



# Academic Integrity Working Group Report

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## Summary

The Academic Integrity Working Group (AIWG) was formed to investigate the suitability of Grammarly as a tool to support the academic integrity of student work at USQ. The Working Group comprised of members of the Education Support, Research Support and Student Learning and Development teams within Library Services.

The main focus was to evaluate the software's effectiveness in reducing accidental plagiarism, developing students' academic writing skills and enhancing students' competence in information literacy. This was achieved by conducting trials to compare the functionality of different versions of Grammarly and Turnitin software.

The findings indicate that Grammarly is not a useful tool for supporting academic integrity. The AIWG recommends that the use of the software should not be further pursued in this context. The software was further found to be limited in its potential as a teaching tool for academic writing.

## Findings

### Grammarly premium vs Grammarly free version trial

To further investigate the functionality of Grammarly, an analysis was undertaken by AIWG to compare the premium and free versions of this software. This was carried out through an examination of Grammarly's own comparison tables and a practical test of the two versions. As outlined in Table 1, there are notable differences between both versions.

Table 1. Overview of differences (Grammarly 2017)

Free Version	Premium Version
150 critical grammar and spelling checks	250 critical grammar checks
This function not available in free version	A detailed report on the number and types of errors
This function not available in free version	Vocabulary enhancement suggestions
This function not available in free version	Genre-specific writing style checks

This function not available in free version	Plagiarism detector that checks more than 8 billion web pages
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The practical test, which involved uploading written work to Grammarly further highlighted some of the differences between the two products. The premium version identified 22 issues whereas the free version only identified 7 issues. Some examples of the types of grammar and spelling checks not identified by the free version included:

- Passive voice
- Overused words
- Sentence fragments and incomplete sentences
- Vocabulary enhancement
- Style check

Appendix 1 provides examples of the grammar checks not included in the free version and the differences in the level of detail and advice given between the two versions.

Overall, it was found that the premium version of the software provided more checks and detailed advice in more areas of writing but that the free version still provided a good base of checks that would be beneficial for students.

Despite the perceived benefits of utilising Grammarly, potential issues with both versions of the software were also identified. These included,

- Student can accept changes without engaging with or viewing the grammar explanation
- While some explanations are very detailed, would a student from a NESB or an average English speaker understand this explanation?
- Some issues are either not identified or are identified incorrectly. For example, the software does not seem to pick up repeated words or sentences that contain the correct and incorrect version of words, or when when a question mark was required

As an intention was the utilisation of Grammarly to develop academic writing skills amongst students, these issues need to be taken into consideration.

## Grammarly vs Turnitin trial

USQ currently subscribes to Turnitin, a software package that assists in assessment management and plagiarism detection. Turnitin is a university-wide, ICT-supported software package capable of analysing submitted work against a large database of accessible sources, including assessment from other institutions. Turnitin works within Moodle Studydesk via an integrated plugin and has the

provision for greater teaching tools above the standard plagiarism checker, such as marking comments and assignment feedback.

As an integrated plagiarism detection tool already exists – and significant resources have been utilised to implement Turnitin across USQ – it is doubtful that a secondary tool will gain support unless proven more effective in plagiarism detection than Turnitin, or by offering alternative teaching benefits within the academic integrity or writing spaces.

AIWG conducted a short trial to compare Turnitin and Grammarly’s effectiveness as plagiarism checkers, as well Grammarly’s overall ability to help students improve their academic writing. This involved running a series of past students’ assignments through both systems to compare feedback and assess viability.

Trials (see Appendix 2) concluded that Turnitin far exceeded Grammarly in its ability to locate material lifted from external sources and effectively communicate this to students. Turnitin’s larger search database and layout make it a useful tool to assist students to check work, learning which sections require proper attribution while limiting loose paraphrasing. Grammarly failed to highlight the most basic examples of plagiarism and was unsatisfactory in this purpose due to a small pool of searchable sources. It could not replace Turnitin for plagiarism checking or help students understand referencing standards.

In terms of improving academic writing, USQ Turnitin does not provide separate writing support, so direct comparison was impossible. Instead, Grammarly’s writing advice was considered as a complementary tool to improve overall writing quality and was assessed on these merits. While Grammarly’s algorithms gave writing advice of some benefit, the program remained limited in the quality of this advice and focused on superficial issues rather than addressing structural issues within student writing. Some advice was contradictory and program limitations tended to promote Grammarly as a simple ‘grammar checker’ rather than a teaching tool.

## Recommendations

### Usability and Applicability

In terms of Grammarly’s usability as a tool to assist with academic writing, results from the trials suggest possible advantages to incorporating this software. However, as an intention is for students at USQ to be self-directed learners and use the software proactively to improve their academic writing skills, the identified limitations within Grammarly would not be of assistance. For example, students may choose to not engage with feedback or understand explanations and instead use the software reactively to just correct their writing. Furthermore, in terms of grammar and writing, the support is moderate at best and only useful for those wishing to check their work for small errors in more detail than Microsoft word can

provide. The rules are helpful but its use as a teaching tool is limited by its capabilities as mentioned above

For plagiarism detection and training, Turnitin is far superior to Grammarly as it provides more comprehensive similarity matching results. AIWG does not recommend moving forward in this space as it does little to highlight or even inform the student of incorrect referencing or lifted work.

## **Future direction**

Based on the evidence presented in this report, Grammarly has proved to be unsuitable for the intended purposes at USQ and should not be considered any further within this context.

It is the recommendation of AIWG that alternative solutions be investigated to address the issue of academic integrity, development of students' academic writing skills, and enhancing students' competence in information literacy. The following are suggested alternatives for consideration:

- Development of a compulsory module for first year students covering academic integrity
- Investigation of alternative software or online resources
- Strategic and proactive use of Turnitin as a tool to improve academic writing rather than as a plagiarism checker

## References

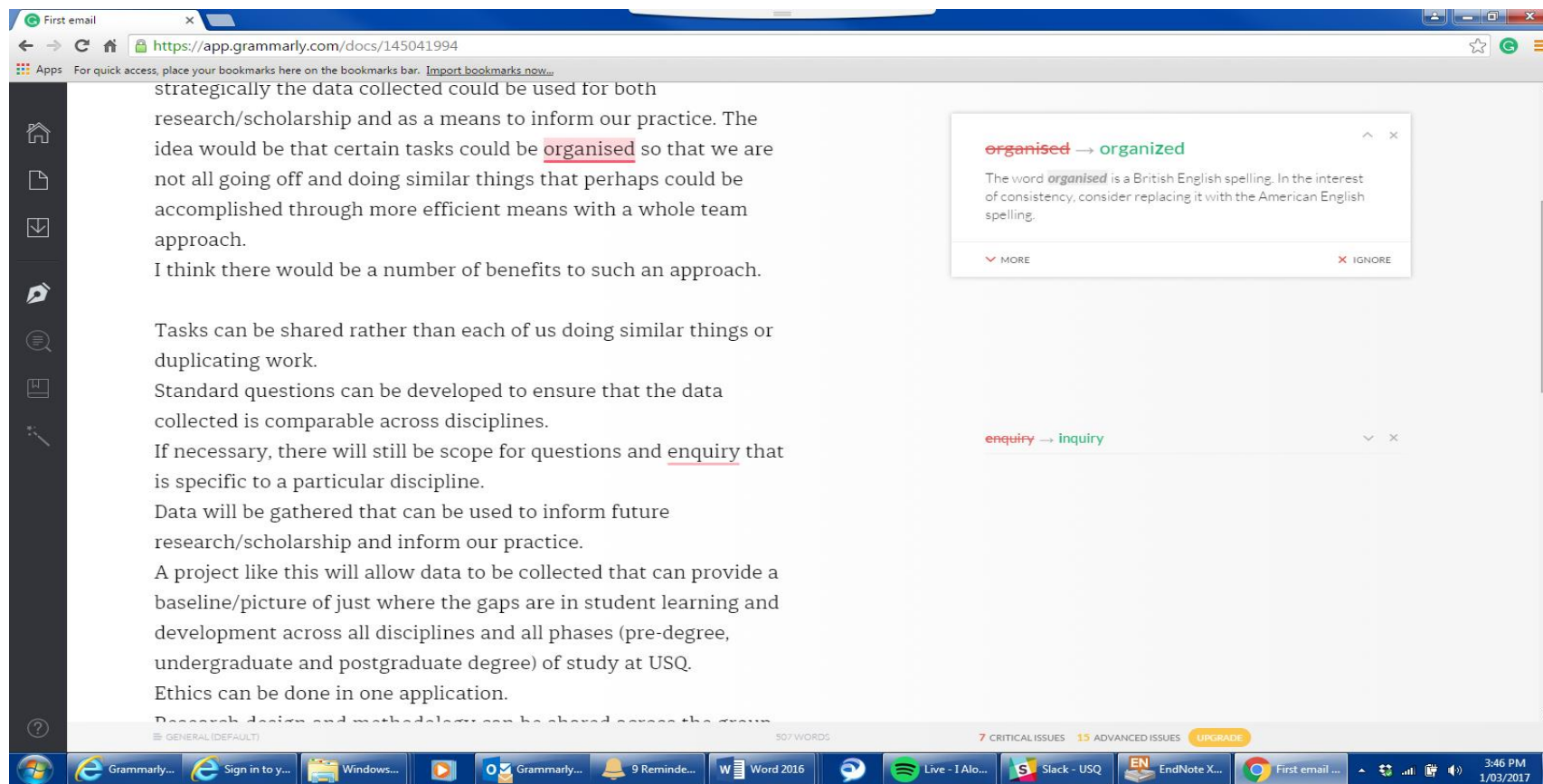
Grammarly 2017, *Grammarly Premium*, Grammarly, viewed 15 August 2017, <<https://www.grammarly.com/premium>>.

# Appendix 1

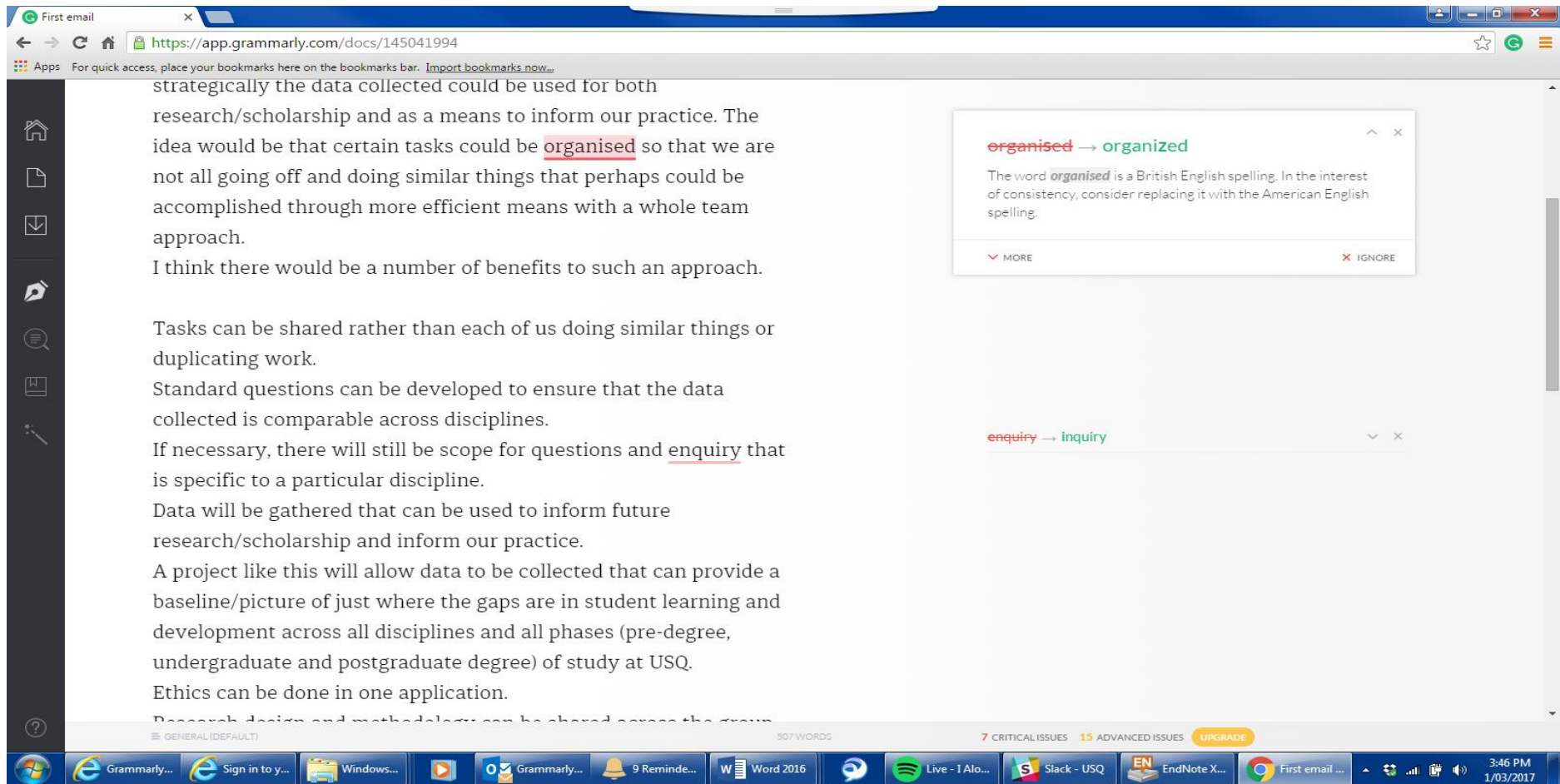
## Practical comparison on a piece of writing

### Examples of Feedback - Premium Vs Free Account

#### Free Account







First email

https://app.grammarly.com/docs/145041994

Apps For quick access, place your bookmarks here on the bookmarks bar. [Import bookmarks now...](#)

Ethics can be done in one application.

Research design and methodology can be shared across the group.  
Data collected will be less anecdotal and more robust/reliable.  
We may be able to access additional personnel to support certain aspects of the project.

I have set up an area in Slack for further discussion around these idea. Amelia are currently setting up a new Slack channel that we will move to in the future but in the interests of time can I ask that you use the current SLD channel.

Here is the link:

[https://usq.slack.com/files/eacersal/F4AHMKKH7/Proposed\\_strategy\\_c\\_approach\\_to\\_discipline\\_specific\\_needs\\_analysis](https://usq.slack.com/files/eacersal/F4AHMKKH7/Proposed_strategy_c_approach_to_discipline_specific_needs_analysis)

Can you please insure that you use the speech bubble or box labelled comments/add comment in the top right hand corner of my post as this will then keep all comments together. Don't start a new message SLD.

I would be interested to know your thoughts on this idea. In particular:

**these-idea** → **this idea**  
**these ideas**

It appears that the plural demonstrative **these** is modifying the singular noun **idea**. Consider using a singular demonstrative or a plural noun instead.

The demonstrative **these** is the plural form of **this**. **Those** is the plural form of **that**. Plural demonstratives modify plural nouns (*these apples, those books*) and singular demonstratives modify singular nouns (*this apple, that book*). Remember that collective nouns and uncountable nouns are usually treated as singular.

**Incorrect:** *Those flock of birds will be migrating soon.*  
**Correct:** *That flock of birds will be migrating soon.*  
**Correct:** *Those flocks of birds will be migrating soon.*

**Incorrect:** *These money came from an anonymous donor.*  
**Correct:** *This money came from an anonymous donor.*

LESS IGNORE

are → is

Possibly confused word: insure

GENERAL (DEFAULT) 507 WORDS 8 CRITICAL ISSUES 15 ADVANCED ISSUES UPGRADE

Windows taskbar: Grammarly... Sign in to y... Windows... Word 2016 Live - All O... Slack - USQ EndNote X... First email... 3:57 PM 1/03/2017

The screenshot shows a web browser window with the URL <https://app.grammarly.com/docs/145041994>. The document text is as follows:

We may be able to access additional personnel to support certain aspects of the project.

I have set up an area in Slack for further discussion around these idea. Amelia are currently setting up a new Slack channel that we will move to in the future but in the interests of time can I ask that you use the current SLD channel.

Here is the link:

[https://usq.slack.com/files/eacersal/F4AHMKKH7/Proposed\\_strategic\\_approach\\_to\\_discipline\\_specific\\_needs\\_analysis](https://usq.slack.com/files/eacersal/F4AHMKKH7/Proposed_strategic_approach_to_discipline_specific_needs_analysis)

Can you please insure that you use the speech bubble or box labelled comments/add comment in the top right hand corner of my post as this will then keep all comments together. Don't start a new message SLD.

I would be interested to know your thoughts on this idea. In particular:

How would this model work? e.g. Which tasks do you think could be grouped together strategically? Are there tasks you think would

The Grammarly interface on the right side of the document displays several suggestions:

- these idea → this idea**
- are → is**  
The plural verb *are* does not appear to agree with the singular subject *Amelia*. Consider changing the verb form for subject-verb agreement.  
A singular subject of a sentence or clause requires a singular verb.  
**Incorrect:** *James are coming to the picnic.*  
**Correct:** *James is coming to the picnic.*
- insure**  
Possibly confused word: *insure*
- labelled → labeled**
- a comment or the comment**
- right hand → right-hand**

At the bottom of the document, it shows '507 WORDS', '8 CRITICAL ISSUES', '15 ADVANCED ISSUES', and an 'UPGRADE' button. The Windows taskbar at the bottom includes icons for Grammarly, Sign in to y..., Windows..., Grammaty..., 9 Reminde..., Word 2016, Live - All O..., Slack - USQ, EndNote X..., and First email ... The system clock shows 3:58 PM on 1/03/2017.

https://usq.slack.com/files/eacersal/F4AHMKKH7/Proposed\_strategy\_c\_approach\_to\_discipline\_specific\_needs\_analysis

Can you please insure that you use the speech bubble or box labelled comments/add comment in the top right hand corner of my post as this will then keep all comments together. Don't start a new message SLD.

I would be interested to know your thoughts on this idea. In particular:

How would this model work? e.g. Which tasks do you think could be grouped together strategically? Are there tasks you think would need to be carried out separately.

Do you see any some potential problems or issues with this model? What do you think can be done to add efficiencies that will save us time when undertaking needs analysis?

Should we consider applying for additional funding? e.g. applying for an ALL research/resource development grant?

If you could please provide your thoughts and feedback by 7 March 2017.

If we agree that this is a good idea we can discuss in further detail

Possibly confused word: *insure*

labelled → labeled

a comment or the comment

right hand → right-hand

507 WORDS 8 CRITICAL ISSUES 15 ADVANCED ISSUES UPGRADE

The screenshot shows the Grammarly web application interface. The main document text is as follows:

[https://usq.slack.com/files/eacersal/F4AHMKKH7/Proposed\\_strategic\\_approach\\_to\\_discipline\\_specific\\_needs\\_analysis](https://usq.slack.com/files/eacersal/F4AHMKKH7/Proposed_strategic_approach_to_discipline_specific_needs_analysis)

Can you please insure that you use the speech bubble or box labelled comments/add comment in the top right hand corner of my post as this will then keep all comments together. Don't start a new message SLD.

I would be interested to know your thoughts on this idea. In particular:

How would this model work? e.g. Which tasks do you think could be grouped together strategically? Are there tasks you think would need to be carried out separately.

Do you see any some potential problems or issues with this model? What do you think can be done to add efficiencies that will save us time when undertaking needs analysis?

Should we consider applying for additional funding? e.g. applying for an ALL research/resource development grant?

If you could please provide your thoughts and feedback by 7 March 2017.

The right-hand side of the interface shows a list of suggestions:

- Possibly confused word: *insure*
- labelled → labeled
- a comment or the comment
- right hand → right-hand

The tooltip for 'right hand' provides the following information:

It appears that **right hand** is missing a hyphen. Consider adding the hyphen(s).

A hyphen is used to create compound words. Often, the two words joined by the hyphen act as an adjective that describes a noun in the sentence. However, you don't need a hyphen to join the word *very* or an adverb ending in *-ly* to another word (*very pretty flowers, oddly dressed man*). When an age or a period of time is used as an adjective before a noun, use two hyphens (*my two-year-old son*), but leave the hyphens out if the noun comes first (*he is two years old*). Both cardinal and ordinal numbers may be part of a compound word (*one-time pass, first-year student*).

Incorrect: Clara finished a **400 page book** last week.  
Correct: Clara finished a **400-page book** last week.

Incorrect: Jake served on a **nuclear powered submarine**.  
Correct: Jake served on a **nuclear-powered submarine**.

Incorrect: My **ten year old brother** loves dinosaurs.  
Correct: My **ten-year-old brother** loves dinosaurs.

At the bottom of the tooltip are 'LESS' and 'IGNORE' buttons.

The bottom of the browser window shows the Windows taskbar with various application icons and the system tray showing the time as 3:59 PM on 1/03/2017.

## Premium account

The screenshot shows the Grammarly Premium web interface. The document being edited is titled "First email" and contains the following text:

Hi all,

After some preliminary discussions with Megan and several of the learning advisors it has been suggested that our team might benefit from a strategic group approach to the discipline-specific needs analysis/environmental scan most, if not all, of us are undertaking as part of our roles. It has also been suggested that if organised strategically the data collected could be used for both research/scholarship and as a means to inform our practice. The idea would be that certain tasks could be organised so that we are not all going off and doing similar things that perhaps could be accomplished through more efficient means with a whole team approach. I think there would be a number of benefits to such an approach.

Tasks can be shared rather than each of us doing similar things or duplicating work.

Standard questions can be developed to ensure that the data collected is comparable across disciplines.

On the right side, the Grammarly suggestions panel is visible, showing the following corrections:

- advisors, (no change)
- are → is
- Passive voice
- organised → organized
- Passive voice
- organised → organized
- Passive voice
- a number of → some
- Passive voice

At the bottom of the interface, the status bar indicates: GENERAL (DEFAULT), 508 WORDS, 9 CRITICAL ISSUES, 14 ADVANCED ISSUES, and a SCORE of 68.

Tasks can be shared rather than each of us doing similar things or duplicating work.

Standard questions can be developed to ensure that the data collected is comparable across disciplines.

If necessary, there will still be scope for questions and enquiry that is specific to a particular discipline.

Data will be gathered that can be used to inform future research/scholarship and inform our practice.

A project like this will allow data to be collected that can provide a baseline/picture of just where the gaps are in student learning and development across all disciplines and all phases (pre-degree, undergraduate and postgraduate degree) of study at USQ.

Ethics can be done in one application.

Research design and methodology can be shared across the group.

Data collected will be less anecdotal and more robust/reliable.

We may be able to access additional personnel to support certain aspects of the project.

I have set up an area in Slack for further discussion around this idea.

Amelia is currently setting up a new Slack channel that we will move to in the future but in the interests of time can I ask that you use the current SLID channel?

GENERAL (DEFAULT) 508 WORDS 9 CRITICAL ISSUES 14 ADVANCED ISSUES SCORE: 68

*a number of* → *some*

Passive voice

*enquiry* → *inquiry*

Overused word: *specific*

Passive voice

Passive voice

Passive voice

Passive voice

Repetitive word: *setting*

Can you please insure that you use the speech bubble or box labelled comments/add comment in the top right hand corner of my post as this will then keep all comments together? Don't start a new message SLD.

I would be interested to know your thoughts on this idea. In particular:

How would this model work? e.g. Which tasks do you think could be grouped together strategically? Are there tasks you think would need to be carried out separately?

Do you see any potential problems or issues with this model?

What do you think can be done to add efficiencies that will save us time when undertaking needs analysis?

Should we consider applying for additional funding? e.g. applying for an ALL research/resource development grant?

If you could please provide your thoughts and feedback by 7 March 2017.

If we agree that this is a good idea we can discuss in further detail what methodological approach we might take, who might lead on certain aspects of the project etc...?

Possibly confused word: *insure*    v    x

labelled → labeled    v    x

a comment or the comment    v    x

right hand → right-hand    v    x

Repetitive word: *tasks*    v    x

Sentence fragment    v    x

Sentence fragment    v    x

GENERAL (DEFAULT)    506 WORDS    9 CRITICAL ISSUES    14 ADVANCED ISSUES    SCORE: 68



## Examples of additional elements from premium account

### Passive Voice

The screenshot shows the Grammarly web interface. The main document text is as follows:

from a strategic group approach to the discipline-specific needs analysis/environmental scan most, if not all, of us are undertaking as part of our roles. It has also been suggested that if organised strategically the data collected could be used for both research/scholarship and as a means to inform our practice. The idea would be that certain tasks could be organised so that we are not all going off and doing similar things that perhaps could be accomplished through more efficient means with a whole team approach. I think there would be a number of benefits to such an approach.

Tasks can be shared rather than each of us doing similar things or duplicating work.

Standard questions can be developed to ensure that the data collected is comparable across disciplines.

If necessary, there will still be scope for questions and enquiry that is specific to a particular discipline.

Data will be gathered that can be used to inform future research/scholarship and inform our practice.

A project like this will allow data to be collected that can provide a baseline/picture of just where the gaps are in student learning and development across all disciplines and all phases (pre-degree, undergraduate and postgraduate degree) of study at USQ.

The Grammarly interface shows a sidebar on the left with navigation icons. At the bottom, it displays '506 WORDS', '9 CRITICAL ISSUES', '14 ADVANCED ISSUES', and a 'SCORE: 68' badge.

The 'Passive voice' panel on the right contains the following text:

**Passive voice**

This sentence appears to be written in the passive voice. Consider writing in the active voice.

Passive voice is not a grammatical error, but a style choice. In general, active voice is the preferred style of most readers. With the active voice, the subject performs the action. This style can provide more clarity, brevity, responsibility, or certainty than passive voice. If the active voice makes sense, use it.

Passive: *The mayor **was informed** of the accounting errors.*

Active: *Mr. Jones **informed** the mayor of the accounting errors. (adds clarity)*

Active: *The mayor **was aware** of the accounting errors. (adds responsibility)*

In the passive voice, the actions are performed upon the subject by someone or something else. When the subject is more important than the actor, the passive voice is a useful style.

Passive: *The graduated cylinder **was filled** with 750 ml of the solution. (no actor)*

At the bottom of the panel are buttons for 'LESS', 'THIS IS HELPFUL', and 'IGNORE'.

## Overused word

The screenshot shows the Grammarly web interface. The main text area contains the following paragraphs:

Tasks can be shared rather than each of us doing similar things or duplicating work.

Standard questions can be developed to ensure that the data collected is comparable across disciplines.

If necessary, there will still be scope for questions and enquiry that is specific to a particular discipline.

Data will be gathered that can be used to inform future research/scholarship and inform our practice.

A project like this will allow data to be collected that can provide a baseline/picture of just where the gaps are in student learning and development across all disciplines and all phases (pre-degree, undergraduate and postgraduate degree) of study at USQ.

Ethics can be done in one application.

Research design and methodology can be shared across the group.

Data collected will be less anecdotal and more robust/reliable.

We may be able to access additional personnel to support certain aspects of the project.

I have set up an area in Slack for further discussion around this idea.

Amelia is currently setting up a new Slack channel that we will move to in the future but in the interests of time can I ask that you use the current SLD channel?

The sidebar on the right shows several suggestions:

- Passive voice
- enquiry → inquiry
- Overused word: specific**  
The word *specific* is often overused. Consider using a more specific synonym to improve the sharpness of your writing.  
**peculiar**
- Passive voice
- Passive voice
- Passive voice
- Passive voice
- Repetitive word: setting

At the bottom of the sidebar, it shows: 9 CRITICAL ISSUES, 14 ADVANCED ISSUES, and a SCORE: 68.

## Sentence fragment

The screenshot shows the Grammarly web interface. The document text is as follows:

Do you see any potential problems or issues with this model?  
What do you think can be done to add efficiencies that will save us time when undertaking needs analysis?  
Should we consider applying for additional funding? e.g. applying for an ALL research/resource development grant?  
If you could please provide your thoughts and feedback by 7 March 2017.  
If we agree that this is a good idea we can discuss in further detail what methodological approach we might take, who might lead on certain aspects of the project etc...?

The Grammarly pop-up box titled "Sentence fragment" provides the following information:

**Sentence fragment**

This appears to be an incomplete sentence. Consider rewriting the sentence or connecting the fragment with another sentence.

A complete sentence requires a main clause, which includes a subject, a verb, and a complete thought. When one of these components is missing, the result is called a sentence fragment or incomplete sentence. To correct the problem, the fragment must be rewritten to include a main clause or joined in some way with the existing main clause of another sentence.

**Incorrect:** *I'm tired because.*  
**Correct:** *I'm tired because I stayed up late last night.*

**Incorrect:** *Smiling at the audience.*  
**Correct:** *Helen took the stage, smiling at the audience.*

**Incorrect:** *We decided. To have an adventure.*  
**Correct:** *We decided to have an adventure.*

At the bottom of the pop-up, there are buttons for "LESS", "THIS IS HELPFUL", and "IGNORE".

The bottom status bar of the Grammarly interface shows: GENERAL (DEFAULT), 506 WORDS, 9 CRITICAL ISSUES, 13 ADVANCED ISSUES, and a SCORE of 68.

## Provision of a report

Can you please insure that you...  
 comments/add comment in the...  
 this will then keep all comments...  
 SLD.  
 I would be interested to know...  
 How would this model work? ...  
 grouped together strategically...  
 to be carried out separately? ...  
 Do you see any potential pro...  
 What do you think can be do...  
 time when undertaking need...  
 Should we consider applying...  
 an ALL research/resource de...  
 If you could please provide y...  
 2017.  
 If we agree that this is a good...  
 what methodological approa...  
 certain aspects of the project

**ALERTS**  
**22**

You need to make some changes. Look out for Style and Contextual Spelling mistakes during your review.

Category	Count
<b>Contextual Spelling</b>	<b>6</b>
Mixed Dialects of English	4
Confused Words	1
Misspelled Words	1
<b>Grammar</b>	<b>2</b>
Determiner Use (a/an/the/this, etc.)	1
Faulty Subject-Verb Agreement	1
<b>Punctuation</b>	<b>1</b>
Comma Misuse within Clauses	1
<b>Sentence Structure</b>	<b>2</b>
Incomplete Sentences	2
<b>Style</b>	<b>9</b>
Passive Voice Misuse	8
Wordy Sentences	1
<b>Vocabulary enhancement</b>	<b>2</b>
Word Choice	2

[Download detailed report](#) Close

GENERAL (DEFAULT) 506 WORDS 9 CRITICAL ISSUES 13 ADVANCED ISSUES SCORE: 68

## Appendix 2

### Turnitin vs Grammarly tests – full report

The following informal trial was conducted to assess Grammarly against Turnitin in terms of their plagiarism checker features. While testing, notes on the quality of Grammarly's writing advice were also taken (Turnitin has a writing tool but USQ has not purchased it for comparison).

#### ***Student test subjects***

A sample of past students with various writing and plagiarism issues were chosen. All were from the Arts and Humanities portfolio and from various courses where high-quality essay writing/referencing is a necessary skill. This sample comprised of:

- Poor writing and deliberate student collusion that resulted in formal academic misconduct (third year) x2;
- Medium quality writing yet unintentionally severe plagiarism (first year) x2
- Domestic ESB student struggling with writing and grammar (first year)
- International student (NESB) struggling with writing and Grammar that severely impeded ideas (masters)
- High quality writing from domestic students (first year and third year) x2

#### ***Method***

Assignments were run through Grammarly's online account and a Turnitin Pseudo-class. Results were compared by analysing each report's plagiarism levels (disregarding properly-reference material and bibliographies). Each Grammarly report was also briefly analysed for type and quality of writing feedback given to the student. The following results were recorded about each test group:

#### ***Plagiarism checkers***

*Group 1 (Collusion)*. In the case of collusion, Grammarly will not pick up the work of other students (it does not seem to have a database of submitted work, just scans webpages). Turnitin should do this, if the settings are right for submitted work to be added to their databases. Grammarly also did not pick up poorly referenced text from websites (eg only 4% plagiarism score in Grammarly, 13% in Turnitin, not counting the collusion or bibliography/properly quoted sections).

*Group 2 (Unintentional plagiarism)*. With unintentional plagiarism (lifting of large sections of text directly from websites), Grammarly failed to identify any sections

in both student's work. When it did locate web sources, Grammarly highlighted only small sections of the larger text or were for irrelevant webpages that happened to use similar phrasing. Turnitin, however, gave full reports of which webpages the material came from, including other student work, websites, books.

For student A, this resulted in only 4% plagiarism being reported in Grammarly, but 39% in Turnitin, (not counting the collusion or bibliography/properly quoted sections). For student B, Grammarly improved, with 9% plagiarism compared to 21% in Turnitin. This improvement was due to Grammarly picking up the one website where most information was lifted.

*Group 3 (Domestic student, writing issues).* This domestic student had referenced correctly and both Grammarly and Turnitin came up with very little need for improvement (4% Turnitin, only 8 words with Grammarly).

*Group 4 (International NESB Student, writing issues).* Grammarly picked up no plagiarism in the student's work, and most work was properly referenced despite being picked up by Turnitin. There was some loose paraphrasing or non-cited sections that Turnitin acknowledged.

*Group 5 (High Quality Student work).* The first year student had referenced correctly throughout so Turnitin and Grammarly both reports 0% after quotes and bibliography were removed. The Third year student received 0% for Grammarly but Turnitin highlighted some insubstantial loose paraphrasing.

### ***Plagiarism checker findings***

In essence, Turnitin picks up too much source material and Grammarly picks up way too little. The preferable option would be to filter out the properly referenced material from Turnitin rather than not even be aware of it . The difference was striking and the results of this trial demonstrate that Grammarly should not be used for plagiarism checks.

## ***Grammarly for writing***

*Group 1 (Collusion)*. The quality of writing in these collusion cases was rough and had a lot of niggling issues in formatting and basic word choice, and Grammarly did well to pick them up. There were 68 critical issues and 54 advanced issues in one case, for example, but most were small issues with full stops, capitalisation and long sentences. It would be helpful advice to quickly accept such changes, but the overall quality of the work would not be overly improved and not much would be learnt.

*Group 2 (Unintentional plagiarism)*. Student A's work was already ok in writing due to so much lifting of material. Grammarly mainly picked up s/z issues, wordiness, unusual words choice and passive voice. Would only assist the student in fine-tuning the essay. Student B had many more errors in writing that Grammarly assisted with, including dangling modifiers and incorrectly-placed prepositions.

*Group 3 (Domestic student, writing issues)*. For the domestic student with low writing skills/confidence, Grammarly also gave a lot of feedback, largely on passive voice, repetition, unclear antecedents and use of 'has/had'. Once again the student could make use of this feedback to iron out small issues, but there was no concrete advice for larger issues of sentence structure.

*Group 4 (International NESB Student, writing issues)*. I thought that the most benefit in using Grammarly would be for the NESB student, and to an extent this was correct. The work was riddled with issues (to the point of being incomprehensible), and Grammarly gave a lot of advice in fixing the essay. However, advice was limited to adding missing articles (the, an) giving advice on repetitive words, hyphenated words, capitalisation etc. It did not address any structural issues above passive voice, which this student actually needed (eg sentence structure, logic). It would be useful perhaps for those NESB students who just need to polish and check such small issues, rather than teach them how to write, but not so different from MS Word.

The explanations for the rules sets it apart from MS Word checks (which assume the student knows what is wrong, but for a NESB student, they could be hard to understand without guidance).

*Group 5 (High Quality Student work)*. Surprisingly Grammarly did pick up quite a few small issues with the work of top students. These were all the usual comments about overused words and passive voice, but sometimes also suggesting replacement words that were obviously incorrect (e.g. replacing 'suburban women' with 'rural women' as a synonym).

## ***Writing findings***

Overall Grammarly could be a beneficial tool for those wanting to quickly fix a range of small errors and polish their essays. It was quite simplistic in the type of errors uncovered, and while better than MS word, did not really seem to improve the student's work rather than superficial changes. Grammarly is therefore only useful as a small-scale Grammar checker. It will not cover larger issues in student writing that often are linked to poor grammar, such as poor sentence/paragraph structure or planning of ideas.

## ***Other considerations***

- The add-on to MS word forces the student to disable the 'undo' function on their essay. This means that most students who wish to use undo would only enable Grammarly at the end, as a check rather than a 'learn-as-you-write' tool. This may mean that students do not learn, but instead fall back on it as a check and simply accept the changes without learning the rules.
- The suggestions do seem to be sometimes incorrect and misleading, and could hinder assignments unless the student does adequately go through the suggestions and accept/reject (as they should anyway).
- The online and word versions do not seem to allow staff to upload a document then download a checked version (e.g. if we wanted a small group of staff to have access to run work through rather than purchase full accounts). Students must work through the changes in their Grammarly account before downloading an amended version instead.