World Education Statistics

Team Members

Charlene Chen, Divya Babu, Matt Thielen, Nate Velarde

Project Concept

Design descriptive dashboards to evaluate the effectiveness of (various) educational policies on improving literacy rates and learning outcomes.

Our project aims to develop dashboards that can outline correlation between government policies and resulting outcomes using performance indicators such as literacy rate, school dropout rates, higher education enrollment etc.

Data

The World Bank EdStats All Indicator Query holds over 4,000 internationally comparable indicators that describe education access, progression, completion, literacy, teachers, population, and expenditures. These indicators cover the education cycle from pre-primary to vocational and tertiary education. The dataset is maintained and updated daily by Kaggle.

The data comes in the form of tables where the items (rows) are countries/regions and the attributes (columns) include indicator identifier codes, indicator description and values for those indicators from 1970 to present. The indicator values are either ordinal (eg. rankings) or quantitative, and they are ordered sequentially by year.

Users

Policy makers, teachers, NGOs (e.g Plan International)

Task 1: Discover distribution of primary educational attainment among countries/regions by:
- Overall population
- Between genders
- Age groups

- ❖ Subtasks
    - ➢ Identify outlier countries at both ends of the distributions
    - ➢ Compare trends (over time) among and between outlier groups -- are there commonalities

❏ **Insight:** Narrowing of male and female primary education enrollment rates accounts for the majority of improvement in overall primary educational attainment in developing countries

Task 2: Explore correlations between primary educational attainment statistics and macro-economic indicators.

❏ **Insight**: Improvements in female primary education enrollment rates lead to higher female labor force participation rates and ultimately, higher economic growth

Task 3: Explore correlations between primary educational attainment statistics and demographic shifts

❏ **Insight:** Higher levels of female educational attainment lead to lower levels of population growth, better health outcomes (lots of positive knock on effects)

Task 4: Compare trends between primary educational attainment statistics and government spending on education

● Identify countries whose governments are getting the best or showing the most improvement in returns on education spending

❏ **Insight:** Countries that get the higher returns on educational investment also have higher indicators of Governance and Institutional Quality as measured by:
   ○ Freedom Index (Political Freedoms Civil Liberties)
   ○ International Country Risk Guide (Corruption in Government, Law and Order Tradition, Bureaucratic Quality)

Task 5: Explore the performance gap between students in rural and urban areas

● Explore the correlation between performance gap and other rural-urban-related indicators, such as average year of schooling, secondary completion rate, primary completion rate, net intake rate for the first grade of primary education, etc

❏ **Insight:** Students in urban areas that has high net intake rate are tend to have better academic performance than those in rural areas

References

https://www.kaggle.com/theworldbank/education-statistics/home

https://databank.worldbank.org/data/home.aspx

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