

Dr Nick Riley

School of Education

Faculty of Education and Arts

University of Newcastle

Callaghan NSW 2308

Phone: + 61 (02) 4985 4254

Email: nicholas.riley@newcastle.edu.au

**Research Project: Kick-Smart**

Document Version 2 (2/5/2019)

**PARENT INFORMATION STATEMENT**

Dear Parent,

Your child is invited to participate in the research project above which is being conducted by *Mr Louis Burt (Doctoral Researcher)* under the supervision of *Dr Narelle Eather, Dr Nicholas Riley* and *Dr Robert Parkes* from the University of Newcastle. As a PhD candidate, Mr Burt will be supervised and supported by Dr Eather, Dr Parkes, and Dr Riley throughout the project.

**Why is this research being done?**

Previous studies have demonstrated the potential of mixing physical activity into mathematics lessons to increase students’ activity levels and improve students’ on-task behaviour, without sacrificing academic performance. Other studies have shown that martial arts programs have had positive effects on children’s aggression levels, self-esteem and social behaviour.

Kick-Smart has the potential to change school policy and practice in relation to physical activity and martial arts integration, increase students’ school-time physical activity levels and enhance a range of educational outcomes. Additionally there is a growing body of literature linking physical activity with improvements in brain function and understanding. As such, the Kick-Smart study will examine the impact of the program on key measures of executive functioning: attention span, and memory. Additionally, the study will examine the impact of the program on students’ competence with basic adding, subtracting, multiplying and dividing, as well as on their physical fitness.

**Who can participate in this research?**

All children in a selected Stage 3 class will participate in the program as the “test class”, while children in another Stage 3 class will act as a control group. Only children who return the parental consent form will have their results used in the data collection aspects of this research. The program will combine Mathematics and PDHPE with martial arts and will be delivered in PE and School Sport time. The control class will continue with their usual PE and Sport lessons while the test class is at the Kick-Smart sessions. The program will run for six weeks starting week 2 of Term 3, 2019. Data to test the potential effectiveness of the intervention (for example, One Minute Basic Fact test) will be collected from students in both the intervention (test class) and control class during Term 3, 2019. The control class will receive a condensed delivery of the intervention in weeks 8-11. Classes will be randomised after base-line data collection in Week 1 of Term 3. Both your child’s class and the other class from your school have equal chance of being selected for either the test or the control group.

All students in the class will participate in the program, however, only the students who provide signed consent letters will contribute to the study data. If you are interested in participating, you must complete and sign the consent form and return it to your child’s school teacher or Principal.

**What choice do participants have?**

Participation in this research is entirely your choice and only schools where both the principals and teachers have agreed to participate will be included in this study.
If you do agree for your child to participate, you may withdraw from the study at any time without giving a reason. A decision not to participate or decision to withdraw from the study will not jeopardise your relationship with your child’s school, or the University of Newcastle. Similarly, students will be included in the study only after a consent form has been signed by you, the parent/guardian.

**What is involved in this study?**

During the program, students (in the test class) will engage in two, 1-hour session each week, which will include activities and techniques from a range of martial arts including Karate, Boxing, Taekwon-Do and Pankration/MMA. This will include learning basic punches and kicks and practicing them on pads, as well as basic self-defence techniques. The students will **not** be striking each other at any point, however in some classes, controlled physical contact will be necessary. For example:

* Students will learn how to escape simple grabs such as a wrist grab. This will require students to practice this with a partner by holding their partner’s wrist and the other to apply the escape technique.

The martial arts program will also include discussions and activities that aim to develop a better understanding of various character/ethic topics such as courage, self-control and teamwork.

Additionally, the content from this project meets many Stage 3 requirements for the NSW Mathematics and the NSW PDHPE syllabi. ​Mr Burt, and members of the research team, qualified to administer the assessments, will be involved in the delivery of all assessments and the observations of students. Follow up data will be collected in week 8 of Term 3.

Children will complete a range of assessments at baseline (Week 1, Term 3) and follow up (Week 8, Term 3).

**What are the potential risks?**

There are no risks associated with this project that are not found in a typical physical education lesson. Standard teaching practices will be followed during each lesson, including all safety precautions that would be taken into account in a normal physical education setting.

**Who will be teaching the content?**

The program will be taught by *Mr Louis Burt*, who is a qualified, practicing Primary School Teacher. Mr Burt is also an accredited martial arts instructor in affiliation with the Martial Arts Industry of Australia (MAIA) [ID No: 2114993]

**What are the main Outcomes?**

The main outcomes for this study will be **children’s social and emotional well-being,** and **children’s on-task behaviour** during lessons following the program. Base-line and follow-up data collection will take place during regular class time, with students being taken out in small groups to complete assessments. It is anticipated to take between 60-90 minutes per class,

**On-task behaviour** within lessons following the program will be assessed using a momentary time sampling procedure. This tool has been adapted from the Behaviour Observation of Students in Schools and the Applied Behaviour Analysis for Teachers. On-Task behaviour will be reported as a percentage of lesson time. Members of the research team will conduct the observations of pupils for 30 min in total (6 children).

**Cognition:** Student’s cognition will be assessed using the following two measures.

The NIH Toolbox Flanker Inhibitory Control and Attention Test: This measures both attention and inhibitory control using an IPad. Students are required to focus on a specific stimulus whilst ignoring the stimuli around it. To achieve this, students are presented with a row of arrows pointing different directions. Students are then required to choose one of two buttons on the screen that matches to the direction in which the middle arrow is pointing. Students are presented with four practices questions before they begin the examination.

The NIH Toolbox Dimensional Change Sort Test: This measures attention and cognitive flexibility. Students are presented with two dimensions (either shape or colour) and are required to answer a series of “Choose either *A* or *B”* style questions according to one of the two dimensions (the dimensions change throughout the test). Students are given three practice questions before they begin the examination.

**Academic performance:** Children’s academic performance in Mathematics will be measured using the One Minute Basic Fact test.

**Physical activity across the whole week**: Students will wear accelerometers (to monitor their level of movement) across the whole week (Monday to Friday). Information from the accelerometer will be analysed using software which provides an accurate analysis of lesson-time and school-time physical activity and sedentary (inactive) behaviour. Accelerometers will only be worn throughout the school day, and will not be taken home.

**Physical fitness:** Students will participate in a 90° push-up test, 20m repeated shuttle run test, standing broad jump test, and a sit and throw test.

**Social and Emotional Well-being:** Students will complete the Stirling Children's Wellbeing Scale. The Stirling Children's Wellbeing Scale was developed by the Stirling Council Educational Psychology Service (UK). It is a general, positively worded measure of emotional and psychological well-being in children aged eight to 15 years. The scale aims to provide a way to measure the effectiveness of interventions and projects designed to promote children’s well-being and emotional development, such as this one.

**How will the information collected be used?**

The data collected from the Kick-Smart program will be used for Mr Louis Burt’s PhD Thesis, journal publications and conference presentations and to inform future practice for the design of other programs. A summary of the research findings can be provided via email within six months of the end of the program upon request to Nick Riley or any of the research team members.

**How will privacy be protected?**

Any personal information provided by teachers/students will be confidential to the researchers. The results of the study will be published in general terms and will not allow the identification of individual students, teachers or schools. Once the data has been collected, it will be de-identified, replacing participant names with codes and put into an electronic data file, data collection sheets will be destroyed. Data will be stored for a minimum of 5 years on password protected files (only accessible to researches).

**Further information**

If you would like further information, please do not hesitate to contact Dr. Nick Riley. Thank you for considering this invitation.

 

 Dr Nick Riley

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| Dr Nick RileySchool of EducationFaculty of Education and ArtsUniversity of NewcastleCallaghan NSW 2308Phone: + 61 (02) 4985 4254Email: nicholas.riley@newcastle.edu.au  |

Should you have concerns about your rights as a participant in this research, or you have a complaint about the manner in which the research is conducted, it may be given to the researcher, or, if an independent person is preferred, to the Human Research Ethics Officer, Research Services, NIER Precinct, The University of Newcastle, University Drive, Callaghan NSW 2308, Australia, telephone (02) 4921 6333, email

Human-Ethics@newcastle.edu.au.

This project has been approved by the University’s Ethics committee, Approval number […………....].

**Parent Consent Form**

Dr Nick Riley

School of Education

Faculty of Education and Arts

University of Newcastle

Callaghan NSW 2308

Phone: + 61 (02) 4985 4254

Email: nicholas.riley@newcastle.edu.au



**Consent Form for the Research Project:**

**Kick-Smart**

Dr Nicholas Riley, Dr Narelle Eather, Dr Robert Parkes, Mr Louis Burt

Document Version 2 (26/04/2019)

I agree for my child …………………………………………………………… to participate in the above research project and give my consent freely.

I understand that the project will be conducted as described in the Information Statement, a copy of which I have retained.

I understand my child can withdraw from the project at any time, up to the point of publication, and do not have to give any reason for withdrawing.

I understand that this research will be conducted as a feasibility trial. The researchers will recruit 2 classes in total. During Term 3, 2019, one of the classes will be randomly allocated (i.e., by chance) to receive the intervention program. The other class will be a control group who will receive a condensed version of the course during weeks 8-10 of Term 3. Data to test the potential effectiveness of the intervention will be collected from students in both intervention and control classes during Term 3, 2019.

I have had an opportunity to ask the research team questions about the research and have them answered to my satisfaction.

By returning the below form to school, I am indicating my consent for my child to participate in this research project. I am also consenting for the collection of baseline and post intervention data in Term 3, 2019.

Name of school:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent’s name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Child’s name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent’s signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Child’s signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_