MOTIVATING STUDENTS TO READ USING A DESIGNATED EDUCATIONAL COMPUTER SUPPORT PROGRAMME

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Purpose:

The key purpose of this study was to investigate whether students can measurably improve their engagement with book reading as a consequence of using the web based Lexile Reading Programme. This was further refined to focus on student motivation and can be summarised in the following question:

> ***"Can students' motivation to read measurably improve as a consequence of using the web based Lexile Reading Programme?"***

Acknowledgements:

Background:

What is the Lexile Programme?

It is important to understand how the Lexile programme works before we can get an appreciation of how well it motivates and sustains students' interest in reading.

The Lexile Framework is available from Scholastic New Zealand (and Australia). It is a web based computer programme that endeavours to match students to books. It can be found at *www.mylexile.com.au*

The Lexile is a unit that measures the amount of challenge presented by a passage of text. Scholastic state that they measure reading text in two ways *(refer to Appendix Three: How a Book is Lexiled):*

> Measuring a text by sentence length, word familiarity and high frequency words give an "Objective Leveling".

> The subjective side of the leveling is done by teachers based around theme, content, age appropriateness and text type.

> This analysis leads to a Lexile level for each book in the system. The Lexile scale is a developmental scale for reading ranging from 200L for beginning readers to above 1700L for advanced texts *(Hint – add 3 to each level and you get an approximate reading age)*.

The programme aims to determine a student's "Lexile Level" through an initial multiple-choice test of their reading ability. The students sit on-line a "Scholastic Reading Inventory" test and once they have completed this they are told what their Lexile reading level is. Reading at this 'target' level is meant to offer sufficient challenge without frustration. *(These tests can be repeated every 4 to 6 months to enable the teacher to monitor reading development).*

The students also complete an 'interest survey'. The programme then generates a list of books to match the student's Lexile level and their interests.

A majority of the Lexile books have comprehension quizzes which the students complete on-line. Each quiz consists of ten multiple-choice questions and once completed provide immediate feedback. These are a key motivational factor to reading a book and lead to certificates and awards.

Teachers are able to get summary reports of student progress and reading history. They can call up 'whole class' reports which will summarise each of their students Lexile level, whether they have taken quizzes or not, their reading records and recommended reading lists for each students etc.

Nothing is free and each student needs a 'student licence' to enroll in the programme. This is a once-only enrolment fee of $4.00 per student.

Each school needs to also invest in the Lexile Framework book collections so that they have plenty of Lexiled books available for the students. The programme only directs the students to Lexile books and so these books need to be readily available in the Library. Scholastic state that they have almost 7000 Lexile leveled books and around 2500 associated quizzes.

Demographic Details:

In this small study 14 teachers were interviewed (2 male teachers) from schools in South Canterbury and Dunedin.

Of the teachers interviewed, the overall average experience with the programme was one to two years. Three of the respondents had been using the Lexile programme for longer than this but it wasn't the on-line web based version. In one case the teacher had only been using the Lexile programme for one Term.

All the teachers interviewed taught Year 4 or above with the majority at the Year 5/6 level.

To the question *"Why did you choose Lexile as part of your reading programme?"* there was a mixed response from schools adopting it across all their Year 4 to 8 classes as a matter of policy, to it only being used on a class by class basis in the Year 7/8 classes by those teachers who wanted to *"give it a go"*.

Regardless of why they were using the Lexile programme all the interviewees stated that it was introduced to help motivate student interest in reading and in a lot of schools it was introduced to provide a *"point of difference in the reading programme"*.

When asked to compare the students' reading ability and their motivation to read, most of the responses recognised that only a small percentage of their class read at *"below expectation"* but that percentage went up when asked about *"low motivation"* to read. These were generally the boys in the more senior classes who preferred glossy magazines about motocross, surfing, skateboards etc.

Key Findings:

The simple answer to the question… *"Can students' motivation to read measurably improve as a consequence of using the web based Lexile Reading Programme?"* is yes with some reservations.

Generally it was thought that the Lexile Web based computer programme motivated and sustained students' interest in reading. Teachers were enthusiastic about how it had worked in their classrooms and most related stories of students who hadn't read a *"chapter book"* prior to using Lexile, but once enrolled in the programme, had found books they could manage and were interested in. Many of these students, who previously didn't read *"chapter books",* had gone on the read more than one or two books at their Lexile level.

The variety of the books and the matching of students to books that they are able to easily read, has a real effect and has meant a definite shift in reading behaviour. This has been observed with a number of the students being *"on-task reading for longer periods of time".* Feedback from some of the students focused on the fact that for the first time in their lives they are reading *"chapter books and reading for enjoyment".*

The responses to the question about whether the programme is equally effective for all students were varied and contradictory. Some felt Lexile motivated able readers more, whereas others stated that it appealed more to the less able readers. One teacher responded that the Lexile Programme does not motivate the *"middle of the road readers".* One teacher commented that *"capable readers don't need Lexile"*

A possible conclusion to be drawn from this is that the motivation factor is not particular to a reading age group but the programme appeals to some individuals more than others regardless of reading ability.

Lexile needs to be seen as another 'tool' available to support a good reading programme. It is not a reading programme on its own. *"The key factor that can really help motivate a student's engagement in reading is the habit forming nature of daily reading so that reading becomes intrinsic over time".* If by using the Lexile system for finding 'interesting' books for a student and through this the student gets 'hooked' into daily reading then Lexile has become a key factor in motivating a student's engagement with reading.

The discussion around the question about ways that students indicate that Lexile appeals to them, or doesn't appeal was very interesting and led to the following major conclusions about the success or otherwise of the whole process.

1. **Teacher Factor** –

   The key factor in the success for the Lexile Programme within a classroom's reading programme is the TEACHER.

   If the teacher is…
   - enthusiastic,
   - organised,
   - sets up quality time for the pupils to use the programme,
   - allows for regular silent reading time
   - has consistent review procedures
   - encourages and motivates the students to keep selecting Lexile books at their level

   ….then students can be observed reading quality literature on a regular basis and *"students' motivation to read measurably improves"*.

2. **Quiz Factor** –

   Another key factor in the success of the Lexile programme is the ON-LINE QUIZZES. The quizzes are a major motivating factor in the students' eagerness to complete a book. The quizzes can be accessed on-line which appeals to a lot of students (in some cases they complete these at home as well as school). The successful passing of a quiz leads to points being awarded and once a certain number of points have been accumulated on-line certificates can be printed off. Some classes published these for all to see and the subsequent competition it engendered encouraged others to read more to accumulate points. One of the schools surveyed has the added incentive for their students by offering free books when certain numbers of points are achieved.

   A majority of the teachers commented that the quizzes can drive the programme (and motivation) because they have observed students only choosing books with a quiz attached and they will generally only read books where they get this immediate feedback and *"reward"*. A number of teachers commented that they were happy just to see the students reading no matter what the motivation.

Teachers can make up their own quizzes or activities for students to complete once they have read a 'non-quizzed' Lexile Book. It was generally felt these weren't as popular with the students although a key factor in their success or otherwise was the role the Teacher played in motivating and designing materials.

A school's / Teachers celebration of pupil achievements with recognition of certificates being achieved, numbers of books read and milestones gained was a noticeable factor in how motivated students were to use Lexile.

3. **Matching Students to Books Factor –**

Linking pupils to correct books at their reading level is a very positive factor of the Lexile Programme, *"it helps the Teacher find books that are interesting and suitable for the student".* Most teachers spoke highly of this aspect of the Lexile programme.

For this factor to be successful it relies very heavily on the Library's Lexile resources. If the school has prepared well and purchased sets of books at each Lexile level so there are plentiful stocks of books at all levels then there is less student frustration to find the books their personal inventory recommends.

The students' were easily put off in those situations where the number of books were not as plentiful and the students spent a lot of time looking for alternative titles when the books they wanted were not in their school library. Multiple copies of popular books helps avoid student frustration.

The schools' Librarian role in implementing and maintaining the Lexile stocks was a key factor in how successfully the Lexile programme was implemented within a school and this contributed to how class teachers and students used the programme.

Some of the school libraries keep the Lexiled materials shelved separately from other books in the Library so the students can easily find them. The books are organised by their Lexile levels and are either colour coded or easily identifiable in some other way, for example, with labels on spines of books. They have been assigned a Lexile level or purchased as part of a pre-existing Lexile collection package purchased through Scholastic NZ Ltd.

4. **Time Factor –**

Computer time for students (and Teachers) to go on-line, search for books, complete quizzes, etc is essential for this programme to work smoothly within the classroom or Library. Schools where computer time and access was easy and frequent felt most benefit from using Lexile and certainly were less frustrated by the programme.

Feedback about the Lexile Programme –

Listed below are some of the frustrations with the programme that were mentioned in discussions:

- Quizzes were not consistent and at times *"quite hard"* for the level of book being tested.

- The poorer reader at the lower levels found the initial testing *"very long and off putting"* with too much reading and time needed to concentrate.

- A very common theme from Teachers of the Year 7/8 classes was the difficultly for those few failing readers in this age group who found the lower leveled Lexile books [300 & 400 level] not really very interesting for them. They need the easy reading material but have more mature tastes in reading topics such as motor bikes, surf boards, skate boards etc. One teacher felt the School Journals achieved this for her students where lower level Lexile books did not.

- Lack of quizzes on a lot of books was a disappointing factor about Lexile. There is also a feeling that making quizzes available only for schools that buy sets of books or books in bulk is an unfair approach and not conducive to good relations between Scholastic Lexile consultants and the schools. It was felt that the quizzes should be available to anyone who purchases a book regardless of whether it is bought as part of a set or individually.

I have been invited by Scholastic's Head Office in Auckland to feedback any matters and I will ask them to consider if any of these issues can be addressed as a result of this feedback.

If any Teacher / Librarian wishes to contact them directly their contact details are as follows – The address is 21 Lady Ruby Drive, East Tamaki rsoutham@scholastic.co.nz / phone 09 968 9810.

Summary of Teachers Responses:

1. **"Overall, does the Lexile Programme measurably lift a student's motivation to read?"**

▪ mostly	**4**
▪ usually	**8**
▪ sometimes	**2**
▪ not often	0

2. **"Is there a good match between the Lexile allocated reading level and your assessment of a student's reading age?"**

▪ mostly	**5**
▪ usually	**6**
▪ sometimes	**3**
▪ not often	0

3. **"How many students in your class typically benefit from Lexile?"**

▪ all	**2**
▪ most	**10**
▪ some	**2**
▪ few	0

4. **"Would you recommend that other teachers use Lexile? How strong is your recommendation?"**

▪ highly recommend	**4**
▪ recommend with some reservations	**10**
▪ not recommend	0

Appendices

Appendix One:

Questions which formed the basis of the Teacher Interviews -

1. How successful has Lexile been for motivating and sustaining the motivation of diverse children in your class?

2. Have you found that Lexile is equally effective for all students, or are there some patterns of difference across different groups of children or individuals?

   - Have you any ideas about why this is?

3. Are there any ways that students indicate that Lexile appeals to them, or doesn't appeal?

4. What are the key changes you have noticed in your students reading behaviour as a more or less direct result of using Lexile?

5. What is it about Lexile that can really help to motivate and sustain your students' engagement with reading?

Appendix Two: How a Book is Lexiled

How is a text's Lexile measure determined?

Lexile measures are based on two well-established predictors of how difficult a text is to comprehend: *semantic difficulty* (word frequency) and *syntactic complexity* (sentence length). In order to Lexile a book or article, text is split into 125-word slices. Each slice is compared to the nearly 600-million word Lexile corpus — taken from a variety of sources and genres — and words in each sentence are counted. These calculations are put into the Lexile equation. Then, each slice's resulting Lexile measure is applied to the Rasch psychometric model to determine the Lexile measure for the entire text.

Books such as *Toocool: Tennis Ace* (400L) by Phil Kettle and *Captain Purrfect* (420L) by Jackie French have shorter sentences and words appear frequently. Conversely, books in the Harry Potter series which Lexile between 880L and 1030L, *Little Women* (1300L) and *Don Quixote* (1410L) contain longer sentences and more complex words.

The text measurement is based on over 20 years' research done by Metametrics Inc.

Why do some simple picture books have high Lexiles?

Many picture books are written with non-standard grammatical structures used in general prose. They also have fewer than 500 words, which is the minimum number of words recommended to obtain a meaningful Lexile level.

Text example:

> *The boy ran up the hill, down the other side, through the park, across the road, around the corner and past the shops to home.*

The vocabulary in this text is not complex, although the sentence is very long. It is possible that text like this could also be spread across several pages in a picture book and be accompanied by illustrations that support the text to make reading easier for the student.

In this example the text contains only 25 words, and so it is not a big enough sample to obtain a meaningful Lexile measure. So, when analysing just this one very long, non-standard sentence, the Lexile level is calculated as 1140L because the average sentence length is 25 words!

Lexile Analyzer Result

Lexile Measure:	1140L
Word Count:	25
Mean Sentence Length:	25.000

However, if the sentence example above is broken into smaller sentences as in the example below, the Lexile level changes dramatically to a more realistic 160L.

> *The boy ran up the hill. He ran down the other side. Then he ran through the park. Next he went across the road. Then he ran around the corner. Finally he ran past the shops to home.*

Lexile Analyzer Result

Lexile Measure:	160L
Word Count:	38
Mean Sentence Length:	6.333

If the vocabulary complexity is increased by substituting synonyms for the word 'ran' the Lexile level also increases to 260L.

> *The boy zoomed up the hill. He leapt down the other side. Then he hot-footed it through the park. Next he scuttled across the road. Then he bounded around the corner. Finally he dashed past the shops to home.*

Lexile Analyzer Result

Lexile Measure:	260L
Word Count:	39
Mean Sentence Length:	6.500

The use of non-standard sentences is the reason why many picture books with a high Lexile level may also have a RA (Read About) or NP (Non-prose) code in The Lexile Framework.