



IATL

(Research Report)

An investigation into how the choice of terminology /
language can impact on student engagement, in a range
of traditional and non-traditional learners

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1. Background

It is widely acknowledged that academic styles of writing (in common with many other professions) have a tendency to use complex terminology. This practice would seem to be expected, even regarded as 'good' and certainly common practice. This may be appropriate when the writing is aimed at similarly expert peers but has the potential to be very discouraging if it is deployed in publications that are accessed by many learners, especially those who are new to a subject and / or lack confidence in HE environments. A great deal of feedback from students specifically mentions their appreciation of having taught material 'demystified' with simple, plain language explanations of concepts. This project is based on the belief that this could result in practice which could discourage many potential students from higher education, due to a lack of confidence in their ability to engage with learning at this level and consequently impact upon some efforts of widening participation.

2. Methodology

This research project aims to provide novel insights into how the choice of terminology/language can impact on student engagement with resources and consequently their learning more broadly. The project gathers and analyses empirical data on issues directly impacting upon both student engagement and widening participation. It seeks to enlighten understanding of factors perceived to have a major influence on students from all disciplines, backgrounds, cultures, ages and genders but probably most significantly those usually considered 'non-traditional' learners. Developing a deeper understanding of these factors will allow us to enhance our approaches to inclusive teaching.

This project has been engaging students from a range of educational programmes in all stages of the study, from the design and specification of the project methodology and data collection tools to comprising the students as the source of the collected information. As for the research

design and development of research materials and data collection, a research student (the research assistant in this project) with expertise in designing a valid and reliable methodology has been recruited. Regarding students as the source of collected data, both postgraduate and undergraduate students, members of the School of Engineering and WMG's SSLCs and Engineering Society have been taking part in the project. While this project is an investigation with students on the various programmes of study within WMG and the School of Engineering, the work would be greatly enhanced by subsequent extension of the study cohort to students from other faculties and programmes of study, building on the findings from the pilot.

The study seeks to achieve empirically-derived data and analysis which will provide insights into the challenges experienced by a range of traditional and non-traditional learners in engaging with academic writing styles.

The legacy of this study will be an enhanced understanding of factors influencing the accessibility of academic writing especially for those early-stage or non-traditional learners who may lack initial confidence when encountering academic writing for the first time.

2.1. Research questions

Primary research question

How does the choice of text with various readability features (lexical complexity, and syntax) impact on students' engagement with and understanding of academic resources?

Secondary research questions

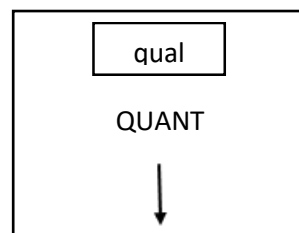
1. How do readability features (lexical complexity and syntax) interact with reading comprehension?
2. How do readability features interact with the learner's profile (traditional and non-traditional)?
3. How do readability features interact with individual reading comprehension items?

4. How do the participants perceive the effect of the two readability features investigated in this study on their comprehension of and engagement with the text in relation to understanding, confidence, and clarity?

2.2. Research design

An embedded mixed method is being employed in the research in order to gain a broader perspective on this research topic, and to provide further description for possible significant or non-significant observations. Both quantitative and qualitative data are being collected simultaneously in one phase, and a concurrent embedded strategy of mixed method (Creswell, 2009) will, therefore, be used. Figure 1 demonstrates the general procedures in this design.

Figure 1 Concurrent Embedded Design¹



According to this design, in the first phase the primary set of data entails the quantitative data, which is shown in uppercase in the figure above, will then be followed by the secondary data (i.e. qualitative shown in lower case) which is based on the results of the primary data in order to find explanations for unexpected results which might be gained in the first data collection stage.

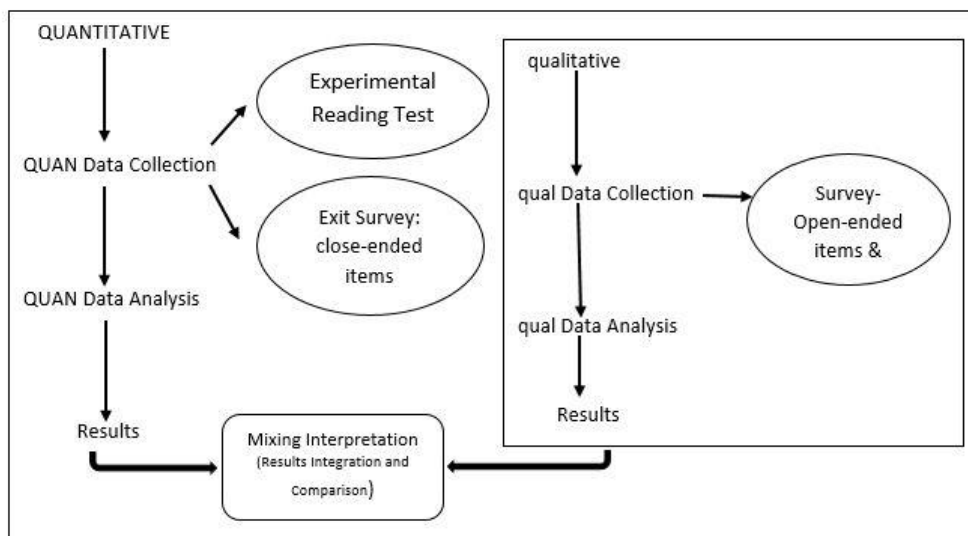
2.3. Method

Regarding weighting, the quantitative method is the primary method applied, with the qualitative method nested in it. The predominant method in this research addresses the outcomes from the experiment. The quantitative data collected includes scores given to the experimental reading test performances. Further explanations for the observed outcomes is provided using the qualitative database. These qualitative data is collected through liker items

¹ Source: (Creswell, 2009: p. 210)

and open-ended questions in an exit survey following the experiment. After collecting these sets of data, the quantitative and the qualitative data will be analysed, and the results will be mixed for final interpretation and discussion. Figure 2 shows the specific procedures in the mixed method used in this research.

Figure 2 Mixed Method Procedures Used in the Present Study



2.4 Participants

The number of students involved in the main data collection for this project study will be around 80-100 (based on 4 or 5 workshops of around 20 students each). These participants are home/EU or international students and at B2+ (CEFR) language proficiency level. These cohorts will include both traditional and non-traditional students.

The project results will be disseminated to colleagues from across the institution and, therefore; it is anticipated that this work should be of interest/relevance to *all* learners in other fields and at other CEFR English language proficiency levels (i.e. B2 and C1).

2.5 Materials

The materials consist of a series of selected academic articles (around 5000-7000 words long), divided into three sections (based on the overall text main ideas and the readability measure for each section using the Professional English Analyzer). While, in each article- the most difficult section- measure by *Lexile* measures- remains in its original format, the other two parts are simplified either syntactically or semantically. Following the preparation of the text, a series of comprehension questions are designed to assess comprehension at both local and global cognitive processing levels requiring both expeditious and careful reading. The experiment involves the participants being given a certain amount of time to read the passage and then being asked to answer the questions relating to both factual and inferential information contained within the text. An exit survey is also designed to investigate the participant's self-assessment of the ease of understanding, confidence in their responses and clarity of the two pieces.

3. Research Procedures

3.1 Phase 1

Material Design

The work involves three main phases. The first phase of the project, *completed using the IATL funding*, consisted of the design of the research materials. In this phase, the experimental reading test/ and the exit survey were designed and piloted for the first data collection phase. This consisted of a series of selected academic articles (around 5000-7000 words long), divided into three sections (based on the overall text main ideas and the readability measure for each section). While, in each article, the most difficult section remained in its original format, the other two parts were simplified either syntactically or semantically. Following the preparation of the text, a series of comprehension questions were designed to assess comprehension at both local and global cognitive processing levels requiring both expeditious and careful reading.

The experiment involves the participants being given a certain amount of time to read the passage and then being asked to answer the questions relating to both factual and inferential information contained within the text. An exit survey was also designed to investigate the participant's self-assessment of the ease of understanding, confidence in their responses and clarity of the three parts of the text.

Text Difficulty and Reading Time Pilot

The material pilot included analysing the selected reading texts for inclusion in the reading comprehension test in terms of their readability level (text difficulty) and reading time. To this end, a representative group (N=12) of the participants were asked to read the text and respond to a series of questions regarding the text difficulty and the reading time (Please see appendix 1). The selected article has been modified according to the feedback for inclusion in the second pilot study which includes an administration of the reading comprehension test.

3.2 Phase 2

Pilot Study

The second phase of the research, *funded by British Council Research into Reading Grant*, consists of a pilot study as well as the main study. The pilot study, completed last term, included a series of test sessions with representatives of the sample population from both undergraduate and post-graduate students in the WMG and the School of engineering sitting the test as well as completing an exit questionnaire. The data from the second (final) pilot was analysed and based on the item analysis of the individual comprehension questions as well as students feedback on the format of the test and the difficulty level of the three texts used in the test, the reading comprehension test was amended, and the final version of the test was developed for inclusion in the main study.

Main Study

The main study, which will be completed in the spring term, will involve a series of workshops in which the tests will be conducted with a range of different learners, followed by an exit survey to explore participants' experiences of engaging with it. Students from the various programmes of study within WMG and the School of Engineering from both traditional (young undergraduates with a mix of gender and domestic / overseas etc.) and non-traditional (post-experience, company-based, mature, those who have not been involved with HE before or for many years etc.) cohorts will take part in the main study. The project will collect biographical data from participants to enable the analysis to control for participant characteristics such as gender and age, and to make comparisons between traditional and non-traditional learners.

3.3 Phase 3

Following the collection of data in the main study, the third phase, commencing in term 3, will involve analysis of the quantitative and qualitative data and preparation of the results for dissemination.

Data Analysis

As with the experimental reading test, Many-facet Rasch modelling will be used to investigate any interaction between reading comprehension performance and lexical complexity and syntax features of the text. Many-facet Rasch modelling will be used to compare the difficulties of the different sections of the text in relation to its readability features (i.e. syntactic and semantic features); to investigate interactions between readability features (lexical complexity and syntax) and the reading comprehension; and to identify specific items biased toward one or the other readability feature.

The data from the experimental reading tests as well as the descriptive statistics of the quantitative data obtained from Likert items used in the exit survey will be analysed using the

SPSS package. The qualitative data from the open-ended items in the exit survey will be coded and analysed using MAXQDA 12.

4. Anticipated outcomes

This study aims to provide a better awareness of the challenges encountered by learners of various backgrounds in reading academic publications and engaging with written materials. The study will result in robust, empirically-derived data enabling analysis that will identify the principal factors affecting the ease of understanding experienced by a wide range of traditional and non-traditional learners engaging with various styles of academic writing. And by consideration of the relative influence of a range of such factors, the results of this study can provide guidance to teachers and learners across disciplines and the whole spectrum of academic diversity to enhance effective communication and maximise understanding.

5. References

Creswell, J.W. 2009. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Sage Publication: London.