



## Spelling Practice Approaches in Adolescent Students

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**Principal investigator:** Professor George Georgiou (University of Alberta)

**Research Coordinator:** Dr. Dalia Martinez (Australian Catholic University)

**Co-investigators:** Professor Anne Castles, Dr. Danielle Colenbrander, Dr. Signy Wegener, and Dr. Tomohiro Inoue.

We are excited to share a research project that may be of interest to you. This research is being conducted by University of Alberta researchers in collaboration with the Australian Catholic University. Professor George Georgiou (University of Alberta) and Dr. Dalia Martinez (Australian Catholic University), along with Professor Anne Castles, and Drs. Danielle Colenbrander, Signy Wegener, and Tomohiro Inoue, all of whom have years of experience in conducting reading research, are joining efforts to explore literacy development in adolescents.

### What is this project about?

Spelling skills significantly influence key literacy outcomes, including writing composition and reading comprehension. Traditional spelling instruction often uses uniform word lists (referred to in this project as fixed lists), regardless of students' prior knowledge or progress during practice. An alternative approach is the use of adaptive word lists tailored to students' ongoing performance; however, studies evaluating their effectiveness at the classroom level remain limited, possibly due to the time demand this may place on teachers. Digital tools may offer a way to automate this process. We aim to examine the effectiveness of adaptive compared to fixed spelling lists to learn the spellings of irregular words. The words in the adaptive condition will be practiced to a one correct recall learning criterion with a maximum of three attempts. In comparison, the fixed list condition will have each word practiced exactly three times, regardless of accuracy. We will target high school students in Grades 7 and 8, particularly because students at this level frequently face long, complex words. We are aiming for 100 participants who will be randomly assigned to one of two groups (50 participants per group), either the Adaptive List (AL) group or the Fixed List (FL) group and receive instruction and opportunities to practice the spelling of 12 irregular words. Word reading efficiency and spelling recall will be assessed immediately after, and up to five weeks later, to measure the rate of forgetting. Our goal is to evaluate the cost-benefit trade-off (i.e., time spent vs. learning gained) of individualized spelling practice, to find the best balance between effective learning and limited instructional time.

### What would your participation look like?



#### School commitment:

The entire study could be distributed across 4 weeks. A schedule example is shown in the Table below.

Week	Activity	Days in Schools
Week 1	Pre intervention testing	Tuesday and Thursday
Weeks 2	Intervention sessions	Monday, Wednesday, and Friday
Week 3	Post intervention testing	Tuesday and Thursday



One month later	Delayed post intervention testing	Tuesday and Thursday
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As some of the testing and training materials are delivered through a virtual platform, participating students will require access to personal computers, headsets, and a reliable Wi-Fi connection. Please let me know if these requirements may present any challenges for the schools.

To effectively run statistical analysis, a sample of around 100 participants is needed (students in either Grade 7 or 8 with no history of learning or behavioural difficulties). Once the project has received the division's approval, schools will be first contacted through a letter explaining the project's aim, duration, commitment, and benefits (see the school letter document attached). We have also created a letter that classroom teachers may use to first introduce the project to their students (document attached).



### **Participant commitment:**

The time commitment for each participating student would be approximately 2 hours over 6 sessions, with an average duration of 15 minutes per session, with the exception of pre-testing. The six sessions include one session for pre-training testing, three spelling practice sessions, and two sessions for post-training testing. Testing sessions will include individual and group assessments (see below). All participating students will require a computer and headphones. Only students with written consent and assent will receive training. However, to avoid the feeling of being left out, other students without consent will receive a reading comprehension activity that will also be displayed on a computer. This reading comprehension activity will be a Word document (to be shared upon request) from which no information will be recorded.

Group session	Individual session
<ul style="list-style-type: none"><li>• Silent Word Reading Fluency</li><li>• Word spelling recall</li></ul>	<ul style="list-style-type: none"><li>• Vocabulary: Word-picture matching</li><li>• Spelling-to-dictation</li><li>• Oral word reading</li></ul>



### **Classroom teacher commitment:**

Spelling practice will occur at the classroom level using a virtual platform. This activity will be introduced and monitored by a University of Alberta researcher. Teachers will only be asked to support classroom management during the practice sessions. At the end of the study, we will share the list of words included in the training and will also share our contact information to answer any questions or provide additional details about the project.



### **Guardians:**

As for parents/guardians, a consent form will be sent to them (to be shared upon request). Their participation involves reading this document that contains important information regarding the project, signing (if authorizing participation) the consent form, and returning it to the school staff.



### Project Timeline

Month	Activity
October-November, 2025	Initial contact will be made with schools, and information letters and consent forms will be sent to those that express interest in participating
November-December, 2025	The tentative start date for the project is November 17. We aim to engage two schools interested in running the project between November and December
January, 2026	A third school may need to be contacted if necessary.
April, 2026	A final report will be ready to be shared with participating schools.