AN INTEGRATED TERMLY TOOL TO HARMONIZE EMIS DATA COLLECTION EFFORTS

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DHIS2 for Education takes advantage of decades of experience using DHIS2 for public-sector information management in more than 70 countries across the world. 6 Ministries of Education are involved in the global research project: Eswatini, Mozambique, The Gambia, Sri Lanka, Togo and Uganda.

Summary

In Uganda, different Ministry of Education and Sports (Basic Education) departments, districts and partners identified a need to streamline, integrate and routinize data collection efforts to inform planning and resource allocation at central and district levels. A newly developed integrated termly data collection tool aims to improve routine reporting, coordination, analysis and presentation of indicators across departments for improved data use.

Using DHIS2, visual dashboards depict termly data for each implementing site in addition to programme-specific dashboards visualizing gender, school feeding and school health related data. Programme specific dashboards play an additional role in advocating for new partners to join efforts to support scale, promote data use and to explore the power of DHIS2 for monitoring and reporting on the Uganda Education Response Plan, including for Refugees and Host Communities.
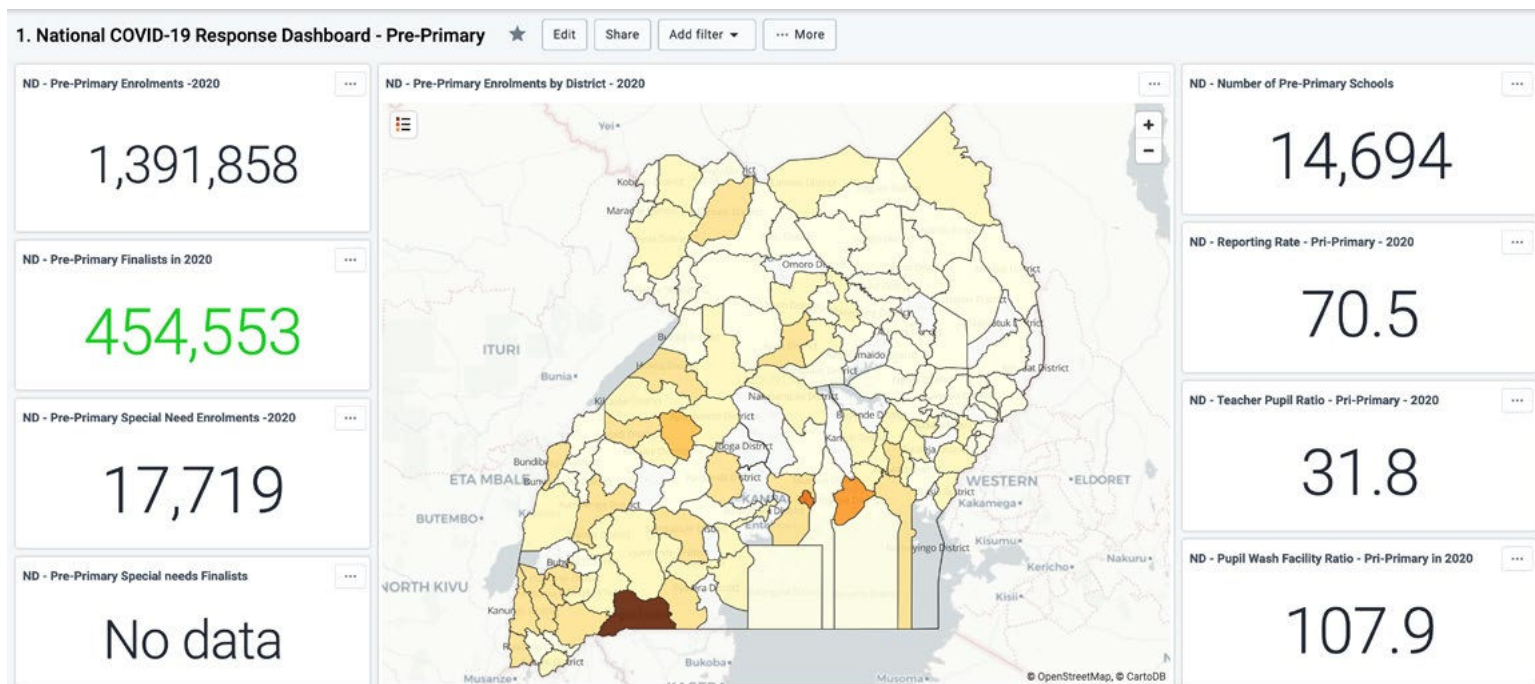
Background

The Ministry of Education and Sports (MoES), Basic Education Department in collaboration with HISP Uganda and Save the Children Uganda have been implementing the DHIS2-DEMIS project since June 2019 with support from Norad. In 2020, funding from GPE KIX led to expansion from Gulu and Mayuge to the districts of Wakiso and Ntungamo.

The implementation of DHIS2 as a decentralized education management information system (EMIS) has focused on building the capacity of districts to collect, capture, validate, analyze and use data for budgeting, planning and resource distribution including the allocation of student capitation grants. DHIS2-DEMIS provides user-friendly analytics tools, including dashboards for easy presentation of key education indicators such as enrollment by gender, pupil-teacher and pupil-classroom ratios, which inform decision making at the district level.

Before the introduction of DHIS2, the EMIS in Uganda was centralized at the Ministry of Education and Sports (MoES) Uganda with a stand-alone database and a largely manual data management process. Data collected through the annual statistical census was captured into EMIS at the MoES central level offices, analyzed and presented in statistical yearbooks with 6-9 month's time lag. The system was neither accessed by the district offices nor linked to other MoES systems e.g. finance, HR, examination nor to other cross-cutting sectors like health. The annual statistical census was last conducted in 2017. This meant that the MoES and districts lacked timely and reliable data to inform planning and resource allocation.

To circumvent these challenges, different MoES departments and education development partners (EDPs) conducted frequent ad hoc data calls to districts and schools. These data calls were uncoordinated across departments and EDPs, often times requesting different categorization of the same data elements (e.g. total enrolment or enrolment disaggregated by sex, or enrolment disaggregated by sex and class) thus causing data collection fatigue of district education managers. Sometimes the districts did not use the templates provided and shared the data in different formats (e.g. word, excel, PDF) leading to further delays in analysis and feedback to the districts.

Learning from over 10 years of implementing DHIS2 in the health sector in Uganda, a key lesson for the KIX research project is that harmonization of data collection, reporting tools and partners needs is key to successful joint implementation and scale. This has not been the case in the education sector, where different MoES departments and partners' tools are not harmonized. A need was identified to streamline, integrate and routinize data collection efforts by different MoES departments, districts and partners to inform planning and resource allocation at both the central and district levels. Therefore, routine reporting using the newly developed integrated termly data collection tool will improve coordination, analysis and presentation of the different indicators across departments for improved data use.

1. National COVID-19 Response Dashboard - Pre-Primary   ★   Edit   Share   Add filter ▾   ··· More

ND - Pre-Primary Enrolments -2020
1,391,858

ND - Pre-Primary Finalists in 2020
454,553

ND - Pre-Primary Special Need Enrolments -2020
17,719

ND - Pre-Primary Special needs Finalists
No data

ND - Pre-Primary Enrolments by District - 2020

ND - Number of Pre-Primary Schools
14,694

ND - Reporting Rate - Pri-Primary - 2020
70.5

ND - Teacher Pupil Ratio - Pri-Primary - 2020
31.8

ND - Pupil Wash Facility Ratio - Pri-Primary in 2020
107.9

Process

HISP Uganda and Save the Children Uganda, conducted a one week data and DHIS2 customization workshop for MoES user departments and partners. These included the Gender unit, Guidance and Counseling, HIV & School Health, School Feeding Programme, ICT, Statistics & Planning, Human Resources, Higher Education, Teacher Instruction Education Training as well as partners such as Plan International, PlayMatters and War Child Holland. Teams shared key indicators and data needs which were reviewed, documented and harmonized into draft pre-primary and primary termly reporting tools. Feedback from the MoES and district stakeholders were incorporated, with a clear message to decrease the volume of data to be collected on a termly basis.

With the decline in COVID-19 cases and full re-opening of the economy the team held a one day stakeholder review workshop with the different user departments and district education team. Feedback from the workshop was incorporated into the tools that were used for field testing at selected schools in Wakiso

district. The field testing exercise clearly highlighted the data elements that could be challenging to collect on a termly basis and which elements needed to be clearly defined for ease in data capture. The finalized data collection tools have been customized in the DHIS2-DEMIS system with support from the MoES departmental staff that had exhibited capacity to do system customization based on their performance results in the customization workshop. This builds on one of the project's objectives of building the capacity of MoES staff to sustainably run the system and be able to update it based on rising new data needs.

The team orientated district inspectors of schools and field tested the DHIS2-DEMIS system for data capture and entry using both the android and web versions at different schools. This was in the bid to allow schools with the required resources like internet and computers to be able to capture data at school level instead of submitting paper tools to the district.

Date use at District Level

Dashboards have been developed in DHIS2 to visualize termly data for each of the implementing sites and the team plans to develop departmental/programme specific dashboards focused on specific indicators on gender, school feeding, school health etc. The programme specific dashboards are also being used as an advocacy tool for engaging more partners like World Food Programme and the Education Response Plan (ERP) for Refugees and Host Communities to support scale and promote data use beyond the project supported districts.

Moving forward, district and Ministry teams have agreed that data should be collected at the end of every first month of each school term after enrollment has stabilized. Further data use workshops have been planned for both the MoES and district education teams to ensure that routine data collected in DHIS2-DEMIS is effectively utilized for planning and decision making. Capacity building will be ongoing through DHIS2 Academies that include topics on Designing for Data Use and Data Analysis and Use. Read more about how the DHIS2 Academy programme aims to strengthen national and regional capacity to successfully set up, design and maintain DHIS2 systems.

Action Research

DHIS2 for Education is an action research project coordinated by The University of Oslo.
Action research topics from dedicated PhD and Master students implementation have included:

- Amuha, M. and Masiero, S. (2022): *Data Use as Liberation: A Case from an Education Management Information System in Uganda,* available at: https://bit.ly/3Uj9dDT

- Jallow, S. and Sanner, T. (2022): *Education Information System Decentralization: The Introduction of Digital Learner Records in The Gambia,* available at: https://bit.ly/3ShQQxd

- Dodaj, G. (2022): *Representing gender equity through dynamic indicators,* available at: https://bit.ly/3MiMdBp

- Valbø, B. (2021): *The IS-Notion of Affordances: A Mapping of the Application of Affordance Theory in Information Systems Research,* available at: https://bit.ly/3xBGRLr

- Knudsen, Ø. (2021). *School Report Cards in The Gambia: Exploring perceived opportunities and challenges of digitization,* available at: https://bit.ly/3BqDWXc

- Halilaj, A. and Udnesseter Johnson, L. (2021): *Developing and testing for usability within a low resource context: An action case study of the School report card in the Gambia,* available at: https://bit.ly/3RWKt2H

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