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Learning analytics adoption – approaches and maturity

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ABSTRACT: The poster presents the change of prioritised approaches to learning analytics (LA) among higher education as their experience of adoption increases. The study examined 27 UK and European higher education institutions using the Epistemic Network Analysis technique. Results show that institutions with one or more years of experience with LA put more emphasis on understanding learning or teaching phenomena, whereas institutions with less experience of LA focused more on measuring the phenomena. This implicates a change of conceptualisation among institutions as their experience with LA increases.

Keywords: Learning analytics, higher education, adoption, strategy, approach

1 INTRODUCTION

A strategic vision that responds to the needs of an organisation is critical for long-term impact and the development of institutional capability for LA. While existing studies of LA adoption have shed light on policies and strategies targeted at institutional or national level of implementation (Colvin, Dawson, Wade, & Gašević, 2017), there is limited understanding of the change of priorities when institutions' experience with LA increases. The current study seeks to bridge the gap and highlight the need for a strategy that evolves based on evaluations of short-term objectives for LA (Kotter, 2006). This work explores an overarching question: *what is the state of adoption among UK and European HEIs in terms of learning analytics?* The poster focuses on identifying the prioritised goals and approaches to LA.

2 METHODOLOGY

To answer the research question, we carried out 29 semi-structured interviews with institutional leaders from 27 HEIs. The interview data was first transcribed and coded before subsequently analysed using the Epistemic Network Analysis (ENA) technique (Shaffer et al., 2009). ENA works by examining the co-occurrence of *codes* (representing concepts) within a set of *stanzas*, which are text excerpts (e.g., conversation utterances) where co-occurrence represents a meaningful relationship for each of the *units of analysis* (e.g., institutions). For this poster, we present the interwoven networks of eight codes under two themes – goals (institutional, teaching, and learning levels) and approaches (measuring, exploratory, data-led, problem-led, and experimental). The institutions were put in two groups by adoption experience: less than one year of experience (n=9) and one or more years of experience (n=18). One year was chosen as a threshold due to the fact that only two institutions had adopted LA for more than 3 years.

3 RESULTS

To understand what institutional adoption looks like when the experience of LA increases, we plotted two mean ENA networks of institutions by their experience of adopting LA (Figure 1). The X-axis corresponds to the first singular value and explains 9.1% of the variability in the study subjects' networks, while the Y-axis, corresponds to the second singular value that explains additional 15.0% of the variability in subjects' networks. The thickness of the lines between nodes represents the frequency of their co-occurrence across stanzas, which indicates the strength of connections.

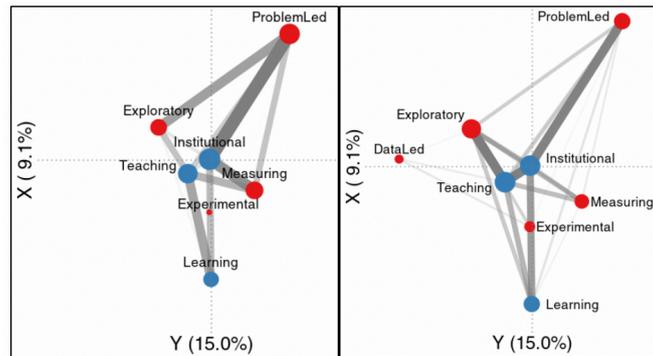


Figure 1. Mean ENA networks for novice institutions (left) and experienced institutions (right)

The results showed both groups having strong connections between institutional goals and a problem-led approaches. This suggests that problem-solving approaches were usually adopted for improving institutional performance. The network of novice institutions also displays a strong connection between institution-level goals and measuring approaches. This suggests that LA was often adopted as a measuring tool for institutional performance, e.g., student retention rate. By contrast, more experienced institutions showed strong connections between teaching-level goals and exploratory approaches. This suggests that as institutions' experience with LA increased, there was a growing interest in understanding a teaching or learning phenomenon to enhance teaching.

4 CONCLUSION

The strong connection between 'institution goal' and the 'problem-led' approach alludes to the political pressure that HEIs are currently under – providing evidence to demonstrate and enhance excellence and quality. Nevertheless, the study showed a movement among the institutions from measuring the phenomena of learning and teaching to exploring them for a better understanding of factors that contributed to the phenomenon. This suggests a need for a strategy that evolves based on evaluations of short-term objectives for LA, as institutions' experience matures.

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