Making Data Work for Educators

Sharing Baguio's Experience

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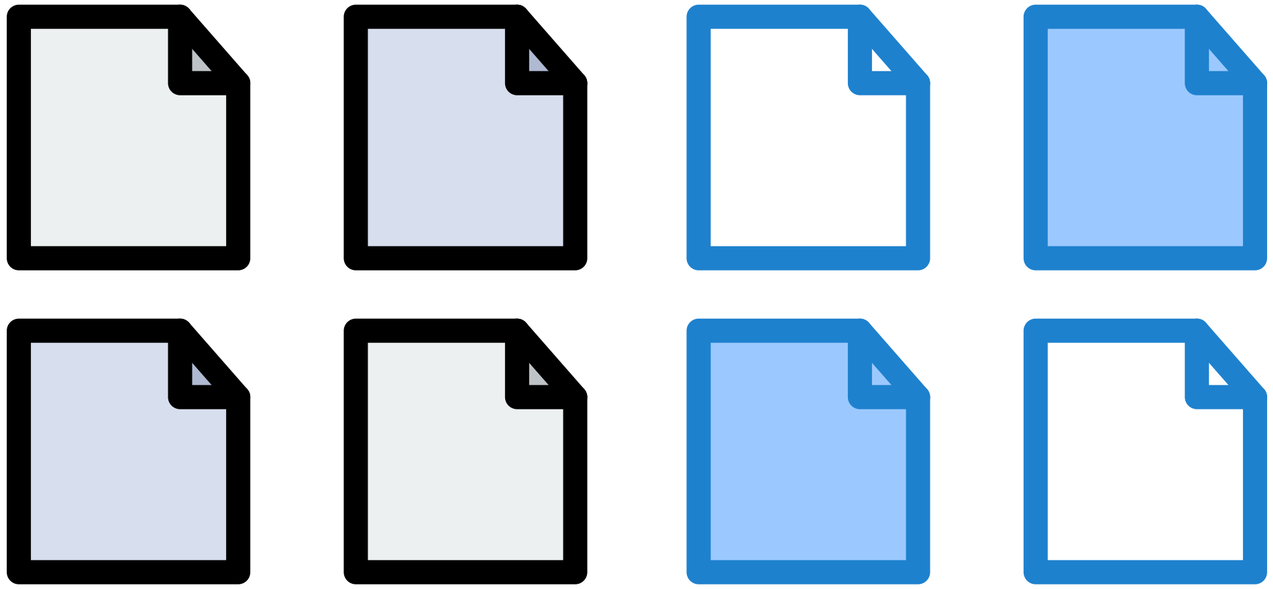
Education Practices & Trends: Using Data Analytics to Improve Learning Outcomes

Teacher Zeporah, an Araling Panlipunan Teacher of Pines National High School in Baguio City



Tala - Aral: A Dashboard for Monitoring Learner Progress and Individual Learning Monitoring Plan (ILMP) Generation Tool

localhost/data_gathering/manage_student.php?student_id=2

Admin Panel

Dashboard Students Feedbacks Subjects

Address: SANITARY CAMP, NORTH BAGUIO CITY BENGUET

Scores | Performance | Feedback History | ILMP

Manage Student Scores

Empowerment Technologies

No topics yet under this subject.

PAG-AARAL NG KASAYSAYAN AT LIPUNANG PILIPINO

Topic: QUARTER 1.I. Mga Palatandaan at Katangian ng Kamalayang Pangkasaysayan

Activity	Max Score	Student Score
Gawain Bilang 1: "kaSAYSAYan"	100	95
Gawain Bilang 2: "MAPPING THE MIND"	50	45
Gawain Bilang 3: "QUOTABLE QUOTES"	10	10
Gawain Bilang 4: "Pangkatang Gawain"	30	25

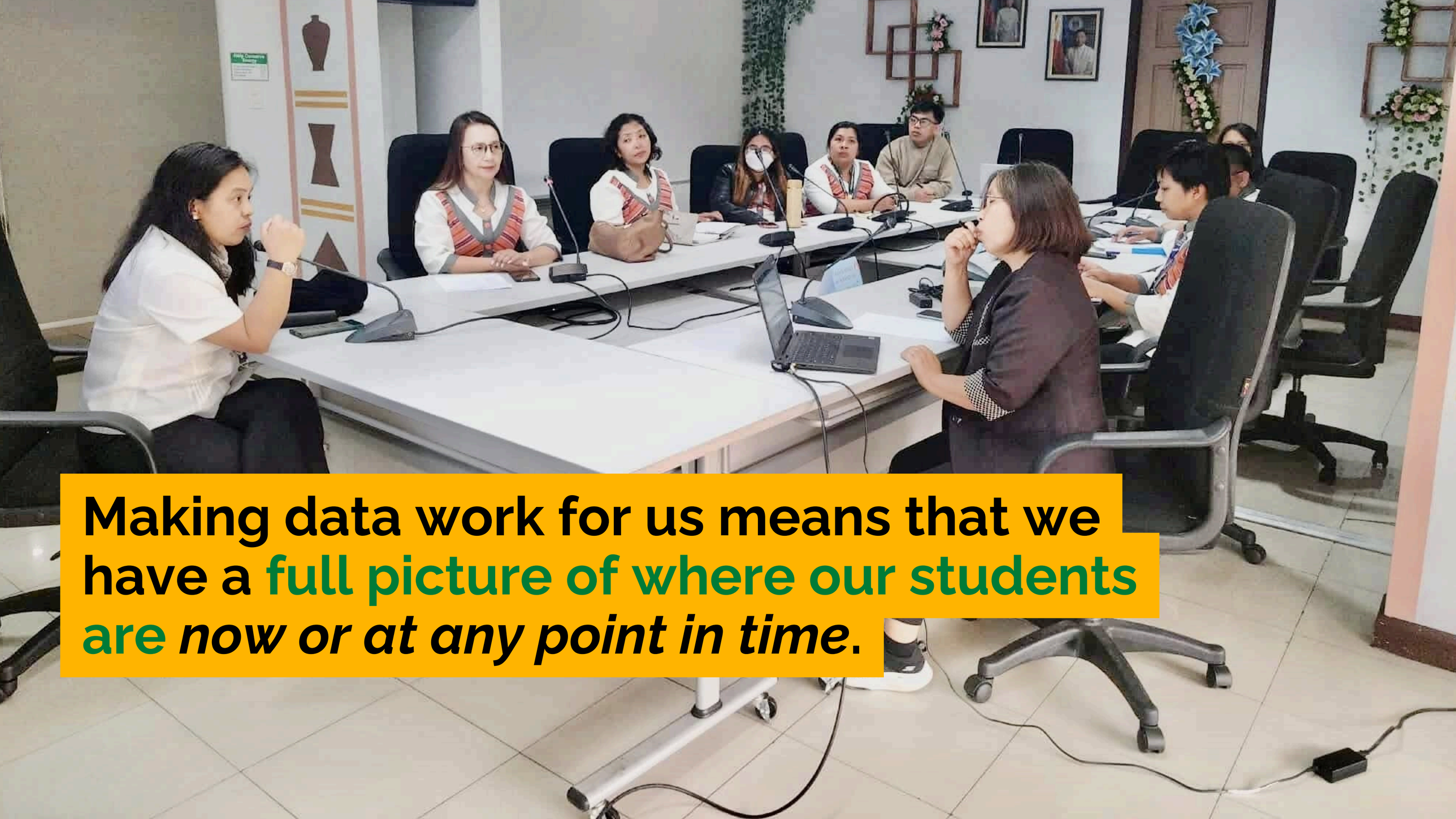
Teacher Zeporah's Dashboard contained data for:

- 239 learners
- **Learner Grades** in the Subjects she handles
- **Mastery Level** of each student in every competency required.
- Student's Self Assessment, Feedback, and Suggestions

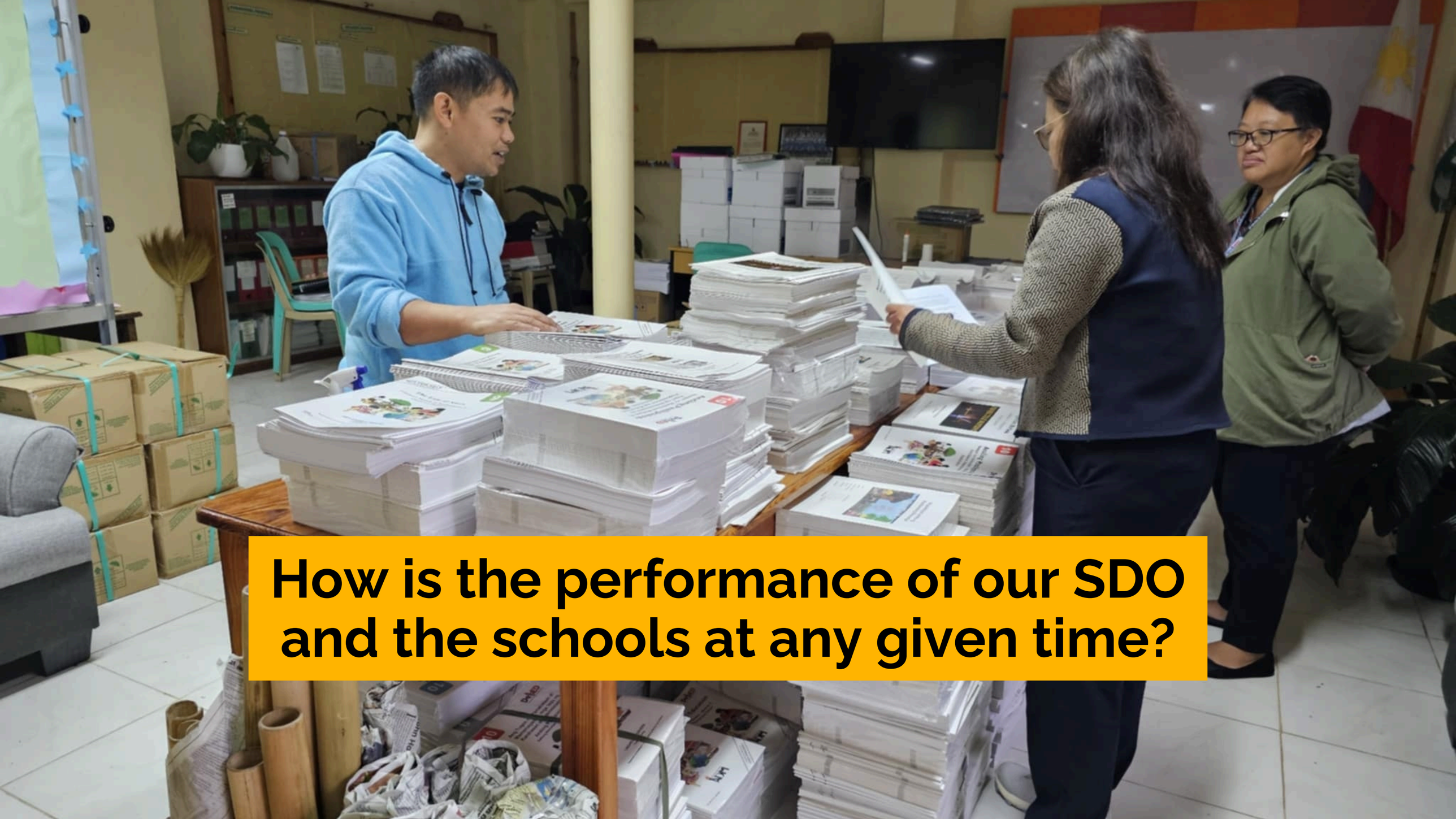
Teacher Zeporah's Dashboard generated:

- **Individual Learning Monitoring Plans**

MAKING DATA WORK FOR ME
ME WORKING FOR DATA



Making data work for us means that we have a full picture of where our students are *now or at any point in time*.


How is the performance of our SDO and the schools at any given time?

ZV-E10
M
83%
MENU
Fn
DISP
1/250
F3.5
M.M.
-1.0
Av
Tv
ISO 100

67 public schools
85 private schools

152 schools

59,419 from the Public Schools
15,582 from the Private Schools

75,001 Baguio Learners

SDO Baguio

12
1
2
3
4
5
6
7
8
9
10
11

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20th Congress

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Press Release
December 13, 2023

Gatchalian: PH should learn from Baguio, CAR schools on boosting English proficiency

Schools across the country should learn the best practices of Baguio City and the Cordillera Administrative Region (CAR) when it comes to boosting learners' English proficiency, Senator Win Gatchalian said.

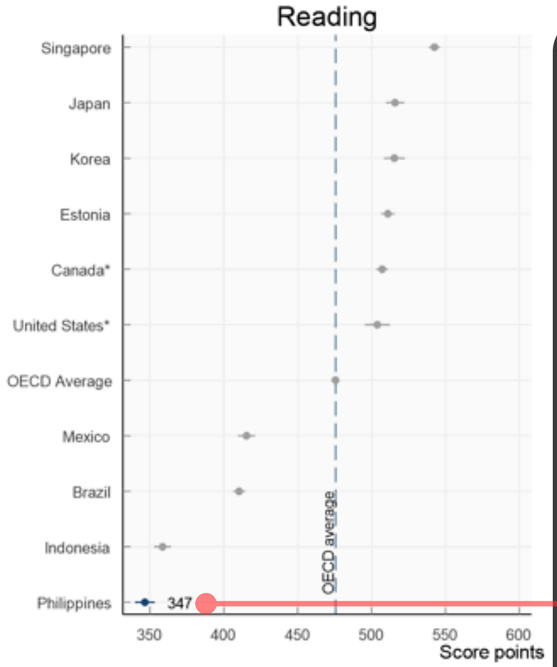
According to the 2023 English Proficiency Index by international education company EF Education First, Baguio City emerged as the top English-speaking and -listening city in the Philippines, garnering a score of 619. CAR, where Baguio is located, garnered a score of 616 and topped the English-speaking and -listening regions in the Philippines.

"Binabati ko ang ating mga mag-aaral at mga guro sa Baguio at CAR dahil sa naging magandang performance nila sa nagdaang international assessments. Marami tayong pwedeng matutunan sa kanila upang iangat ang performance ng mga mag-aaral sa iba't bang panig ng bansa pagdating sa English proficiency, pati na rin sa pagbabasa," said Gatchalian, Chairperson of the Senate Committee on Basic Education.

CAR is also among the top-performing regions in the 2022 round of the Programme for International Student Assessment (PISA). Alongside the National Capital Region (NCR) and Region 4A, CAR has one of the largest shares of students who have achieved the minimum proficiency in reading. The 2022 PISA results reveal that two out of five students in CAR achieved at least the minimum proficiency in reading.

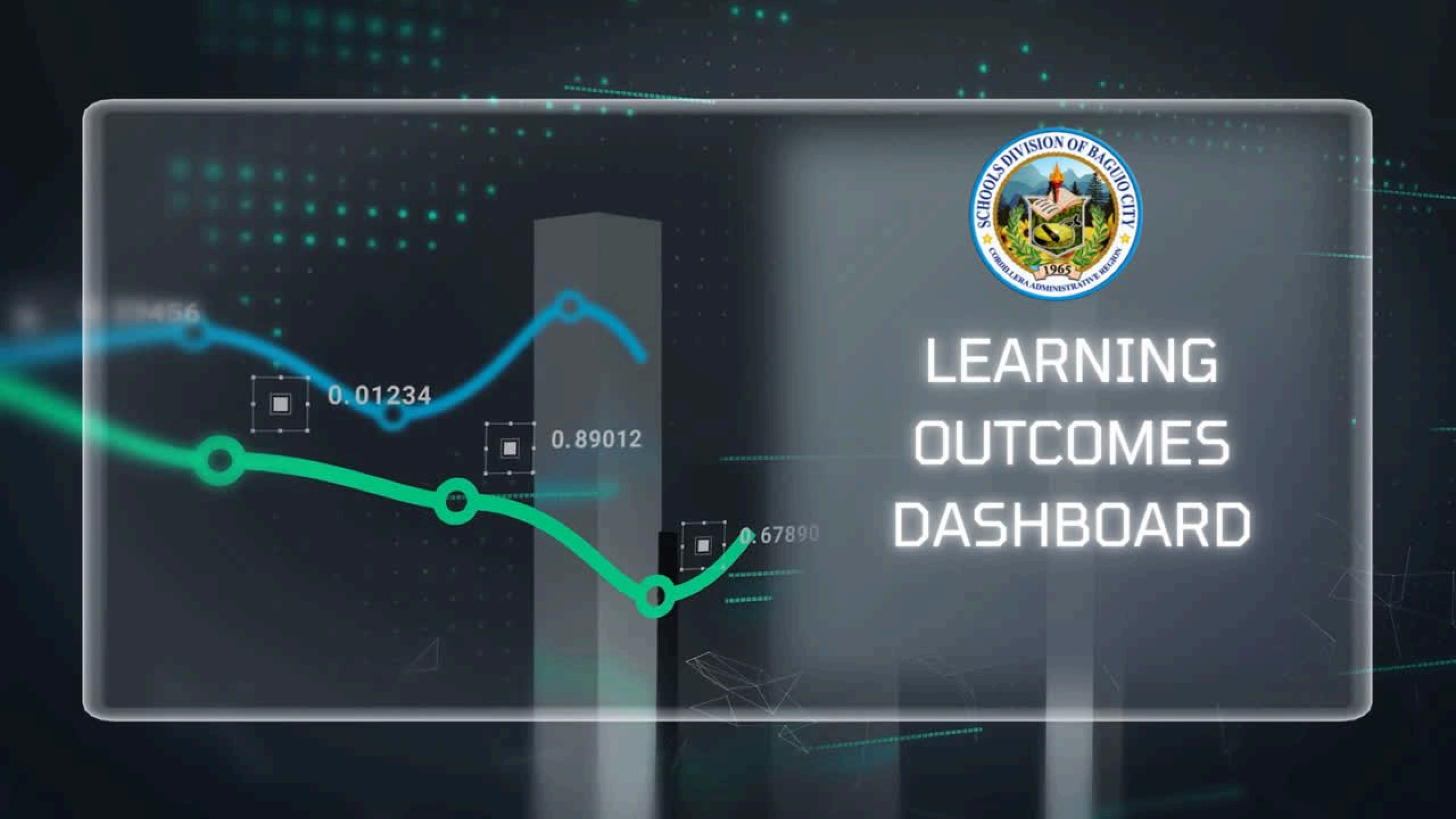
Gatchalian emphasized that international assessments such as the 2023 English Proficiency Index and the latest round of PISA present opportunities to learn the best practices from top-performing regions. The lawmaker added that the best practices can be in the areas of collaboration between local government units and DepEd regions and divisions.

Moving forward, Gatchalian said that data from PISA will help the Second Congressional Commission on Education (EDCOM II) and the Senate Committee on Basic Education in proposing reforms to improve learners' performance and reverse the country's education crisis.



In 2018 and 2022, Baguio is a Top Performing Division in the PISA for the Philippines.

Baguio's score is below average in terms of OECD Average.


SCHOOLS DIVISION OF BAGUIO CITY
1965
CORDILLERA ADMINISTRATIVE REGION
LEARNING
OUTCOMES
DASHBOARD
0.01234
0.89012
0.67890

CASE 1: Learning Outcomes as a function of **Learning Assessments**

SDO Baguio's Learning Outcomes Dashboard contains data for:

- 59,353 public school learners
- 152 Baguio schools

  2,443 public school teachers
- Student Quarterly Performance
- External Assessment Results

Tracking Performance Gaps and Learning Recovery

School Quarterly Performance Gaps Analysis

SECONDARY LEVEL

Data-driven intervention tracking aligned with DepEd Philippines continuous improvement framework

School Year: 2024-2025

Quarter: All Quarters

District: All Districts

School: All Schools

Apply

Reset

TOTAL GAPS IDENTIFIED

221

34 are critical

SCHOOLS BELOW 85% TARGET

3

Click to view • Out of 16 total schools

AVG GENDER EQUITY GAP

4.82%

DepEd Gender-Responsive Education

LEARNING RECOVERY RATE

+4.43%

Average Q1 → Q4 improvement

School Quarterly Performance Gaps Analysis

SECONDARY LEVEL

Data-driven intervention tracking aligned with DepEd Philippines continuous improvement framework

School Year: 2024-2025

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Key Performance Indicators we have set as an SDO

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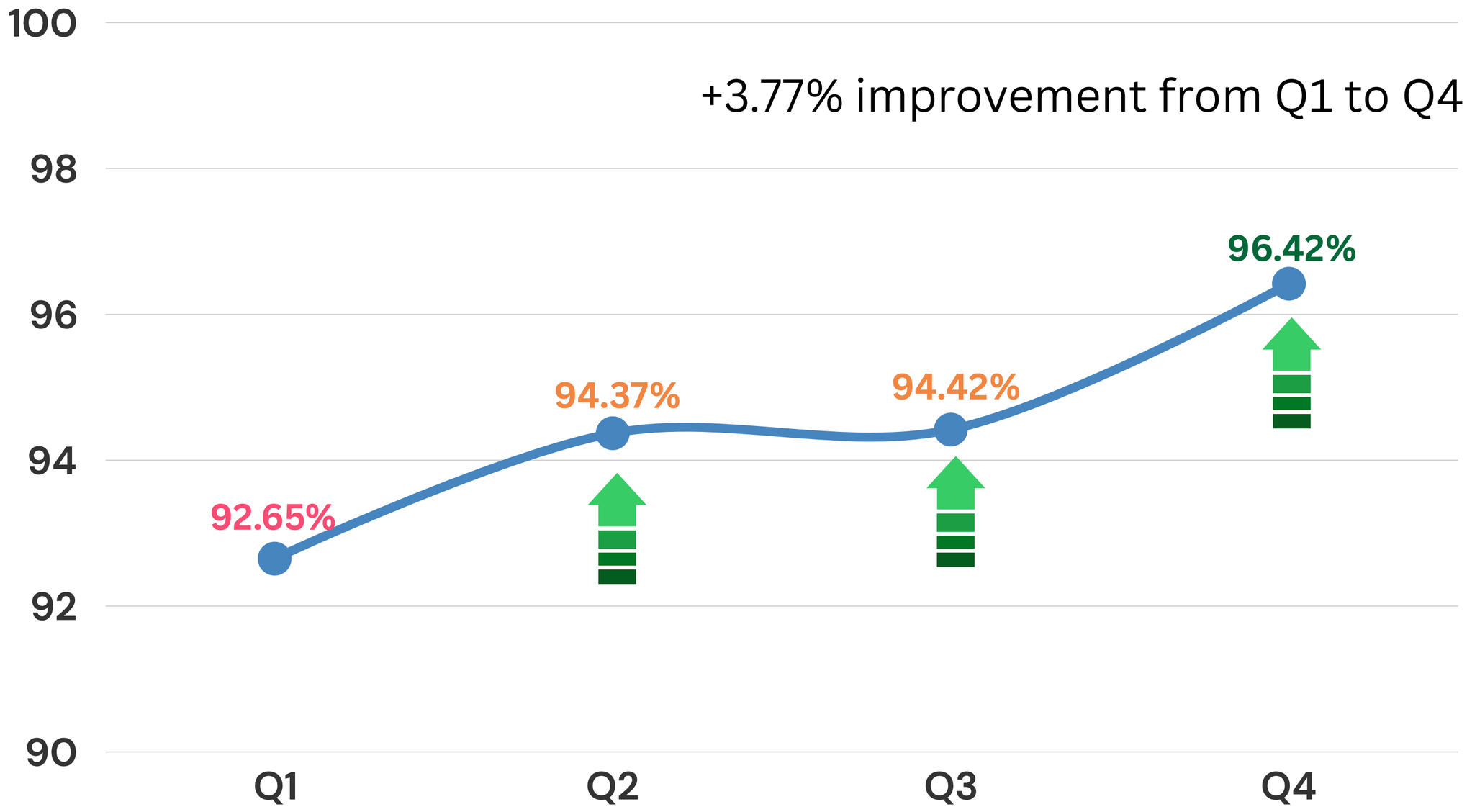
KPI on Gender Equity

Division Performance Trend: Quarterly Pass Rates



Focusing on Schools That Need Support

Pinsao NHS

Gap Analysis Summary

⚠️ Below 85% in: Q2, Q3

📊 Duration: 2 quarters

Quarter	Pass Rate
Q2	83.76%
Q3	82.86%

Guisad Valley NHS

Gap Analysis Summary

⚠️ Below 85% in: Q3

📊 Duration: 1 quarter

Quarter	Pass Rate
Q3	81.95%

CASE 2: Learning Outcomes as a function of **Learning Environment**

SDO Baguio's Infrastructure and Facilities Dashboard contains data for:

- 67 public schools
- 565 school buildings
- 2199 classrooms
- Critical Issues to be addressed

Utilizing Data for Effective Learning Interventions

SDO Baguio City

Project FAITH Dashboard
Integrated datasets for education and community

- Dashboard
- Infrastructure & Facilities
  - Schools
  - Buildings
  - Classrooms
  - Projects
  - Site Titling
- ICT / Computerization
  - Overview
  - Laptops for Teachers
  - Internet Infrastructure
  - Computer Labs

Baguio City High School

ID: 305269 • Secondary

Buildings
22
0 need attention

Classrooms
231
15 need attention

Critical Issues
15
Buildings & Classrooms

Overall Status
Critical

Classroom Conditions

Condition	Count	%
Good Condition	148	64.1%
Needs Minor Repair	65	28.1%
For Condemnation/For Demolition	15	6.5%
Condemned / For Demolition	3	1.3%

Intervention: Blended Learning

3 DAYS
Face-to-Face Classes

2 DAYS
Asynchrounous
Online Distance Learning
via DepEd LMS

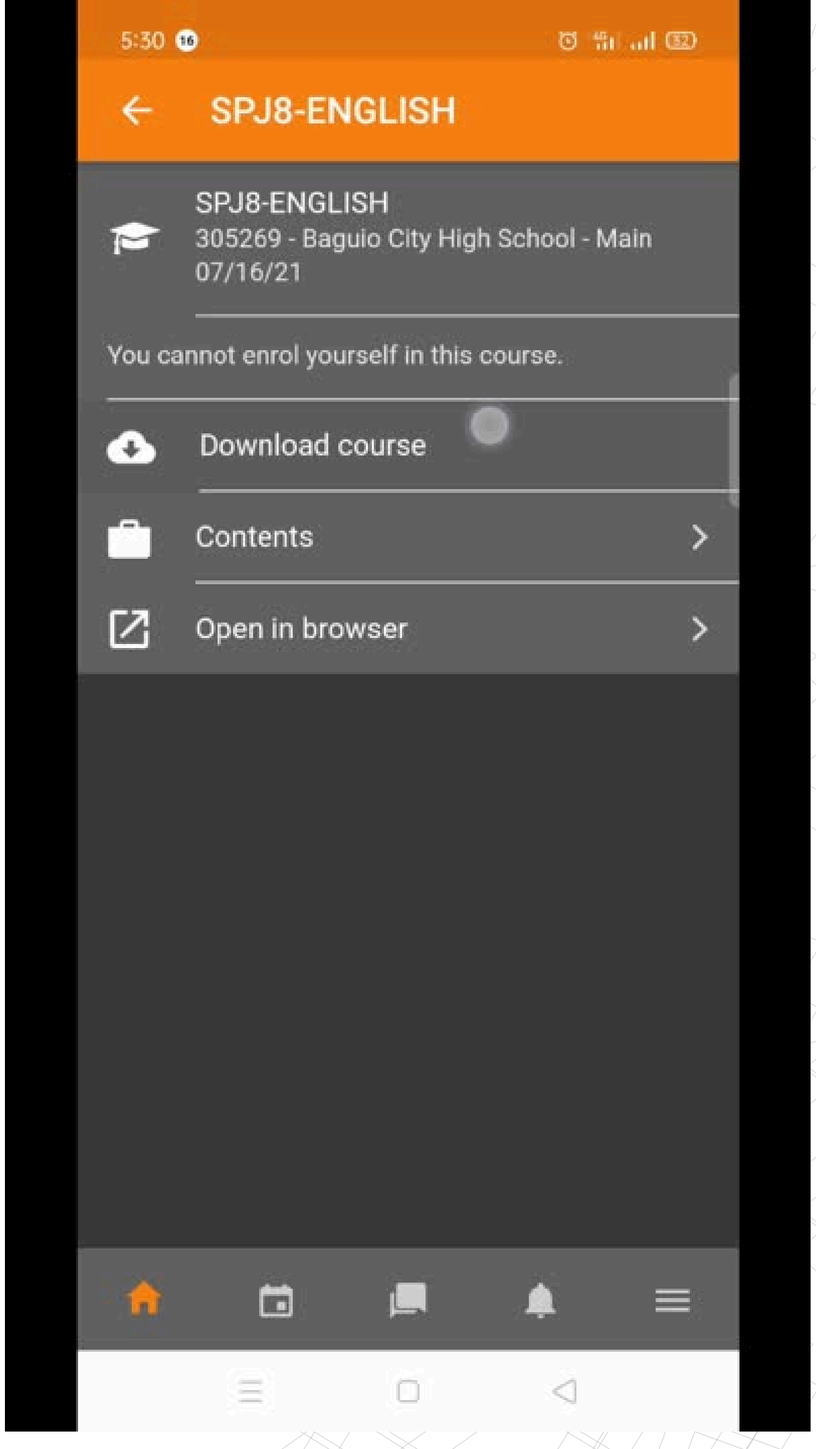
4 SECTIONS each from **Grade 8-10** = **12 Sections**, **393 Learners**, **24 Teachers**

each Subject is **4x / week** = **3-Days F2F**, **1 Day ODL**

1. **Flipped Learning or Reinforcement/** enhancement
2. **Khan Academy** classes

DepEd LMS for ODL

- **activities can be downloaded via the Moodle app**
- **accessed by learners even without data or internet connection at home**
- **activities and student responses can be monitored by school head**



How the Learning Outcomes Data Is Collected and Processed

1 DATA ENTRY

Schools **encode regularly** and directly into a **standardized database**.

2 DATA CLEANING

Division IT team **checks for accuracy, completeness, and consistency.**

3 CLOUD UPLOAD

Validated data is **uploaded and stored securely in the cloud** for **real-time access**

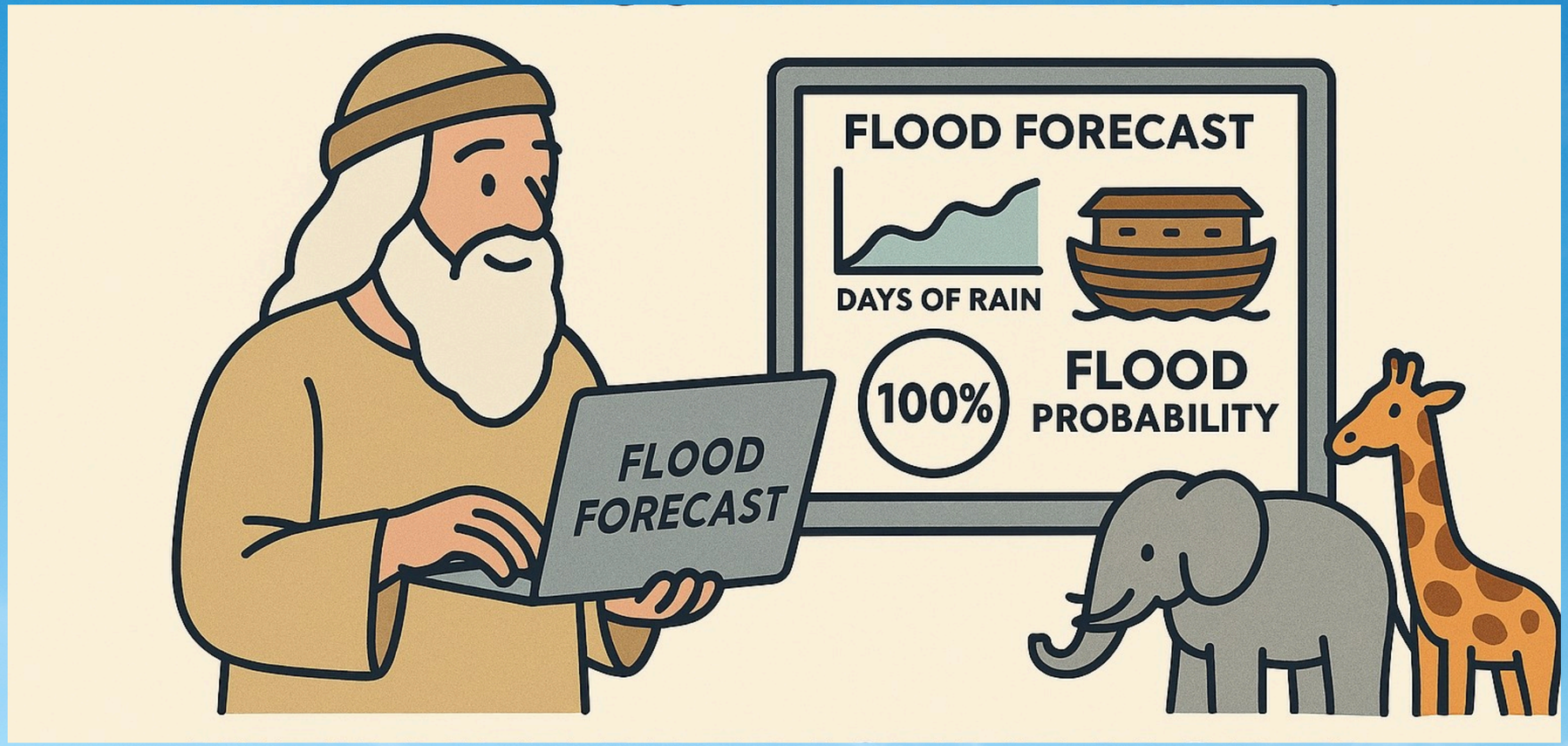
4 DASHBOARD PROCESSING

Input the KPI

5 INSIGHTS & ACTIONS

The dashboard highlights patterns and **performance gaps through visual analytics**

What Bible story used data analytics?



“Noah didn’t just build an ark—he ran the ultimate predictive model.

✅ 40 days of rain forecast

✅ 100% flood probability

✅ Perfect resource optimization

From SPREADSHEETS to DASHBOARDS

1 **STRATEGIC MONITORING OF DISTRICTS AND SCHOOLS**

Identifies gaps and strengths, guide in prioritizing schools

2 **MORE TEACHER - STUDENT INTERACTION TIME**

guide targeted interventions, teacher as a guide

3 **GENERATE ACTIONABLE INSIGHTS AND ENSURE ACCOUNTABILITY**

transparency, resource allocation and professional development

KEY LESSONS

1 Build your DASHBOARD

Identify what data is needed for decisions and actions

2 Get BUY – IN

Who will do what and when.

3 Make DATA your CENTERPIECE

Integrate in key meetings like:

- School Monitoring, Evaluation and Adjustment Meeting(MEA)
- District MEA, Division MEA
- Regional ManCom, Monthly DExeCom
- Program Implementation Review (PIR)
- Local School Board Meeting

4 Keep it SUSTAINED

Create systems that will facilitate data collection, processing, and sharing of practices such as a set Division policy and procedure, EdTech Forum and Events.

Challenges

Cultural Adoption

shift in mindset

Multiple Systems

integration with existing systems such as BEIS, LIS

Data Collection and Accuracy

incomplete and inaccurate data affects dashboard reliability

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Ways Forward

Data Literacy

PD, AI information campaign, pilot schools

Integration

showcase Project FAITH to RO/CO for integration

Automate and Humanize

utilization of Dashboard at the school to the division level

From division dashboards to school-wide and classroom-level initiatives, Baguio City schools are embracing data analytics to guide learning and interventions --- making data work for us. Join us.

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