

A case study involving Business Intelligence as a tool to support enrollment management in educational institutions.

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Abbreviated abstract: This work deals with a case study capable of assisting educational managers in making decisions regarding enrollment in an educational institution. Using the concepts and tools of Business Intelligence (BI) and information visualization, a BI application was proposed and developed. To reach the objective, we used the database of an institution, supported by the Integration Services tool (SSIS) for the construction of the Data Warehouse (DW) and the Power BI tool for the development of the visualizations.



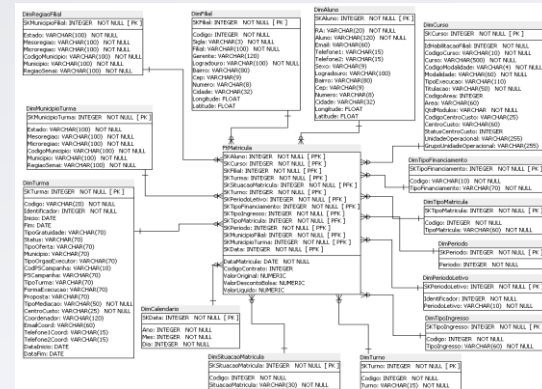
Objectives

- **General Objective:** To develop a BI application capable of helping managers in the decision-making process on some aspects of school management in an educational institution.
 - Enrollment indicator;
 - Financial indicator.
- **Specific objectives:**
 - Literature review and definition of indicators;
 - Identification of data sources and construction of the DW;
 - Dashboard development for information visualization.



Methods

- Stakeholder mobilization and definition of the project objective – (artifact: Necessity Matrix).
- Data collection - (artifact: Data source mapping)
 - 38 tables
- Granularity: Enrollment in the academic period.
- Modeling: Star Schema
 - 13 dimension tables
 - 1 fact table
- Implementation of DW (ETL)
 - Class Size - ECD Type 2
 - Tool: SQL Server Integration Services (SSIS).
- Information visualization – Dashboard
 - Tool: Microsoft Power BI



Star schema for the proposed BI application model.



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Results and Conclusions

- As a result of the project was delivered:
 - DW
 - Dashboard
- Identification of enrollment profiles:
 - During semesters, quarters, months and years;
 - Courses, modalities, shift, branches, etc.;
 - Municipalities and regions with potential new offers of classes and courses;
- Project evolution:
 - History of changes in the registration status of the student during the semester;
 - New indicators that enable tracking from a registration from origin to completion.

