

# Development of a Prototype of a Visualization Tool for Assessing the Efficiency of Primary and Secondary Public Schools in the Philippines

**John Lorenzo A. Yambot**

Assistant Professor  
*Institute of Statistics*  
*University of the Philippines Los Baños*

Thesis Fellow  
*Philippine Statistical Research  
and Training Institute*



# Raising the Quality of Education

**Educational Attainment  
by Population Share: Philippines**

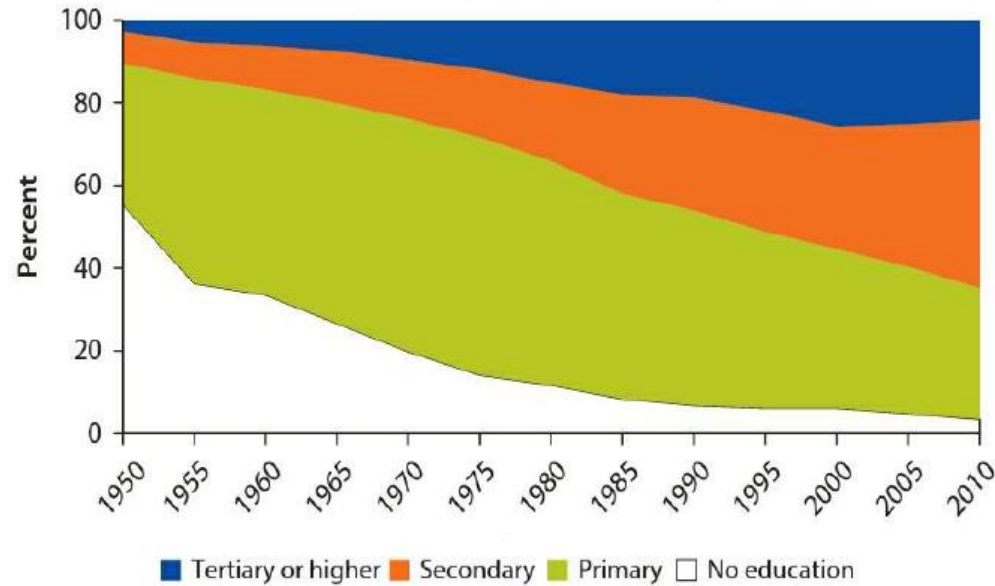


Image Source: Acosta, et al. 2017. *Developing Socioemotional Skills for the Philippines' Labor Market*, The World Bank



Writing, reading and comprehension, numeracy, communication in early grades



Learning the required competencies



Employability



Responsiveness to Philippine realities



Global competitiveness



Are we getting  
the highest possible value  
from this investment?

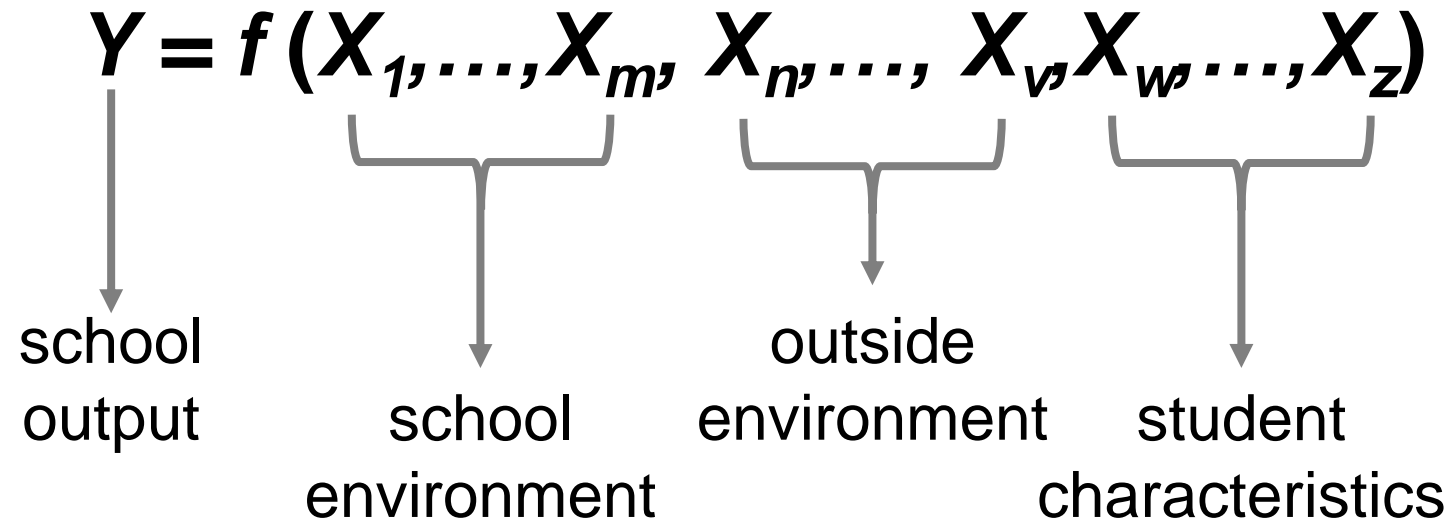
improving education outcomes  
without spending more



reducing the expenses  
on education without sacrificing  
the education outcomes

# Education Production Function

Mathematical relationship defined by Bowles(1970)



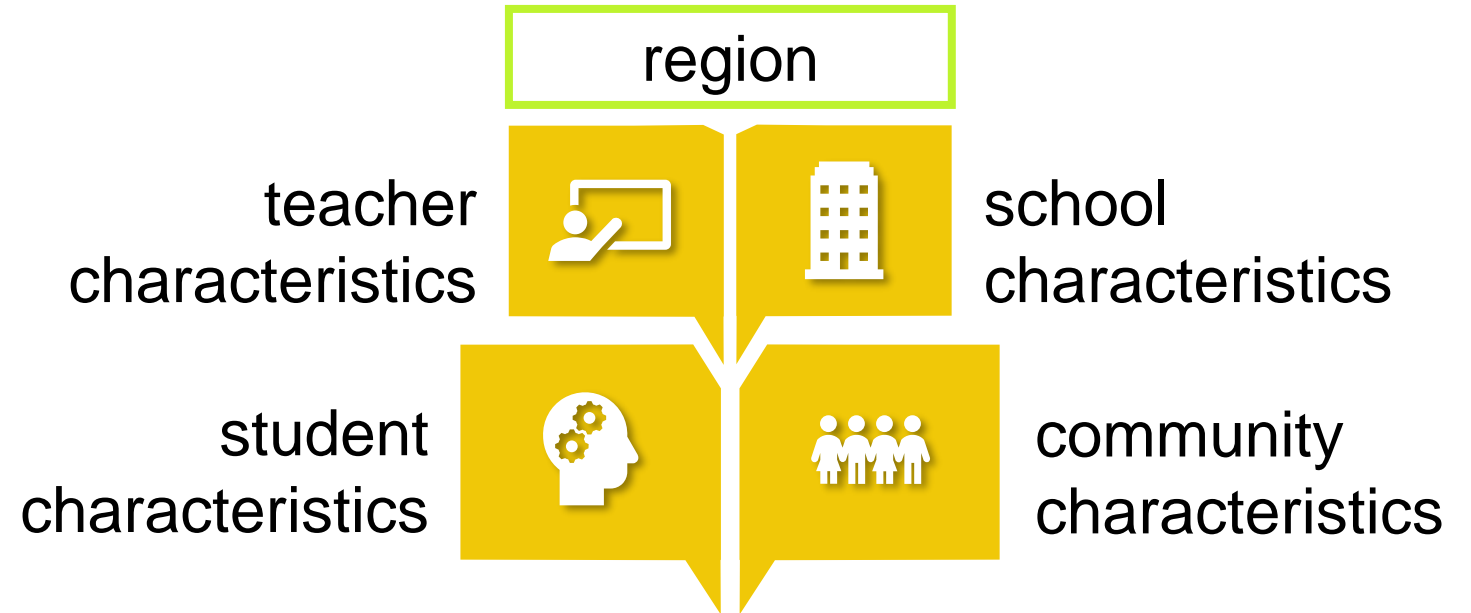
# Education Production Function



## Education Output

Total number of Grade 6 (for primary schools), and 4<sup>th</sup> year (for secondary schools) examinees achieving at least a minimum overall proficiency level

## Education Input



# Data Sources and Description



DepEd's Enhanced Basic Education Information System (EBEIS)

For S.Y. 2014-2015,



DepEd Bureau of Education Assessment (BEA) National Achievement Test Scores

Primary  
Public

Secondary  
Public

**38,648**

total number

**7,976**

**3,355**

number  
of sampled  
schools  
(excluding ARMM)

**709**

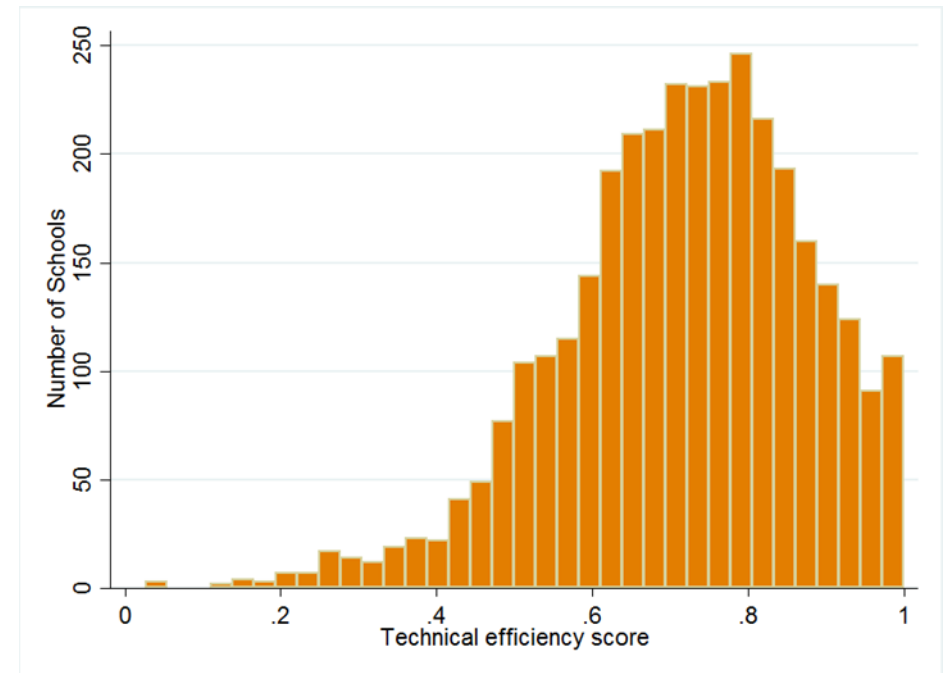


PSA Census of Population and Housing Form 5 (Barangay Schedule)

# Technical Efficiency Score Estimates (Primary Public Schools)

Summary statistics and distribution of the estimated technical efficiency scores of the sampled primary public schools

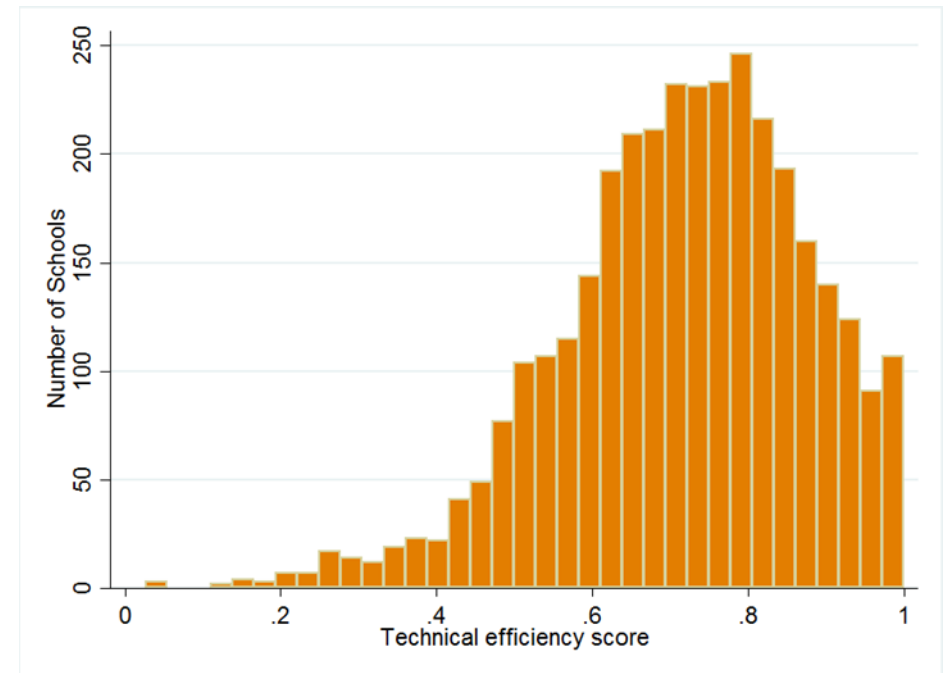
<b>SUMMARY STATISTIC</b>	<b>T.E. SCORE</b>
Minimum	0.0268
1 <sup>st</sup> Quartile	0.6221
Median	0.7305
3 <sup>rd</sup> Quartile	0.8285
Maximum	1.0000
Mean	0.7162
Standard Deviation	0.1582



# Technical Efficiency Score Estimates (Secondary Public Schools)

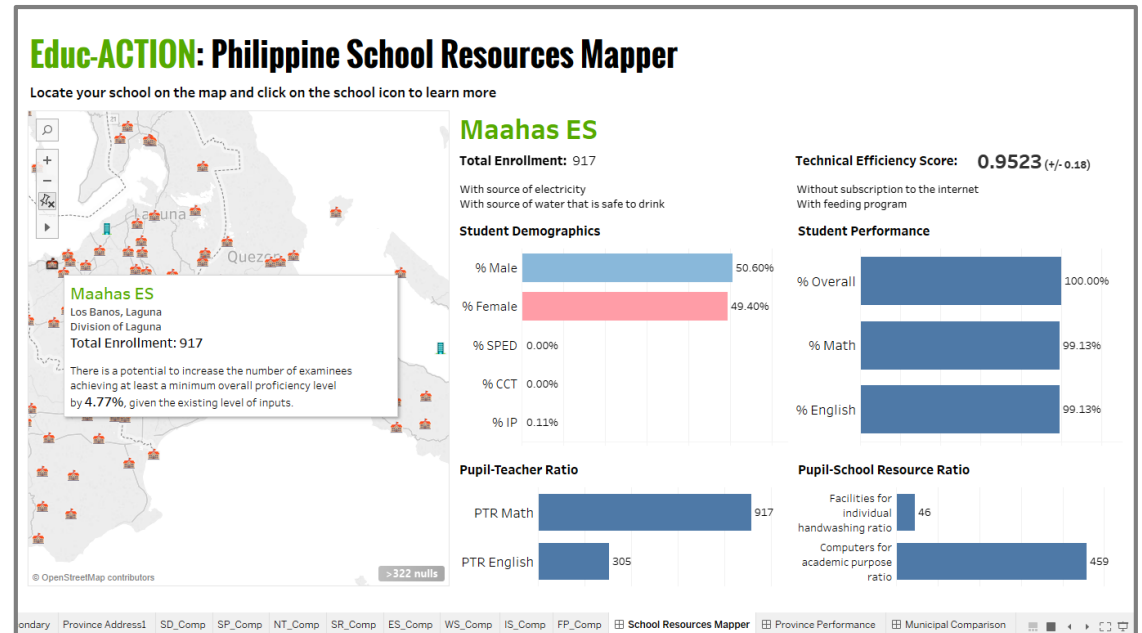
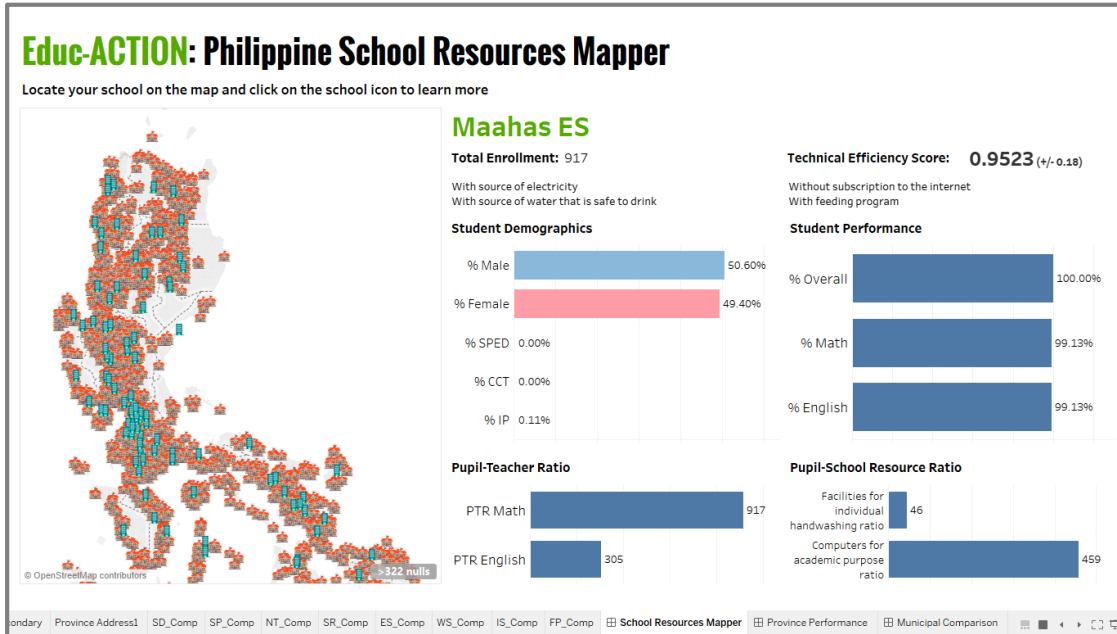
Summary statistics and distribution of the estimated technical efficiency scores of the sampled secondary public schools

<b>SUMMARY STATISTIC</b>	<b>T.E. SCORE</b>
Minimum	0.0273
1 <sup>st</sup> Quartile	0.5481
Median	0.6753
3 <sup>rd</sup> Quartile	0.8094
Maximum	0.9978
Mean	0.6701
Standard Deviation	0.1764

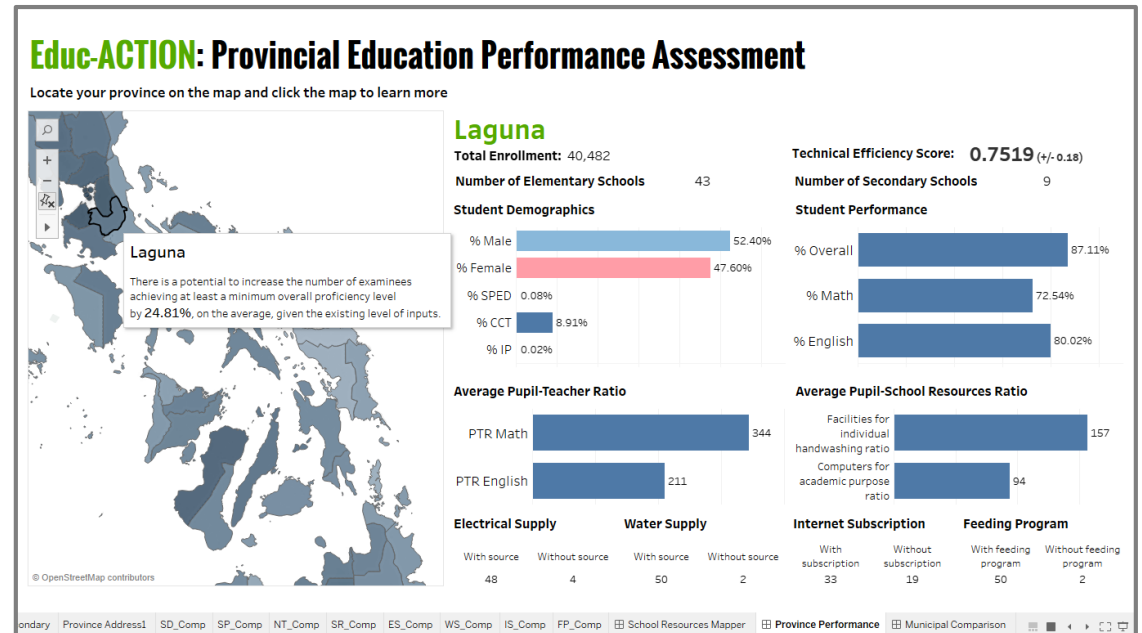
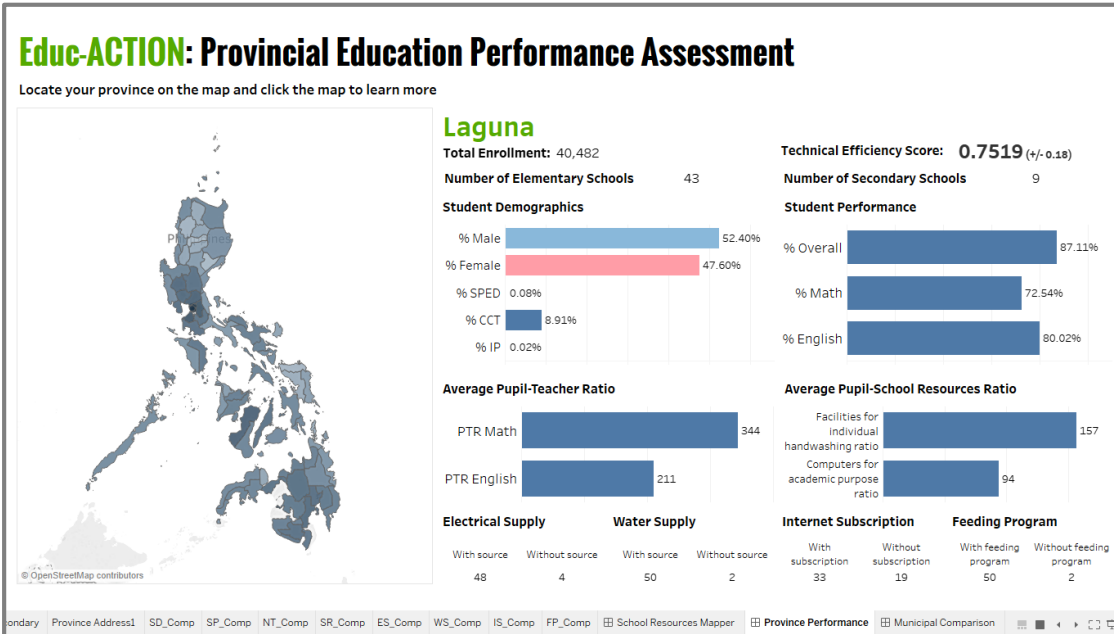




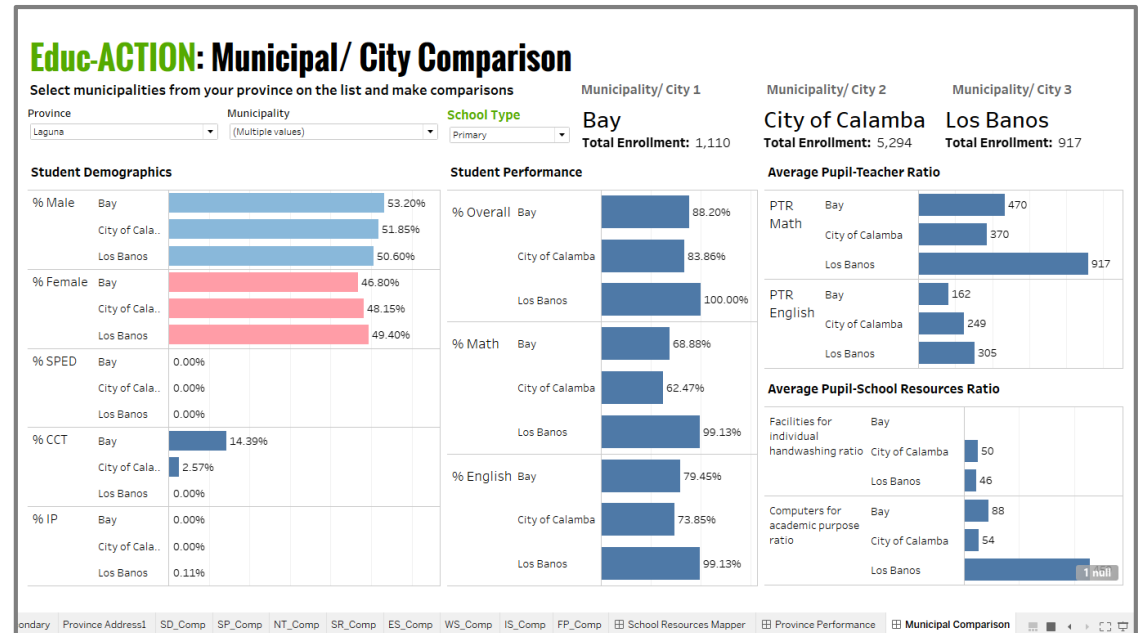
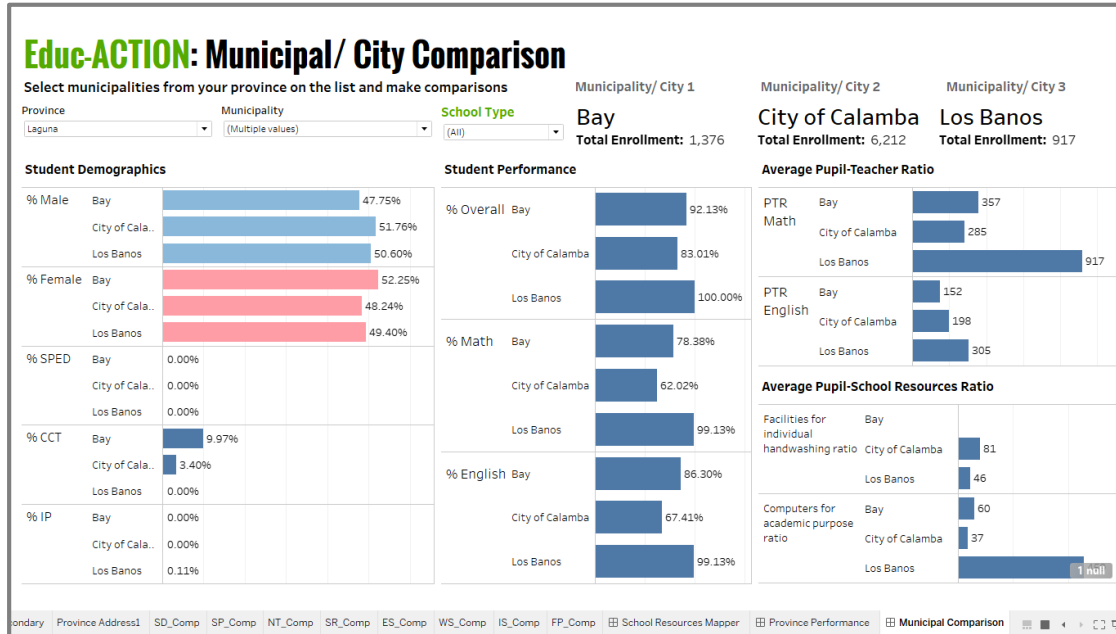
# Educ-ACTION: Philippine School Resources Mapper



# Educ-ACTION: Provincial Education Performance Assessment



# Educ-ACTION: Municipal/ City Comparison



# Thank you very much for listening!

*Para sa bayan,*  
**John Lorenzo A. Yambot**

3/F Wing C, Francisco O. Santos Hall, Harold Cuzner Royal Palm Avenue,  
University of the Philippines Los Baños, College, Laguna 4031

+63917 700 5354 | [jayambot@up.edu.ph](mailto:jayambot@up.edu.ph)

