

An Overview of the LALA project

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Abstract. The LALA project (“Building Capacity to Use Learning Analytics to Improve Higher Education in Latin America”) is a project that aims at building capacity about the use of data in education for improving education in Latin America. This article presents a general overview of the LALA project including the LALA framework (as a set of guidelines, recommendations and patterns for enabling adoption of learning analytics), the adaptation of learning analytics tools (mainly three different tools used in Europe) and the pilots with learning analytics experiences. The results of this project could serve as an example for other institutions in the Latin American region or other under-represented regions to adopt Learning Analytics as part of their processes.

Keywords: learning analytics, Latin America, adoption

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1 Introduction

The LALA project (<http://lalaproject.org>) is an initiative funded by the European Union with the purpose of transferring knowledge from Europe to Latin America for the application of learning analytics in a practical manner in Higher Education Institutions in Latin America so as to improve their education by means of data-driven approaches.

Since the project started in October 2018, the LALA project has already produced different outcomes, some of the most important are:

- The LALA framework. A set of guidelines to support Higher Education Institutions in Latin America in the adoption of learning analytics.
- The adapted or adopted learning analytics tools in Latin America, which includes a counselling system, an early dropout prediction system, a system for supporting self-regulation in online and blended learning environments, and the on-task tool.
- Pilots with Learning Analytic tools. At present, different pilots are running in Latin America institutions and others have already been done in order to test and validate the learning analytic tools designed during the project.
- Dissemination actions. As part of the dissemination activities, we have developed different training activities, workshops, publications, presentations and the annual LALA conference. In addition, the LALA community has been set up with many institutions interested in the project. Moreover, there are twitter and Facebook accounts, a distribution list and a bulletin. Institutions in Latin America can join the LALA project following the instructions at <https://www.lalaproject.org/be-part-of-lala/> and according to the statutes at <https://www.lalaproject.org/statutes/>

2 LALA framework

The LALA framework [1] was conceived as a set of guidelines and instruments to facilitate and promote the design, implementation and adoption of learning analytics tools in Higher Education Institutions in Latin America. The LALA framework is inspired by the SHEILA framework [2] which was established in the SHEILA Erasmus + project. The LALA framework is composed of four dimensions that could be applied independently or in an integrated manner.

- Institutional. This dimension aims to promote the participation and commitment of key actors - or stakeholders - (students, academic staff, and leaders) in the adoption of LA tools, anticipating political and strategic aspects. Specifically, it proposes activities to understand what the current state and the desired state of the institution is in relation to the incorporation of LA tools, as well as the policies and strategies established for the management of educational data. It proposes a series of instruments and phases for answering the following question: *What are the institutional considerations to adopt a learning analytics tool or process?* An important part of the result of applying the instruments and methods proposed in this

dimension is a list of needs of the main actors of an institution in the form of strategic guidelines to reach a desired state in terms of adoption of LA. The identification of needs for the different Latin American partners of the project can be seen in [3].

- **Technical.** This dimension proposes a set of guidelines and recommendations for supporting the design of learning analytic tools. These guidelines aim at providing a basis for ensuring the adequate collection and administration of educational metadata, as well as the management of the adequate infrastructure and technical capacities to support them. This dimension will answer the question: *What steps do I need to follow to work on the design, implementation and/or adaptation and evaluation of a learning analytics tool that is adapted to the needs of the main actors in the institution?*
- **Ethical.** This dimension aims to promote the adoption of ethical and privacy considerations in the design implementation and adoption of learning analytics tools. Specifically, it proposes a collection of papers and instruments on ethical considerations for learning analytics that interested institutions could take as a reference. The application of this dimension will answer the following question: *What are the ethical and privacy considerations that the institution should take into account in order to adopt or implement a learning analytics tool?*
- **Community.** This dimension provides the guidelines for the creation of a Learning Analytics community for promoting the exchange and experiences between higher education institutions in Latin America. The aim is to favour collaboration among institutions without compromising internal information. Applying this dimension institutions could answer the following question: *What steps should we follow to become an active member of the Learning Analytics community in Latin America (LALA community)?*

3 Adoption of LALA tools

The LALA project has adapted or adopted mainly four tools that have been developed (at least partially) in Europe: a counselling tool, an early dropout prediction tool, a system for supporting self-regulation in online and blended learning environments and the on-task tool. Detailed information about the adaptation and adoption of these learning analytics tools can be found at [4].

A counselling tool developed in KU Leuven has been adapted to Latin American partners. Universidad Austral de Chile, Escuela Politecnica Superior del Litoral and Universidad de Cuenca adapted the counselling tool providing a set of dashboards at the academic level such as the grades of students in different courses, their present call in each course, etc. An example of this tool can be seen in [5] for Universidad Austral de Chile. Pontificia Universidad Católica de Chile provided also a tool at the course level named NoteMyProgress, which enabled students and teachers to self-monitor their learning process in a course including information such as self-regulated learning strategies.

An early dropout prediction tool developed in Universidad Carlos III de Madrid has been adapted to Latin American partners. Universidad Austral de Chile, Escuela Politecnica Superior del Litoral and Universidad de Cuenca used an early dropout prediction tool for predicting dropout at the degree levels, while Pontificia Universidad Católica de Chile adapted it for courses in a MOOC [6].

The Pontificia Universidad Católica de Chile developed the NoteMyProgress tool, a tool for supporting students self-regulation strategies in both online and blended learning environment. It is composed by a plugin currently available for the MOOC platform Coursera and the Moodle Learning Management system that provides interactive visualisations about students activities. Both plugins are available here: <https://git.cti.espol.edu.ec/LALA-Project/PUC>.

The on-task tool, which is contributed in part by University of Edinburgh, is being adopted in Escuela Politecnica Superior del Litoral, Universidad de Cuenca, and Universidade Federal Rural de Pernambuco (UFRPE)(an associate partner in Brazil) for providing personalization and feedback.

4 Pilot experiences

All four regular Latin American partners (Pontificia Universidad Católica de Chile, Universidad Austral de Chile, Universidad de Cuenca and Escuela Politécnica Superior del Litoral) have already run some pilot experiences with learning analytics tools developed during the project. Other pilot experiences are running or will run during this year. In addition, other associate partners from Latin America have or will run pilots with the tools of the project.

Regarding the pilot experiences, depending on the context, the target groups are different. In Pontificia Universidad Católica de Chile, a total of 638 students from a MOOC in Coursera downloaded the tool, although the analysis of their behavior with the tool was conducted with 236 that answered all questionnaires related with the pilot. In Escuela Superior Politécnica del Litoral (ESPOL), more than 315 academic counselors (teachers) used the new LA visualizations in their current counselling system. Thus, involving approximately 7700 students. However, the analysis was carried out with only 152 teachers who answered all the questionnaires related with the pilot. In Universidad de Cuenca, where LA has no been previously applied, 31 academic counselors (teachers) used the counseling dashboard LA. Thus, involving approximately 522 students whose academic performance was analyzed by the academic counselors. Additionally, 178 of those students had an academic counseling session to analyze their academic performance. While Universidad Austral de Chile the main stakeholders using the tools are the managers. In any case, students are the target group to improve their educational process. The first version of the project deliverable describing all pilots will be publicly available soon in the webpage of the project.

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