

PRINCIPAL INFORMATION LETTER

Project Title: KidVision: Using Wearable Cameras to Understand Children’s Interactions with the World

Application Number: 2020-142H

Principal Investigator: Professor Chris Lonsdale

Dear Principal,

Teachers and students (and their parents) from your school are invited to take part in a study. This study is designed to understand how primary school students interact with the world.

What is the study about?

How do primary school students spend their time?
How do students interact with the world and with each other?

Student’s lives have changed greatly in the past few decades. For example, students have many more technological options for learning and recreation than previous generations. They may also be less likely to engage in unstructured free play at home or use active modes of transport, such as walking or biking, on the way to and from school. The impact of these changes on student’s learning and development is largely unknown because most previous research has relied on self-reported or parent-reported data about how students spend their time.

Our study will be among the first in the world to collect data using objective measures (wearable cameras) to understand how students interact with the world and how they use technology. By being a part of this study, parents, teachers, and students have an opportunity to learn more about how students spend their time and advance our understanding about student’s learning and development.

Who is undertaking the study?

This study is being led by Australian Catholic University (ACU), and other world-leading researchers. The Investigators are:

Investigator	Experience Relevant to Project
Professor Chris Lonsdale	Prof Lonsdale is a health scientist with 20 years of research experience. His research examines the motivational underpinnings of behaviour in a variety of contexts, including education, healthcare, and physical activity.
Dr Taren Sanders	Dr Sanders is a health scientist with eight years research experience. He has expertise in behaviour measurement for young people, and in the management of large datasets.
Professor Phil Parker	Prof Parker is a psychologist with over 15 years of research experience. He uses large longitudinal databases from countries such as Australia, US, UK, Germany, and Finland where he focuses on career pathways, educational attainment.
Dr Borja del Pozo-Cruz	Dr Pozo-Cruz has 10 years of research experience. His research explores the assessment of physical activity and sedentary behaviour patterns using objective

	techniques.
Dr Michael Noetel	Dr Noetel is a psychologist who has been teaching for over 10 years. He has contributed to a large number of funded projects aimed at engaging students in education.

Other investigators are: Ms Christine Innes-Hughes from NSW Health, Professor Stuart Biddle from University of Southern Queensland, Professor Katariina Salmela-Aro from the University of Helsinki (Finland), Professor Louise Signal and Professor Rachel Taylor from the University of Otago (New Zealand), and Dr Aiden Doherty from Oxford University (United Kingdom).

Who can participate in the study?

Students in Years 2-4 (in 2023). Teachers and parents of these students are also invited to participate.

What are we asking participants to do?

We will collect data from teachers, parents, and students at three time points:

1. at the start of the study in 2023
2. then at the same time of the year in 2024
3. finally, the same time of the year in 2025

Teachers

Years 2, 3, and 4 teachers of classes invited to participate will complete a questionnaire at three timepoints: baseline in 2023, then the same time in each year during 2024 and 2025. The questionnaire will be brief (1 to 3 minutes per student) and will ask about each student in their class who participates in our study. Based on similar research, we expect that approximately 10 students from a class of 25 will volunteer, meaning that the teacher will need to spend about 20 minutes completing the questionnaire.

As the study will be conducted across three years, the students who are involved will change teachers. Therefore, if teachers have students who were selected to participate in 2023, we will ask those teachers to complete a questionnaire in the future. At the end of the study, we will invite a small sub sample of teachers to take part in an interview that would take up to 30 minutes.

Parent(s)/Carer(s)

We will ask parents of students in Years 2, 3, and 4 to participate at three time points: baseline in 2023, then the same time in each year during 2024 and 2025. We will ask the student’s primary caregiver (i.e., the person who spends the most time with the student at home) to complete a 15 to 20-minute questionnaire at the start of the study. The parent or carer can opt to complete the survey online or via a phone interview. These questionnaires will be repeated again in 2024 and 2025. At the end of the study, we will invite a small sub-sample of parents to participate in an interview that would take upto 30 minutes.

Student Measures

We are inviting students who are in Years 2, 3, and 4 in 2023 to participate at three time points: baseline in 2023, then the same time in each year (2024 and 2025). In each school, we will select two to three classes of students per school from Years 2, 3, and 4 in 2023 to complete the measures below [1-4]. At the end of the study we will also invite a small sub-sample to participate in an interview that would take up to 30 minutes.

1. Questionnaire:

Students will be asked to complete a 20-minute questionnaire on a tablet at the start of the study (2023), and again 12 and 24 months later. At the end of the questionnaire there will be two tasks presented as games for students to



complete on the tablet. The tasks are from a cognitive battery that will measure students' executive functioning. The questionnaire will be completed in a classroom environment under the supervision of trained research assistants with current Working With Children Checks.

2. NAPLAN and Student Enrolment Dataset

At the end of the study, students' data will be linked to their NAPLAN data, and demographic information linked to the Student Enrolment Dataset. This will include demographic variables about the parent/guardian and child (e.g., ethnicity, language spoken, sex, occupation, education level, etc.) and NAPLAN scores before and during the study period. This will be provided by the NSW Educational Standards Authority (NESA) or the Queensland Curriculum & Assessment Authority (QCAA).

3. Activity and Sleep Monitor

We will ask students to wear a 'GENEActiv' physical activity and sleep monitor for eight days during 2023, and again 12 and 24 months later. This is a watch-like device which measures the student's movement. This device will tell us how much time the student spends sitting, being active, or sleeping. The device is "always on" but the student or parent/carer may remove it at any time. If the student needs to remove the device, we ask that they put it back on at the next possible moment. We would like the student to wear the monitor all day for 8 days, including when they go to bed at night. The monitors are waterproof, so the student can wear it in the shower or swimming pool. The device does not have GPS and cannot track the student's location.



4. Wearable Camera

We will ask students to wear a small, lightweight camera (pictured to the right) on four separate days, including three weekdays and one weekend day during 2023, and again 12 and 24 months later. The purpose of the camera is to record what the students can see throughout the day. The camera takes pictures every 10-20 seconds (no video or audio). Students will be asked to wear the camera during all waking hours that they are not at school.

- Students will **not** wear the camera on school grounds.
- If the student feels uncomfortable, or is in a place where photography is inappropriate or prohibited (e.g., bathroom, swimming pool) we will ask students to turn their camera off or remove the camera. A trained research assistant will demonstrate to all students how they can turn off their device and how to remove the camera. To ensure students understand, the research assistant will ask participating students to demonstrate how they can disable their device and answer any questions.



To further ensure privacy of all students and other third parties, we will:

- Use '**imaging blurring**' technology to blur faces captured by the camera **before** the images are viewed by any person. A computer program will automatically blur the faces on all images captured. The image to the right provides an example of what the blurred images look like. The original images will be permanently deleted before the research team leaves the school grounds.
- The student and their parent/carer will have an opportunity to review the images that have been blurred and **permanently delete any image for any reason**. The research team will provide at least two dates for students and their parents to book in to view their child's data in the period immediately after school. Students and parents will be able to review and permanently delete any images they do not want the research team to view. Students



and parents who cannot attend on any of the scheduled dates can arrange for a specific date and time that suits them. To maintain privacy of third parties, you will not be able to receive a copy of the images. Please see “**I am concerned about privacy - how will privacy and confidentiality be protected?**” below for further information.

- We request that you provide a private space at the school that could be used for the purposes of parents and students reviewing images.

Note: We will not hold any student, parent, or school responsible if an activity/sleep monitor or wearable camera is damaged or lost. But, we do hope to get these devices back as they have been customised for this study and are important for our research.

How much time will this study take?

Principals

The only involvement would be if the principal has any questions about the research.

Teachers

Depending on student response rate, teachers will require approximately 20 minutes to complete the questionnaire (1 to 3 minutes per student) at the start of the study in 2023. The amount of time required to complete the questionnaire at 12 and 24 months will depend on the number of participating students in the teacher’s class.

We will also request one teacher per school to work with ACU’s project officer to coordinate data collection visits. We expect this coordination will take 90 minutes in the first year and 60 minutes per year after that (210 minutes over the project).

Parent(s)/Carer(s)

Parents will require approximately 15-20 minutes to complete the questionnaire at each of the three time points (2023, 2024 and 2025). In total, parents will need 45-60 minutes total to complete the questionnaires across the entire project. If parents choose to review their child’s images this would take an extra 10-15 minutes at each time point.

Students

Years 2, 3 and 4 students will require 20 minutes to complete the measures at each time point (i.e., in 2023, 2024 and 2025) and this will take place during school time. Students will complete a 5-minute question and answer session with a research assistant at the first time point. This session will show students how to operate their wearable camera (e.g., turn the camera off and on) and allow students to ask any questions they may have. In total, students will need 60 minutes to complete the questionnaires across the entire project. In addition to the time required to complete the measures, students will wear the activity/sleep monitor for eight days and the camera for four days at each time point. A small sub-sample of students will be invited to participate in an interview which will take approximately 30 minutes.

How will you get consent from principals, teachers, parents, and students?

All students, parents, and teachers participating in the study will provide “active consent” (opt-in) to participate in the study. The Years 2, 3, and 4 students, parents, and teachers who are invited to participate will be asked to return the consent form.

How will we distribute consent?

We will distribute to each student (via their teacher) a hard copy of the information letter and consent form. We will make available to each teacher hard copies of documents in all languages the school principal indicates are appropriate for the school. Consent forms can be returned to the teacher or directly to the research team.

We will also host a dedicated website that will allow parents to visit and opt-in. All documents will clearly indicate the URL for this website. We will host a question and answer session for parents on the school grounds.

Are there any risks for participants?

The questionnaires and devices are commonly used in research. They are safe for students. The camera may make the student feel uncomfortable or cause people to act differently around the student. The Student may also feel discomfort knowing their actions are being recorded. Other individuals who are not wearing the camera might feel uncomfortable knowing that they could be captured in images (i.e., walking in the background). To minimise these risks, we will strictly adhere to an existing ethical framework for the use of the wearable cameras in behavioural research (Kelly et al., American Journal of Preventive Medicine, 2013). The framework was developed by a team at Oxford University which included Dr Aiden Doherty, who is one of the researchers in this study.

Students will be given clear instructions for wearing the camera, including instructions to take the camera off if they are asked (e.g., by a shopkeeper, teacher, or student), or if they feel uncomfortable. All students will be provided with a recital card to show to anyone who may ask questions about the camera. This recital card will state:

"I am part of a research study that is looking at my environments. I am wearing a camera that takes a picture every 10-20 seconds. But the camera is not trying to take pictures of individual people".

The recital card will state the images will not be released to the public and that it will only be accessed by members of the research team after faces have been blurred. We will also include the research team's contact information and encourage any questions to be asked directly to the research team. The research assistant will be available to answer questions from any student, parent, or staff member.

Researchers are obliged to comply with lawful orders (e.g., subpoena or search warrant) and provide data (images) when required. In the event the research team views data that suggests a serious crime has taken place, researchers are required to report this to the University's ethics committee and to the appropriate Government Department (e.g., NSW/QLD Police or Department of Education). If data reveals a student has been harmed, or is at risk of being harmed, the researchers are required to immediately report this to the school Principal.

What are the benefits of the study?

The findings of this study will help us better understand how students spend their time and engage with the world, especially as it relates to the use of technology. The information gathered in this study will help us to identify the aspects of a student's life that lead to better learning and development.

For schools who choose to participate, we will offer free access to an award-winning evidence-based online teacher professional learning course for all teachers at participating schools (an average value of \$130/teacher). The course is called iPLAY and it was developed by ACU, the University of Newcastle, and the NSW Department of Education to help teachers promote student physical activity and health. The program has been implemented by more than 3,000 teachers in over 190 schools and has been shown to increase students' cardiorespiratory fitness and enhance their self-reported wellbeing. Teachers can complete as much or as little of the program as they like and can claim up to 13 hours of professional learning by completing the entire course. Teachers will have access to the course for the duration of their school's participation in the study (about two years). For more information about iPLAY, you can visit the program website at iplay.org.au.

We will provide each school with a summary report of the project's findings. This report will not provide any data that will be identifiable at the individual or school level. Parents can opt to receive a summary report of our findings at the end of the study. Parents will be invited to discuss this report with their student. This report will provide an overview of study findings, written in nontechnical language. We will also provide the NSW/QLD Department of Education with a report that includes suggestions for policy development and teacher professional learning, if appropriate.

Can participants withdraw from the study?

Participation in the study is entirely voluntary. If you agree to participate, you can choose to withdraw from the study and stop participating at any time. A decision not to participate, or to end involvement with the study, will not jeopardise your relationship with the Australian Catholic University. If you choose to withdraw prior to the end of the study, we will ask for consent to keep the data previously collected. Without your consent to retain the data, we will remove it completely. At the conclusion of the study, all identifiable data will be destroyed, meaning we cannot delete participant data after study conclusion.

I am concerned about privacy - how will privacy and confidentiality be protected?

The researchers will follow strict protocols to ensure any personal information remains confidential. Once the data has been collected, de-identified using a coding system, and entered into an electronic database, any questionnaires or other data collection sheets will be destroyed. Images collected by the wearable cameras will be treated with the strictest confidentiality. As discussed above in the “wearable camera” section (item 4), we will use imaging blurring technology to blur faces captured before any image is viewed by a person. This includes students participating in the study and all other third parties. Parents/carers of participating students will be able to request to review their child’s images to permanently delete any image for any reason. To maintain privacy of third parties, no parents or school staff will be able to receive a copy of the images. The wearable camera will be locked in such a way that only the researchers will be able to access the camera. This will prevent any unauthorised access in the event a camera is lost or misplaced.

The number of researchers who can access the camera images will be limited to those analysing the data. The electronic files will be retained for at least 10 years, but we will not publish data that would allow any individual (study student or otherwise) to be identified. Any publications or presentations related to these data will provide only summary data, meaning that no individual or their data can be identified. Researchers outside of our team will be able to apply to access coded data or request that we code specific behaviours or environments, but they will not be able to view any images.

Who is funding this study and has this been approved?

The study is funded by the Australian Research Council. This has been approved by the Australian Catholic University Human Research Ethics Committee (reference: 2020-142H) and Brisbane Catholic Education.

Who do I contact if I have questions about the study?

Thank you for considering this invitation. If you would like further information, the below contacts have been provided. Please contact the Project Officer via email: KidVision@acu.edu.au or phone: **(02)9701 4629**.

Project Officer

Kirsty Bergan

Australian Catholic University

Investigator

Dr Taren Sanders

Australian Catholic University

Lead Investigator

Prof Chris Lonsdale

Australian Catholic University

What if I have a complaint or any concerns?

If you have any complaints or reservations about the ethical conduct of this research, or questions about your rights as a research participant, you may contact the ACU Ethics Committee on (02) 9739 2519 or email resethics.manager@acu.edu.au and quote the approval number 2020-142H. Any issue you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.

What do I need to do?

Thank you for your consideration of our study. If you are willing to participate please complete the form online here or complete the attached form and return this to the research team via email KidVision@acu.edu.au.

Yours sincerely,



Professor Chris Lonsdale

Institute for Positive Psychology and Education
Faculty of Health Sciences
Australian Catholic University
Phone: (02) 9701 4642
E: Chris.Lonsdale@acu.edu.au



PRINCIPAL ACTIVE CONSENT FORM

Project Title: KidVision: Using Wearable Cameras to Understand Children’s Interactions with the World

Application Number: 2020-142H

Principal Investigators: Professor Chris Lonsdale

I acknowledge that:

1. I have read the information sheet and been given the opportunity to discuss the information and my involvement in the study with the researchers via email or telephone.
2. The procedures required for the study and the time involved have been explained to me, and any questions I have about the study have been answered to my satisfaction.
3. I understand that involvement is confidential, and that information gained during the study may be published, but no participant information will be used in any way that reveals their identity. If a serious crime takes place, the researchers will be required to report this to the University and appropriate Government department. If the crime involves harm or risk of harm to a student, the researchers will report this to the school Principal.
4. I understand that participants can withdraw from the study at any time with no consequences. If participants withdraw prior to the conclusion of the study, participants can choose if their data is kept or removed.
5. I understand that at the conclusion of the study, the researchers will no longer be able to remove participant data.

I consent to being involved in the following activities:

(Cross out any activity that you do not provide consent/assent)

- teachers being invited to participate in the research.
- teachers completing a short questionnaire at three time points.
- the NSW (NESA) or QLD (QCAA) Department of Education providing the research team with access to:
 - the Student Enrolment Dataset for demographic variables.
 - access to academic achievement data (e.g., NAPLAN scores) before and during the study period.
- a small sample of teachers being invited to a brief interview at the end of the study
- students and parents (or carers) being invited to participate in the research.
- students completing the below measures at the three time points:
 - A short questionnaire (20 min)
 - Wearing an activity and sleep monitor for 8 days
 - Wearing a camera for 4 days outside school grounds.

School Name: _____

Principal First Name: _____

Principal Surname: _____



Signature: _____ Date: _____

Principal Phone Number: _____ Principal Email: _____

The teacher I would like to have coordinate with ACU's project officer is:	
Teacher First Name: _____	Teacher Surname: _____
Teacher Number: _____	Teacher Email: _____

ACU will provide Information materials to your school in English and other languages, if required. Please list the other prominent languages at your school.		

Please return this form to: KidVision@acu.edu.au