Appendix A Courses

Table 1: Courses selection. MPC - Multiple Choice. One of the respondents is a teaching assistant for both Higher Mathematics I and Higher Mathematics II, so we have six interviews for seven courses.

Course, ECTS	**Semester**	**Program**	**Evaluation**	**#students**
Higher Mathematics I, 6	First	BS of Business (and Information Systems) Engineering, BS of Economics (as an elective)	Weighted intermediate written assessment, written final exam, and an extra bonus if 75% of the quizzes are correctly solved	463
Higher Mathematics II, 6	Second	BS of Business (and Information Systems) Engineering, BS of Economics (as an elective)	Final written exam with open and MPC questions	376
Financial Accounting A, 3	First	BS of Business Engineering, BS of Business Administration	18/20 points on the written exam, 2/20 points for active participation during the semester	508
Financial Accounting B, 3	Second	BS of Business Engineering, BS of Business Administration	18/20 points on the written exam, 2/20 points for active participation during the semester	545
Fundamentals of Business Information Systems, 6	First	BS of Business Engineering	Final written exam (16/20): MPC for the ICT part (7.5/16) and MPC+programming for the software part (8.5/16) + case-study paper (4/20)	252
Accountancy, 6	First	BS of Business Engineering	Final written exam with open exercises and MPC questions (correction for guessing applied)	260
Bank and finance: introduction to financial modeling, 6	Second	BS of Business Engineering	Final written exam (18/20) - MPC questions + groupwork (2/20)	254

Appendix B Interview structure and questions

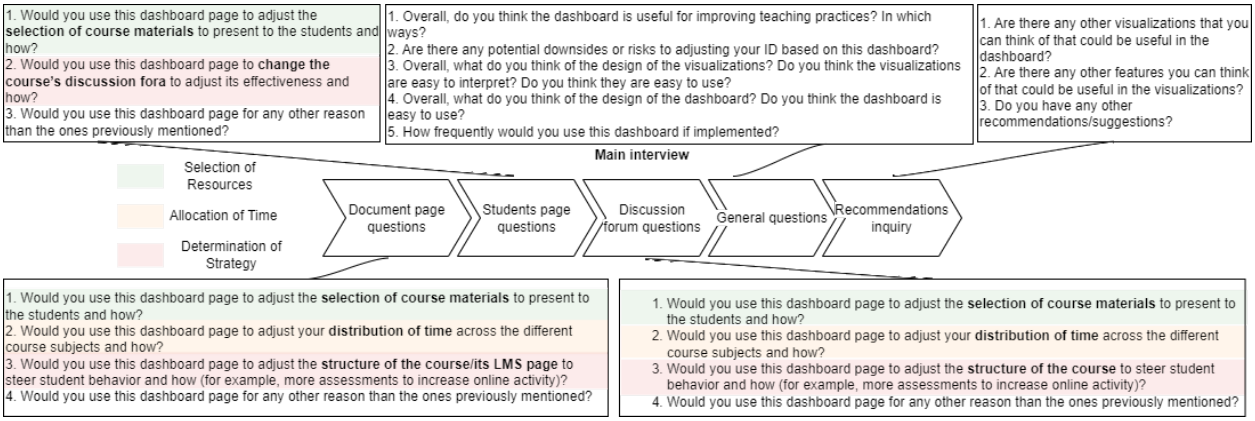

Fig. 1: Main interview structure

Appendix C Responses analysis

Table 2: Responses analysis. Green color - the visualization is found useful; orange color - the visualization is found not useful; yellow color - the visualization is found conditionally useful; grey color - not applicable

Page	Participant	Initial reaction (if any)	Determination of Strategy	Allocation of Time	Selection of Resources
Documents	Participant 1	Awareness, Reflection, Sense-making, Impact	Awareness, Relection, Sense-making, Impact	Awareness, Sense-making, Impact	Condition: if combined with student feedback
	Participant 2	Awareness, Reflection, Sense-making	-	Awareness, Sense-making, Impact	-
	Participant 3	Awareness, Reflection, Sense-making	Awareness, Relection, Sense-making, Impact	Condition: if used for additional course items, not core items	Awareness, Reflection, Sense-making, Impact
	Participant 4	Awareness, Reflection	Awareness, Relection, Sense-making, Impact	-	Condition: if used for additional course items, not core items
	Participant 5	Awareness, Sense-making	-	Awareness, Impact	Awareness, Impact
	Participant 6	Awareness, Reflection, Sense-making	Awareness, Relection, Sense-making, Impact	Condition: if a mapping with the final exam results is added	-
Students	Participant 1	Awareness, Reflection, Sense-making, Impact	Condition: if more granular forum structure is added		Condition: if more granular activity is added
	Participant 2	Awareness, Reflection, Sense-making	Reflection, Sense-making, Impact		-
	Participant 3	-	-		Condition: if exam grades are added
	Participant 4	-	Awareness, Reflection, Sense-making, Impact		Condition: if more granular activity is added
	Participant 5	-	-		Condition: if more granular activity is added
	Participant 6	Awareness, Sense-making	-		-
Discussion fora	Participant 1	Awareness, Impact	-	Awareness, Impact	Condition: forum should be structured based on course chapters
	Participant 2	-	-	Awareness, Reflection, Sense-making, Impact	-
	Participant 3	Awareness, Impact	Awareness, Reflection, Sense-making, Impact	-	Awareness, Reflection, Sense-making, Impact
	Participant 4	-	-	Awareness, Reflection, Sense-making, Impact	Condition: forum should be structured based on course chapters
	Participant 5	-	-	-	-
	Participant 6	Awareness	Awareness, Impact	-	Awareness, Reflection, Sense-making, Impact

Table 3: Responses analysis - general questions

Participant #	**Usability**	**Risks**	**Design**	**Intention to use/Frequency**	**Recommendations**	**LA usage**	**Other analytics**	**Other reasons for using LAD**
1	Yes	Not only the LAD should be taken into account while changing ID	Practical but some time needed to learn to work with it	Yes, occasionally	More granular view on course document usage on the Students page - adding course chapters; Adding a group as a filter	Rarely	Student evaluation surveys - often	Individual student inspection and intervention
2	Yes	Risk of making an opinion about a student solely based on online data	Easy to use with some prior explanation needed	-	-	No	Official and extra student evaluation surveys	Using the Students page for interventions
3	Yes if training is provided	-	Understandable but prior explanations are needed	Yes, once a semester, but more often for a discussion fora	Adding student cohorts based on grades; Adding comparison with other courses	Rarely	Discussion fora analytics	Activating students
4	Yes	Using the LAD as a KPI for a teacher	Not too complex and well-structured	Often usage	Adding activity of the exercises that are not graded; Tracking not only course material access but the time spent on it; making an LAD version for students	Rarely	Regular usage of student questionnaires and analysis of final results	Using the LAD in communication with students, their activation and providing feedback
5	Yes	More work	Design is OK except the Discussion fora page	Once a month	Adding per chapter performance in the Students page	Rarely	Student feedback, course evaluation	Student motivation and communication, student activation, feedback provision
6	Yes if a thorough analysis from teacher's side is performed	Data interpretation issues and abrupt changes made based on the data only	Easy to use, especially compared with analytics in the current LMS	At first very often to understand it better and then lowering the frequency of use	Including the final grades in the Documents page, also a detailed exam grade vs. chapter distribution	No	Official feedback and additional feedback from students on course organization	Student communication

Table 4: Participants information. All the participants come from Belgium.

#Participant	Teaching experience, years	Seniority
1	5	Teaching assistant
2	10	Professor
3	21	Senior lecturer
4	11	Professor
5	30	Full professor
6	19	Associate professor