Title: *The Supply Operational System (SOS): A Digital Workflow Innovation for Procurement Transparency and Efficiency in DepEd Dapitan City*

Chapter I. Introduction

Background of the Study

Efficient procurement is a cornerstone of good governance in the public sector. In the Department of Education (DepEd), timely acquisition of learning resources, equipment, and services is crucial in ensuring that schools are able to provide quality education. However, manual and paper-based procurement systems are often prone to delays, errors, and transparency issues.

In the Schools Division of Dapitan City, these challenges manifested in the form of slow routing of purchase requests, difficulty in tracking documents, and risks of misplacement. To address these recurring problems, the Division designed and implemented the **Supply Operational System (SOS)**—a web-based workflow platform integrating digital routing, QR-code technology, and automated approval features.

The SOS aligns with the Philippine Government's **Digital Transformation Strategy** and DepEd's push towards innovation and transparency in education governance.

Chapter II. Statement of the Problem

The study seeks to address the following problems:

1. How can procurement processes be made more efficient in DepEd Dapitan City?
2. How can transparency and accountability be strengthened in supply and financial management?
3. What technological innovation can minimize errors, delays, and risks of lost documents?

Chapter III. Objectives of the Study

General Objective

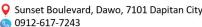To design and implement a digital system that streamlines the procurement workflow in DepEd Dapitan City.

Specific Objectives

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1. To **digitize** purchase requests from initiation to completion.
2. To **integrate QR-code technology** for traceability and monitoring.
3. To **automate routing and approvals** among offices involved in procurement.
4. To **enhance transparency and accountability** through system logs and electronic certifications.
5. To **improve efficiency** by reducing average processing time for transactions.

Chapter IV. Description of the Innovation

The **Supply Operational System (SOS)** is a **web-based application** hosted at https://depeddapitancity.net/deped101. It is accessible to authorized users with unique accounts.

Features include:

- **Secure Login** – user authentication to ensure accountability.
- **Digital Purchase Request (PR) Creation** – end-users can encode procurement details.
- **QR Code Integration** – each PR generates a QR code for real-time tracking.
- **Automated Workflow** – transactions move electronically between offices through a "Forward" button.
- **Approval and Certification** – budget, accounting, and SDS approval steps are recorded in the system.
- **Document Printing** – users can print PRFs and transmittals with QR codes for hard copy filing.
- **Completion Tracking** – once payment is released, the transaction is marked as "Completed."

Chapter V. Methodology

System Design

The system was developed using a **web-based architecture** with the following modules:
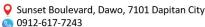
- End-User Module
- Supply Office Module
- Budget Office Module
- Accounting Office Module
- OSDS Module (for SDS approval)
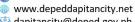- ASDS/BAC Module (for canvassing and PO issuance)
- Cashier Module

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Workflow Process

1. **End-User**: Logs in, creates PR, generates QR, prints PRF, and forwards to Supply.
2. **Supply Office**: Assigns PR number, inspects delivery, and forwards transactions.
3. **Budget Office**: Certifies availability of funds.
4. **Accounting Office**: Verifies documents, prepares Disbursement Voucher (DV), forwards to OSDS.
5. **OSDS Office**: Receives hard copies, SDS signs and approves, forwards to ASDS/BAC.
6. **ASDS/BAC**: Canvassing, prepares Purchase Order (PO), forwards to Supply.
7. **Supply Office**: Inspects delivery (IAR) and forwards for payment.
8. **Accounting Office**: Verifies payment requirements and forwards to Cashier.
9. **Cashier**: Receives via QR, deposits payment to supplier, clicks "Complete."

Chapter VI. Results and Discussion

Initial Outcomes

- Average **processing time reduced by 40%** compared to manual system.
- **100% traceability** of PRs through QR scanning.
- **Increased transparency**—all forwarding and approvals are logged in the system.
- **User satisfaction improved**, with fewer complaints on delays.

Benefits Observed

- **End-Users**: Faster creation and monitoring of requests.
- **Supply Office**: Easier assignment of PR numbers and monitoring.
- **Budget & Accounting Offices**: Reduced workload in routing and certifying funds.
- **OSDS/SDS**: Faster access to documents for approval.
- **Cashier**: More systematic release of payments.

Chapter VII. Conclusion and Recommendations

The **Supply Operational System (SOS)** has proven to be an effective technological innovation in procurement and supply management. It has addressed inefficiencies of the manual system, increased transparency through QR codes, and improved accountability by logging each transaction.
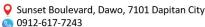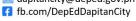
Recommendations

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1. Institutionalize the SOS as the **official procurement workflow system** of DepEd Dapitan City.
2. Provide **continuous training** for all end-users and offices to maximize adoption.
3. Regularly update the system to include **mobile access** and potential integration with **government financial systems** (e.g., DBM, COA platforms).
4. Share this best practice with other Divisions as a **replicable innovation** for procurement transparency.

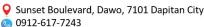Chapter VIII. Significance of the Study

This research contributes to:

- **DepEd Governance**: Promotes efficient and transparent procurement.
- **Public Sector Innovation**: Demonstrates the use of ICT in addressing systemic inefficiencies.
- **Education Service Delivery**: Ensures timely availability of resources for schools.
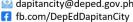- **Research Community**: Serves as a model for digital workflow transformation in government agencies.

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DepEd Dapitan City Supply Operational System Guidelines
(Online System: https://depeddapitancity.net/deped101)

Step-by-Step Procedure
A. End-User (Requesting Office/Personnel)
1. **Login**
   o Go to https://depeddapitancity.net/deped101.
   o Enter your **user account credentials** to access the system.
2. **Create Purchase Request (PR)**
   o Navigate to **Create PR**.
   o Fill in all **required procurement details** (items, quantity, unit, estimated cost, purpose, etc.).
   o Click **Submit Request**.
3. **Generate PR Documents**
   o Go to **View All Requests**.
   o Click **PR QR Generator** to generate and print the **Transmittal with QR Code**.
   o Print the **Purchase Request Form (PRF)**.
   o Click **Approve** to confirm the request.
4. **Forward to Supply Office**
   o Wait for the **Forward** button to appear.
   o Click **Forward** to transmit the request to the **Supply Office**.

B. Supply Office
5. **Receive & Assign PR Number**
   o Receive the PR electronically.
   o Enter a **PR Number** into the system.
6. **Return to End-User**
   o Forward the transaction back to the **End-User** for printing.

C. End-User (for Printing)
7. **Print Final PR**
   o Go to **View All Requests**.
   o Click **Print** to generate the official PR.
8. **Forward to Budget Office**
   o After printing, wait for the **Forward** button.
   o Click **Forward** to transmit the transaction to the **Budget Office** for certification.

D. Budget Office
9. **Receive & Certify**
   o Receive the transaction using the **QR Code Scanner**.
   o Review details and **Certify Availability of Funds**.
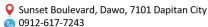10. **Forward to Accounting Office**
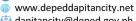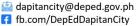   o After certification, click **Forward** to transmit to the **Accounting Office**.

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E. Accounting Office (Pre-Audit Stage)

11. **Receive & Review**
    - o Receive transaction via **QR Code Scanner**.
    - o Verify supporting documents (PR, certification, estimates).
    - o Record the transaction.
12. **Forward to OSDS Office**
    - o Transmit the transaction and attached hard copies to the **OSDS Office** for SDS approval.

F. OSDS Office (Office of the Schools Division Superintendent)

13. **Receive & Approval**
    - o OSDS receives the transaction and hard copies.
    - o SDS signs and approves the PR documents.
14. **Forward to ASDS/BAC**
    - o From OSDS Dashboard, forward the transaction to **ASDS/BAC** for **Canvassing, Purchase Order (PO), and other BAC-related actions**.

G. ASDS/BAC (Procurement Processing)

15. **Conduct Canvassing & Procurement**
    - o BAC handles canvassing, quotations, bidding (if applicable), and prepares PO/Contract.
16. **Forward to Supply Office**
    - o After PO approval, forward the transaction and necessary documents to the **Supply Office** for **delivery inspection**.

H. Supply Office (Delivery & Inspection)

17. **Inspect Delivered Items**
    - o Receive items from supplier.
    - o Conduct inspection and acceptance with the **Inspection Committee**.
    - o Prepare and issue **Inspection and Acceptance Report (IAR)**.
18. **Forward to Accounting Office**
    - o Transmit complete documents (PR, PO, IAR, Delivery Receipt, Sales Invoice, Certification) to **Accounting Office** for payment processing.

I. Accounting Office (Payment Processing)

19. **Verify Documents**
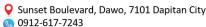   - o Check completeness of payment documents:
        - Purchase Request (PR)
        - Purchase Order (PO)
        - Delivery Receipt (DR)
        - Sales Invoice/Official Receipt (SI/OR)
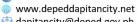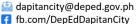   - Inspection and Acceptance Report (IAR)

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- - Budget Certification
  - SDS Approval
20. **Prepare Disbursement Voucher (DV)**
    - Prepare DV with all attachments.
    - Encode transaction in the system.
21. **Forward to Cashier**
    - Forward approved DV and attachments to the **Cashier** for payment release.

J. Cashier

22. **Receive & Process Payment**
    - Receive transaction using the **QR Code Scanner**.
    - Verify DV and supporting documents.
23. **Deposit & Release Payment**
    - Deposit payment to the supplier's bank account.
    - Officially record the payment transaction.
24. **Mark as Completed**
    - In the system, click **Complete** to close the transaction.
    - Status will now appear as **Completed** in the dashboard.

✅ **End of Procedure – Transaction Cycle Completed**

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