

2023 Premier’s English Teachers Association English Scholarship

Tech To Teach

Strategies to Teach Writing Through Technology

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# Introduction

In 2006, Ruben R. Puentedura presented the SAMR (Substitution – Augmentation – Modification - Redefinition) Model for technology integration in the classroom[[1]](#footnote-1). The model suggests that technology can be implemented on one of four levels; Substitution, Augmentation, Modification and Redefinition. While any implementation of technology in classrooms is beneficial for students, to properly prepare them for the modern world, it is essential that we are using tech as more than merely enhancements, but as a transformative tool. This is particularly important when engaging in the teaching and learning of writing where both creativity and technical accuracy are mutually important.

The following report is not an outline of WHY the implementation of technology is important, though I do aim to explain that too, but it is a guide to help English teachers build their capacity to effectively teach writing skills using technology. It is a collection of practical activities that staff can implement at all levels of the model, thus assisting staff to not only engage at the level of the model suitable to them but also move through the levels of the model supported by tried and tested activities. The intent is to help teachers become comfortable with each level of the model and steadily move through the levels at their own pace. The outcome is that students will ultimately be better able to compose powerful texts in a range of text types.

# Focus of Study

The Gonski Institute’s [Growing Up Digital](https://www.gie.unsw.edu.au/GUDAustralia) Report suggests that 94% of teenagers, 67% of primary school-aged, 36% of pre-school have their own device[[2]](#footnote-2). Phase One of the research demonstrated that 43% of teachers believe that digital technologies enhance their teaching and learning and activities[[3]](#footnote-3). Phase Two of the research unsurprisingly revealed that as a result of COVID-19 and the subsequent blended learning that took place, 53% of parents changed the way they viewed technology[[4]](#footnote-4). With this in mind, teachers need to utilize technology to develop the skills of our students. However, not all teachers may feel comfortable with this ever-changing pedagogy. The focus of this study was to develop a strategy guide, outlining a variety of practical activities that teachers can use in their own classrooms.

To refine the research, it was important to determine a focus area within the English curriculum. With NAPLAN Data suggesting that student writing skills are declining[[5]](#footnote-5), it makes sense to target writing as an area in need of improvement. As Clare Dowdall posited, “literacy, text and communication are melding to such an extent that the act of text production can be viewed as a by-product of social networking, where the act of creating a text is driven as much by social and technological mastery as the ability to be functionally literate.”[[6]](#footnote-6) With this in mind, the research sought to survey English Teachers around the country to discover their most effective activities with a focus on improving student literacy and creativity. The following are a series of student tested activities that have led to an increased understanding of textual construction, accuracy, and creativity across a range of imaginative, discursive and persuasive text types.

To allow the research to appeal to the widest possible array of staff, I ensured that I surveyed schools from differing socio-economic and cultural backgrounds, including a mixture of government and independent schools. The schools I attended also had differing access to technology, including schools with fully developed Bring Your Own Device (BYOD) programs, schools with financially limited access to technology and schools in remote and regional areas. Further to this, by categorizing these activities using the SAMR Model, educators can enter the teaching and learning process at a level they are comfortable with and, ideally, progress to more transformative strategies as their confidence increases.

Through the implementation of increasingly complex technologies in English classrooms, I hope to see a rise in student writing capabilities and, ultimately, their ability to engage with modern technologies in a meaningful way.

# Significant Learning

## The following is an outline of the most common strategies identified during my research. While some of these activities have been included directly as they were explained to me, most are the culmination of many similar activities, categorised based on the SAMR Model. Teachers are encouraged to access activities at the level they are most comfortable with, then slowly move up the scale as their confidence grows.

## Substitution

### Activity 1 – Flipped Learning / Instructional Videos

Instructional videos can be created using a number of different technologies, however, the most effective implementation of this strategy seems to come when the videos are created using screen capture technologies including Zoom, Loom and Microsoft Teams. By recording the screen, teachers can effectively model the writing process, giving them step-by-step instructions in composing texts or parts of texts.

While similar activities can be done in person, the instructional video presents two main benefits. Firstly, it offers students a much closer view of the modelling process as collective whiteboard is exchanged for individual device. Perhaps more importantly, instructional videos allow students the opportunity to engage with the instructions at their own pace. Being able to re-wind and pause the instructions allows students to develop a deeper understanding of the task and means they can complete the steps simultaneously with the instructions without fear of missing the next step. It also means that students can re-watch the instructions repeatedly until they are confident in their understanding, and has the added benefit of being accessible to them whenever and wherever they need it.

### Activity 2 – Online Readers

A common issue that students face when writing is an inability to identify their own errors. This seems especially prominent when discussing lexical choice and phrasing. The most common piece of advice teachers give to these students is to “read it aloud”, however, it is not always possible to have someone read a piece of writing aloud for a student. In these circumstances, online readers like OneNote and [Synthesia](http://www.synthesia.io/) are a viable substitution. Students input their written work, and the program reads it back to them. They are able to hear the intonation of their writing and identify any grammatical, lexical, and tonal issues which may have been hidden in the written text.

**Activity 3 – Digital Picture Books**

The creation of picture books is a fundamental part of the writing process. It assists students in the development of plot, character, and symbolism and can often be a part of the comprehension and reinvention process too. However, not all students are artistically minded so substituting manual drawing for digital counterparts like Canva ensures all students can effectively participate. If you want students to develop creativity even further, use a device with a camera to have students take the photographs that will be used as the pictures in their book.

**Activity 4 – Online Editing**

While the use of digital word processors to replace handwriting is hardly new or innovative, the development of the technology does mean that there are a number of useful tools that can elevate the word processor experience making it more effective than traditional writing strategies. Most notably, the use of comments or annotations on live documents like Google Docs allows teachers to provide specific, detailed, and immediate feedback. The feedback is linked to specific words, sentences etc, and can be as long or as short as needed. Students can also respond to these comments. This has two key benefits:

1. Students can reply with questions of clarification on specific feedback points. This ensures students have fully understood your feedback and can apply it effectively to improve their writing.
2. Students can reply to a comment with their intended edit. This means that you, as the teacher, can ensure that students have effectively understood how to rectify their errors before they apply the change to their work. Finally, by using a live document, students are able to receive the feedback immediately, meaning students can apply feedback to improve their writing, without having to wait until they next see that teacher.

## Augmentation

### Activity 5 – Collaborative Writing

There are several online word processors that you can use in class to facilitate collaborative writing. The simplest and most popular in my research were Canvas, Microsoft Teams and Google Docs. These online word processors allow multiple people to contribute to one document simultaneously. Students are, therefore, able to write collective responses simultaneously composing and editing each other’s work. Not only does this facilitate the collaborative process effectively, but it also improves the quality of all students writing as they contribute to the peer editing process.

### Activity 6 – Playing With Structure

When trying to develop students’ creativity and writing skills, it is essential that students are developing an understanding of various writing structures. There are several ways that this can done in the classroom.

#### Word Processors

To effectively utilise a word processor for this activity, students need to write their piece in carefully constructed chunks based on the structural elements of their chose text type. For example, if students are composing narratives, you would have them write an orientation, then the rising action etc. all individually. Students are then able to cut and paste the different sections in various orders to experiment with differing structural types. For example, if you want students to play with cyclical structure, they can copy different sections and paste it at the start of the story to demonstrate how differing structures can impact audiences differently.

#### Comic Creator

A similar activity can be done with comic strip creators. Students create a series of frames using a comic creator like StoryBoard That. While many of these apps will require a subscription, some allow you to create a short strip without any sign-up. Using this firstly requires students to break their story into clearly defined parts, then allows them to rearrange these elements to see how the story can be manipulated by experimenting with structure.

### Activity 7 – AI Writing Tools

The invention of AI has proved quite concerning for education. In fact, 54.5% of schools suggested that AI Writing Tools (like ChatGPT) are currently a concern for them. However, this does not have to be the case. Some schools are beginning to experiment with ways that they can use Artificial Intelligence Sites to improve students writing. The following are the three of the most discussed strategies:

#### Developing Questions

Students are given a topic that they need to compose a response to. They need to consider exactly what questions they need to ask the AI to generate the desired response. Once a response has been created, students need to develop a new set of instructions to assist the AI to refine the work. This process is repeated as many times as necessary until the AI has composed a response which effectively meets the task criteria. While this may sound like a counter-productive process, the goal is to start getting students to think about what a writing task is actually asking them to do. It forces students to break a task down to its most fundamental elements to provide the AI with the necessary instructions. They also need to work with the marking criteria to ensure the final product meets the requirements. This activity was found most effective when followed up with students having to replicate the planning process before writing their own response to a task.

#### AI Editing

A response is created using AI. Students are required to read the response and identify the key issues with the piece. This is particularly effective when trying to develop students understanding of personal voice. Students can be instructed to develop the pre-written response to improve the quality of the response. Here students do not have to consider the content of the response, so the core focus is the development of the actual writing skill. Students must consider phrasing, structure, detail etc. to ensure that their final piece is as effective as possible.

#### Collaborative Writing

The idea of collaboratively writing with AI may seem strange, but many teachers are having great success using this activity to teach younger students how to develop expression, structure, and plot. Students are given a topic. They write the opening paragraph, then the AI writes the second paragraph and so on. Alternatively, students can write the first paragraph and then AI writes the first paragraph of the same story. Then both write the second paragraph etc. Either way, students can see the similarities and differences between their work and the AI response, however unlike in the editing activity, students are given the opportunity to continually alter and improve their work in line with the model response being created live by the AI. In my own experience, this has helped students to identify effective phrasing of ideas and to improve their use of description to effectively engage readers in the creative writing process.

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| --- | --- |
| **View of AI** | **Percentage of Schools Surveyed** |
| Problem | 54.45% |
| Benefit | 9.09% |
| Not an issue yet | 36.36% |

### Activity 8 – Image Creators to Develop Description

One of the benefits of AI has been the creation of Image Creators like [DALL-E2](https://openai.com/dall-e-2). These sites require you to type in a written description of the image you want it to create and then it generates the image for you. When teaching creative writing, these sites can allow students to develop an understanding of the importance of describing effectively and in detail. Students are asked to picture a scene, then describe it in writing. They type this into the generator and see what it comes up with. This allows students to judge the specificity of their description based on the accuracy of the image created. Students repeat this process until the AI is able to generate an image accurate to the one they imagined. This activity can be differentiated by giving students an image they have to try and get the AI to recreate, closest student wins.

## Modification

### Activity 9 – Virtual and Augmented Reality

The use of virtual reality (VR) and augmented reality (AR) devices has been noted for its success in many faculty areas. The immersive nature of the technology allows students to undergo experiences that would be otherwise impossible. In English, this is particularly useful when attempting to develop students’ creativity and use of description. One activity that has proved particularly useful requires students to use this technology to immerse themselves in the setting they are writing about. It allows students to have a real-world understanding of the environment they are describing making it easier for them to give effective descriptions. Sites like [360 Cities](https://www.360cities.net/) allow users to get a panoramic view of an environment. YouTube, tourism websites and other online platforms include 360 videos which can be used to create a VR or AR experience. After completing this activity, students are able to use the description written to help improve other description tasks where no AR or VR was available, proving that this activity can, in fact, improve fundamental describing skills. An interesting twist on this activity is to use apps like the [AR IKEA Catalogue](https://www.ikea.com/au/en/customer-service/mobile-apps/say-hej-to-ikea-place-pub1f8af050) to allow students to develop this same skill for more simplistic environments.

### Activity 10 – Talk to Text

Talk-to-text is a simple concept, as you talk, the technology listens and generates a transcript of what you are saying. While many paid services were recommended to me, including [Dragon](https://www.nuance.com/en-au/dragon/business-solutions/dragon-professional-anywhere.html), guaranteeing high-quality dictation, there are also plenty of free, easily accessible apps and sites that allow students to use this technology regardless of the school context. In fact, every person who owns an iPad, Mac or iPhone has an effective text-to-talk function embedded into the Notes App.

There are two core benefits of talk-to-text. The first is in the teaching of the stream of consciousness writing, especially discursive writing. By allowing students to talk and record their ideas, students are better able to see how ideas can be fluid. The activity requires students to talk (either individually or in small groups) about a particular topic using the talk-to-text function. They then review the transcript to identify core ideas and shape the discussion into a more formal structure. Upon completing this activity with my own students, I saw a significant improvement in their ability to write discursively without the app. In fact, many students requested an opportunity to use talk-to-text for all extended writing tasks in future as they felt it facilitated their thinking and analysis.

This leads to the second core benefit of talk to text; accessibility. Students who feel unconfident about writing, including those with disabilities or alternate language backgrounds, are often hesitant to put pen to paper. Furthermore, students with perfectionist tendencies will often be hesitant to begin the writing process. By having students use a talk-to-text function, they can process thoughts more organically leading to less hesitation in writing.

## Redefinition

### Activity 11 – Digital Stories

The pioneer of digital storytelling, Dana Atchley, said “…digital storytelling combines the best of two worlds: the "new world" of digitised video, photography and art, and the "old world" of telling stories.”[[7]](#footnote-7) Much like digital essays, the way these stories are actually developed in classrooms is dependent upon the individual teacher, however the commonalities include the use of images, film, music and text to covey what would once have exclusively told in text form. While many online sites exist to create these stories, most teachers opted for simple, cheap (if not free) services, the most popular being IMovie, Powerpoint and Adobe Spark. What makes this activity so effective is its adaptability. Teachers who want to focus on improving students understanding of tone and mood, required students to consider symbolic music or colours. Teachers wanting to focus on plot allow students to move clips of footage around so they are seeing how the plot works in different structural types. Even when the focus is physical text writing, teachers have been able to manipulate this activity, so students are given the multimedia components of the story and have to write the description, or are given a silent film and have to write the dialogue to go with it.

# Conclusion

The activities I have listed here are by no means the only ways that you can embed technology into teaching writing. Rather, I hope that they serve as a starting point for teachers to generate their own activities based on the requirements of their students. I encourage all English teachers to consider where their practice sits on the SAMR scale and consider ways they could implement more radical technological enhancements. For less confident teachers, the activities here are an opportunity to begin the implementation of technology in ways that have proven success. Once confident in these activities, teachers should consider combining activities to address more specific requirements.

Visiting schools around Australia gave me a unique insight into the pedagogy being used in classrooms nationwide. One of the biggest things that I took from the experience is that many teachers want to use technology in their teaching practice, but they are unsure how to use it in a way which provides meaningful learning opportunities for students. It is also worth noting that many teachers are, in fact, using effective technologies but because of their substitutive nature, they fail to see the impact on students. It is important for teachers to continue building confidence in technology use, only then will we see the necessary inclusion of the more modified and redefined activities which are essential to properly prepare students for the technologically rich world they will be writing in when they leave school.

# Acknowledgements

Thank you to all the schools that participated in my research.

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3. [Growing Up Digital Australia: Phase 1 Technical Report](https://www.gie.unsw.edu.au/sites/default/files/documents/UNSW%20GIE%20GUD%20Phase%201%20Technical%20Report%20MAR20%20v2.pdf), page 19 [↑](#footnote-ref-3)
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7. https://www.uow.edu.au/student/learning-co-op/assessments/digital-storytelling/ [↑](#footnote-ref-7)