

Data analytics, a good practice of educational innovation in decision making under the Lean - Six Sigma approach

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Abbreviated abstract: : For the case study, the Lean Six Sigma methodology was evaluated in the actions of UDES. This method promotes standardization and work flow, reducing process variation and improving control through quantitative statistical analysis applied to a visual data analysis tool called "academic analytics observatory". As a result, there is evidence of an improvement in the management process, the optimization of response times for consultation of information required by stakeholders, reducing requests via email for providing the data, thus generating a culture of self-consultation and reflection of various academic aspects.

Related publications:

– Pérez Miguel *et al*, Strategies for follow-up, monitoring and academic intervention for university permanence: the case of the University of Santander. Book Advances in Higher Education and Research Vol 2, editorial Dickinson S.L, 58 (2022)



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4th Conference on
**Statistics and
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Salvador, Brazil (online)
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Problem, Data, Previous Works

Lack of information and data analytics in education

challenges or problems

information decentralization

Low productivity and achievement of goals.

Lack of information for decision making.

Errors in strategic management due to lack of information

Lack of resources for data collection and analysis

ANALYTICS OF DATA

Benefits

Tools and techniques for information and data management.

Evaluation of past actions and potential for future actions

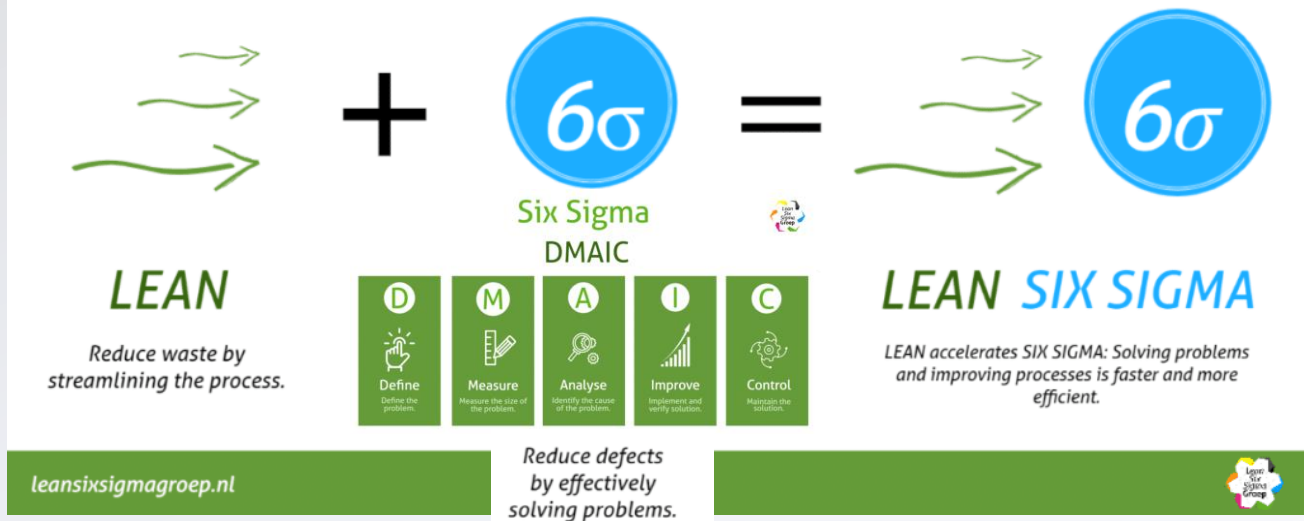
Modeling and data analysis, prediction.

Value Added Analysis.

Generate data to guide decision making.

Methods- Lean - Six Sigma

What is Lean Six Sigma?



leansixsigmagroep.nl

Reduce defects
by effectively
solving problems.



Fuente: <https://leansixsigmagroep.nl/en/lean-agile-and-six-sigma/what-is-lean-six-sigma/>



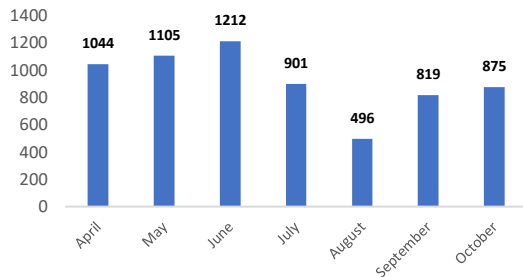
Results and Conclusions DMAIC-Maintenance plan executed in 2022

1. DEFINE

Does the Observatory of
Can academic analytics be an
instrument for consolidating
institutional information related to
academic processes as a support
tool in decision-making within the
framework of continuous
improvement?

2. MEASURE

Impact of the Academic Analytics Observatory
(No. of Visits April–October 2022)



6,452 visits +500 trained users

3. ANALYSE

- Foster a culture and thinking of data science
- Monitor and measure the academic achievement of students Generate knowledge for decision-making with a functional vision of the institution.
- Apply academic data analytics as a tool for generating value for the institution and exercise of democracy.

4. IMPROVE <https://udes.edu.co/enseñanza-principal/analitica-academica/observatorio> “business intelligence tools”



5. CONTROL

- Impact measurement indicators
- User satisfaction surveys

Conclusions: The academic analytics observatory contributes to the curricular and integral management of higher education institutions, enabling better structuring and planning in the development of student development strategies



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