**Appendix. Survey Instrument.**

***Introduction***

Dear participant,

Thank you for taking the time to complete our survey! You are invited to participate in this survey that aims at understanding the privacy concerns of students and their cultural values that may influence such concerns in relation to Learning Analytics (LA). LA refers to the measurement, collection, analysis and reporting of (digital) data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs.

Although collecting, analysing and reporting learning data back to the learners and teachers can improve learning and teaching, there are also potential risks to students’ privacy when it comes to the handling of their personal information. One such risk is that companies or institutions might use the students’ personal information for other purposes than the ones originally communicated to the students when collecting the data, violating students’ right to privacy. Therefore, access and use of student information raise privacy concerns that need to be addressed if learning analytics systems are to be implemented in higher education.

*Personal information* refers to any information that can be used to identify an individual. Examples of personal information include the name, the home address, the identification card number, the location data, the IP address, etc. In the case of (online) learning, students would not disclose directly identifiable information. But, through interaction with the instructors and Learning Management Systems (e.g., Canvas or Moodle) they can provide pieces of information that can lead others to identifiable information.

*Information privacy concerns* refer to individuals’ concerns about the possible loss of privacy as a result of information disclosure to an external agent/institution. They reflect an individual’s perception of their concerns and worries for how their personal information is handled by a specific institution.

Earlier research has shown that cultural values may influence how individuals perceive information privacy in different contexts. Therefore, in this study, we also aim to understand whether students’ cultural values may affect their information privacy concerns in relation to learning analytics and how universities handle students’ personal information.

**Who are we?**

We are an international group of researchers interested in privacy issues and cultural differences in the adoption of learning analytics around the world. This research is carried out in cooperation with KTH Royal Institute of Technology (Sweden), German Institute for Educational Research (DIPF), the Ruhr-University Bochum as well as the Goethe University Frankfurt (Germany), Universidad Politécnica de Madrid (Spain), Cornell University (the US), and the Korea Advanced Institute of Science and Technology (KAIST).

**Your rights as a participant**

Participation in this questionnaire is voluntary. You have the right to cancel your participation at any time and to delete your contributions without any consequences in any form. You have the possibility to obtain information about the personal data stored by us at any time. You can at any time request that this data be corrected and deleted. You have the right at any time to demand a restriction on the processing of your data, to object to its further processing or to assert your right to data transferability. If you refuse to participate or revoke or restrict your consent, you will not face any consequences.

**How is your data collected?**

We are using different platforms in different countries to collect answers to this survey. For the subsequent evaluation of the data, all data that could lead to an identification of your person will be removed after the data collection has been completed. All collected data will be deleted after completion of the study, but at the latest after a five-year retention period. The data collected will be accessible only to researchers associated with this research project. Your answers will be evaluated anonymously and confidentially by the research team. We do not anticipate any risks from participating in this research.

The survey consists of a few demographic questions and a series of short questions and statements that you are asked to rate according to the **5-Likert scale:**

1 - strongly disagree, 2 - disagree, 3- neither agree nor disagree, 4- agree, 5 strongly agree

**Your consent**

I am asked to participate in a questionnaire about my information privacy concerns and cultural values in learning analytics. I had the opportunity to ask questions. All my questions have been answered to my satisfaction. By continuing, I confirm that I have read and understood the information above. By selecting “yes”, I give my consent and am willing to participate in this research study, free from coercion and undue influence, subject to my specific approvals as stated above.

**Part 1**

1. I have understood the information provided and am participating in the study voluntarily. My information may be used for scientific purposes

1=agree

2=disagree

2. Gender

1=female

2=male

3=other

4=do not want to answer

3. Age (in years)

1= 18-24 years old

2= 25-34 years old

3= 35-44 years old

4= 45-54 years old

5= 55+ years old

4. What type of study program are you enrolled in?

1= Independent Course

2= Bachelor’s degree program

3= Master’s degree program

4= other, please specify

5. What is your field of study?

* Humanities, Arts, Social Sciences: Anthropology, Archaeology, Economics, Education, Geography, History, Law, Linguistics, Politics, Psychology and Sociology.
* STEM: Natural Science, Technology, Engineering, Mathematics
* Medical Studies: Medical, Pharmacy, Dentistry
* Other (input)

6. Current country of residence (input)

7. Nationality (input)

**Part 2**

***Perceived privacy control***

8. I believe I have control over who can get access to my personal information, collected by my university.

9. I think I have control over *what* personal information is shared with others (e.g., third parties) by my university.

10. I believe I have control over *how* my personal information is used by my university.

11. I believe I can control my personal information that I provide to my university.

***Privacy concerns***

12. I am concerned that the information I provide to my university could be misused.

13. I am concerned that others (e.g., a person or entity who is different from oneself) can find private information about me in learning management systems.

14. I am concerned about providing personal information into learning management systems because of what others might do with it.

15. I am concerned about providing personal information when interacting with learning management systems, because it could be used in a way I did not foresee.

***Perceived privacy risk***

16. In general, it would be risky to give personal information to the learning management system used by my university.

17. There would be high potential for privacy loss associated with giving personal information to the learning management system used by my university.

18. Personal information could be inappropriately used by my university.

19. Providing my personal information to the learning management system used by my university would involve many unexpected problems.

***Trusting beliefs***

20. I trust that my university tells the truth and fulfils promises related to my personal information.

21. I trust that my university keeps my best interests in mind when dealing with personal information.

22. I trust that my university is in general predictable and consistent regarding the usage of student personal information.

23. I trust that my university is always honest with me (student) when it comes to using the information that I would provide.

***Non-self-disclosure behavior***

24. I refuse to use the learning management system because I disagree with the way my university uses personal information.

25. I take action to have my name removed from the direct mail list for the learning management system used by my university.

26. I do not want to use the learning management system employed by my university because I do not want to provide certain kind of personal information.

27. I refuse to give personal information to my university.

**Part 3**

***Power distance***

27.People in higher positions should make most decisions without consulting people in lower positions.

28. People in higher positions should not ask the opinions of people in lower positions too frequently.

29. People in higher positions should avoid social interactions with people in lower positions.

30. People in lower positions should not disagree with decisions by people in higher positions.

31. People in higher positions should not delegate important tasks to people in lower positions.

***Individualism (vs collectivism)***

32. Individuals should sacrifice self-interest for the group.

33. Individuals should stick with the group even through difficulties.

34. Group welfare is more important than individuals’ rewards.

35. Group success is more important than individual success.

36. Individuals should only pursue their goals after considering the welfare of the group.

37. Group loyalty should be encouraged even if individual goals suffer.

***Masculinity (vs femininity)***

38. It is more important for men to have a professional career than it is for women.

39. Men usually solve problems with logical analysis; women usually solve problems with intuition.

40. Solving difficult problems usually requires an active, forcible approach, which is typical for men.

41. There are some jobs that a man can always do better than a woman.

***Uncertainty avoidance***

42. It is important to have instructions spelled out in detail so that I always know what I am expected to do.

43. It is important to closely follow instructions and procedures.

44. Rules and regulations are important because they inform me of what is expected of me.

45. Standardized work procedures are helpful.

46. Instructions for operations are important.

47. If you have anything to add, please do it here.