
Digital Tools and Strategies to Improve Writing

Have you ever stared at a blank page wondering where to begin on a writing assignment?

For many students, starting a writing task can be intimidating. Writing involves implementing a complex process that presents students with various challenges. Some common challenges are presented below:

Common Student Challenges Related to Writing	
<ul style="list-style-type: none">● Generating ideas● Organising ideas	<ul style="list-style-type: none">● Drafting a piece of writing● Mechanics of writing

Universal Design for Learning (UDL) advocates for learners to have the opportunity to use a variety of tools during the learning process. This document examines the phases of the writing process, presents various digital tools and strategies that can support students in each phase, and connects them to UDL checkpoints.

Phases of the Writing Process

Pre-writing <ul style="list-style-type: none">● Generating Ideas● Organising ideas	During Writing <ul style="list-style-type: none">● Drafting	Post-Writing <ul style="list-style-type: none">● Revising● Editing
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Digital Tools for Pre-writing Brainstorming, Planning and Organising			
Tool	What it does	Examples	UDL Connection
Graphic Organiser in Digital Form	<ul style="list-style-type: none">● Develop ideas visually● Organise and categorise ideas● Can add images, handwriting and audio● Can use prior to outlining	<ul style="list-style-type: none">● Ed Tech Toolkit List of Digital Graphic Organizers	3.3 Guide information processing, visualisation, and manipulation 5.2 Use multiple tools for construction and composition
Mind/Concept Maps	<ul style="list-style-type: none">● Provides a structure to identify, organise and develop a topic● Connects information loosely● Concept maps can be used for a variety of purposes, so it's not an isolated skill	<ul style="list-style-type: none">● Jamboard	3.3 Guide information processing, visualisation, and manipulation 5.2 Use multiple tools for construction and composition

Word Prediction	<ul style="list-style-type: none"> Provides a list of words to choose from when you type in a few characters 	<ul style="list-style-type: none"> Read and Write (Teacher registration unlocks premium features for free) 	<p>4.2 Optimise access to tools and assistive technologies</p> <p>5.2 Use multiple tools for construction and composition</p>
Speech Recognition	<ul style="list-style-type: none"> Converts the spoken word into text Helpful for students who struggle with the mechanics of writing or those who are more comfortable with speaking 	<ul style="list-style-type: none"> Built-in in just about every modern operating system Speech to Text Chrome Speak It Read and Write 	<p>5.2 Use multiple tools for construction and composition</p> <p>4.1 Vary the methods for response and navigation</p>
Multimedia Tools	<ul style="list-style-type: none"> Students can produce writing in environments that connect photos with text. This can be a powerful scaffold for students, because the image can be a prompt for generating words or ideas Teachers can give students an environment in which they can write words and sentences and combine text with photos (and audio and video) 	<ul style="list-style-type: none"> Google Slides UDL Book Builder BookCreator 	<p>3.3 Guide information processing, visualisation, and manipulation.</p> <p>5.2 Use multiple tools for construction and composition</p> <p>5.3 Build fluencies with graduated levels of support for practice and performance</p> <p>3.4 Maximize transfer and generalisation</p>

During Writing Phase:
Drafting

Type of Tool	What does it do	Examples of Digital Tools	UDL Connection
Timer	<ul style="list-style-type: none"> Tracks how long you write for. Use a timer to sustain focus During breaks do something enjoyable BUT minimize attention residue (i.e. do exercise, not play video games or engage in heated conversations) 	<ul style="list-style-type: none"> Be Focused 	<p>6.4 Enhance capacity for monitoring progress</p> <p>4.2 Optimise access to tools and assistive technologies</p> <p>7.3 Minimise threats and distractions</p>
Word Prediction	<ul style="list-style-type: none"> As the student writes, he or she receives a possible list of words that they could be typing, and likely words that would follow 	<ul style="list-style-type: none"> Built into iPad onscreen keyboard Available on Read and Write Keyboard (for tablets) and Chrome extension 	<p>4.2 Optimise access to tools and assistive technologies</p> <p>5.2 Use multiple tools for construction and composition</p>
Speech to Text (STT)/ Speech Recognition(SR)	<ul style="list-style-type: none"> Converts the spoken word into text Helpful for students who struggle with the mechanics of writing or those who are more comfortable speaking 	<ul style="list-style-type: none"> iPad Dictation Voice Recognition Speak It 	<p>5.2 Use multiple tools for construction and composition</p> <p>4.1 Vary the methods for response and navigation</p>

Digital Tools for Post Writing

Revising and Editing

Tool	What it does	Examples	UDL Connection
Thesaurus and Dictionary (Integrated)	<ul style="list-style-type: none"> During the revision process, it allows you to quickly find and replace a word with a similar word. Good for finding more relevant, interesting or alternative words, if using a particular word is being used frequently 	<ul style="list-style-type: none"> Integrated in Grammarly Keyboard (iPad) Add-on in Google Docs or Chrome Extension (Computer). 	<p>4.2 Optimise access to tools and assistive technologies</p> <p>5.2 Use multiple tools for construction and composition</p>
Spelling & Grammar Checkers	<ul style="list-style-type: none"> Checks spelling, capitalisation, grammar, passive voice, sentence structure, subject-verb agreement 	<ul style="list-style-type: none"> Grammarly (Chrome extension) (Watch a short video of a teacher using Grammarly) Ginger Grammar Checker Read and Write (Teacher registration unlocks premium features for free) <ul style="list-style-type: none"> Use as Chrome Extension on Computer Use as an Add-on Keyboard for iPad 	<p>4.2 Optimise access to tools and assistive technologies</p> <p>5.2 Use multiple tools for construction and composition</p>
Text to Speech	<ul style="list-style-type: none"> Read text aloud. Good for proofreading during revision and editing stages of the writing process 	<ul style="list-style-type: none"> Read and Write 	<p>1.3 Offer alternatives for visual information</p> <p>4.2 Optimise access to tools and assistive technologies</p>

Strategies to Aid During The Writing Process

Strategy	What it does	UDL Connection
Discuss the Purpose of the Writing Task	<ul style="list-style-type: none"> Students are engaged by information and activities that are relevant and valuable to their interests and goals. To sustain effort and concentration in the face of distractions. To remind students of the goal and its value. Generate relevant examples that connect to their cultural background and interests. 	<p>7.2 Optimise relevance, value, and authenticity</p> <p>8.1 Heighten salience of goals and objectives</p> <p>9.1 Promote expectations and beliefs that optimise motivation</p>
Menu of Options for the Topic	<ul style="list-style-type: none"> Can help students to think about and process information when talking and transfer that information from the mind to the paper easily. 	<p>7.2 Optimise relevance, value, and authenticity</p> <p>8.3 Foster collaboration and communication</p>
Talk with a Partner before Writing	<ul style="list-style-type: none"> Can help students to think about and process information when talking and transfer that information from the mind to the paper easily. 	<p>7.2 Optimise relevance, value, and authenticity</p> <p>8.3 Foster collaboration and communication</p>
Create Checklist of Tasks Required for the Assessment	<ul style="list-style-type: none"> Allows students to look at the concrete steps they need to take in order to finish their project. They can check them off as they complete them. 	<ul style="list-style-type: none"> 6.4 Enhance capacity for monitoring progress 3.3 Guide information processing, visualisation, and manipulation
Use Sentence Starters or Frames	<ul style="list-style-type: none"> These help students see what types of sentences are expected and provide scaffolding for the language. 	<ul style="list-style-type: none"> 3.3 Guide information processing, visualisation, and manipulation. 5.3 Build fluencies with graduated levels of support for practice and performance
Provide an Authentic Model of the Completed	<ul style="list-style-type: none"> Provide multiple authentic examples of the final product that students are being asked to complete. 	<ul style="list-style-type: none"> 3.3 Guide information processing, visualisation, and manipulation.

Deliverable		<ul style="list-style-type: none"> 5.3 Build fluencies with graduated levels of support for practice and performance
View Demonstration of Task Completion	<ul style="list-style-type: none"> Complete the task in the presence of students in a demonstration. Offer a video showing how to complete the task for a later reference. 	<ul style="list-style-type: none"> 3.3 Guide information processing, visualisation, and manipulation. 6.4 Enhance capacity for monitoring progress
Guided Practice	<ul style="list-style-type: none"> Guide students to complete a part of the particular task on their own. 	<ul style="list-style-type: none"> 3.3 Guide information processing, visualization, and manipulation. 5.3 Build fluencies with graduated levels of support for practice and performance
Teach Concepts of Grit and Growth Mindset	<ul style="list-style-type: none"> A growth mindset – how intelligence and abilities can be developed through effort. Writing can be improved through focus and time, hard work and perseverance (grit). This helps with sustaining attention and persistence with challenging projects that have multiple components and last multiple class periods. 	<ul style="list-style-type: none"> 7.2 Optimise relevance, value, and authenticity 8.1 Heighten salience of goals and objectives 9.1 Promote expectations and beliefs that optimise motivation
Provide a Structured Workspace	<ul style="list-style-type: none"> Create a familiar and supportive classroom climate. Charts, calendars, schedules, visible timers, cues can increase the structure of daily activities and transitions. Vary the level of sensory stimulation. Vary the social demands required for learning or performance. 	<ul style="list-style-type: none"> 3.3 Guide information processing, visualisation, and manipulation. 7.3 Minimise threats and distractions 6.2 - Support planning and strategy development
Individual Conferencing	<ul style="list-style-type: none"> Communicate one-to-one with students to help them in their progress. 	<ul style="list-style-type: none"> 5.3 Build fluencies with graduated levels of support for practice and performance
Small Group Instruction	<ul style="list-style-type: none"> Communicate with students in a small group who may need reinforcement. 	<ul style="list-style-type: none"> 5.3 Build fluencies with graduated levels of support for practice and performance
Provide Independent Space	<ul style="list-style-type: none"> Working near other known people is more likely to result in distractions and disruptive scenarios. Find a peaceful, self-selected, and somewhat isolated space. 	<ul style="list-style-type: none"> 3.3 Guide information processing, visualisation, and manipulation.

		<ul style="list-style-type: none"> 7.3 Minimise threats and distractions
Extended Time	<ul style="list-style-type: none"> Students could set their own incremental deadlines as long as they could complete the project by the final due date. This allows students to take multiple breaks as needed in order to complete the task. 	<ul style="list-style-type: none"> 4.1 Vary the methods for response and navigation 7.1 Optimise individual choice and autonomy
Highlight Key Vocabulary Words	<ul style="list-style-type: none"> Pre-teach vocabulary, especially in ways that promote connection with the learners' experience and prior knowledge. 	<ul style="list-style-type: none"> 2.1 Clarify vocabulary and symbols
Use Videos as Writing Prompts instead of Reading	<ul style="list-style-type: none"> Text is a particularly weak form of presentation for learners who have text- or language-related disabilities. Providing alternatives — especially illustrations, simulations, images or interactive graphics — can make the information in text more comprehensible for any learner and accessible for some who would find it completely inaccessible in text. 	<ul style="list-style-type: none"> 2.5 Illustrate through multiple media
Landing Page of Resources for a Project	<ul style="list-style-type: none"> This is a web page, sometimes a public Google Doc, with a number of links to resources available to help with the project. Links include items such as video demonstrations or explanations, curated articles for research. 	6.3 Facilitate managing information and resources
Collaborative Editing	<ul style="list-style-type: none"> Google Docs allows for easy sharing of documents for commenting and suggesting, with a number of links to resources available to help with the project. 	8.3 Foster collaboration and communication
Customise Writing Environment	<ul style="list-style-type: none"> Change text size, font, color, spacing, and margins. Change background colour, highlight colour, etc. Voice Dream Writer App (iPad) Google Docs with Chrome (Mac) 	<ul style="list-style-type: none"> 1.1 Offer ways of customising the display of information 4.2 Optimise access to tools and assistive technologies 7.1 Optimise individual choice and autonomy