-house production follows the procurement process. However, it took time for the schools to manage the procurement since some bidders considered the amount of the project. As reflected in the FGD responses, Key Informant 4 stressed that they were provided with

a printer by the school, but they also shouldered the repair once the printer broke down. In addition, the district or the schools are not fully aware of DepEd Order no. 18, s. 2020, which is the Policy Guidelines on the Provision of Learning Resources in the Implementation of the Basic Education Learning Continuity Plan (BE-LCP). This is supported by one key informant saying that there was a time they printed modules in A5 format instead of A4 paper size to save paper, which is a violation of the ADM LR Standards.

Table II-B. What is the level of effectiveness of In-House Production by Administration (Districts/School) as to;

B. Availability of Printed SLM/SLAS	Mean (X)	SD	Focus Group Discussion Responses
1. The district has printed SLM/SLAS ahead of schedule.	3.35	0.89	**K1-4.** *"This is the agony because we have no manpower to do the job."* **KI-2.** *"T*he soft copy of RTP is not *available, so we can't print ahead of schedule."* **KI-1.** *"Some subjects have no RTP SLM/SLAS."*
2. The district has provided sufficient number of printed SLM/SLAS to cater 1:1 ratio.	3.35	1.08	**KI-1.** *"The allocation for printing is not enough."* **K1-4. "**The LGU helps us in the printing *materials to support 1:1 ratio."*
3. The district has enough human resources to do the printing and sorting of SLM/SLAS.	2.81	0.98	**KI-5. "***No."* **KI-3. "**The school has no human resource to do the job. The teachers are doing the printing instead of developing materials. *sad reality."*
4. The district has not utilized the teachers to do the printing and sorting of SLM/SLAS.	2.23	1.11	**KI-2. "***On the contrary Big NO."* **KI-3. "**In the field, teachers are utilized to do the printing and sorting of *modules."* **KI-4. "**We print, sort, staples, and *distributes, super tiring tasks for us."*
5. The district has not utilized personal funds in the printing and sorting of SLM/SLAS.	3.69	1.05	**KI-4. "**Sometimes, we spend our personal money to buy ink.

Table 1-B, which is on the availability of printed SLM/SLAS, shows that indicator no. 4, which is the district or school has not utilized the teachers for the printing and sorting of SLM/SLAS, got a mean of 2.23 and a SD of 1.11, which only signifies that teachers are deeply engaged in the printing and sorting of modules. This was

supported by the responses of KIs 2, 3, and 4 during the Focus Group Discussion. These claims were also supported by indicator no.3 of the table, which showed that the district or school does not have enough manpower to do the printing and sorting of the materials.

Table I-C. What is the level of effectiveness of In-House Production by Administration (Districts/School) as to;

C. Physical Aspect of SLM/SLAS	Mean	SD	Focus Group Discussion Responses
1. The printed SLM/SLAS is in conformance to LR Technical Specifications such as; (A4 size paper, 70 gsm glossy and full-colors cover)	3.35	0.89	**KI-3. "**Not glossy cover even in the division *provided SLM."* **KI-2. "**It cost too much for glossy cover, *what is important the content."*
2. The printed SLM/SLAS will endure years of utilization.	3.46	1.07	**KI-5. "**The school printed modules are only good for 1 or 2 years uses. Unlike the division outsourced modules, they are *durable."*
3. The printed SLM/SLAS is free from ink glitches.	3.46	1.07	**KI-1. "**There are some glitches due to *malfunctions of printers and duplicators."* **KI-3.** *"Sayang kung ilabak, ipagamit na lang bisan may mga glitches."*
4. The printed SLM/SLAS is intact, sorted and softly bound.	3.31	1.12	**KI-4. "**Stapler only in the school/district *printing."* **KI-1. "***We only sort and staple."* **KI-2. "**Dili ka afford mag *soft bound."* **KI-3. "***Kapoy na mag bind"*
5. The printed SLM/SLAS is delivered as ready to use by the learners.	3.73	1.04	**All Key Informants:** *"yes"*

Table 1-C provides data on the physical aspect of SLM/SLAS of in-house production. SLM/SLAS should adhere to LR specifications such as A4, glossy and full-color cover, and saddle stitch. Data shows that the mean score of this indicator is 3.35 and the SD score is 0.89. This was also supported by the response of KI-3 that the cover is not glossy. KI-2 also supported that it cost too much for a glossy cover and that what matters most are the contents of the materials. As to whether the printed SLM/SLAS are intact, sorted and softly bound, data shows that it has the least mean yet with a greater SD score of 1.12. This was attributed to those modules being sorted and stapled by teachers but not softly bound, as claimed by the Key Informants.

Table 1-D. What is the level of effectiveness of In-House Production by Administration (Districts/School) as to;

D. Delivery Timeline of SLM/SLAS	Mean	SD	Focus Group Discussion Responses
1. The SLM/SLAS is made available before opening/start of quarter/class.	3.31	1.26	**KI-5. "**kadtong may Ready to Print, ma *print dayun ug ma ready."* **KI-4. "**Some of us have to sourced out from another region for the softcopy of *SLM/SLAS para ma ready na."* **KI-3. "**The division delivered the modules *late and sometimes advance."*
2. The school receives the ready to use SLM/SLAS as scheduled.	3.00	1.17	**KI-4.** *"No!"*
3. The district has initiated the delivery of SLM/SLAS to the recipient schools.	3.44	1.08	**KI-3. "**In the district, it is the teachers of the particular school who make the *delivery."* **KI-5. "**No personnel from district office to do the *delivery."*
4. The district has enough manpower/resources in the delivery of SLM/SLAS to the recipient schools.	2.92	1.16	**KI-5. "**The Division has less manpower to *deliver the modules."* **KI-4. "***There's a need to hire a job*-order employee to do the delivery to assist the *Supply Officer."* **KI-1.** *"The teacher delivers the modules."*
5. The district has adopted mechanism to ensure fast-tracking of delivery of SLM/SLAS to the field.	3.27	0.92	No Comments

Table 1-D, which is the delivery timeline of SLM/SLAS via in-house production, shows that among the indicators that got the least mean and SD score were indicators 4 and 2. It can be gleaned that the school/district did not receive the printed SLM/SLAS on time, and this is because the district or division has no manpower to do the delivery of modules to the recipient schools. This was even supported by KI-4, that it was the teacher that delivered the modules or got the modules from the division/district.

Table 2-A. What is the level of effectiveness of Outsourcing Through Service Provider as to;

A. Procurement of Materials/Services	Mean	SD	Focus Group Discussion Responses
1. The division has observed procurement process compliant to RA 9184	4.6	0.62	**KI-6.** *"It took time for the procurement activity to achieve timeline."* **KI-7.** *"Some bidders will consider the volume of printable quantities."*

2.The division has provided the printing materials such as; bond papers, master roll, and ink on time.	4.60	0,63	**KI-6.** *"Yes"*
3.The division is particular in the technical specifications of the printing materials.	4.73	0.59	**KI-8.** *"It is mandatory and non-negotiable."*
4.The division is fully-aware of DepEd Order No. 18, s. 2020.	4.67	0.62	**KI-6.** *"yes"*
5. The division has monitored/tracked the progress of procurement delivery.	4.73	0.46	**KI-6. "**yes, we are mandated to submit *report."*

Table 2-A, which is procurement of materials and services via outsourcing through a service provider, reveals that all indicators have almost the same level of mean and SD scores. Among the highest indicators that data showed is indicator 2, which is the division is particular in the technical specifications of the printing of the materials. This was supported by the response of KI-8, saying that it was mandatory and non-negotiable. Data also revealed that the division has monitored and tracked the progress of the procurement delivery as they were mandated to submit a report. This was reflected in the response of Key Informant 6.

Table 2-B. What is the level of effectiveness of Outsourcing Through Service Provider as to;

B. Availability of Printed SLM/SLAS	Mean	SD	Focus Group Discussion Responses
1. The division through Service Provider has printed SLM/SLAS ahead of schedule.	4.67	0.49	**KI-6. "**It depends on the availability of the *RTP files"*
2. The division has provided sufficient number of printed SLM/SLAS to cater 1:1 ratio.	4.53	0.74	**KI-8. "**The allocation for printing is not *enough."* **KI-7. "**The LGU helps us in the printing *materials to support 1:1 ratio."*
3. The division has enough human resources to do the printing and sorting of SLM/SLAS.	3.80	1.15	**KI-8. "**No. We have no budget for job *order."* **KI-7. "**We tapped LSB paid teachers to help the division to do the waterproofing *of modules."*
4. The division has not utilized the teachers to do the printing and sorting of SLM/SLAS.	4.2	1.15	**KI-6. "***We utilized teachers."*

5. The division has not utilized personal funds in the printing and sorting of SLM/SLAS.	4.60	0.74	**KI-8. "**Sometimes, we spend our personal money to buy some materials like straw to *pack modules for delivery."* **KI-9. "**We spend money for our food in the *delivery of modules to the schools."*

Table 2-B shows the availability of printed materials via outsourcing through a service provider. Among the indicators in the table, indicator 3 had the lowest mean score. From this, it can be gleaned that the division does not have enough human resources to do the printing and sorting of SLM/SLAS. This was supported by the answer of Key Informant 8 that they have no budget for job order employees. However, as KI-7 answered, they tapped LSB-paid teachers to help the division do the waterproofing of modules. It was further supported by the result on indicator 4 that the division has utilized teachers to do the sorting. Although these claims are far different from in-house production as reflected in Table 1-B.

Table 2-C. What is the level of effectiveness of Outsourcing Through Service Provider as to;

C. Physical Aspect of SLM/SLAS	Mean	SD	Focus Group Discussion Responses
1. The printed SLM/SLAS is in conformance to LR Technical Specifications such as; (A4 size paper, 70 gsm glossy and full-colors cover)	4.67	0.72	**All KIs:** *"yes"*
2. The printed SLM/SLAS will endure years of utilization.	4.53	0.83	**KI-9.** Yes. It is with PVC cover and soft bound
3. The printed SLM/SLAS is free from ink glitches.	4.67	0.72	**KI-8. "***None so far"*
4. The printed SLM/SLAS is intact, sorted and softly bound.	4.73	0.72	**KI-7. "***Yes."*
5. The printed SLM/SLAS is delivered as ready to use by the learners.	4.73	0.46	**KI-6. "***yes"*

The data in Table 2-C, which is the physical aspect of SLM/LAS via outsourcing through a service provider, shows that almost all indicators had higher mean and SD scores. These results were also supported by the responses of all key informants in a focus group discussion. One of the indicators of the physical aspects via outsourcing showed that the printed SLM/SLAS were intact, sorted, and softly bound.

Table 2-D. What is the level of effectiveness of Outsourcing Through Service Provider as to;

D. Delivery Timeline of SLM/SLAS	Mean	SD	Focus Group Discussion Responses
1. The SLM/SLAS is made available before opening/start of quarter/class.	4.60	0.51	**KI-8.** *"Yes, but there are times that some* modules with out ready to print copy came *late."* **KI-7.** *"Our teachers are very resourceful as* well. They always find ways to cope the *demands of time."* **KI-9. "**The division delivered the modules late and sometimes advance, but most of the time, *advance."*
2. The division receives the ready to use SLM/SLAS as scheduled.	4.67	0.49	**KI-7. "**It depends on the availability of RTP *(Ready to Print) files in the drive of LSM/SLAS."*
3. The division has initiated the delivery of SLM/SLAS to the recipient schools.	4.87	0.35	**All KIs:** *"yes."*
4. The division has enough manpower/resources in the delivery of SLM/SLAS to the recipient schools.	3.87	1.30	**KI-8.** *"Sometimes, the division has to tapped* teachers to count during inspection, but they do *the delivery."* **KI-7. "***There's a need to hire a job*-order employee to do the delivery to assist the Supply *Officer."*
5. The division has adopted mechanism to ensure fast-tracking of delivery of SLM/SLAS to the field.	4.60	0.74	**All KIs:** *"yes, they have."*

Table 2-D, which is on the delivery timeline of SLM/SLAS via outsourcing through a service provider, shows that among the indicators under this table, indicator 4 had the lowest mean and had the highest standard deviation scores. This was supported by the responses of KI-8 and 7. While indicator 3 of this table got the highest mean score of 4.87 and the lowest SD score of 0.35, This was also supported by the claims of all respondents in FGD with their response of "yes".

Conclusions

Based on the findings and results gathered in this study, the following recommendations are considered necessary. On the level of effectiveness of in-house printing of modules via facility management as to procurement of materials, the school or district found it to be difficult to find illegible bidders due to logistics and splitting of contract costs. As lamented by respondents, printers that were procured for teachers were not also shouldered by repair and maintenance costs. Hence, it is recommended that in the procurement of printing supplies and equipment, a contingency allowance should be included for repair and maintenance. It can be best viewed that because of this issue, printing of modules via outsourcing was revealed as the preferred choice of respondents.
While the availability of materials as to in-house and outsourcing, it was found that in-house production engaged teachers to do the printing and sorting tasks, hence compromising their actual job, which is to teach and develop

materials. However, in outsourcing, the printed modules are made available on time as long as the ready-to-print electronic copy is provided to the service provider. It was also revealed that the division office, as the responsible office in the outsourcing, must include manpower allocations, particularly for module delivery to its recipient schools. This scenario came up after knowing that the printed modules had to be delivered to the procuring entity for inspections and acceptance prior to delivery. As to the physical aspects of the materials, in-house production is less appealing and less durable compared to outsourcing through a service provider. This was supported by the indicator that the physical aspect is not in conformance with LR standards as its cover is not glossy and has no colors, while in outsourcing it has full colors, saddle stitch or softly bound and the cover material is thick or book cover. Because of the poor quality of printing equipment in the in-house facility, some ink glitches are visible and are still being utilized by schools to save paper and other resources. Unlike in outsourcing, pages with ink glitches are not accepted by the inspectorate team during inspection. As to the delivery timeline of SLM or SLAS, in-house production is also dependent on the availability of ready-to-print modules provided by the division learning resource manager. This is also evident in the outsourcing scenario. However, the shortage of manpower to do the delivery of printed modules was evident in both in-house and outsourcing since the delivered modules from the service provider still had to be delivered to the division office, which is the procuring entity, for inspection and acceptance. Hence, it is highly recommended that a budget allocation be made for a job order employee to help man the delivery from the district or from the division. This is to speed up the provision of learning resources.

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