

Implementing a learning analytics dashboard to support academic advising practice: advisors' information needs and evaluations - Abstract

Anni Silvola ¹, Jenni Kunnari ¹, Egle Gedrimiene ¹ and Hanni Muukkonen ¹

¹ University of Oulu, Pentti Kaiteran katu 1, Oulu, 90570, Finland

Abstract

Current research has identified academic advisors as an important stakeholder group of developing and using learning analytics (LA) tools and practices. With the provided LA tools, advisors are able to monitor students' progression, use visualizations as a mediation for the student-advisors dialogue during advising meetings, support students' academic decision-making, follow predictions of student performance and retentions, and make informed decisions about needed support and interventions [1], [2]. Engaging all stakeholders actively for the development and implementation process of LA tools is important in order to develop relevant and reliable LA tools [3]. Our study describes a development process of a learning analytics dashboard (LAD) for academic advisors. We set following research questions to identify the key support aspects, advisors' information needs, and their evaluations of the developed LAD as a support for their advising practice:

1. What academic advising practices emerged during the pandemic?
2. What kind of possibilities and challenges did the academic advisors identify in utilizing LAD in remote advising?
3. How did the academic advisors experience the LAD?

The developed dashboard included two visualizations of students' personal study plan: bar plot (Figure 1) and radar plot (Figure 2). The dashboard utilizes existing study-registry data. We conducted a set of workshops for academic advisors to better understand emerged practices and experiences of academic advising during the pandemic, and a pilot study in which academic advisors tested the dashboard as a mediating tool for academic advising meetings with students. We collected data through focus group interviews (N=18) and questionnaires including Likert-scale questions and open-ended questions (N₁=11, N₂=32). These data provided us an important overview of advisors' practices, information needs and their evaluations of the developed LAD. Results indicate that the LAD can take different roles in advisors' work, helping to prepare for the advising sessions, mediate the interaction with students, helping to follow students' progression during the academic year and identifying students who need to be contacted further. However, advisors also identified challenges in interpreting the visualizations and outlined further information needs. Advisors evaluated the dashboard more useful for preparation and monitoring than as an intervention prompt. The preliminary results provide valuable understanding about the ways how existing educational data can be utilized effectively to support academic advisors. The theoretical perspectives for LA supported academic advising will be discussed.

Keywords

academic advising, learning analytics, academic paths

Proceedings of the Finnish Learning Analytics and Artificial Intelligence in Education Conference (FLAIEC22), Sep 29-30, 2022, Joensuu, Finland

EMAIL: anni.silvola@oulu.fi (A.1); jenni.kunnari@oulu.fi (A.2); egle.gedrimiene@oulu.fi (A.3); hanni.muukkonen@oulu.fi (A.4)

ORCID: 0000-0002-2191-2194 (A.1); 0000-0002-4411-657X (A.2); 0000-0003-2586-2582 (A.3); 0000-0002-1086-1352 (A.4)



© 2022 Copyright for this paper by its authors.
Use permitted under Creative Commons License Attribution 4.0 International (CC BY 4.0).
CEUR Workshop Proceedings (CEUR-WS.org)

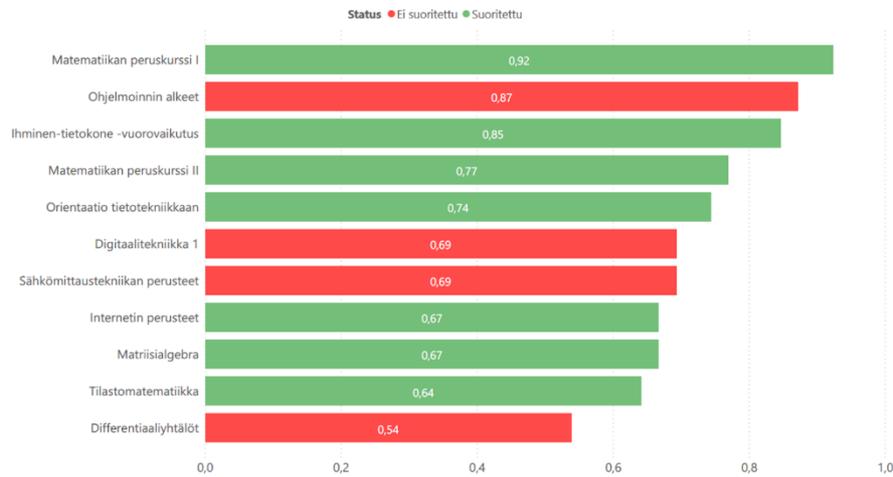


Figure 1: Bar plot visualization

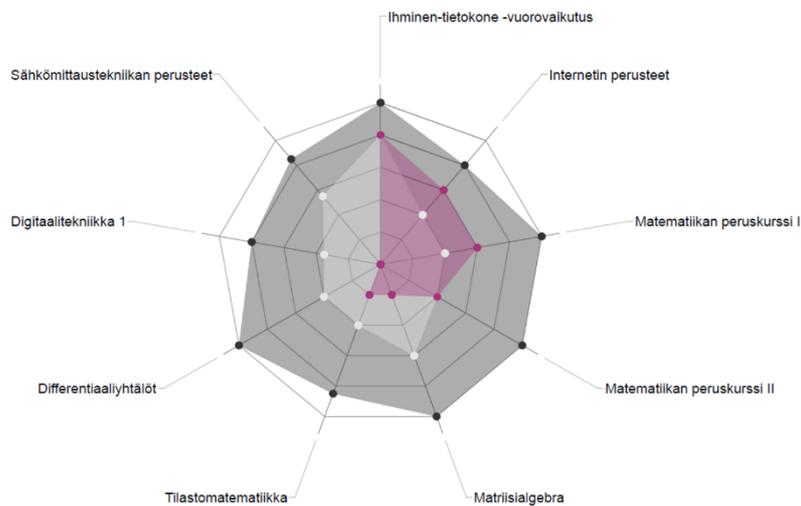


Figure 2: Radat Plot visualization

Acknowledgments

This study was supported by the Ministry of Culture and Education [grant number OKM/272/523/2017].

References

- [1] Charleer, S., Moere, A. V., Klerkx, J., Verbert, K., & De Laet, T. (2017). Learning analytics dashboards to support adviser-student dialogue. *IEEE Transactions on Learning Technologies*, 11(3), 389-399.
- [2] Hilliger, I., Laet, T. D., Henríquez, V., Guerra, J., Ortiz-Rojas, M., Zuñiga, M. Á., ... & Pérez-Sanagustín, M. (2020). For learners, with learners: Identifying indicators for an academic advising dashboard for students. In *European Conference on Technology Enhanced Learning* (pp. 117-130). Springer, Cham.
- [3] Chatti, M. A., Yücepur, V., Muslim, A., Guesmi, M., & Joarder, S. (2021). Designing Theory-Driven Analytics-Enhanced Self-Regulated Learning Applications. In *Visualizations and Dashboards for Learning Analytics* (pp. 47-68). Springer, Cham.