# Does reading anxiety impact on academic achievement at university?

If students with reading difficulties do manage to reach university, are their struggles to cope compounded by reading anxiety? **Sophia Soares** and **Nic Badcock** discuss the results of Sophia's Honours thesis, submitted to the School of Psychological Science at the University of Western Australia, examining the relationship between reading anxiety and the variables of reading history, reading comprehension, and academic grades in a sample of university students. There seems to be a pattern of some encouraging results.

**R**eading is an essential skill for all individuals, and it can be a difficult task for some. Difficulty with reading has a serious impact for university students, because at the level of higher education the majority of information and knowledge is gained through reading. A recent study of university students found that those with a history of reading difficulties had lower academic achievement than those without a history of reading difficulties (Bergey et al., 2017). In the absence of a diagnosed learning disability, these students often fly under the radar of support services,

are more likely to withdraw from their first year of study, and are at higher risk of not completing their degree (Richardson & Wydell, 2003). Gaining a better understanding of the reasons for students' reading difficulties could help guide new approaches to support.

The difficulties encountered by university students often involve poor reading fluency (accuracy and speed of reading) and low reading comprehension. At the tertiary level, students are required to understand very complex and difficult texts. The academic workload takes a particularly large toll on students who find reading slow and effortful. Some poor readers put in a huge amount of effort and many hours to achieve their academic goals, with some students spending up to three times as long on basic revision tasks (MacCullagh et al., 2017).

Beyond the factors of reading ability and academic workload, however, there is another – often invisible – variable that impacts on university students who are poor readers: anxiety. This article reports on a study conducted in the School of Psychological Science at the University of Western Australia, in which we examined the impact of reading anxiety on the relationship between reading ability and academic achievement at university.

## What is reading anxiety?

When students struggle with reading, school and university can include unpleasant experiences. Negative experiences can start in school, where children may fear being judged and ridiculed about their reading. This is likely to lead to poor readers reporting higher levels of emotional problems like general anxiety (Meer et al., 2016), and experiencing higher levels of anxiety when reading aloud.

The term 'reading anxiety' refers to an unpleasant emotional response to reading, as well as apprehension to



situations involving reading (Ramirez et al, 2019.) Compared with general anxiety, specific reading anxiety has a stronger negative correlation with primary school students' reading, math, and spelling grades (Zbornik & Wallbrown, 1991).

It has been argued that reading anxiety and poor reading have a two-way relationship. That is, reading anxiety may both cause and result from, poor reading (Piccolo et al., 2017; Ramirez et al., 2019). In this way, reading anxiety can be viewed as part of a vicious cycle, in which poor reading abilities cause anxiety. This promotes avoidance behaviours and less practice of reading, preventing improvement, which results in the student viewing learning to read as an ongoing failure, ultimately leading to more anxiety (Bradley & Thalgott, 1987).

## Academic achievement and anxiety

Whilst moderate levels of general anxiety can be advantageous to academic performance (Al-Qaisy, 2011), higher levels of anxiety are associated with poorer academic achievement (El-Anzi, 2005). In the case of specific reading anxiety, there are multiple routes through which reading anxiety could impact on academic achievement at university. The relationship between reading ability and reading anxiety tends to increase avoidance, manifesting in skipping class, failing to turn-up for oral presentations (Damico et al., 2011), and

potentially leaving university altogether. Reading anxiety is also associated with low motivation to read, further promoting reading avoidance (Zbornik, 2001). Emotions such as anxiety can also impair academic achievement through eliciting task-irrelevant thoughts, and subsequently reducing available cognitive resources typically utilised to complete tasks (Pekrun et al., 2002). Additionally, concentration and retention of information can be reduced by anxiety (Eysenck et al., 2007), and this would in turn potentially impact on academic achievement.

## The present study: anxiety, reading ability, and academic achievement

In our study, we explored whether reading anxiety made a difference to the relationship between reading ability and academic achievement. We asked whether the presence of reading anxiety further decreased the academic achievement of poor readers. If this connection was supported, it would suggest that interventions targeting reading anxiety may help individuals to realise their potential at university, independent of their reading ability.

In order to explore this relationship, we recruited current undergraduate and postgraduate students from the University of Western Australia (UWA), using 'SONA', UWA's research-participation system. Those who volunteered reflected a broad range of reading abilities – no special selection for reading difficulties was used. Eighty-eight participants completed a series of online questionnaires measuring reading anxiety, general anxiety, reading history, and reading comprehension.

Reading anxiety was measured using the Macquarie Oxford Reading Anxiety Test: Adult version (Francis et al., unpublished). This test includes questions like: "I feel afraid if I have to read aloud in front of people" and is answered on a 4-point scale: 'Never' through to 'Always'. General anxiety was measured using the Trait Anxiety Scale (Spielberger et al., 1983), with general questions like: "I feel nervous and restless" answered on a 4-point scale: 'Almost Never' through to 'Almost Always'. Measuring general anxiety allowed us to establish that reading anxiety was a specific subtype of anxiety.

Students' reading history was measured using the Adult Reading History Questionnaire – Revised (ARHQ-R) (Parilla et al, 2003), which taps into past and current attitudes and experiences with education and reading. Example questions include: "When you were in secondary school, how many books did you read for pleasure?" answered on a five-point scale: 'None' through to 'More than 10'; and "Did you have difficulty remembering complex verbal instructions in secondary school?" 'No' through to 'A great deal'.

Reading comprehension was measured using the Reading Comprehension Test from the York Adult Assessment Battery – Revised (YAA-R) (Warmington et al., 2013). In this test, students read a passage of text (one page of approximately 500 words) at their own pace and then answer a series of questions about the text by typing their answers.

University grades were used as an estimate of the participants' academic achievement. Specifically, participants' Weighted Average Mark (WAM) was used, which is an average percentage mark for all the academic units students had completed in their course thus far.

## Findings

There were three main findings in our study:

1 Poor reading comprehension and a history of reading difficulties were related to lower grades;

2 Poor reading comprehension and a history of reading difficulties were related to higher reported reading anxiety; and

3 The relationship between reading comprehension plus reading history and grades was not affected by reading anxiety.

## Implications

Current poor reading comprehension, especially when combined with a history of reading difficulties, was associated with lower academic grades at university. This is consistent with previous findings linking reading comprehension with academic success. A history of reading difficulties alone was not, however, associated with poorer grades. This is contrary to previous findings suggesting students with a history of reading difficulties had lower academic achievement (Bergey et al., 2017). It is possible that the accommodations universities currently provide to students with a history of reading difficulties (e.g. extra examination time) make a positive difference to academic grades, even if reading difficulties are not remediated. Therefore, we do recommend that students with a known history of reading difficulties seek special consideration during their studies.

Although reading anxiety did not make an independent contribution to academic grades in this study, reading anxiety was widely reported within our sample - and, as such, it remains an emotional well-being issue to be considered in its own right. Interestingly, reading anxiety was not associated with current reading comprehension problems, but was associated with having a past history of reading
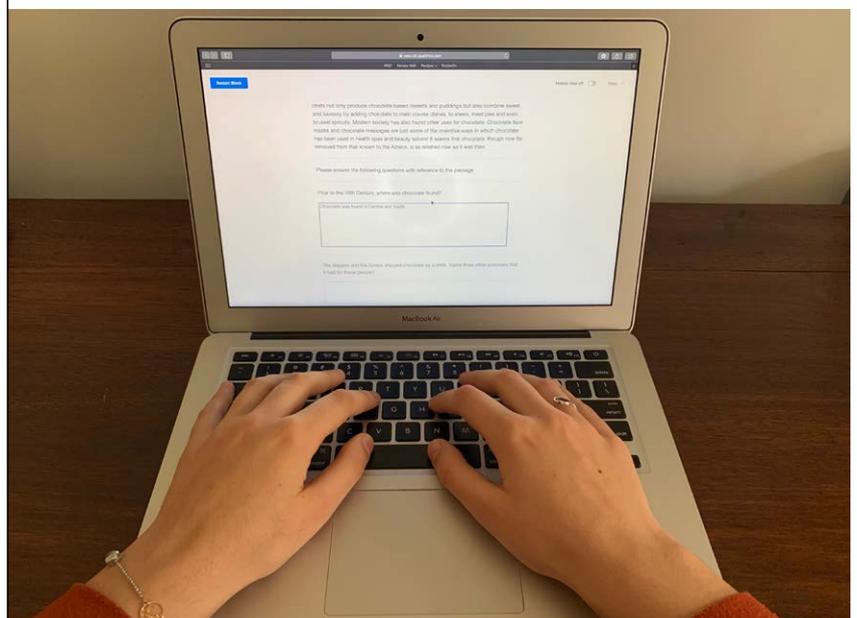


Figure 1: University student completing the online assessment

difficulties. This pattern could be followed up via interview and in-person reading assessments, exploring the degree to which reading anxiety limits the student experience even when academic grades are not affected. That is, reading anxiety may have a bigger influence on drop-out or application rates than reading difficulties themselves.

One further consideration for interpreting the findings of this study is that it was conducted in Semester 1 2020 during the COVID-19 pandemic. As a result, students were given an option of an 'ungraded pass'. This meant that, if students felt their grades for a particular unit were unduly affected by COVID, they could opt for an 'ungraded pass' and this result would not contribute to their overall WAM. This may have reduced the typical range of grades. Therefore, it will be important to rerun this study during a more typical semester.

## The Take-Home Message

In this study we explored whether the relationship between reading ability and academic achievement was impacted by levels of reading anxiety, hypothesising that the presence of reading anxiety would further decrease the academic achievement of poor readers. This hypothesis was not supported, and the current findings suggest that reading anxiety does not affect academic achievement at the university level. This is a useful, and potentially comforting, message to convey to poor readers.

University should be equally attainable for all individuals who wish to participate, regardless of their abilities or learning differences. Our findings suggest that poor readers are not only struggling academically at university, but they are also vulnerable to experiencing anxiety. It is vital that we explore and try to address these factors which could be limiting students' capabilities.

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