

# Data Analysis In Education: How Data Analysis Is And Can Help The Stakeholders In Education Industry?

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**Abstract-** Data analytics is an efficient tool that helps in making decisions easier for the decision maker. Education sector can leverage the power of analytics for the good of society.

**Indexed Terms-** Data analytics, big data, and educational stakeholders.

## I. INTRODUCTION

Education as a process is the most crucial aspect to take into consideration when you think of development of a nation. At the first glance we can infer that nations which are considered to be developed have and considering education system as one of the most important spending among all. According to national centre for educational statistis USA, United states Spent 6.1% of GDP on education in 2015. In the same period Norway spent 6.4% of GDP and New Zealand spent 6.3%. India spent 4.6%.

Education System as any other industry has many stakeholders engaged into it, Fig-1 Students, Parent, Teachers, School administration, state government, central government, curriculum designing body, educational researchers NGOs etc. With all the time and money stakeholders spends on the educational system. It is important that these national resources are well utilised. This is where Data Analysis is and can help the system to become efficient by empowering stakeholders to make effective decisions.

Considering students as consumers and parents as customs (at primary level). This paper aims to study how Data Analysis can maximise the satisfaction of consumer and customers.

## II. TOOLS FOR DATA ANALYSIS

- R Programming
- Python
- Tableau

- SAS
- Spark
- Rapid Miner
- Hadoop

How these tools will help Following Stakeholders?

### 1. Government

UNESCO Institute of Statistics has given a list of 43 indicators for checking the overall health of education in a country.

These are the indices that are important for the government to formulate national education policies and taking decisions. Tools that are listed above helps in processing a huge quantity of data. Government can leverage the power of this tools to measure indices by minimising error. This increases accuracy of indices and enables taking statistically correct decisions.

### 2. Schools and Colleges

Department of Higher Education Ministry of Human Resource Development Government of India, have given A Methodology for Ranking of Universities and Colleges in India. [3]

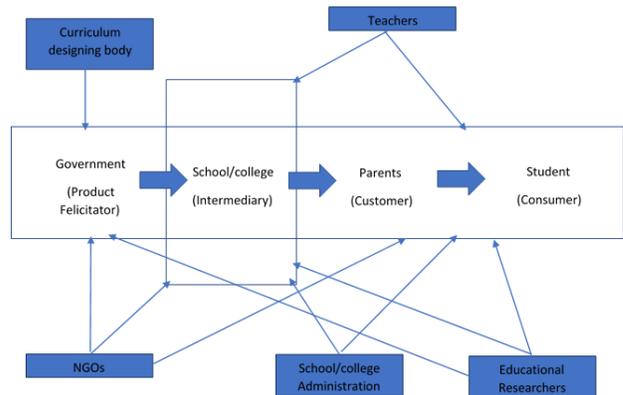


Fig 1

Analytical tools education institutes to keep a close look on these parameters. This enables them in

designing the strategies improve their ranking. The measurement of these quantities is a very tedious task this is where tools will make this task easier.

This parameters of design in such a way that uplifts the quality of education. This eventually helps the students.

### 3. Students and Parents

A proper analysis of the data relevant to students that is the marks and their performance in in various other parameters that are measured by educational board. Will give understand student and their parents where there is scope of improvement what are the strengths and weaknesses of the learner that would eventually help in deciding their career path.

### 4. Teachers

Deploying Data Analytics tools and using it to measure various performance parameters of a learning for example psychological, physiological, environmental factors that affects the learning process of a student will help in evaluating and assessment of a learner on a subjective basis.

By using the data teacher and professor will be able to understand the class environment and the how to overcome the challenges facing in a particular class.

### 5. Other

Curriculum designing bodies, getting a proper information on the student's psychological approach to learning and the environmental settings around them, can design a proper study curriculum for the students.

NGOs can use this information to design their welfare plans.

For educational research every kind of data is a data mine. Data visualise properly will make the task of researcher easy and fast.

## SUGGESTIONS

- Government should encourage the use of data analytics tools.
- Schools should focus hey on overall development of student hey.

- Parents should take into consideration the strength of their child helping them with the career advice.
- Government should take initiative to develop a nationwide digital system for data analysis education in sector.

## REFERENCES

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