

Learning Analytics for matching competences in Language Learning

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Abstract

The paper presents the results of Promacolts project "Promoting Matching Competences in Language Learning", which aims at providing key recommendations to effectively adapt the results of language courses to the specific demands of the customers for these courses (individual students, governmental organisations, private companies). The analytical evaluation of language courses designed to reach a large number of students in e-learning and blended learning modalities offers a great potential of information to determine elements for improvement. As a result of a comparative analysis conducted in Spain, Belgium, Germany, Czech Republic, Poland and Latvia, the partners of the project have established a series of hypotheses about the design and development of language courses intended to help finding relevant indicators to be integrated in IT Analytics tools. The contrast of the hypotheses with stakeholders in the teaching of languages in the different countries participating in the project concluded interesting results not only on factors inherent to the teaching of languages, but also on related features and skills that prove to be crucial to meet the expectations of the customer. These connected skills are often not sufficiently addressed in the design of language courses and their analytic methods of evaluation. The paper focuses on the conclusions related to establishing optimal specifications for a language course, the importance of the involvement of the different actors in the language course to define the key analytical indicators, and how these indicators could be transferred to automatic IT Analytic tools assisting measuring the level of success.

Promacolts results are available at: www.promacolts.eu

1. Introduction

The basis for this paper is taken from the preliminary results of the European Project Promacolts (Promoting Matching Competences in Language Training). The project has allowed so far drawing up and validating hypothesis concerning the influence of external factors, related both to the clients and the learners of the training courses, on the optimal results obtained in these courses; essential is found as well the permanent communication and cooperation between the three main actors of language courses: customer, course developer/ trainer, and learners in order to meet the expectations of each of these parties on acquiring language competences. Learning Analytics is seen as a practical vehicle to support this communication and to drive specifically targeted cooperation between the parties

Promacolts Project has been running for some 20 months now. The conclusions presented in this document are specifically related to the analytic evaluation of language courses with the scope of a high number of learners in e-learning and blended learning modalities.

2. Description of the Method

The method followed in the Project Promacolt is structured in three stages:

- Comparative analysis of a sample of 12 language courses selected by the 6 international partners of the Project.
- Drawing up a series of hypotheses focusing on three broad fields (i) Relevant Learner's Characteristics (RLC), (ii) Targeted Language Use (TLU), and (iii) factors determining the optimal transition from RLC to TLU, by means of the design of a language training course, namely contents, pedagogical method and model of interaction.
- Verification of the hypothesis drafted, by means of contrast with the relevant actors of language teaching and learning.

The approach of this paper follows an open interpretation of the concept of Learning Analytics, instead of restricting it to a structure of support to already existing methods (to adapt general purpose software to a specific online language learning course, for instance). What we propose is an integral approach in which the design of the course is influenced periodically by the indicators related to RLC and TLU. Some of these indicators can be progressively measured through the use of Learning Analytics.

We have selected in this paper 3 indicators that Promacolt has identified as key to measure and use in the conception and design of a language courses and subsequent adaptations thereof. These indicators are the results of 3 of the 15 hypotheses analysed and contrasted in the project. Some 80 stakeholders from the 6 European participant countries have been involved in the preparation/ validation of the results. The indicators are as follows:

Concerning the target group of learners

- The previous direct exposure of the Learners to the target language of the course has an influence on the success of the course. Concerning the target level of learning
- The transposition of the specifications of the course defined by the client to quantitative and qualitative indicators is essential to measure the success of the language course from the perspective of the client of the course. Concerning circumstantial factors relevant to optimise the success of the course
- The design of the language course should be adaptable to circumstantial factors both internal and external to maximise the success of the results.

3. Specific Outcome.

The previous direct exposure of the Learners to the target language of the course has an influence on the success of the course.

Our research shows the need to categorise different types of exposure and to continue the study. The results of the sample offer a full range of different factors relevant to a positive/ negative progress of learners who have been previously exposed to the target language.

The trend of a dominant positive effect is found for those learners who have lived even for short periods in a country where the target language is spoken. Positive as well, in general, is found the fact to have lived in contact with relatives speaking the target language (even in the home context of the learner). These factors of informal learning can be very useful for the learner in improving his/ her understanding of the language. They can be measured with the help of Learning Analytics, and used in the design of the course.

Within the negative effects is found the fact of an unstructured functional learning when the exposure to the target language has reached a point to integrate wrong linguistic structures or uses of the language in the target language. Normally the efforts to unlearn these wrong structures or inadequate uses of the language may be less efficient in the learning process than the benefits of the understanding of words and sentences, or the familiarity of sounds in the target language.

The transposition of the specifications of the course defined by the client to quantitative and qualitative indicators is essential to measure the success of the course from the perspective of the client of the course.

One of the main gaps detected in our research is the lack of sound specifications of the learning objectives on the side of the client. This is mainly relevant in language courses outside the formal education settings, like courses for private companies or public institutions addressed to their staff. The absence of a diagnosis of the characteristics of the group of learners prior to the design of the course and of the intended use of the targeted language is considered one of the main obstacles for the success of the courses. Basically, without defining initial levels of reference, the use of any technique to monitor the progress based on indicators, including Learning Analytics, is of little use.

The results of our research include the following aspects as main difficulties to overcome this situation:

- Lack of specific funding for activities of needs diagnosis within the customer organisations.
- Lack of internal coordination within the customer organisations between the departments in charge of contracting the course and the technical departments benefiting from the language course through the trained staff.

The design of the course should be adaptable to circumstantial factors both internal and external to maximise the results.

The results of our research in this section exceed the scope of the present paper, as the number of circumstantial factors that can influence the success of the course can be endless. Nevertheless, our findings show that establishing a categorisation between most usual internal and external factors related to the three main stakeholders: client, course designer/ trainer and learners, is very useful in order to adopt adaptations relevant for the success of a particular language course. These factors can be then tracked by techniques like Learning Analytics to measure the impact.

We have observed that very often the indicators measured with Learning Analytics techniques restrict to internal parameters of the learning method used (marks in a questionnaire included in the contents of course, for instance). However external factors like the ones included in the previous sections of this paper are highly relevant to be used in the adaptation of our learning method, in order to optimise the results.

4. Conclusions

In order to achieve an optimal use of the techniques of Learning Analytics in language courses with the format of e-learning and blended learning, an integral approach is needed, without restricting just to adapt generic techniques to pre-established methods and curricula.

The adaptation between the characteristics of the group of learners and the expectations of the customer require the integration of circumstantial factors external to the pedagogical method to be used. It is particularly important to incorporate:

1. The diagnosis of the client's needs, with a structure of the learning objectives in terms of competences related to the use of the language that can be summarised in a number of quantitative and qualitative indicators, which can be measured with specific techniques like Learning Analytics.
2. The categorisation of the target group of learners based on factors inherent to the own learners. Without it being exclusive, the level of exposure to the target language prior to the course is one of the typical aspects that can be structured in different relevant aspects for the learning outcome of the language course (recognition of sounds, specific vocabulary, few sentences for typical situations); these elements are measurable through analytic techniques.

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References

- [1] Knowing Knowledge, George Siemens
http://www.elearnspace.org/KnowingKnowledge_LowRes.pdf
- [2] Connectivism, George Siemens: <http://www.elearnspace.org/Articles/connectivism.htm>
- [3] The Common European Framework of Reference of Languages
http://www.coe.int/t/dg4/linguistic/Source/Framework_EN.pdf