

Participant Information Sheet

1. Title of Research Project and Researcher(s)

**Please do not change the numbering or headings. Text that is in black font should be kept as it is; text that is in blue font contains instructions and requires wording that is specific to your research project. Delete this note (and all text highlighted in yellow) after reading.*

Exploratory Factor Analysis of Information and Communication Technology Attitudes, Collaborative Learning, and Role Choice in Classroom Tasks as Predictors of Academic Achievement

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2. Version Number and Date

Version: 2.0

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3. Invitation Paragraph

You are being invited to participate in a research study. Before you decide whether to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and feel free to ask us if you would like more information or if there is anything that you do not understand. Please also feel free to discuss this with your friends, relatives, and doctor, if you wish. We would like to stress that you do not have to accept this invitation and should only agree to take part if you want to.

Thank you for reading this.

4. What is the purpose of the study?

This study aims to explore collaborative learning engagement, student's role in group work, and academic achievement based on faculty's and students' perspectives in a module of electronic engineering. Specifically, the study investigates collaborative learning engagement in large-size classes throughout an 8-week Arduino-based experimental skills course and their impact on learning outcomes.

The findings from this study may help improve educational strategies in engineering and technology courses by identifying key factors that contribute to student success.

5. Why have I been chosen to take part?



You have been invited to participate because you are an electronic engineering student enrolled in a university course that includes an Arduino-based experimental skills module. The study aims to involve approximately 200 students from different levels within the program to ensure a representative sample.

6. Do I have to take part?

Participation is voluntary and participants are free to withdraw at any time without explanation and without incurring a disadvantage.

7. What will happen if I take part?

If you agree to participate, you will be asked to complete a short survey (approximately 10-15 minutes each) at. After that, you will have an interview with researchers if you show your willingness on interview (approximately 30-45 minutes each).

8. How will my data be used?

The University processes personal data as part of its research and teaching activities in accordance with the lawful basis of public task, and following the University's purpose of advancing education, learning and research for the public benefit.

Under the 'Data Security Law of the People's Republic of China' (中华人民共和国数据安全法) and the 'Personal Information Protection Law of the People's Republic of China' (中华人民共和国个人信息保护法), the University acts as the Data Controller for personal data collected as part of the University's research. The Dr. Myeongsu Seong acts as the Data Processor for this study, and any queries relating to the handling of your personal data can be sent to Myeongsu.Seong@xjtlu.edu.cn.

Further information on how your data will be used can be found in the table below:

How will my data be collected?	Your data will be collected through three online surveys at different points in the semester (T1, T2, and T3). Additionally, academic performance data (such as final grades and project scores) will be obtained from course records with your consent.
How will my data be stored?	All collected data will be stored in a secure, encrypted database hosted by XJTLU. Only authorized members of the research team will have access to this data.
How long will my data be stored for?	Your data will be stored for five years after the completion of the study, in accordance with institutional research policies. After this period, it will be securely deleted.
What measures are in place to protect the security and confidentiality of my data?	Data will be stored in an encrypted and password-protected system, with access limited to authorized research personnel. Any printed materials will be stored in a locked cabinet in a secure location.
Will my data be anonymised?	Yes, your data will be anonymized. Your personal identifiers (such as name or student ID) will be removed and replaced with a unique code before analysis to ensure confidentiality.
How will my data be used?	Your anonymized data will be used for academic research purposes to investigate the relationship between ICT attitudes, self-regulation, and academic achievement in electronic engineering students. The findings may be published in academic journals and presented at conferences.

Who will have access to my data?	Only the principal investigator and the authorized research team members will have access to the raw data. Supervisors and reviewers may access anonymized data for research validation purposes.
Will my data be archived for use in other research projects in the future?	No, your data will only be used for this specific study. It will not be shared or archived for future research projects without obtaining additional consent.
How will my data be destroyed?	After the five-year retention period, digital data will be permanently deleted from all storage systems, and any printed materials will be shredded in accordance with institutional data disposal policies.

Transferring data outside China

Personal data will not be transferred outside China.

9. Expenses and / or payments

There are no direct financial incentives for participating in this study. We offer cups of drink as incentives for people who participate.

10. Are there any risks in taking part?

If you should experience any discomfort or disadvantage as part of the research, please make it known to the researcher(s) immediately.

11. Are there any benefits in taking part?

While there are no direct financial benefits, participation in this study may provide:

A better understanding of your own learning behaviors and ICT skills.

Insights that may improve your study techniques and engagement with engineering coursework.

Contributions to educational research that may help improve future engineering education programs.

12. What will happen to the results of the study?

The results will be used for academic research purposes and may be published in peer-reviewed journals and presented at conferences. All findings will be reported in an anonymized manner, ensuring that no individual participants can be identified.

If you are interested in receiving a summary of the study's findings, please inform the research team, and we will provide an overview upon study completion.

13. What will happen if I want to stop taking part?

You can withdraw at any time, without explanation. However, as the data is anonymous at the point of collection, it will not be possible to remove your data after it has been collected.

14. What if I am unhappy or if there is a problem?

If you are unhappy, or if there is a problem, please feel free to let us know by contacting Dr. Myeongsu Seong and we will try to help. If you remain unhappy or have a complaint which you feel you cannot come to us with then you should contact the Chair of the University Research Ethics Review Panel at ethics@xjtlu.edu.cn. When contacting the University Research Ethics Review Panel administrators, please provide details of the name or



description of the study (so that it can be identified), the researcher(s) involved, and the details of the complaint you wish to make.

15. Who can I contact if I have further questions?

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16. Thanks

We sincerely appreciate your time and willingness to participate in this research study. Your contribution is invaluable in helping us improve educational practices in electronic engineering and ICT-related learning.

