

Learning Analytics: Dashboard Application For Analysing And Monitoring Academic Activities

Pallavi Vyas

School of computer science and engineering
Lovely Professional University, Phagwara, Punjab, India

Abstract:

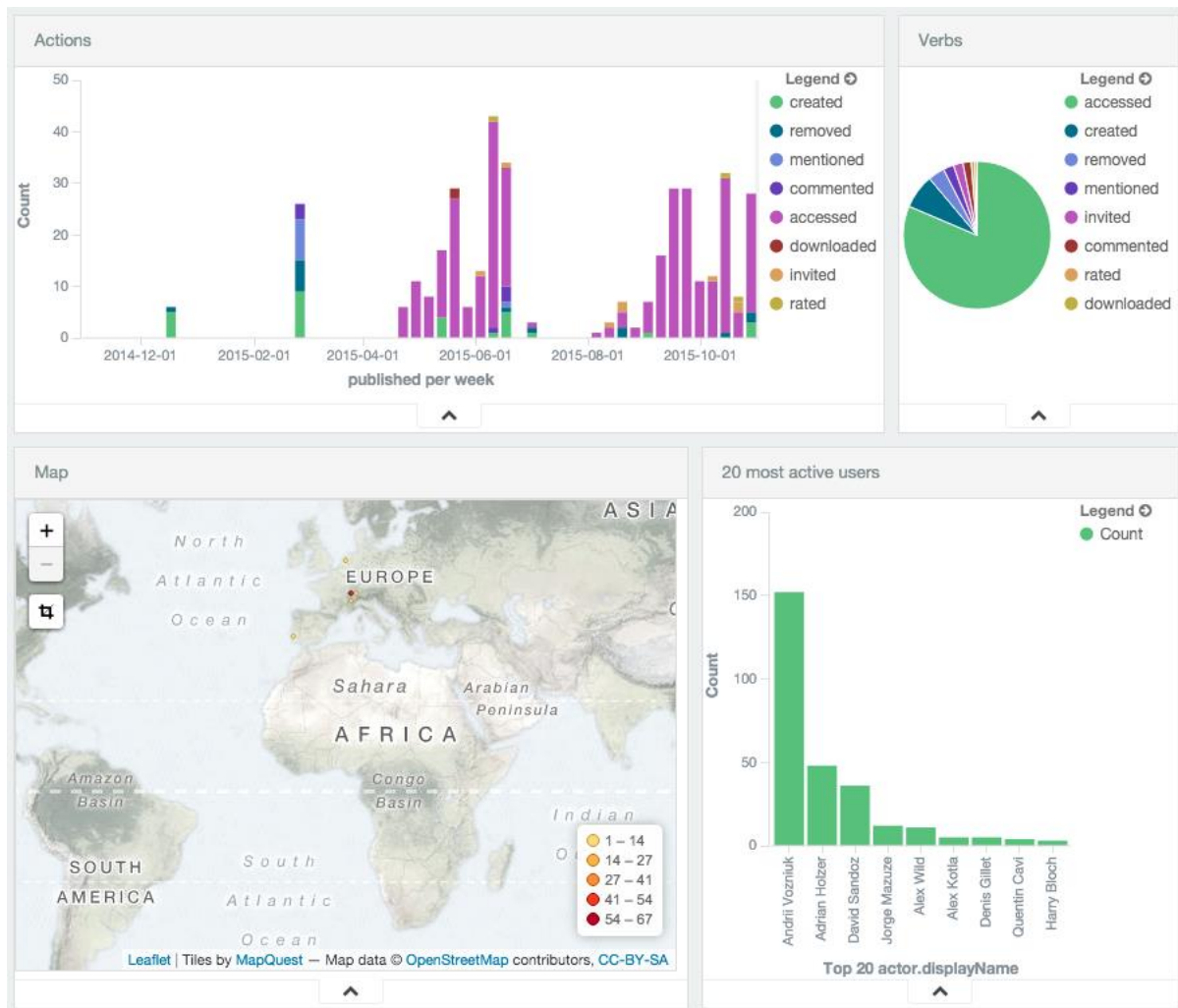
This paper is presenting a sorted out writing audit of the spearheading inquire about learning analytics and its application in instructive information mining. Study on learning dashboards objects to spot whatever material is evocative to totally different backers and how information are often given to upkeep practicable processes. Learning dashboards are now prevalent and useful because the amplified use of educational data and expertise. This audit recognizes completely different sorts of examination thinks about moreover as shifted perspectives of learning dashboards and their development relating to investigation. Since the investigating field remains moderately youthful, most ponder area unit. The audit achieves by giving a definition for learning dashboards and by giving a meaning for learning dashboards and by laying out exposed matters and forthcoming dashboards. There is a need for out-of-the-box investigation in bonafide settings and ponders that effectively compare completely diverse dashboard plans

Keywords: Learning Analytics, Learning Dashboard, organized review.

Introduction:

The sum of information collected through instructional exercise advances, like Learning Management Systems (LMS) or Learning Administration Systems (LAS) and enormous open online courses (MOOC's) expanding quickly in capacity as well as intricacy. Learning Analytics developed as a result of the expanding some of on-line instructional exercise stages and conjointly the necessity to get it but technology mediated learning happens [1]. As soon as data has been composed, data must be prepared, examined and envisioned [2].

Learning dashboards based on analysis in info picturing. About Learning Analytics and academic data processing tons of study been done on academic data handling conjointly there has been in depth analysis on only data visualizations and dashboards in several backgrounds. This analysis targeted on differing types of dashboards useful in teaching-learning method the sphere of learning dashboards continues to be relatively undeveloped as shown by Google Trends in Figure one so this paper is providing unionised literature review on Learning Analytics Dashboards.

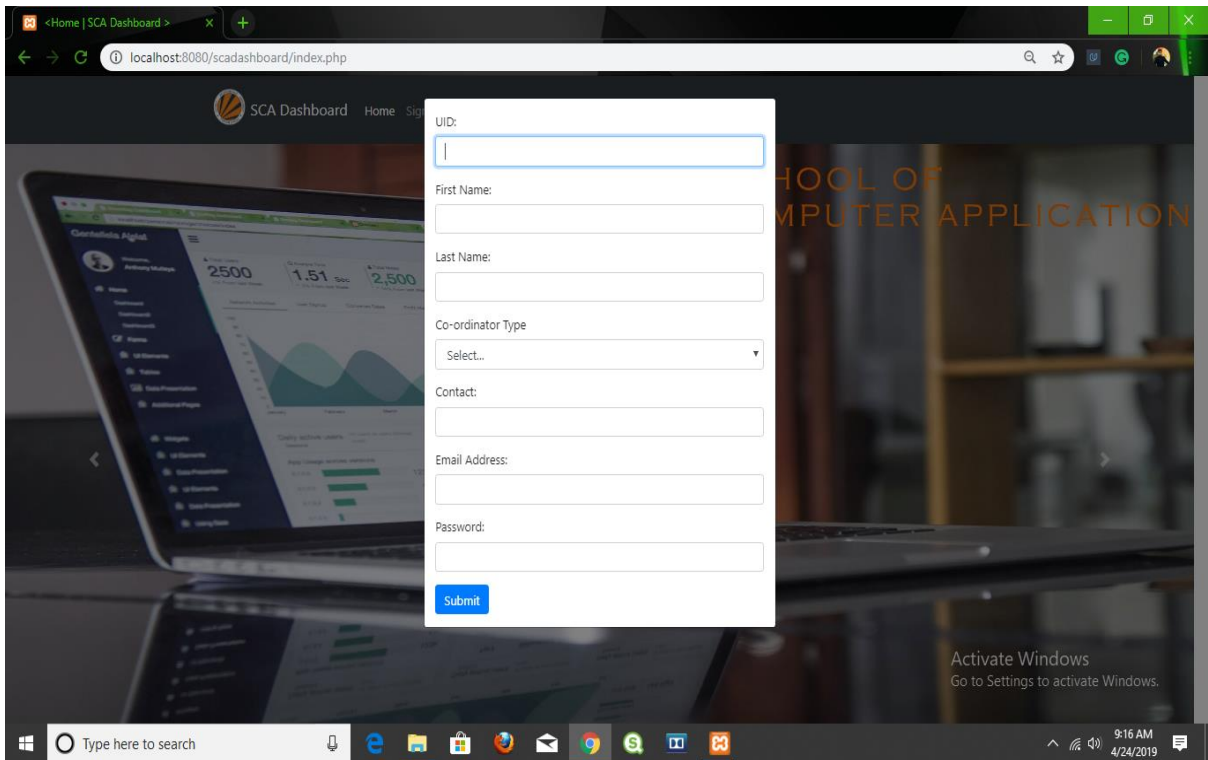


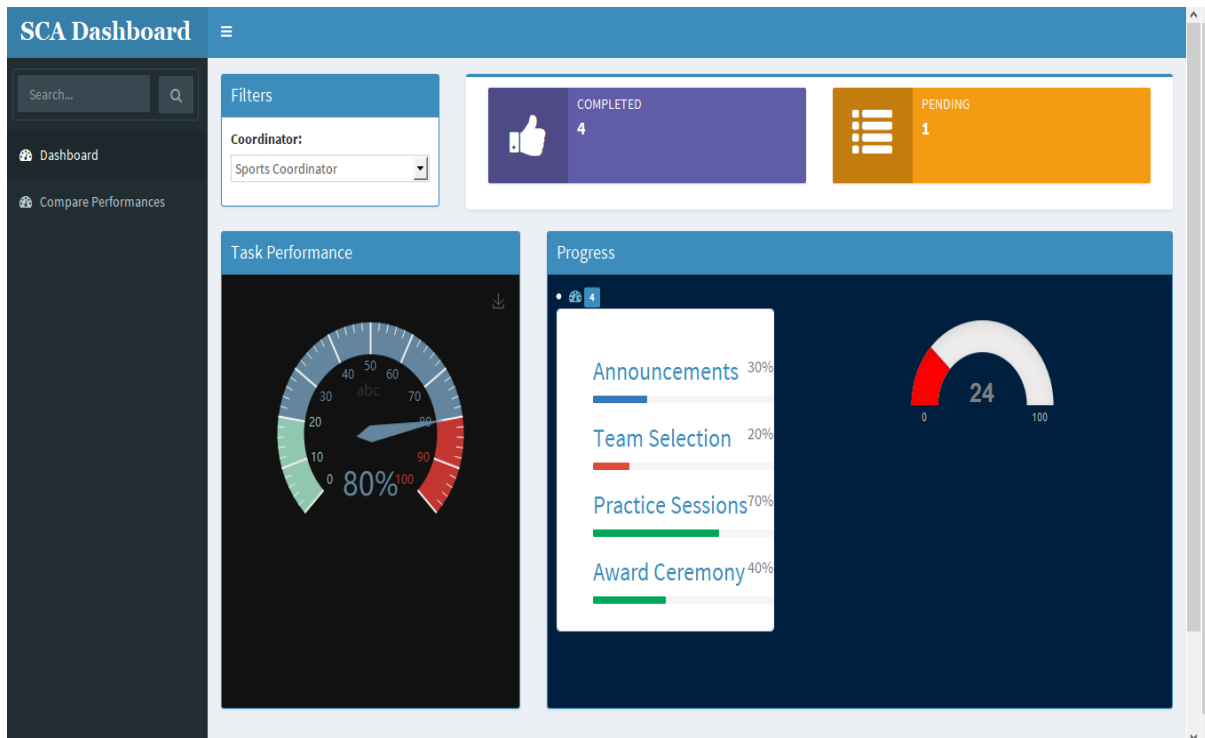
Material and current work:

Numerous terminologies has been used so for Dashboard applications ‘educational dashboard’, ‘dashboard for learning analytics’, ‘learning analytics dashboard’, ‘data dashboard’, and ‘web dashboards. Likewise Learning Analytics Dashboard is defined in different ways and with different scenario. Some defined in a way that “a visual show of the foremost necessary data needed to realize one or additional objectives; consolidated and organized on one screen that the data will be monitored at a glance” [3]. A dashboard an easy and single page monitoring of showcased data in graphical manner. Dashboard also works as performance indicator [11] for example, to track coordinator’s performance and view the ongoing event and activities and he/she can view comparative analysis of coordinators data [12].

Coordinators can give input for activities, events which are upcoming and register them self in these activities. Whereas learning dashboards are unit upward in quality

over the last some decades (Fig 2), the problem about the right info showed completely different backers and also the problem of however this info should be bestowed stays mostly unanswered. Although dashboards are growing rapidly but due to insufficient and inappropriate information, dashboards lacks to showcase actual visualization of information.

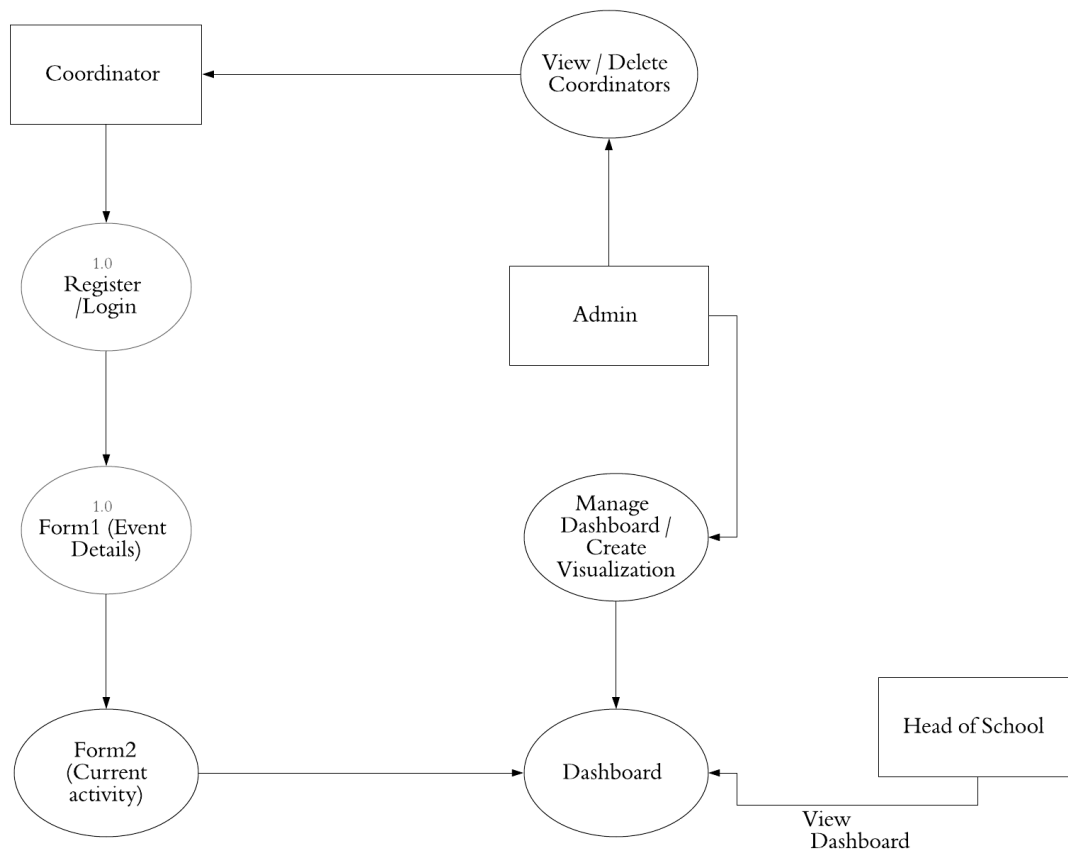




In order to perform the search, we have a tendency to skin the question dig into the item of learning (dashboard) and therefore the key analysis fields wherever dashboards are applied in latest years (Learning Analytics or academic knowledge Mining) the main attention on the term 'dashboard' and these two rising grounds meant to apprehension the majority share of dashboard proposition for scholarly submissions. The impediments of this style that we have not caught papers those are not clearly utilize the term dashboard or assign to the area of Learning Analytics. Papers that have name dashboard AND learning analytics OR educational information mining OR educational data mining OR educational information mining. Through this address we have a bowed to look the title, unique and catch phrases.

First we gauged the abstract and check whether the paper is describing dashboard or its indicators or show casing data using dashboards. Unrelated papers are excluded from the reviewing process. Second, we get every revision, scan it wholly, and systematically reviewed it supported like measures as within the prior round.[1][6][7][8]-[12].

Work Flow: Flow chart 1 showing the working of dashboard application.



Results: Learning dashboards currently meant for the use of higher authorities. In the current work we are showing the graphical dashboard for the academic activities going on in any academic institution. This show the performance and ongoing activities. The objective of the dashboard is to track the progress of the tasks assigned to the coordinators. By this dashboard we are not only giving an online interface to coordinators where they can give input of which activity or event is going on or upcoming. But we have also created a dashboard which will help higher authorities to check the performance of coordinators through dashboard.

Discussion

This article presenting a short overview to the exciting new category of applications that we have a tendency to call learning analytics dashboards. We have a inclination to be appallingly energetic with respect to the openings for mindfulness, reflection, sense making and affect that these kind of dashboards offer and over all with respect to the possible to upgrade learning, that’s to accurate higher at recouping. Affect remains especially debilitating to illustrate un examination considers. In this way, an

dynamic area of our future investigation is to investigate in any case that organize is higher supported.

References:

- [1] T. Elias, "Learning analytics: Definitions, processes and potential," 2011. [Online]. Available: <http://learninganalytics.net/LearningAnalyticsDefinitionsProcessesPotential.pdf>.
- [2] K. Börner and D. E. Polley, *Visual Insights: A Practical Guide to Making Sense of Data*. The MIT Press, Jan. 2014.
- [3] S. Few, *Information dashboard design*. O'Reilly, 2006.
- [4] M. Ji, C. Michel, E. Lavou'e, and S. George, "DDART, a Dynamic Dashboard for Collection, Analysis and Visualization of Activity and Reporting Traces," in *Proceedings of the 9th European Conference on Open Learning and Teaching in Educational Communities - Volume 8719, ser. ECTEL 2014*. New York, NY, USA: Springer-Verlag New York, Inc., 2014, pp. 440–445. [Online]. Available: http://dx.doi.org/10.1007/978-3-319-11200-8_39
- [5] Y. Park and I.-H. Jo, "Development of the Learning Analytics Dashboard to Support Students' Learning Performance," *Journal of Universal Computer Science*, vol. 21, no. 1, pp. 110–133, 2015. [Online]. Available: http://www.jucs.org/jucs_21_1/development_of_the_learning/jucs_21_01_0110_0133_park.pdf
- [6] Y. Yoo, H. Lee, I.-H. Jo, and Y. Park, "Educational dashboards for smart learning: Review of case studies," in *Emerging Issues in Smart Learning*. Springer, 2015, pp. 145–155. [Online]. Available: http://link.springer.com/chapter/10.1007/978-3-662-44188-6_21
- [7] C. M. Steiner, M. D. Kickmeier-Rust, and D. Albert, "Learning analytics and educational data mining: An overview of recent techniques," p. 6, 2014. [Online]. Available: http://css-kmi.tugraz.at/mkrwww/leas-box/downloads/ectel14_booklet.pdf#page=8
- [8] E. Duval, J. Klerkx, K. Verbert, T. Nagel, S. Govaerts, G. A. Parra Chico, S. Odriozola, J. Luis, and B. Vandeputte, "Learning dashboards & learnscapes," pp. 1–5, 2012. [Online]. Available: <https://lirias.kuleuven.be/handle/123456789/344525>
- [9] E. Duval, "Attention please!: learning analytics for visualization and recommendation," in *Proceedings of the 1st International Conference on Learning Analytics and Knowledge*. ACM, 2011, pp. 9–17. [Online]. Available: <http://dl.acm.org/citation.cfm?id=2090118>
- [10] B. Moissa, I. Gasparini, and A. Kemczinski, "A Systematic Mapping on the Learning Analytics Field and Its Analysis in the Massive Open Online Courses Context," *Int. J. Distance Educ. Technol.*, vol. 13, no. 3, pp. 1–24, Jul. 2015. [Online]. Available: <http://dx.doi.org/10.4018/IJDET.2015070101>
- [11] K. Verbert, S. Govaerts, E. Duval, J. L. Santos, F. Van Assche, G. Parra, and J. Klerkx, "Learning dashboards: an overview and future research opportunities," vol. 18, no. 6, pp. 1499–1514, 2014. [Online]. Available: <http://link.springer.com/article/10.1007/s00779-013-0751-2>.
- [12] K. Verbert, E. Duval, J. Klerkx, S. Govaerts, and J. L. Santos, "Learning analytics dashboard applications," *American Behavioral Scientist*, p. 0002764213479363, 2013.