VIA AFRIKA DIGITAL EDUCATION ACADEMY

Using your laptop to make a real difference in your teaching

SESSION 5

Making it work with JUST ONE LAPTOP

CLASS NOTES

basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

In partnership with the Department of Basic Education.

Via Afrika

Our Teachers. Our Future.

Course content

Using your laptop to make a real difference in your teaching

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Session 5: Making it work with JUST ONE LAPTOP

Class Notes

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Our Teachers. Our Future.

Please read the following important information

1. You can download and print the Class Notes for personal use, but you may not share them.
2. Once you have watched all the videos and completed all the quizzes, reflections, tasks and assessments successfully, you can download your certificate and print it.
3. If you wish to earn SACE Professional Development (PD) points for this session, you must complete all the online assessments in the session successfully. Our system will notify us of your success, and we will send the points allocation request to the South African Council for Educators (SACE).
4. Remember that devices and apps are updated all the time. The device specifications and features that you see here might differ slightly from those of the device you are using. The app features and icons that you see here might also differ slightly from the app in which you are working.

Abbreviations and terms

Bloom's Revised Taxonomy: A pedagogical framework for eLearning. [See pedagogy, See eLearning]

eLearning: Learning that is supported by, enhanced by, or facilitated through Information Communication Technologies (ICTs), and that is supported by reconsiderations of content, and a relevant pedagogy. [see ICT]

ICT: Information and communication technologies.

Pedagogy: The how and why of what we do in the classroom. The method and practice of teaching, especially as an academic subject or theoretical concept.

PedTech: Pedagogical Technology for what happens when we want to use technology in the classroom

RAT: Replace, Amplify, Transform. A pedagogical framework for eLearning. [See pedagogy, See eLearning]

SAMR: Substitution, Augmentation, Modification, Redefinition. A pedagogical framework for eLearning. [See pedagogy, See eLearning]

TPACK: Technological, Pedagogical and Content Knowledge. A pedagogical framework for eLearning. [See pedagogy, See eLearning]

Contents

Outcomes and content

Outcomes of the session

By the end of the session, the participant will be able to:

- discuss the concepts of Digital Literacy, Digital Fluency and Professional Digital Fluency
- explain the SAMR Model
- explain the TPACK Model
- apply the SAMR and TPACK Models to lesson planning and development
- identify sources of digital content for use in the digital classroom
- identify suitable digital content for use in the digital classroom
- develop audio lessons
- develop video lessons
- discuss effective ways to use a laptop as an interactive display device
- explain the flipped classroom concept
- set up and run a faux-flipped classroom
- use Microsoft's Immersive Reader in a variety of apps
- discuss ways to use a smartphone in conjunction with a laptop
- use Plickers Software effectively
- explain how to use the Microsoft Office smartphone app

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Content of the session

This session will focus on:

- definitions of Digital Literacy, Digital Fluency and Professional Digital Fluency
- the SAMR Model
- the TPACK Model
- sources of digital content for use in the digital classroom
- identifying suitable digital content for use in the digital classroom
- developing audio lessons
- developing video lessons
- discussing effective ways to use a laptop as an interactive display device
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- Plickers software
- Microsoft Office smartphone app

Overview

Welcome to **Session 5: Making it work with JUST ONE LAPTOP**. This session is about taking all the skills you have learned throughout this course into your classroom in ways that will make teaching and learning even better.

First, we will explore some key theory about how best to bring technology into the classroom in a pedagogically sound way.

Then we will talk about content that you can use now that you have a laptop and then how you can share what's on your laptop. Finally, we will talk about ways of integrating the laptop that will make your teaching easier and your learners' learning more engaging.

Throughout the session, we are assuming that the learners do not have laptops or tablet devices.

During this course – **Using your laptop to make a real difference in your teaching** – you will learn all about how to use your laptop. The course includes the following sessions.

1. Your first laptop
2. Managing files
3. Connecting to the world
4. Using a display device with your laptop
5. Making it work with JUST ONE LAPTOP

If you would like to learn more about using all the Microsoft Office Apps on your laptop as well as your mobile device, please consider enrolling for our **Microsoft 365 Course**, where you will learn all about using Microsoft Word, Excel, PowerPoint, and OneNote. Discover how to use Microsoft Teams in a teaching context in our **Teaching Online Course**.

If you have – in addition to your laptop – a Windows tablet, learn all about how to use your tablet in **Using your Windows tablet device to make a real difference in your teaching**.

If you have an Android tablet device, find out how to use it optimally in **Using your Android tablet device to make a real difference in your teaching**. Also consider enrolling for our **Google Workspace Course**, where you will study a variety of Google Apps, including Docs, Sheets, Slides, Keep and Drive.

Well done for making this investment in your professional development as a teacher and a 21st Century Citizen.

The Technology, Content and Pedagogy Mix

Your task

In simple terms, your task as a teacher is to develop Professional Digital Fluency. To understand what we mean by the term 'Professional Digital Fluency' we need to split working with technology into Information Communications Technology (ICT), and internet use with its related uses like social media.

A person with ICT Literacy can select hardware and relevant apps and knows what to do with them at a basic level. Such a person can use their laptop effectively and work with apps to create documents, process data, make presentations and save files.

A person with Internet Literacy can do things like a search on the internet, post on social media, and use a cloud service. Such a person is also aware of passwords and safety issues when they are online.

A person with ICT Fluency not only knows which hardware and apps to select and what to do with them, but can explain why they work in the way they do. They can also explain how they might adapt what they do if the context were to change. This comes with experience.

A person with Internet Fluency not only knows how to use various elements of the internet and social media, but they also have a strong understanding of the need for cybersecurity. What's more, they can evaluate critically what they find, appreciate the impact the internet has on them and the world, and know how they might adapt what they do if in a different context.

This means that these people have a firm grasp of Media Literacy and Information Literacy.

Professional Digital Fluency means having the skills, knowledge and values to take the learners from where they are to Digital Fluency. To do this, a teacher needs to have not only Digital Fluency, but Professional Digital Fluency.

A person with Professional Digital Fluency has knowledge and understanding of the theory of using technology in teaching. Furthermore, they have the knowledge and skills and they also hold values that enable them to teach the learners how to use apps to create and produce data not just how to consume it. Acknowledging the need for personal safety online, a person with Professional Digital Fluency is able to teach learners about cybersecurity. They also have the know-how to develop and select digital content and technology devices. Appreciating 21st Century Skills, the person with Professional Digital Fluency also has the knowledge and skills to teach the learners collaborative tools. In short, to have Professional Digital Fluency is to want to take learners from where they are, which is probably with little or no Digital Literacy, to Digital Fluency.

Reflection

- Consider the various skills and the knowledge and values that make up Professional Digital Literacy.
- Where would you score yourself on a scale of 1 to 5?
- What do you need to develop in more depth?

Your choice

Your choice now is that you can use your laptop in your classroom to improve your teaching and your learners' learning or you can keep the laptop locked away or use it only for administrative tasks.

If you choose not to use it for teaching, it would be understandable But, first, do consider this research about the ways in which technology is used in schools currently.

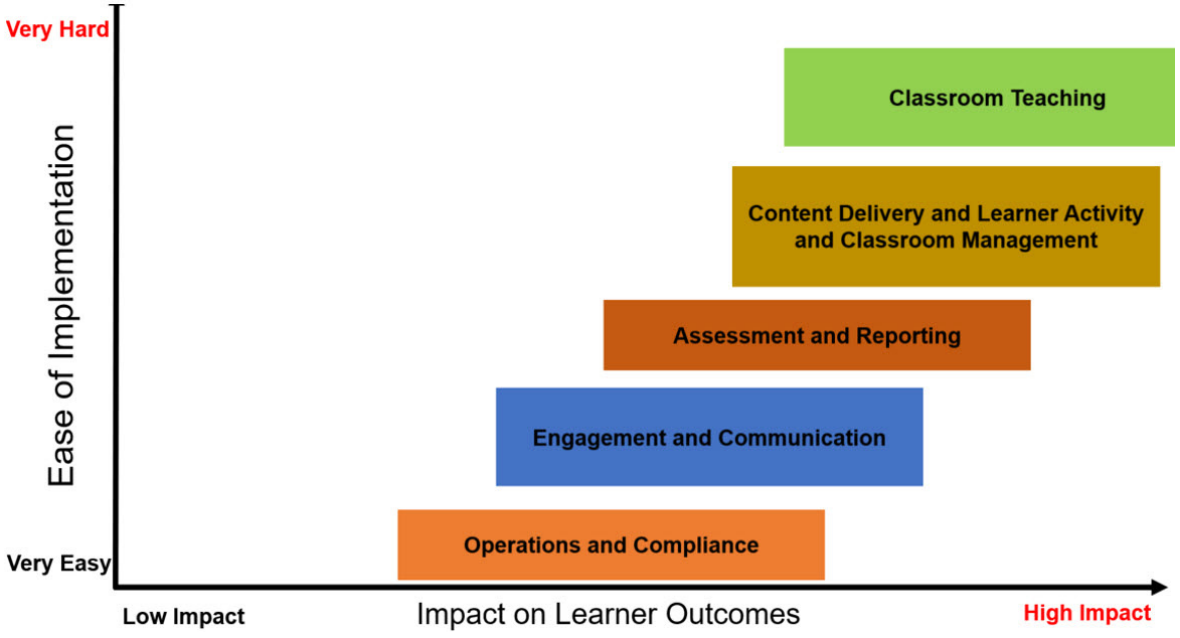
It is in operations and compliance, like school administration, that technology usually first gets used in schools. When tech does get to the classroom, it is usually used to engage the learners in using apps like Socrative, and to communicate with parents.

Teachers' most common next use of technology is to reduce the workload of assessment and reporting. The teachers who are often called 'tech-savvy' will use technology to deliver content and to manage learner activities. Few teachers use technology to actually teach.

Technology is used for	How it is used	Examples of technology used
Classroom Teaching	Skills development Enhanced content	GeoGebra, YouTube and EdPuzzle
Content Delivery, Learner Activity and Classroom Management	eBooks, Learner Management System (LMS), Office suites, Behaviour Management Systems	eBooks and reading apps like Snapplify, and LMSs like Moodle
Assessment and Reporting	Formative and Summative assessment, Learner records	Microsoft Forms and other quiz-type apps
Engagement and Communication	Learner engagement, Communication (learners and parents)	Socrative email and WhatsApp
Operations and Compliance	Administration	office suites like Microsoft Office, as well as software like ISAMS and Edupac.

The limited use of technology in teaching can be explained when one considers ease of use as a criterion. In the table above, the technology used towards the bottom of the table is easier to implement from a technological and pedagogical point of view than the technology listed at the top.

However, the more difficult the technology is to implement, the greater the impact it will have on learner outcomes. This can be seen in the diagram below.



Reflection

- In your current work environment, how much time do you spend using technology that has low impact on learner outcomes?
- Do you think this needs to be changed?
- If so, what can you do?

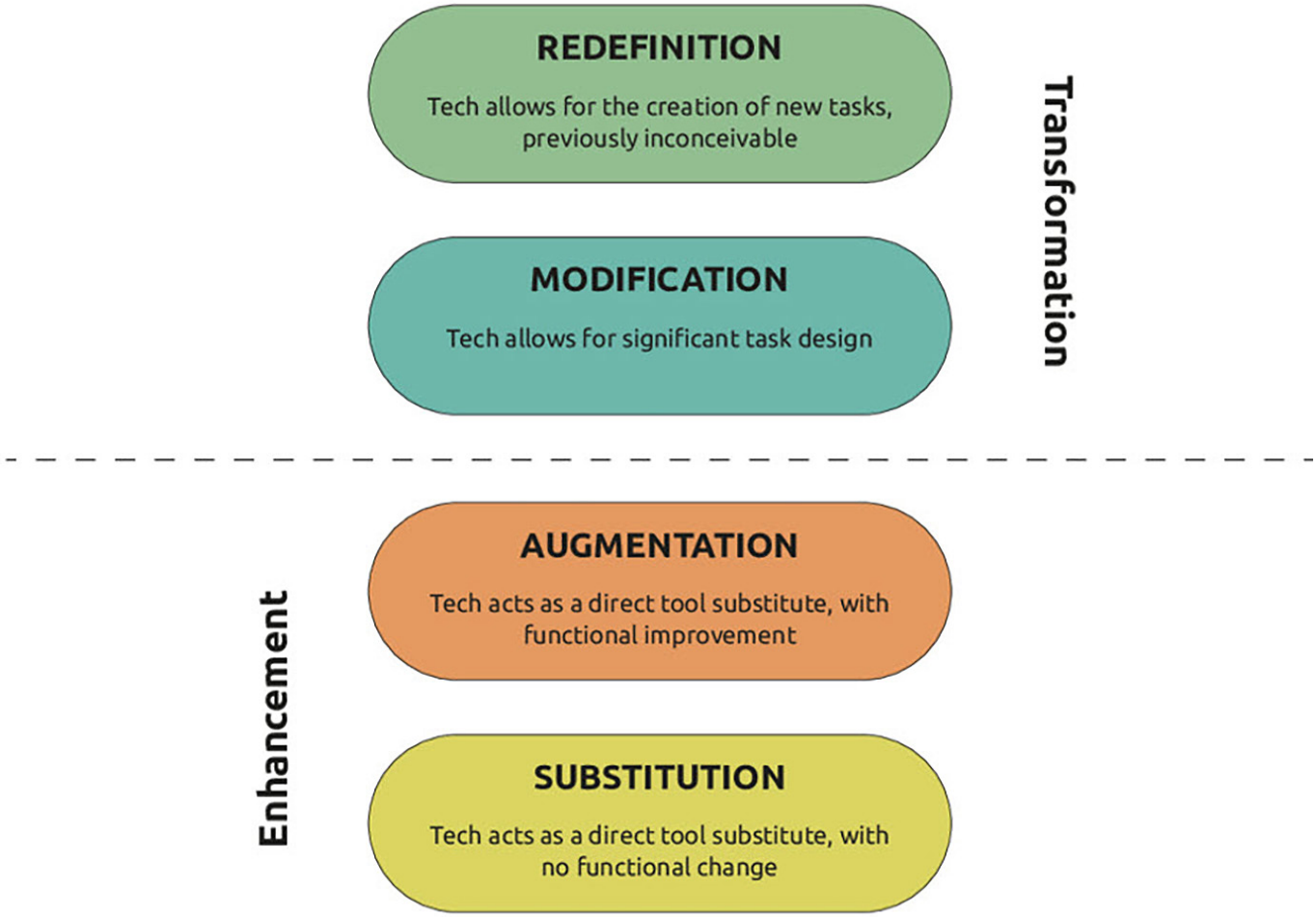
Good teachers and good education

Good education is about teaching in ways that show that a teacher:

- has a good understanding of teaching, learning, content and curriculum, and assessment
- is aware of common misconceptions and ways of helping learners with them
- appreciates the importance of making connections between new content and the learners' prior knowledge
- knows alternative inclusive teaching strategies that will reach all learners
- knows that being flexible and exploring alternative ways of looking at the same idea or problem can help reach and encourage more learners.

A teacher who is doing all these things is doing an excellent job whether they are using technology or not. But times are changing, and our learners are changing. With technology we can do more. If you are using the laptop as an administration device that is great – you are freeing up time with the efficiencies the technology allows you to spend more time in the classroom teaching. It is possible, though, to expand the technology to make the teaching and learning more powerful and more up to date.

SAMR



The SAMR model (Puentedura, 2014)

Dr Ruben Puentedura (2016) devised the SAMR model as a way to think about how technology can be integrated into classroom practice. It offers a useful way to consider how we will teach with the technology, or, in other words, the pedagogical implications of using technology.

The **S** stands for Substitution. In this case, the technology is being put in the place of a more traditional technology and does the same thing without there being any change to the activity at hand. Think about a substitute in a sports match, or an understudy in a play. They are coming on to do what the other person did. In the same way, in the classroom, reading a paper textbook – old technology – or reading an eBook – new technology – are the same thing. The technology device is simply replacing the paper book.

It is important here to start thinking about content, too. We can consider the content of the curriculum as something that is fixed and must be passed on or transmitted to learners for them to reproduce. Or we can think of content as something that can be constructed by learners to develop their own thinking and ideas about it with the guidance of a teacher. 'Here is a chunk of information I, the teacher, am giving you. Take it in and then give it back to me in a test' is what is going on. Even if the teacher used a PowerPoint presentation rather than the textbook to present the information, it would still be substitution.

The **A** stands for Augmentation. Once again, the new technology is being used in place of a traditional one, but there is an improvement to the learning experience in some way. This could be adding a video to watch, for example. It is somewhat more engaging than reading a textbook – it augments or adds to the learning experience.

Once again, augmentation leads to a chunk of information that is being transmitted for the learners to take in and give back.

The **M** stands for Modification. Rather than just enhancing the lesson with technology, technology is used to change the way in which the lesson is structured.

If a teacher gives learners a problem to solve and recommends a variety of technologies like the internet, videos, audio recordings, laptops, apps, and cameras for example, to solve the problem and then present it, the teacher can change the structure of the lesson. Knowledge is no longer being transmitted, but is being constructed. The technology has allowed the lesson to be modified.

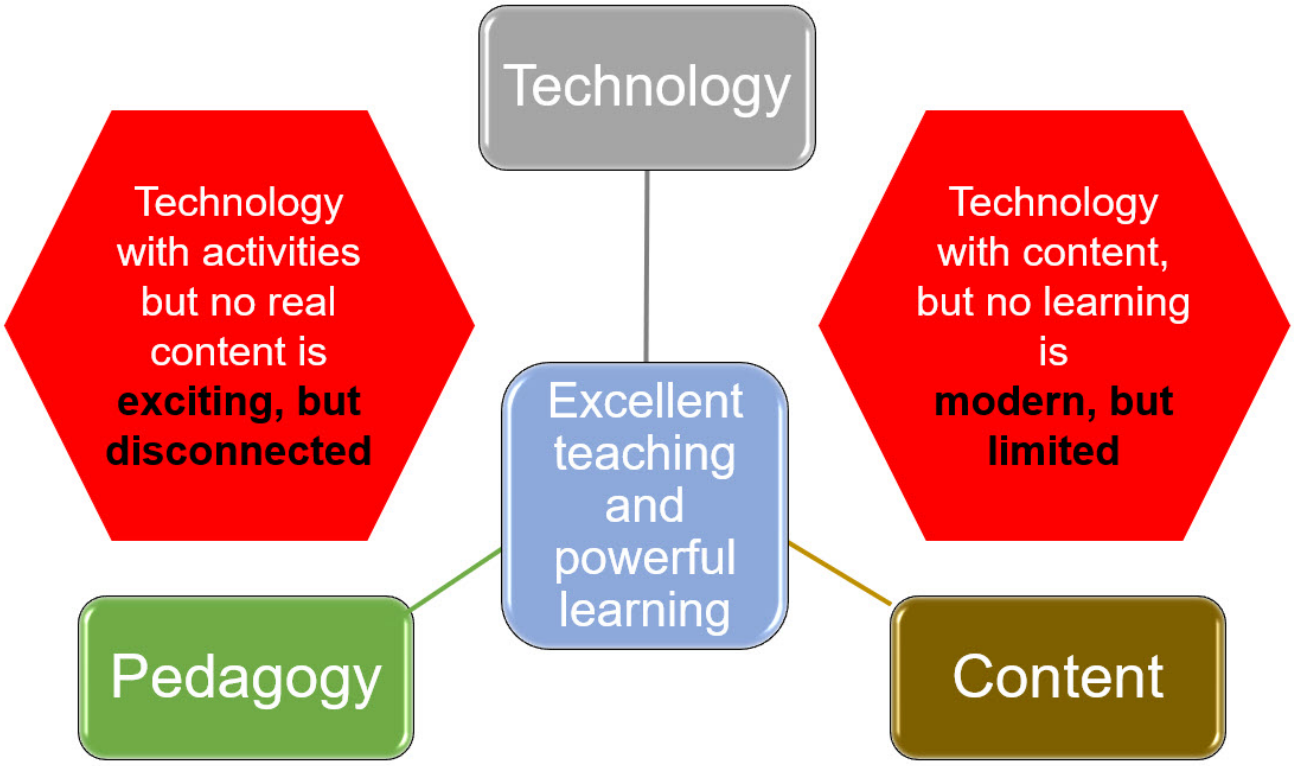
The **R** stands for Redefinition. This occurs when the teacher has redefined a traditional task in a way that could not be possible without the technology. An example would be using a video calling tool like WhatsApp video, Zoom or Microsoft Teams to link learners with researchers at overseas universities to conduct an interview for a project. This would not be possible without technology and would therefore redefine the lesson.

Professor Hughes (2006) and associates feel that the boundary between Modification and Redefinition is too blurry. And researchers Kimmons, Graham and West also argue a similar point. They argue that SAMR could be better understood as RAT: Replacement, Amplification and Transformation.

In SAMR, the first two stages are usually grouped together as Enhancement and the last two as Transformation which does support in some way the other researchers' perspectives.

It is useful to think of SAMR not as being a set of steps, each one separate from another, but rather as a spectrum from replacement of traditional tools to technology enabled experiences that can be achieved only with technology.

TPACK



In 2006, two US-based academics, Mishra and Koehler, extended the work of Shulman (1986) who worked with the notion of Pedagogical Content Knowledge.

Mishra and Koehler wanted to develop thinking about integrating technology into the classroom, and so added technology to the mix, creating TPACK: Technological Pedagogical Content Knowledge. They argue that having a sound understanding of what impact technology has on content and the pedagogical activities involved in teaching is crucial to effective digital integration.

They speak of three scenarios where only two of the three elements are connected at the same time and point out the negative consequences of this.

Pedagogical Content Knowledge: Good, but dated

Here the teacher knows the content (Content Knowledge), and they know how to teach (Pedagogical Knowledge). Pedagogical Content Knowledge is good, but dated. It is no longer responsive to the demands of the modern technological world. The integration of technology is important. Finding a way to do so effectively is key.

Technological Pedagogical Knowledge: Exciting, but disconnected teaching

Here the teacher knows how to use technology (Technological Knowledge), and they know how to teach (Pedagogical Knowledge). It is possible that they would use the technology without due consideration of the curriculum. This in effect boils down to showing off the technology. For example, this might include simply showing a video on the smartboard because they now have a flashy smartboard in their class. This is exciting for everyone, especially for the learners, but if the video is not connected effectively to the curriculum content, there is not much learning going on.

An understanding of how the technology can change teaching and learning is needed. In other words, how does one change the pedagogy to have better learning outcomes?

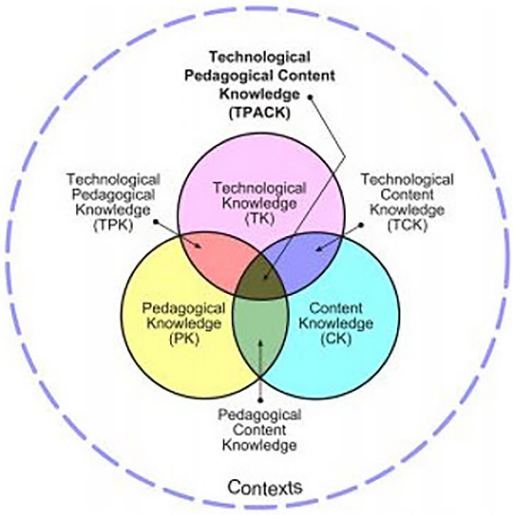
Technological Content Knowledge: Modern, but limited

Here the teacher knows how to use technology (Technological Knowledge), and they know what to teach (Content Knowledge). This teacher is often called tech-savvy and the teaching is certainly very modern. But if the technology is not supported by effective pedagogical practice, we have modern teaching that is very limited because there is no sound pedagogy or teaching practice behind it.

What is needed is an understanding of how specific technologies can be used in a pedagogically sound way. In other words, what sort of technology best suits the teaching of particular content, and what teaching strategies must be used to make the most of the technology?

Technological Pedagogical and Content Knowledge: The Sweet Spot

When there is an overlap of Technological Knowledge, Pedagogical Knowledge and Content Knowledge, excellent and powerful teaching and learning can happen. This overlap can be seen in the diagram below.



TPACK and SAMR working together

When you are presented with an app that claims to be designed for education you should to examine it carefully to check that it really does what it claims to do.

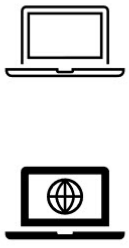
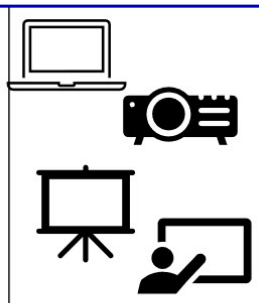
Consider TPACK and SAMR.

- What pedagogical choices does the app require for you to use it? (In other words, how do you need to teach to make the app work?)
- What technology does it use, and how will that have an impact on how you teach?
- What content is being used? Is that what you need to teach?
- Would using the app be a substitution of what you already do, or will it really transform?

Affordances

The term we use when technology allows us to do something is affordance. An app provides you with affordances that allow you to do something with it.

In the table on the next page you will notice that most of the apps and technologies listed that you have covered in this course were not designed specifically for education, but with careful thinking they can be used effectively in a classroom because of their affordances.

				
Incorporate technology into administration and education	• Administration efficiency • Collaboration	• Administration efficiency • Content development • Learner engagement	• Content access & development • Research • Collaboration • Learner engagement	One laptop to reach many

To use any of these apps effectively you must consider what sort of activity will be done, whether the content can be dealt with in that activity, and what the pedagogy will be. The technology must be used in such a way that it enhances teaching and learning.

Task

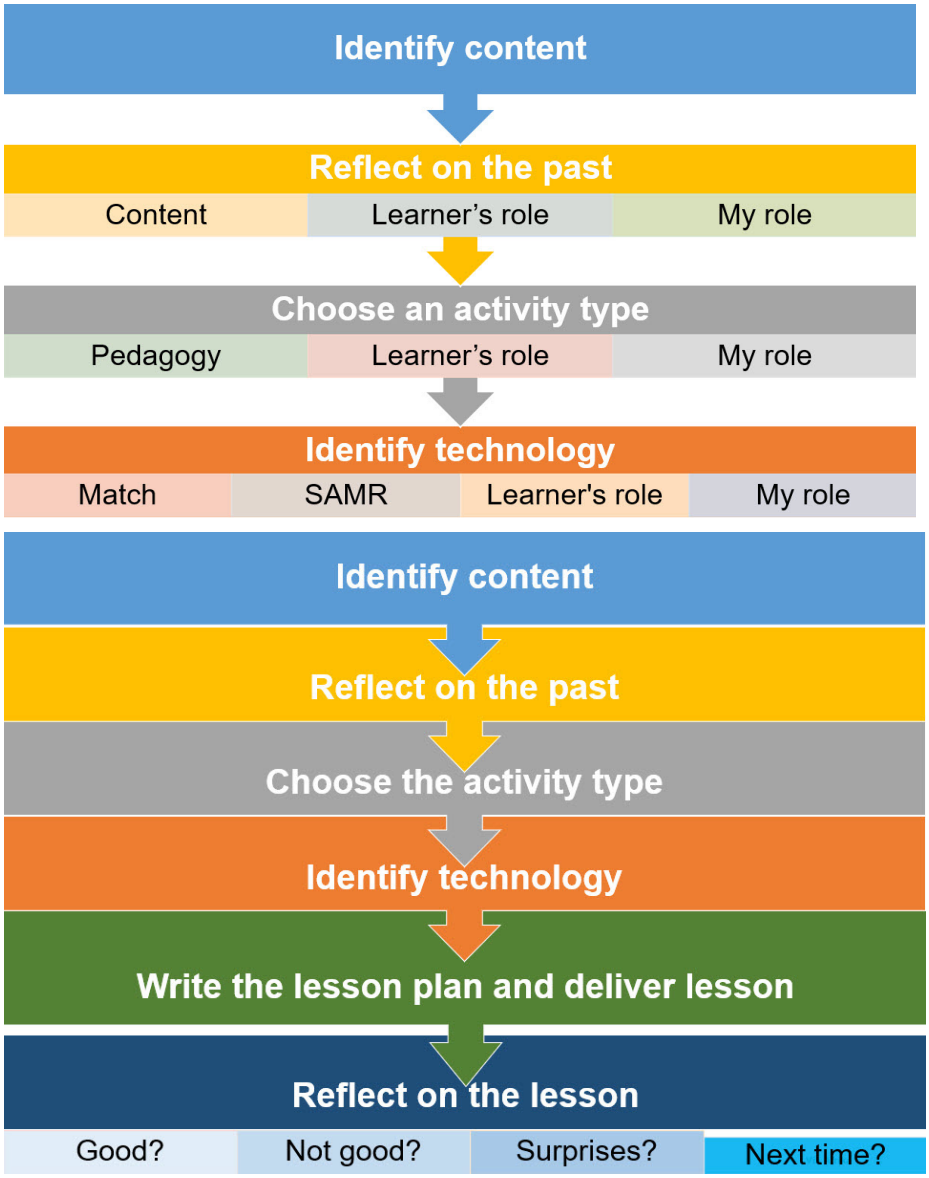
Identify if the use of technology in each scenario is Substitution, Augmentation, Modification or Redefinition according to the SAMR model.

1. Learners read a web-based document about Indigenous Knowledge Systems.
2. Learners work online on a Wiki for their project on the history of Maths.
3. Learners follow a set of weblinks and read.
4. A learner presents their project on Human Rights using a variety of multimedia resources with an online mind map showing the links among them.
5. Learners participate in an online pen pal programme with learners from across the world, commenting on provocative lead questions on important topics.
6. Learners answer questions about a topic using Microsoft Word instead of filling out a worksheet.
7. Learners watch a video clip of how the Group Areas Act was imposed in District 6 during apartheid.

Effective planning with SAMR and TPACK

An effective lesson using technology must consider the concepts that SAMR and TPACK suggest.

This structure can be used.



1. Identify the content that must be covered.
2. Reflect on past lessons and ask yourself:
   - How have I taught **this** before?
   - Did I treat the content as something to be transmitted, so learners can repeat it back, or as something for learners to use to come to their own understanding of the concepts?
   - What was the learners' role? Was it to just absorb the information or was it to think about the content and do things with it?

- What was my role? Was it to transmit the content or to help the learners work with the content, or a combination of both? If a combination, which one took more of the time in the lesson?
- Can this be improved?

3. Choose an activity type.
   - How are the learners going to learn the content (pedagogy)?
   - What is the learner's role in the activity?
   - What is your role in the activity?
4. Identify technologies that will support the activity type and help the learners in learning.
   - Match the activity to the technology.
   - Check the technology use with SAMR. (Will you be doing what could be done with a chalkboard or a textbook? Are you adding or augmenting your teaching with something? Are you transforming the lesson?)
   - How will the technology affect the learners? Will they be active in its use or passive?
   - What will your role be? (Technology switch, in other words just turning it on and sitting back or Facilitator?)
5. Write your lesson plan putting all these decisions into effect.
6. Deliver the lesson.
7. Reflect on the lesson.
   - What were the good parts?
   - Were there any not-so-good parts?
   - Were there any surprises?
   - Is there anything you would do differently next time?

Task

- Work through your next lesson planning session using this method.
- What did you like about the process?
- What would you like to change to meet your needs?

A laptop as content generator

Sources of content

We can find digital content in one of three places – online, from commercial companies like publishers and educational app makers, and from your own personally generated digital content.

Online content

When it comes to online content, there are two possible areas to consider.

The first area is the internet in general. You can do a Google search and uncover several different websites where you can get digital content, especially things like worksheets and videos. These can be free, freemium (some part is free and then you have to pay), or premium (you have to pay from the start, which can also include subscriptions).

The second area is Open Educational Repositories (OER) which are online collections of useful material created by various donor organisations and academic institutions in which they have placed educational materials that you are able to download and use at no cost. These digital educational materials have been carefully curated, or gathered, according to certain criteria like relevance and quality. Some examples of OERs include FundaOER and OERAfrica.

Commercial companies' content

Commercial offerings can be free like Duolingo, Google Apps (for example Google Earth), or paid for apps (for example the various Microsoft Apps and apps in the Microsoft store).

Choosing content

Some important things to consider when you are choosing digital content include:

- the language and context match
- the quality of the content
- the content-technology match
- the cost of the content

Language and context match

Many of our learners learn in a language that is not their Home Language. However, many online resources will be written for English Home Language speakers. A commercial company is likely to develop materials that match the market's language needs, and you certainly will do so.

Good content will use local examples that match your context. You are likely to find better matches in your own materials, and in many of those created by commercial organisations that work in our country. By looking for locally developed websites you are more likely to find suitable material online.

Quality of the content

Content available online can vary in quality, but educational organisations and companies will make sure that the quality is good. It is always worth checking who created content you find online to help you in assessing the quality of it.

Content-technology match

Digital content is designed to be delivered in specific ways, and you need to be sure to have the technology required to deliver the content you choose. If there is little or no match, the content will have to be modified to suit the technology you have.

Chances are that something you get from the internet, unless it is carefully chosen, will not match well. Commercial companies are usually explicit about the technology needed for the content to be used successfully. You can trust that the match will be good. This would also be true of content you developed yourself.

If there are changes to the content that are required to match the technology, you must assess how much work it will be for you to do this. Chances are that something you get from the internet, unless it is carefully chosen, will mean a lot of work for you. Commercial companies, however, will ensure that the fit is good, so no effort is required. The same would be true of content you developed.

Cost

We have noted that costs can vary on the internet. OER resources are, by nature, free to the user, but it is worth noting that someone pays for it. This could be a donor like the Dell Foundation, part of government funding, and could come out of companies' marketing budgets.

Commercial companies are likely to charge for content. Teaching and learning material that teachers create costs in terms of the time it takes to develop, and the costs and time involved in training the teacher.

The decision

Ultimately it comes down to two options: create your own digital content or find it somewhere. As with everything, there are always pros and cons.

When it comes to self-created digital content, you can meet your exact needs based on your experience of your learners. However, to do so, you will need technical skills. While, as teachers, we are trained to develop notes that would replace a textbook, few teachers are trained to develop digital content. Having done this course though, you have already developed skills that will allow you to develop some digital content.

In terms of cost, developing a PowerPoint video or digital versions of notes in Word, or on a Whiteboard App are generally low. However, more complex material like an EPUB will require money for the software and technology that is required.

Of course, developing the skills as you go along is a good reason to create your own digital content. However, you must weigh up the time it takes to learn those skills against when you need the material.

Task

- Where do you get most of your digital content materials?
- How do they match up to these criteria?
  - language
  - context
  - quality
  - match to tech
  - cost
- Is there anything different you want to do now?

Audio content

Probably most educational time is made up of talking – we hope it is not dominated by teacher-talk though. Your laptop can be a rich source of content development.

Sources of audio content

Audio can be developed on your laptop by you and your learners.

As a teacher, you can create voice recordings of listening comprehensions, instructions, and revision notes, for example. The advantage is that you will now have something that the learners can listen to and do which frees you up to do other work with learners who may need the attention.

The learners can record themselves for you to listen to at another time as an assessment and they can record themselves to create texts for other learners to listen to.

Speakers

Most modern laptops have surprisingly loud speakers and they should work well. However, you could consider buying a portable speaker that plugs into your audio jack, or even a Bluetooth one. These speakers really work well. On screen you can see a snip from an online company's offering. We are not saying any of these is what you should buy; this is just an example of how cost-effective this solution could be.

If you envisage learners working independently you may consider pairs of headphones to use.

This is an excellent time to teach the learners about loud noise and ear damage.

Task

Create a poster for your classroom warning learners about the dangers of listening to sounds that are too loud.

Video content

It seems that videos are taking over the way we view and show the world, and they are playing an increasing role in education.

Pedagogical benefits of video in education

There are clear pedagogical benefits to using video in your teaching. First of all, it can provide authentic learning opportunities for learners. Rather than simply reading about how an experiment is done, the learner can see it happen in real time. This makes a difference to their learning.

Second, video can inspire and engage learners. Learners today spend a lot of time watching videos in their own time. As teachers we can grab some of this engagement for our own purposes.

And finally, video can facilitate thinking and problem-solving. There is a clear link to the first point here. If something is presented authentically, the learner is going to be more able to evaluate the ideas and issues if they can experience it in some way other than just hearing or reading about it.

However, for video to have a positive impact in the classroom, it has to be used well.

Using a video effectively in class

The video you select will make or break your lesson, so it is worth making sure that your video has the right content (it meets all your curriculum needs as well as being worthwhile) and that it is at the right level for your learners. You must make sure that the language level as well as the conceptual level are correct.

Research by Professor Phillip Guo, et al. in 2014 on the use of video in education has some interesting results. We will explore some here.

Length of video

Guo's research showed that videos that are between 6 and 9 minutes long are best able to keep the attention and interest of the viewer. Anything longer and there is a sharp drop off in watching the video to the end. It would appear, too, that videos that are very short don't seem to be considered valuable enough to watch all the way through.

It is worth remembering that you do not need to fit everything you want to teach into a 6-minute video. Rather, you might break a longer video down into pieces of about 6 minutes each and show them with activities in between.

Guo's work notes that high-quality Hollywood-style videos are not as engaging as informal videos that are made with basic equipment like, for example, the sort of video you would make with PowerPoint or your mobile phone.

Guo's work indicates that when the teacher in a video speaks at a normal pace (which is usually quite quickly) and with enthusiasm, the learners are more engaged. Speaking slowly and deliberately all the time is not the best way to go. Certainly, there are times that a slower approach might be useful, like when giving a definition, for example, but this should not be the way to speak for the whole video.

Guo's work tells us that when the teacher is seen in the video, sometimes as the only item on screen, sometimes as a head in the corner of the video, the learners are more engaged.

Guo's research teaches us that presentation content that has an element of teacher interaction with the content is more engaging. In other words, a video with a screencast of a Whiteboard App where the teacher is making notes and talking is more engaging than a video just showing PowerPoint slides or a screencast. When the teacher uses the built-in Draw Tools in PowerPoint to make notes on the pre-made slides, that improves how engaging the video is.

Finding the right video

As a teacher, you are the ideal person to create videos because you have control over content and production. There are a number of tools you can use to create videos. We would recommend:

- PowerPoint
- BB Flashback Recorder
- Screencast-o-matic

For ready-made videos you can explore:

- www.refseek.com/directory/educational_videos
- YouTube

Copyright

A word of caution, please. When you select a video that has not been made by yourself, you must be very aware of the intellectual property rights of others.

Since you are working in education, you will be able to use almost any video to teach with in class, as long as you say from where you got the video from and do not sell the video or lesson.

Creating a good video lesson

A good lesson using a video must consider SAMR and TPACK. Furthermore, it is important to provide a clear structure to the lesson.

1. Give the learners a purpose to watch the video.
    - They can check something they already know.
    - Let them look out for specific information.
    - They can solve a puzzle by watching the video.
2. Break the video into two parts. Find a time after about one third to one half of the video when it makes good sense to ask another question. This could be a prediction question or one about a recap of content.
3. At the end of the video, make sure that you have, at the very least, asked questions about the video and what was learned, or even better, create an activity that allows the learners to demonstrate their learning.

EdPuzzle

EdPuzzle is a useful online freemium service that you can use to create video lessons from your own content or from their extensive library.

Task

- Find a video to teach an aspect of a topic you are about to teach in class.
- Create a pre-question.
- Where will you stop the video to ask a question?
- What activity will the learners do after watching the video?

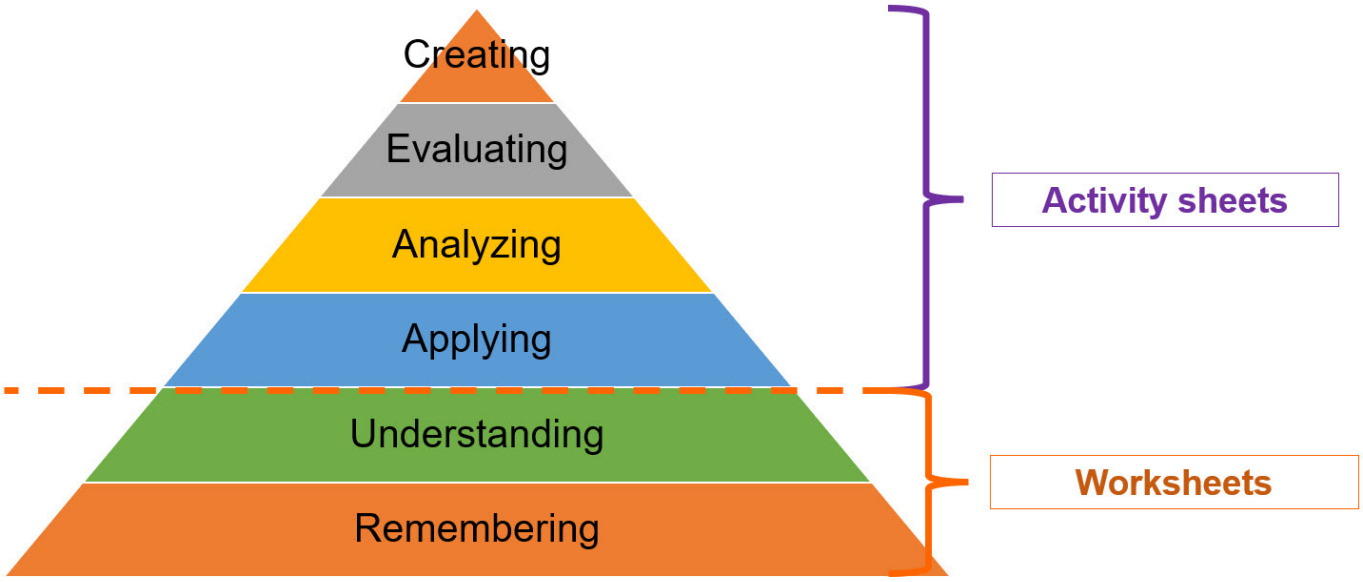
The laptop as activity generator

If your learners do not have digital devices on which they work, they are likely to need to do some work on paper. This can often be in the form of a worksheet. With your laptop you will be able to generate your own worksheets, and you will be able to access worksheets online.

Worksheets or activity sheets

Depending on what the worksheet asks the learner to do, it might be more of an activity sheet than a worksheet. We usually think of worksheets as a way to build automaticity, that is, being able to quickly match learned fixed knowledge to a question and complete it. That sort of worksheet is working at the remembering and understanding levels of Bloom's Taxonomy.

Activity sheets, however, go further and include opportunities to apply, analyse, evaluate and create, all of which are at the higher levels of Bloom's Taxonomy.



Both worksheets and activity sheets are valuable, but they can take a great deal of time to produce. Online you will be able to access generators that will create paper-type work or activity sheets, and those that generate digital work or activity sheets.

Paper worksheet generators

In the table below, you will find just a few of the many places you can find on the internet that will allow you to create worksheets and then download them to print for your learners. Remember, you need always to check context, language level, and quality.

We chose these because they were free, but choosing them does require you to sign up. No credit card details are needed. You may consider creating a teacher sign up email that you use only for such services.

You can find all the details for these services in the Additional Resources at the end of these Class Notes.

Service	Cost	Subject	Level
Canva.com	Free, must sign up	All subjects	GET and FET
Helpingwithmath.com		Maths	GET and FET
Education.com		English reading, Maths	GET and FET
Worksheetfun.com		Maths	GET

Digital activity sheet generators

Digital activity generators can create printable worksheets as well as interactive activity sheets.

Wizer.me

Wizer.me is an online platform for creating multimedia worksheet activities that you can share with learners using a web link that they will complete online. Here you can upload a PDF to which you can add different question formats including voice questions. When the activity sheets are completed digitally the platform marks them for you.

Of course, the downside to this is that the learner needs to be able to sign in and complete the work online. If they don't have their own devices, you might consider this as a way to generate content for the laptop-led learning stations that we will discuss later.

This is a freemium service. It offers you a good free package, and a paid-for option that expands what you can do.

TeacherMade

TeacherMade is a free tool that you can use to turn your Word documents, PDFs and pictures into online activities. You can add multiple choice, true/false, cloze procedure, matching and short answer questions to your PDF activities. TeacherMade can automatically mark the answers for you.

TeacherMade does not require learner email addresses to complete the activities that you create and share with them.

This is a freemium service. It offers you a good free package, and a paid-for option that expands what you can do.

Task

- Consider your context and then compare the six worksheet generator services listed below using a pros and cons list.
  1. Canva.com
  2. Helpingwithmath.com
  3. Education.com
  4. Worksheetfun.com
  5. TeacherMade
  6. Wizer.me
- Which worksheet generator service would you be most likely to use?
- Which worksheet generator services would be least helpful? Why?

A laptop as interactive display device

The danger of sharing your screen

The biggest danger you face as a teacher is turning your laptop and sharing device into the world's most expensive chalkboard. This danger occurs whether you are using PowerPoint presentations or an Interactive Whiteboard (also called IWB).

Remember, if you are using the technology only to do what you did with old tools, and there is no good reason for it, it is cheaper, and often easier, to keep using the old tools.

How displays are used in classes

Research by E. Cutrim Schmid in 1986 showed that teachers use IWBs to do particular sorts of things most often in various subjects.

The list below indicates various ways teachers across subject areas use IWBs:

- annotation of a text
- completing cloze passages
- drag and drop activities
- drawing diagrams
- electronic flipcharts
- geometrical theorems and riders
- graphing grid
- interactive maps
- learning music notes with sound
- letter identification and sound blending
- maths manipulatives
- melodic and rhythmic drills
- phonics integration
- placing numbers on the number line
- recognising letters
- recognising numbers
- showing videos of current events

- sight words
- solving [maths] problems
- sorting activities
- spelling
- teaching shapes, sides, angles
- timer
- writing development

You will notice that the majority of them are, according to SAMR, substitution-type activities. The only activities that move beyond substitution in SAMR are indicated with an asterisk. They could not be done on a simple whiteboard, chalkboard or with a PowerPoint Presentation without add-ins. However, these activities are only augmentation-type activities if they are presented as they are. None of the activities move into the Transformation areas of SAMR – Modification and Redefinition.

A very careful activity will need to be constructed to make the use of displays like IWBs transformative.

Using IWBs effectively

The IWB shouldn't replace teaching time in the classroom. Rather, it must enhance the lesson and give learners opportunities to engage with the information when it is used. This does mean that you must prepare additional materials that can be used with the Interactive White Board before class starts.

Present additional engaging content on the IWB

The additional content must not be anything that can be put on a piece of paper or a chalk board; it must be something that a learner can walk to the Interactive White Board and do something with. It could include sorting shapes, interacting with live data, working with a simulation, or any of a thousand other interactive and engaging activities.

Create information and share it

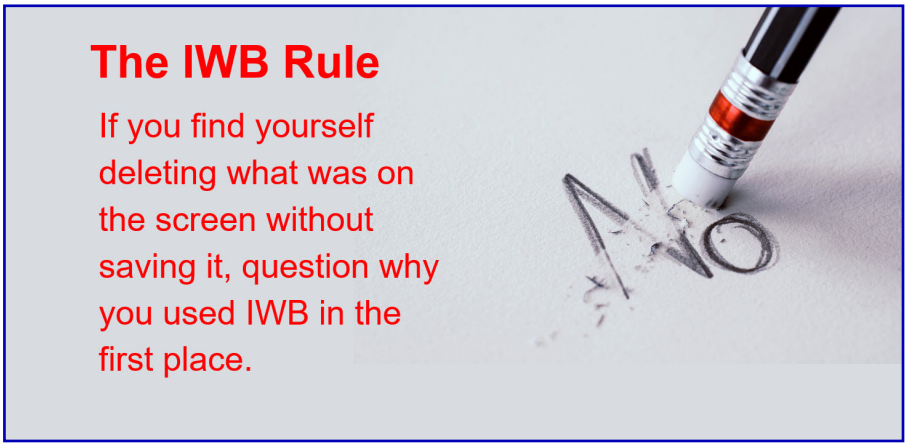
While there is always a danger of just becoming another writing surface, the Interactive White Board can be used to create information and share it.

When learners are invited to the Interactive White Board to solve a problem, or you use it on their behalf to run a brainstorming session, if you then save and share that with the learners by email or by paper printout, you will have used the Interactive White Board usefully.

Templates

You are likely to find many useful templates to use in the app that comes with your Interactive White Board. These templates include things like brainstorming, KWL (What I Know, What I Want to Know, and What I Learned) activities, problem-solving, etc.

The Interactive White Board Rule



Task

- Look on your laptop for the Microsoft Whiteboard App.
- Look at the templates that the app offers in the Insert Menu.
- Which templates could you use?
- If you already have an IWB in your classroom, check what templates that app offers.

Making PowerPoint more interactive

PowerPoint seems to have become every teacher's favourite chalkboard-textbook substitute. It doesn't have to be.

Don't drown in PowerPoint

Just as bad as using your IWB as an expensive chalkboard is using your data projector and screen as very expensive photocopies. Learners (and teachers) cannot learn from a PowerPoint presentation that has many lines of text and lots of slides. Nor do they learn effectively if all they ever get is a PowerPoint presentation as the main source of information and learning. This is how and when they drown in PowerPoint.

Powerful PowerPoint

There are a few things we can do to prevent drowning from happening.

1. Use PowerPoint only when it is useful, not to replace a chalkboard, a set of notes or a textbook.
2. Design clean, clear slides.
3. Add interactivity using add-ins.
4. Create your own games or look for games online.

The example of a learning game in PowerPoint shown in the video is a set of linked PowerPoint slides, but your learners won't know that.

You can download the example we used as a template for your own learning games from the downloads with this session.

Task

Create your own game using PowerPoint. Use the example from the training video as a guide.

A laptop as a co-teacher

Letting a laptop run a group for you

Using your laptop as a co-teacher means you need to consider teaching in a different way to a teacher who wants to be in front of the class leading learners. It requires trusting that group work works well when it is well implemented.

Preparing to work in groups

Getting learners to appreciate the benefit of group work to them, and to understand that there are consequences for non-compliance is key to effective group work in a classroom. You can use this three-step process.

Step 1: Share your rationale for using this method, and have the learners understand and appreciate the benefits to them. These benefits include more direct time with you, and a variety of tasks in a lesson.

Step 2: Talk to your learners about their past experiences with group work. Ask questions about what they could do to make it better this time.

Step 3: Develop an Acceptable Behaviour Policy, in other words, set up group rules with the whole class. Calling it an Acceptable Behaviour Policy focuses on the positive behaviours that are desired. Once the positive behaviours are identified, you can talk about what happens when someone does not follow them.

Traditional vs Flipped classrooms

In a traditional classroom, because of curriculum time constraints among other reasons, teachers spend most and sometimes even all the lesson on teaching the things that the learner must remember and understand. When time runs out the teacher sends the learners home to do the really hard stuff of learning, applying, analysing, evaluating and creating.

This can change when technology enters the mix. With technology it is possible to flip the classroom so that tasks that require understanding and remembering take place at home using technology like videos and audio and even textbooks. During class time the learners can work with the teacher to do the higher order learning tasks.

The downside to all this, though, is that our learners often don't have the required technology at home to do the work.

A faux-flipped class

In the faux-flipped class model, all the flipping happens in the classroom. We chose to use faux because although in French it means fake, it does sound better than fake, or sham, or mock, or pretend.

In a faux-flipped classroom the aim is to create four learning stations: a teacher-led learning station, a laptop-led learning station and two learner-led learning stations.

During the lesson, the learners will move from one learning station to another. Because there is an Acceptable Behaviour Policy, and because the tasks that the teacher designs are so challenging and interesting, the learners are motivated to work effectively on their own.

An overview of the learning stations

At the teacher-led learning station the teacher will work with learners who are having challenges or learners who need extension work to challenge them, or any other work the teacher feels a small group would benefit from including, for example, introducing a new concept.

At the laptop-led learning station there is a task to be done that is on the laptop. This could be teaching a new concept using a PowerPoint video or an audio lesson or whatever is needed that can be run from a laptop without the teacher being there.

At the learner-led learning stations there is a paper-based task set of two different tasks.

After a set time, all the groups rotate.

Setting up a faux-flipped class

A faux-flipped class does take some time and effort to set up. The results are, however, worth the time and effort taken.

Preparation

Identify the learning outcomes for the lesson. These outcomes will relate to the curriculum plan.

Split the outcomes into four separate tasks. You must be sure to have a clear outcome for each learning station with a distinct task. You will need one task per learning station.

Decide on what you wish to cover in the teacher-led station.

Develop the task for the Laptop-led Station.

Develop the tasks for the two learner-led learning stations. (See below for more information.)

Decide on the learner groups.

Introduce the lesson

Explain the goal of the lesson clearly to the whole class.

Explain what the four tasks will be. The depth you go to will be determined by the instructions each group will get at that learning station.

Allow learners to ask questions about anything they don't understand.

Start the lesson by sending the learners into the groups you created as you prepared the lesson.

During the lesson

When you first start with the method of working, build in time for you to be able to check that each group is focussed on the task at their learning station. As time progresses, the learners will effectively work in their groups at the different learning stations.

Model how you want students to participate. You have your own group – stick to it, leaving only if the need arises to prevent something going wrong elsewhere in the class. Develop a system for learners to ask any clarifying questions that they have after the first briefing.

Keep careful time and make the rotations happen as planned.

Be patient at the beginning and keep positive. Very soon the learners will be comfortable working in this way.

Laptop-led learning station activities

There are many different activities you could create for these learning stations. What is key is that they are constructed effectively. What follows is only a sample of possible activities based on the skills you have learned in this course.

Characteristics of a well-constructed learner-led station task

A good learner-led station task will adhere to these standards.

- It's challenging without being impossible.
- It's meaningful and related to the learning outcome for the lesson.
- It's achievable in the time available for the task (remember that the lesson is broken into four with learners rotating among the four stations according to the total lesson time divided by four).
- It has a formal close to it, so that learners can move on to the next learning station.
- It has clear instructions for each task and is clearly communicated with your being present.

Developing reading skills with Immersive Reader

This section is not only for English language teachers – all teachers are reading teachers, and you will be able to assist your learners get better marks in your subject if their reading improves.

If any of your learners is having difficulty with reading in English, you can set them up to work on your laptop as part of your faux-flipped classroom using Immersive Reader in the various Microsoft Office apps.

You could create a group of one learner or use pair reading or small groups of three or four to work at the same time.

Why use Immersive Reader?

Immersive Reader offers several educational reasons for its use.

Font spacing

Marco Zorzi, et al. (2012) found that when text was carefully laid out with more space, readers were 10% faster and made 50% fewer reading errors.

Line length

Matthew H. Schneps, et al. (2013) established that there is a 27% increase in reading speed when a text has short lines. Something to think about when you are preparing a PowerPoint slide. This is true, too, of font spacing in PowerPoint.

Syllabification

Yu-Chi Tai, et al. (n.d.) found that when a word is broken into syllables in a visual text, there is a 10% increase in reading comprehension for adults. Imagine what it can do for learners. Furthermore, research led by Nadège Doignon-Camus, et al. (2013) to conclude that building the syllabic bridge from available phonological syllables and frequent letter clusters may be the first step in learning to read. For learners who are having difficulty with reading then, showing them a reading text that is broken into syllables makes sense.

Background Colour

Research by Arnold J. Wilkins, et al. (2005) shows that when given a chance to use a colour background, learners read text faster than they do on a white background, and get less tired when reading.

Read Aloud Function

Having the text read aloud and having the word or line highlighted at the same time was shown by Georgia Andreou, et al. (2019) to make a positive difference to leaners with learning difficulties.

Kim Floyd, et al. (2012) concluded in their study that the use of screen readers or other text-to-speech software led to increased reading comprehension performance for students with the weakest reading skills.

Immersive Reader in different apps

Microsoft offers Immersive reading across many of its apps as you can see in the table below.

Immersive Reader Features	Apps			
	Word and OneNote Web Apps	Word (desktop)	OneNote (desktop)	Microsoft Edge
Read Aloud	✓	✓	✓	✓
Spacing and Font Size	✓	✓	✓	✓
Background Themes	✓	✓	✓	✓
Font Options	Calibri, Sitka, Comic Sans	Calibri, Sitka, Comic Sans	Calibri, Sitka Small	Automatic
Syllables	✓	✓	✓	
Line Focus	✓			
Picture Dictionary	✓			
Parts of Speech	✓		✓	

Apps like Teams and Outlook have been excluded here since these would not be part of this type of teaching.

Each app does have a slightly different set of features, so you may want to see if you can match your learner's needs to what is available to you. You will learn about these features and their uses as we go on.

Selecting a good text

Consider where the learner is on their reading journey and take this into account when you are choosing a text.

If you are working with emerging readers, you will select a text that is at their reading level from a reading book. They will find it easier to develop their skills here rather than immediately in a non-fiction textbook. The text might be one you created, or a useful one from a reading book. If the learner is having difficulty you may wish to use a reader from a grade or two lower than the learner's grade.

If you are working with older learners who are struggling, it may useful to have them read your class notes, or even their textbook, in Immersive Reader.

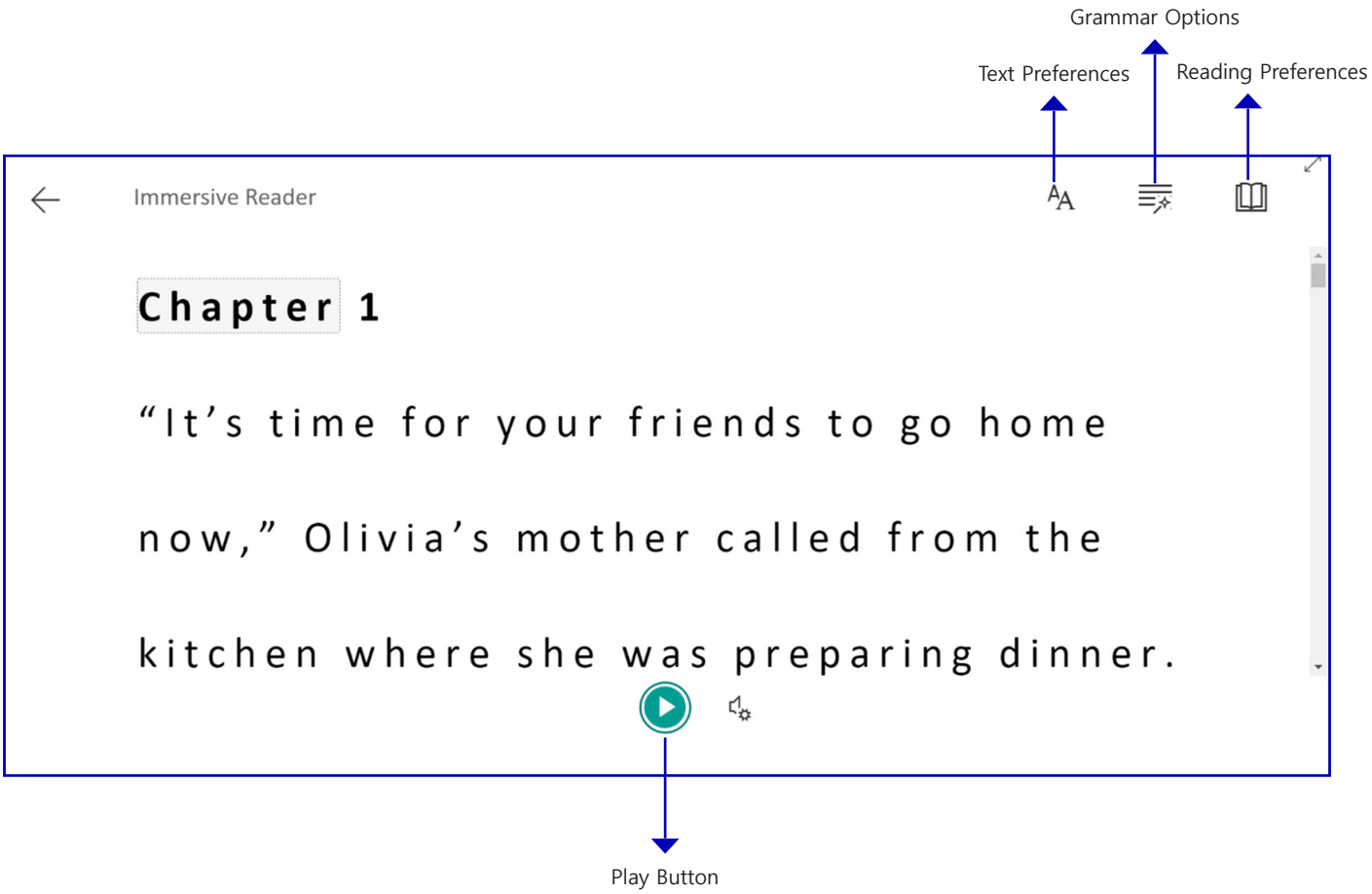
You could use texts other than the subject specific texts you are working with in class at a level closer to the learner's reading level. Always select a text that will keep the learner interested. Using Immersive Reader in Microsoft Edge would be useful here since you can convert any website of interest into a text in Immersive reader.

Using Immersive Reader in the Word Web App

Because the Web Apps have the most Immersive Reader Features, we will start off there. A limitation of the Web App is that you have to be online for the whole time you are using it.

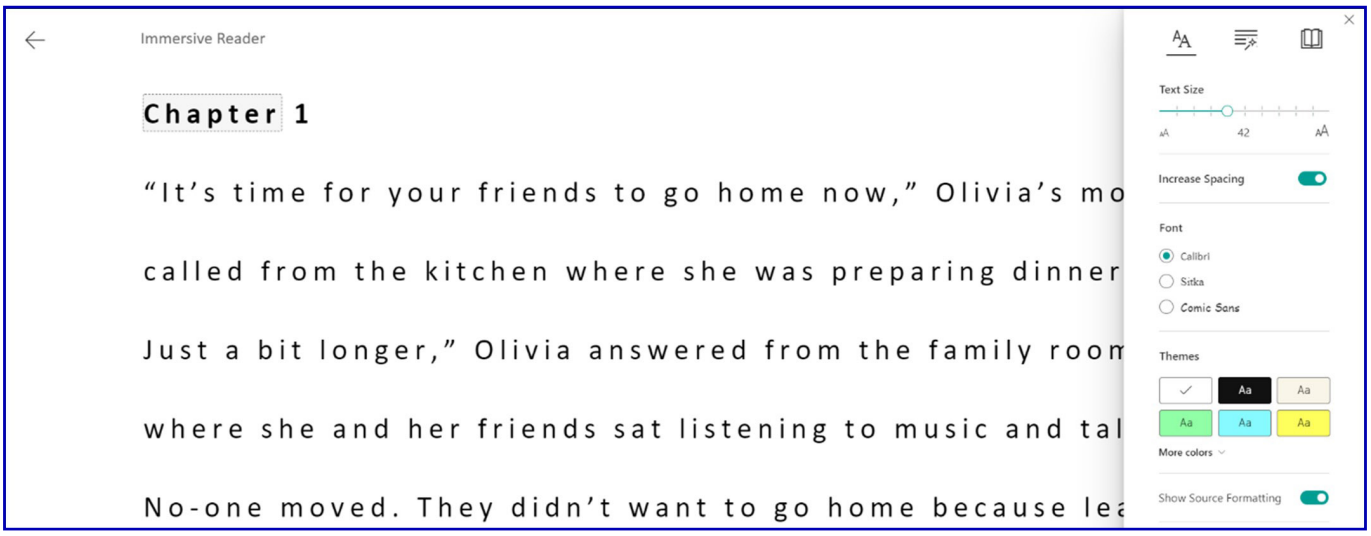
Features of the Word Web App

Immersive Reader Screen



Here, you can see the Immersive Reader Screen and Text. It has lots of empty space, and little visual clutter . The Play Button allows the learner to listen as the text is read aloud. The button next to it allows you to modify the voice speed and choose either a male or female voice.

Text Preferences



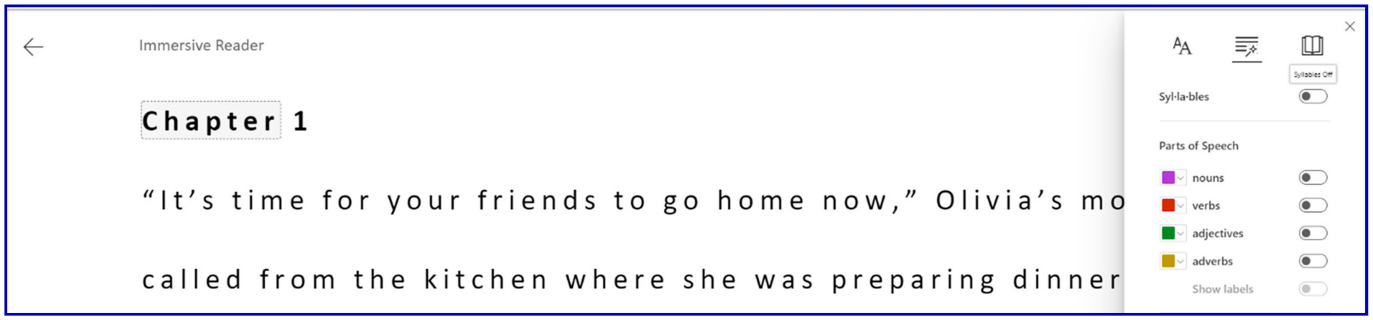
The Text Preferences Button contains menus for Font choice and Themes.

Font: Three fonts are available (Calibri, Sitka and Comic Sans). Research has shown that these fonts are easy to read for learners with reading difficulties. Once reading speed and ease are improved, the learner will be ready to read other fonts with greater ease. Comic Sans has the advantage of having the Juvenile A.

Themes: This allows the colour of the background to be changed. Research has shown that Generation Z and Generation Alpha learners find it easier to read black text on a coloured background rather than on a white background.

Source Formatting: This can be toggled on or off to remove the bold or italics formatting in the text. This can be useful to avoid distractions for readers who have reading difficulties.

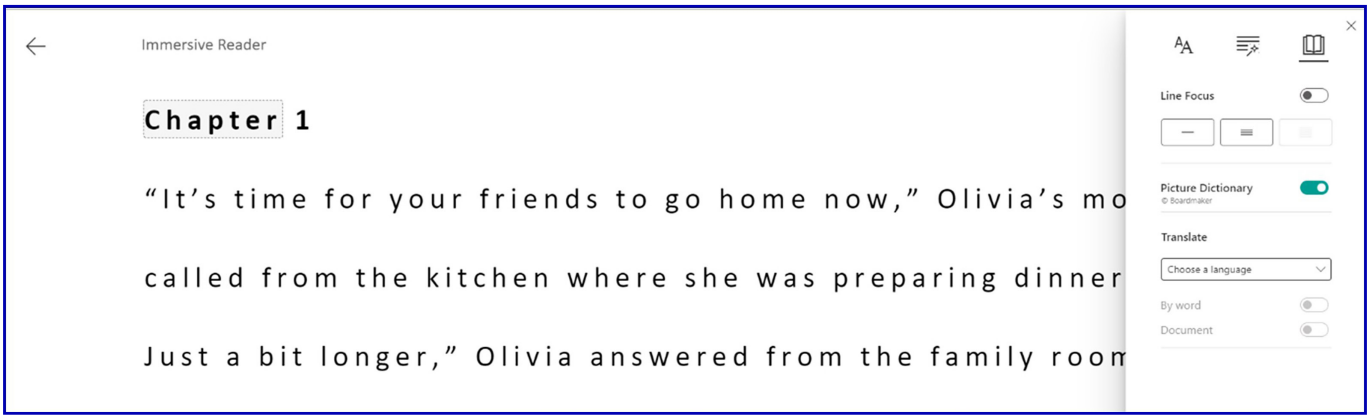
Grammar Options



Grammar Options includes menus for Syllables and Parts of Speech.

Syllables Button: This can be toggled on and off to show the learner how the word is broken up into syllables. This can be a useful tool in developing reading skills.

Parts of Speech: This is meant for English language teachers and will highlight the different parts of speech.



Reading Preferences contains menus for Line Focus, Picture Dictionary and Translate.

Line Focus: This limits the amount of text that can be seen at one time. This is a very useful way of keeping the learner's attention on the text being read rather than on the rest of the text.

Picture Dictionary: This is useful only for younger readers. Many of the words also do not have a linked picture l, but this offers readers a chance to listen to the word being read aloud.

Translate: This can translate the text into a number of languages. Unfortunately, no African language translations are available.

You can use Immersive Reader in the Word Web App.

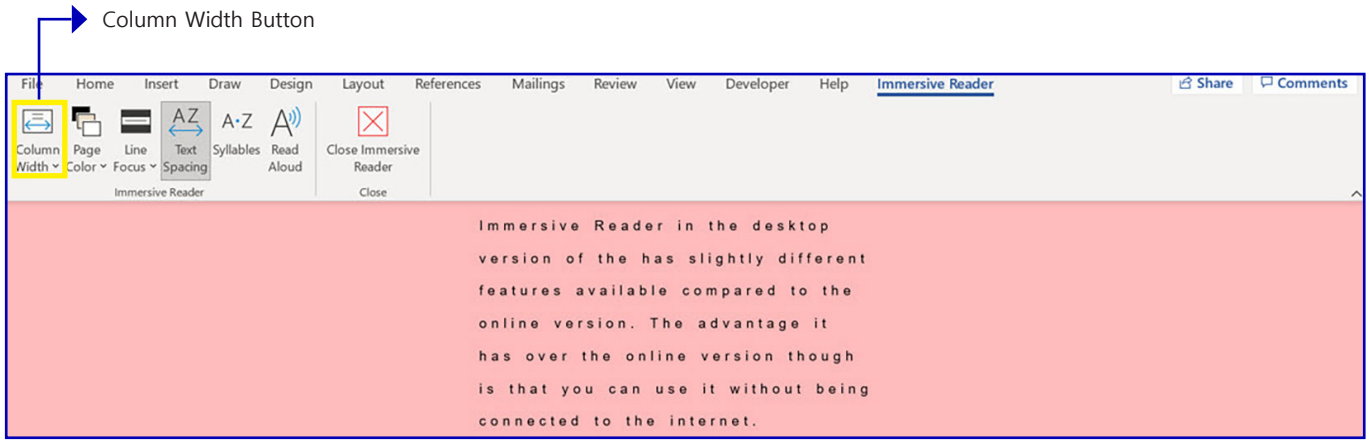
1. Make sure you are online.
2. Open Word in the Microsoft Edge browser and sign into your account.
3. Open the reading text you have created from your list of files.
4. Left-click Immersive Reader on the View Tab.
    - In the top right-hand corner, left-click on the Text Preferences Button to select the text size.
    - Select the spacing.
    - Select the font.
    - Select the colour of the background.
    - Decide whether to show source formatting or not.
5. In the top right-hand corner, left-click on the Grammar Options Button.
    - Choose if you want the words in the text broken into syllables.
    - Choose if you want to show the different parts of speech.

6. In the top right-hand corner, left-click on the Reading Preferences Button.
    - Choose how many lines will be visible at a time.
    - Choose if you want the Picture Dictionary to be available.
    - Ignore the Translate Options.
7. The text is now ready to use.

Using Immersive Reader in the Word Desktop App

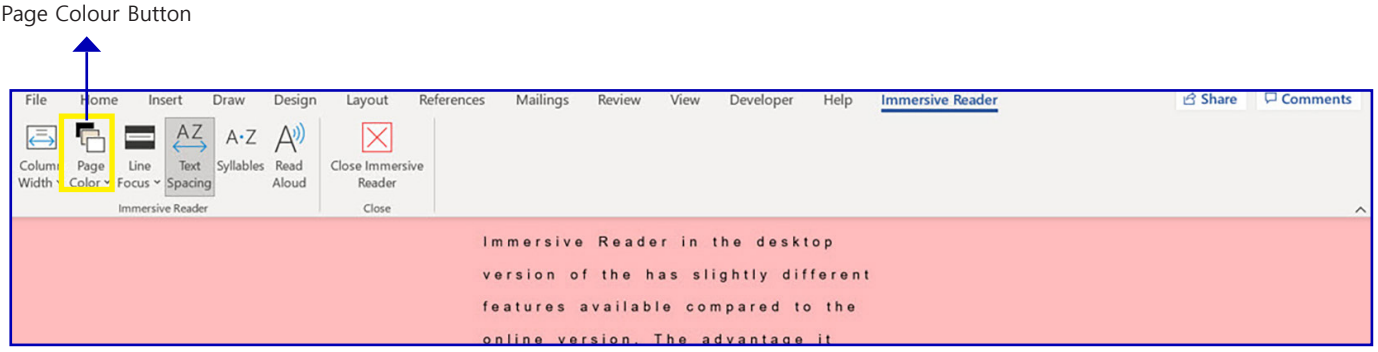
Immersive Reader in the desktop version has slightly different features available compared to the online version. The advantage it has over the online version, though, is that you can use it without being connected to the internet. See below for more information about the Immersive Reader Offline Extension.

Immersive Reader in the Word Desktop App

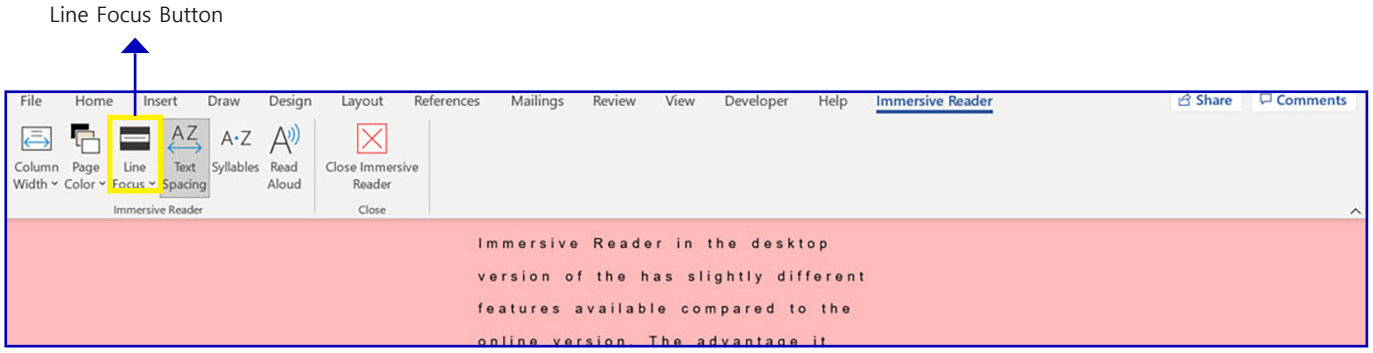


Column Width Button: This changes the column width from very narrow to wide. The advantage of this is that you can control how many words the learner must focus on in a line. When we read, we move our eyes over a number of words at a time with brief stops as we go along. The more times we stop along a line of text, the slower we read, and the greater the chance that we will lose our comprehension of what we are reading. The wider the line of text, the more words there are, so the harder it is to read because the learners' eyes must scan all the way from one side to the other. (This is true for all readers of long lines.) If you reduce the number of times the eye stops in a line you can start to improve reading speed.

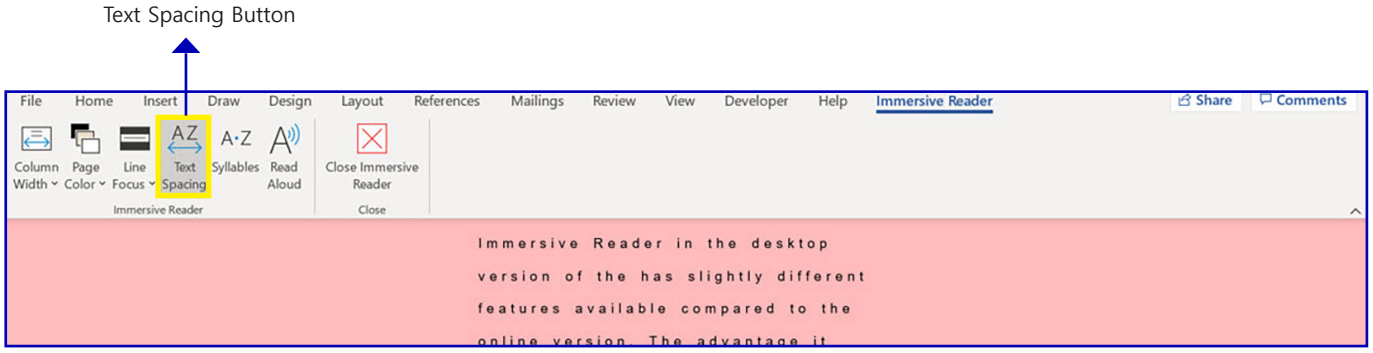
Page Colour Button



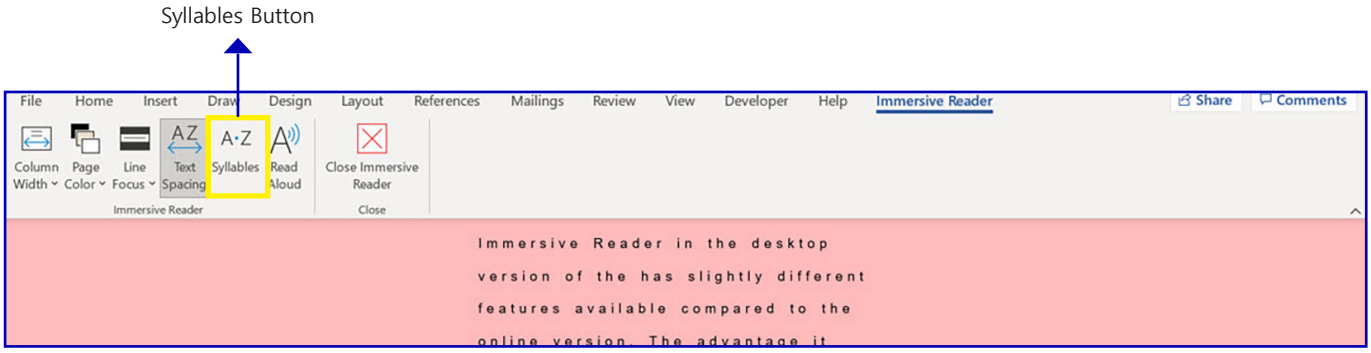
Page Colour Button: This changes the background colour of the page.



Line Focus Button: This limits the amount of text that can be seen at one time. This is very useful to keep the learner's attention on the line being read rather than on the rest of the text.



Text Spacing Button: This increases the space between the letters in the text.



Syllables Button: This can be toggled on and off to show the learner how the word is broken up into syllables.

Read Aloud Button: This allows the learner to listen as the text is read aloud. Controls allow going back to the start of the line, playing, pausing and going forward to the next line. The Cog Button in the menu allows choice of voice and reading speed.

You can use Immersive Reader in the Word Desktop App.

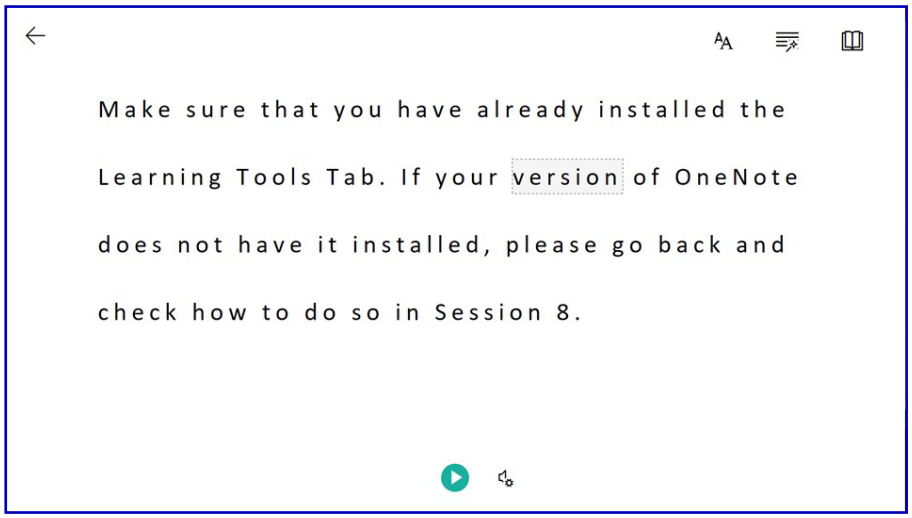
1. Open Word.
2. Open the reading text you have created from your list of files.
3. Work in the View Tab. Left-click on Immersive Reader in the Immersive Group.
4. In the top right-hand corner, left-click on the Text Preferences Button.
    - Select column width.
    - Select the page colour.
    - Select the line focus.
    - Select the text spacing.
    - Choose if you want the words in the text broken into syllables.
5. The text is now ready to use.

Using Immersive Reader in the OneNote App

Make sure that you have already installed the Learning Tools Tab. If you are not familiar with Microsoft OneNote, please enrol for Session 7 of our **Microsoft 365 Course – Keeping it together using Microsoft OneNote**.

The features of OneNote App are almost the same as those of the Online Word App as you can see in the image below. See the notes above for more information if you need to. See below for more information about the Immersive Reader Offline Extension.

Immersive Reader in the OneNote App



You can use text from a file in Immersive Reader.

1. Open OneNote.
2. Open the text you wish to use.
3. Open the Learning Tools Tab.
4. Left-click on Immersive Reader.
5. The text is now ready to use.

Using Immersive Reader in the Microsoft Edge Browser

Where appropriate, you may wish to allow learners to read a web page. The features have been covered in the other Microsoft Apps. If you open a web page completely while you are connected to the internet, you can then disconnect from the internet and still use the Immersive Reader on that web page. This is ideal because then you don't need to be concerned that your learners in the laptop-led learning station are busy on the internet looking at things they are not meant to look at.

The Immersive Reader Offline Extension

If you download the Immersive Reader Offline extension from the Microsoft Store and install it, you will be able to use Immersive Reader in the Word and OneNote apps without being connected to the internet.

Audio recording

There are a few ways in which you can use the microphone on your laptop to help your learners while they work in groups.

Audio tasks

If any of your learners is having difficulty with reading, you can set them up to work on your laptop using Immersive Reader as part of your flipped classroom. You could have one learner doing this, use pair reading or create small groups of three or four to read at the same time.

Learner audio recording

For each of the following ideas, we suggest that you create a OneNote notebook with a page for each learner. They can then audio record into their notebook page, thus making things easier for you.

Evaluation of reading fluency

Have learners record themselves reading aloud in the group so you can assess them individually outside of class teaching time. With guidance, the group can allow one do-over to be sure that each learner has given their best performance.

Speech preparation and evaluation

Have learners practise their speeches and listen to themselves in the group to identify anything they can improve on before giving the speech in public or saving it for evaluation. Things they can look out for include using 'umm' too often. They can also note instances when they lose the thread of the topic. Once they are happy, they can save their speech for you to listen to and evaluate in your own time.

Creating listening texts for others

Have learners create individual or group podcasts for other learners to listen to. They could interview other learners about something, talk about current affairs, talk about a special interest they have, or even tell a story. You will need to guide them as to the structure of a podcast. Having learners listen to professional podcasts and analysing the structure will get them on the right track. Then they can brainstorm, plan and record. You can then use this material in listening activities for other groups in the laptop-led learning station.

Self-evaluation

Have the learners work individually to record their answers to two or three self-evaluation questions. This takes away any anxiety about having to speak directly to you. It is quicker and easier than writing an answer, too, making self-evaluation as stress-free as possible. Saving each learner's recording in their own separate page in a OneNote notebook will allow you, and them, to track their progress. You can easily make notes in the notebook on actions you must take. Depending on their age, the questions could vary.

- What challenges have you faced this week/term/month?
- What have you learned this week/term/month?
- What strategies can you put in place to help you overcome the challenges?

Learner audio recording – writing

Have the learners use the Dictate Function in Word or OneNote to assist them in developing their writing skills. Using the Dictate Function allows them to capture what they want to say with no restrictions in terms of what they can spell, or how they can write, especially if they have difficulty with handwriting and/or write slowly. When it takes too long to put down on paper the words in one's head, frustration becomes an issue. Once the text is captured using the Dictate Function the learners can use the built-in software to edit their work. You can avoid this becoming a computer-checked-and-forgotten text by having them make a written note of each spelling error and its correction before correcting it.

You will need time to show learners exactly what they need to do. You may wish to take over the saving and printing or emailing function from younger learners to be sure their work is saved properly.

Teacher audio recording

You can use your voice for excellent learning in the classroom with your own laptop in the laptop-led learning station.

Creating dictation texts

You can record yourself reading a text that the learners must write down as dictation. You can give them rules about listening again, or even record it as you would say it in class with the necessary repetitions. The learners listen only once in this case. You can mark the work later.

Creating listening comprehension texts

You can create a listening comprehension text with questions and let the learners work independently in their groups. A second recording of the answers for self or peer marking could be used.

Flipped-classroom learning

You can create recordings of your teaching of a section of work and the learners can listen to it in preparation for the work they will do with you in the teacher-led group. In a similar way, you could record your lessons and make the recordings available when needed.

Taking it a bit further

Sometimes you may want to do a little more than a simple recording, or you find that you make an error and now you have to re-record. There are some apps available to help you take your audio recordings to the next level.

123apps.com

123apps.com is an easy-to-use online option. Here you can quickly record and then cut sections that you don't want and re-join the rest of the pieces to create an improved version. You can also work on your smartphone when you are not near your laptop.

Audacity

Audacity is a free app for your computer. It has excellent features, and is updated regularly. Try it when you are ready to extend your audio recording skills even further.

Video activities

We have covered video quite extensively already, so we will stop here. Remember that a well-constructed video activity, or a recorded PowerPoint presentation that you made can be used very effectively in the laptop-led learning station

Reflection

- Reflect on the concept of a faux-flipped classroom in your context.
- What would you need to do to make it work?
- What obstacles might you have to overcome?
- Which of the learning stations inspires you? Why?
- Which of the learning stations concerns you? Why?
- Where do you need to grow your skills and knowledge?

Laptop + Smartphone = WOW

We often forget that our smartphones are powerful computers that can assist us in several tasks as teachers. When a smartphone is used with your laptop, you will discover that there is a great deal that you can be done to make your teaching life easier.

You can use your laptop and smartphone to help you.

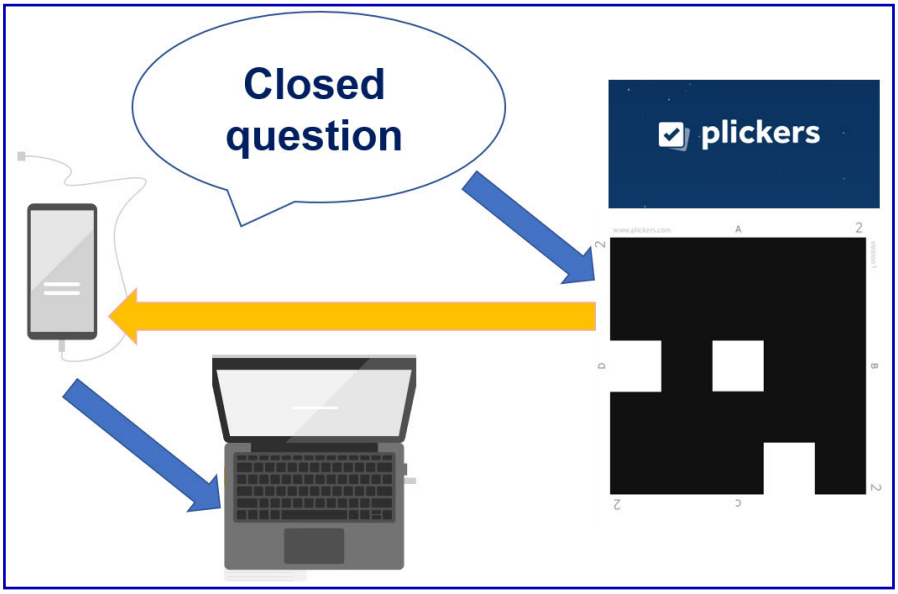
Plickers

Plickers is a very powerful paper and technology-based tool that uses your laptop, your smartphone and paper. It is free to use.

Plickers gives you an easy way to do quick formative assessment using your smartphone and your laptop. It could be used for summative purposes as well with some careful classroom management. Furthermore, it can also be used as an electronic register.

How Plickers work

In essence, Plickers uses your smartphone to read QR codes and then sends that information to a server that you can access with your laptop. Each learner has their own QR code, and by holding it up in different ways they can answer closed questions like a multiple-choice question or 'Do you understand, Yes, No?'



Getting started with Plickers

There are six steps to getting Plickers to work for you.

Step 1: Get the app on your phone

Download the Plickers App to your smartphone from the Android Google Play or iOS App Store depending on the make of your phone.

Step 2: Sign up on your smartphone

Sign up for a free account on the app. You will need your email address for this.

Step 3: Sign in on your laptop

1. Open your web browser and go to www.plickers.com/login
2. Use the same email account to sign in that you used to sign up on your smartphone.

Step 4: Create content

Create the questions you want to ask in the class. Remember these must be closed questions with clear options like a multiple choice or true and false.

You can create questions in Plickers.

1. Log in to your Plickers Account.
2. Left-click on New Set at the top of the Home Page.
3. Key in a question and add the answers in the template. You can also add an image.
4. When you have all your questions, go back to the Home Page.

Step 5: Add a class and learner names

Plickers allows you to create classes with up to 63 learners in each class. If you have more than 63 learners in a class, you can divide the class into two and create two classes. You will need to remember this when you scan answers.

You can add a class and add learners in Plickers.

1. On the Left Side Bar on the Home Page, left-click New Class.
2. Key in the names of your learners or copy and paste them from an Excel class list.
3. Take note of the number allocated to each learner. You will need this when you hand out the Plickers cards.
4. You can add each of your classes by following the same steps.

Step 6: Get Plickers Cards

You can download your set of Plickers Cards from the Plickers website.

If possible, you should laminate the cards. You can use them for different classes, so you only need one set that you keep and hand out and take back in.

Download your Plickers Cards from:
https://get.plickers.com/

Plickers Card features

Each Plickers Card is unique, but shares the same features with the other Plickers Cards in the pack. Look at the training video again to familiarise yourself with the cards.

Each learner is assigned a card when you register the class. They must always get the same card. There are four options the learner must choose from to answer a question. They will hold the card up to you with the correct number on top.

Using Plickers in the class

At first the number of steps to use Plickers might seem daunting, but you will get the hang of it quickly.

Setting up on your laptop

Go to your laptop.

1. Sign into your Plickers Account on your laptop and, on the Home Page, select the class you are teaching at that moment.
2. Click Add to Queue for the content you want to use.
3. Click Now Playing at the top of the page.

Making it happen on your smartphone

Go to your smartphone.

1. Open the mobile app on your smartphone and find the class you will be working with.
2. Tap on the content you want to use.
3. The content will open on your device.

Prepare the learners.

1. Give each learner their assigned card.
2. Show your learners that each card has an A, B, C and D on it.
3. Let them practice turning the card around to check that they all have the right letter at the top as you call it out.

Scanning answers on your smartphone

Use your smartphone.

1. Read the question.
2. Have the learners hold up their cards to show their chosen answer.
3. On your smartphone, tap the blue circle icon to start the scan.
4. Move around the class making sure to capture each learner's card.
5. When you can see all your learners' names on the app screen, press the red button to end the scan.
6. You will see all their answers immediately.
7. You can ask all the other questions you need in the same way.
8. When you have finished, click the X in the upper right-hand corner of your mobile app.

Reviewing the results

As soon as you have completed all the questions you set up, you will see some immediate results.

- The number of learners who selected each answer choice.
- The overall percentage of correct answers.
- The number of responses from learners.

Using the results immediately from the smartphone

If this was a quick formative assessment, you are now able to decide immediately what you are going to do.

- You could make a note to create a small group of learners who need revision. (You will be able to identify these learners in the web app.)
- You could also revise the section for the whole class if a large percentage got the answer wrong.

This is a powerful way to quickly get the right teaching information you need at the right time.

Reviewing reports in the web app

When you have more time, you can go to your Plickers Home Page on your laptop to do some deep analysis.

You can open Reports on Plickers.

1. Open your Plickers Home Page.
2. Left-click on Reports on the Left Side Bar to see all your learners' results.
3. Make decisions about what you will do. For example, if you were going to revise only with learners who had difficulty, you would get their names here.

To make this report more useful, you can use the Plickers scoresheet to track the learners over time. This is useful information to use in your planning.

You can open Scoresheet on Plickers.

1. Open your Plickers Home Page.
2. Left-click on Scoresheet on the Left Side Bar.
3. Select the date range at the top of the page.
4. Examine the results for individual learners or the whole class to track progress over time.

What about an internet connection?

You do need to have access to the internet for most things when you work with Plickers.

You will need the internet to:

- download the apps
- download the Plickers Cards from our website, or the Plickers website
- set up your class
- set up the questions in the web app
- sync your smartphone app to the questions
- get results
- review the class

You don't need an internet connection for the most important thing, which is to scan the learners' responses. The Plickers mobile app will store your learners' responses and sync them to your account when you have an internet connection again. When your smartphone has an internet connection, you will need to press Mark Done in the app to sync your learners' results with your account.

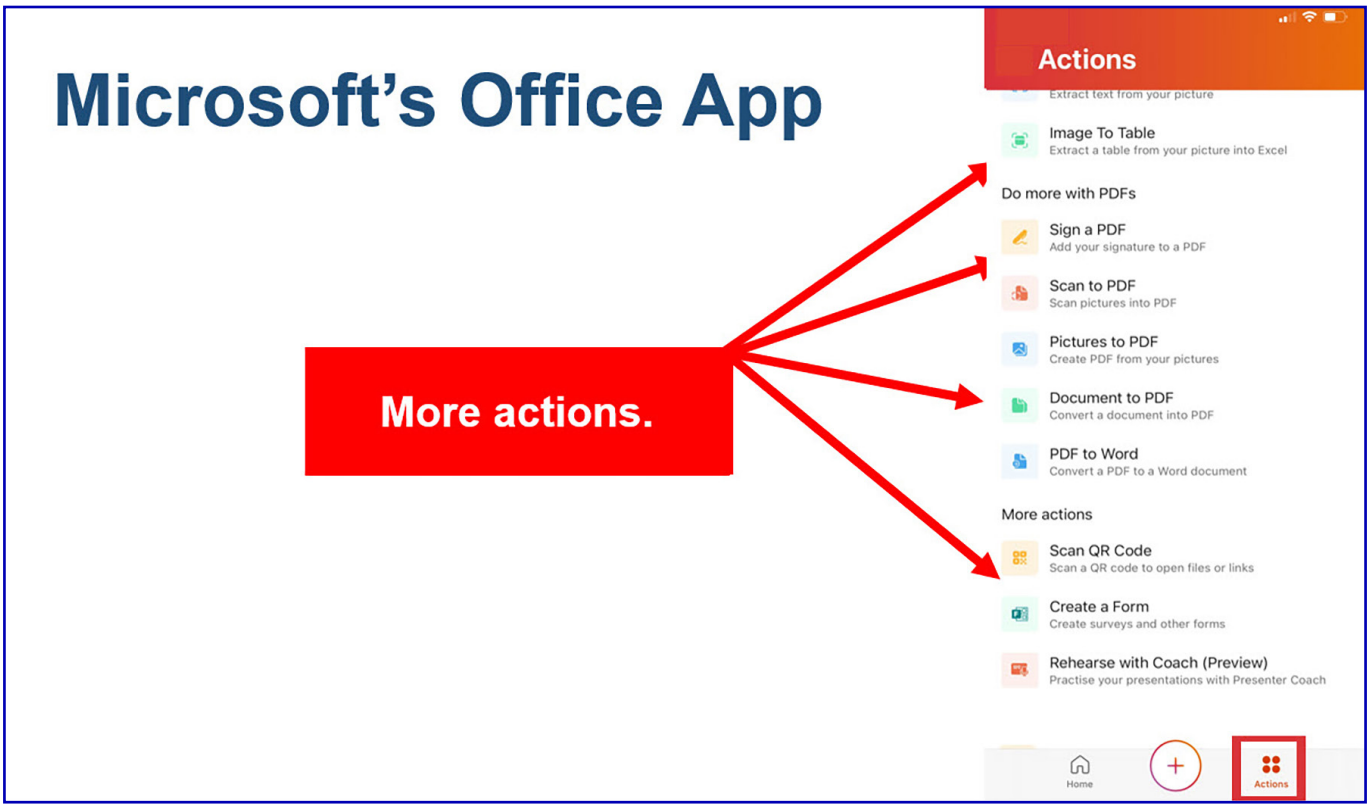
Microsoft's Office App

Microsoft has an app for your smartphone that offers excellent integration with the Office suite on your laptop, allowing you to work on documents on the run that will then sync back to your laptop. The app allows you to ask it to do things and then it gives you clear, easy-to-follow instructions to achieve what you want done.

You can download the app in the Android Google Play and iOS App Store.

The Actions Button

The Actions Button opens a set of useful tools. You can see some of them in this illustration.



Some of the useful actions you can take are listed below.

Transfer files: Transfer files between your phone and laptop without saving them to OneDrive or emailing them.

Image to Text: Convert a photo with text in it to text. Copy the text and paste it where you need it.

Do more with PDFs: Work with PDFs in a range of different ways that would usually require a laptop.

Scan QR Code: This gives you instant access to a QR Code reader.

Create a Form: Prepare a quick survey or assessment.

Reflection

- How could you use Plickers in your classroom?
- What could be an obstacle?
- What could you do to overcome that obstacle?

Task Memo

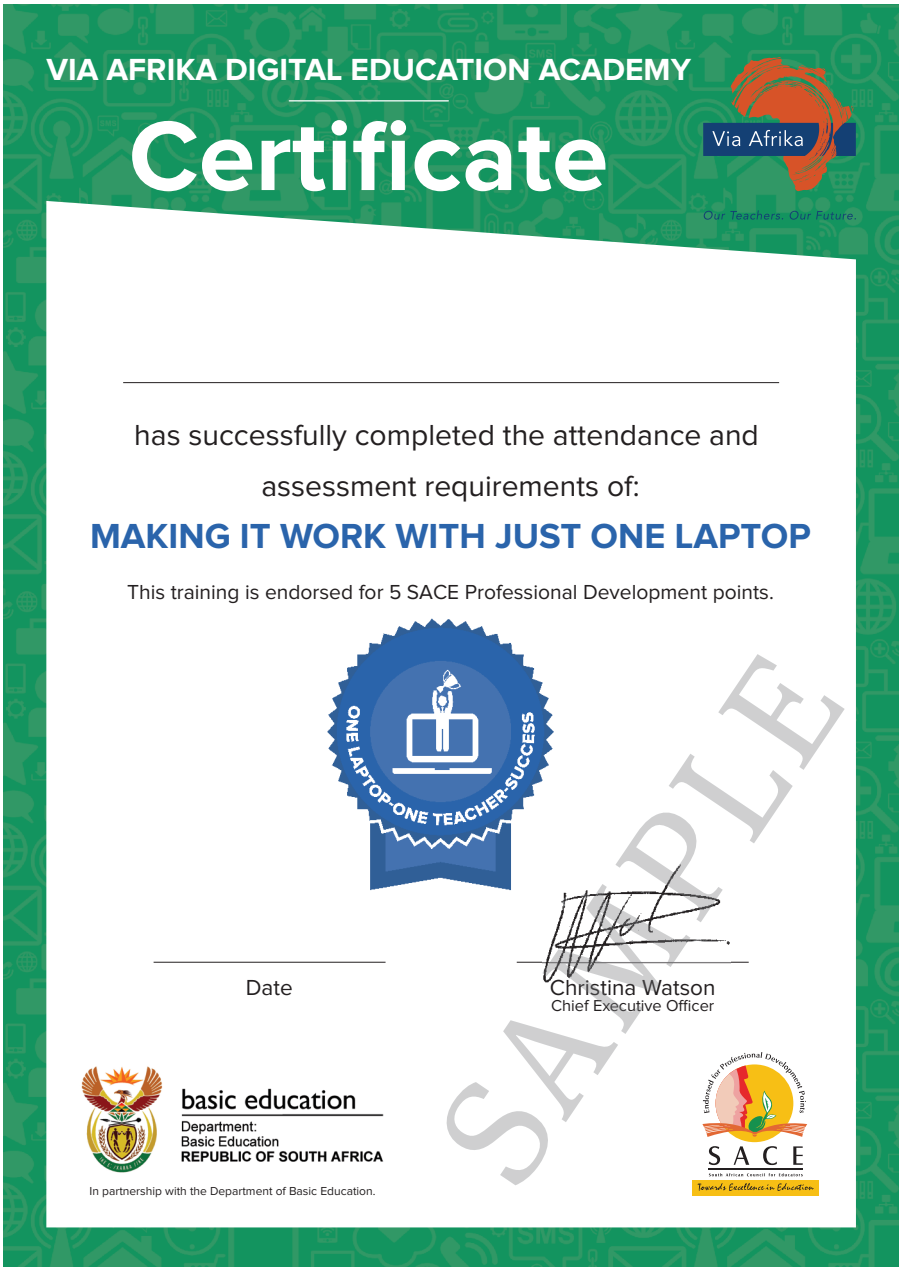
Answers to the Task on page 10

1. Learners read a web-based document about Indigenous Knowledge Systems.
   Substitution
2. Your learners work online on a Wiki for their project on the history of Maths.
   Modification
3. You give your learners a page of weblinks to follow and read.
   Augmentation
4. A learner presents their project on Human Rights using a variety of multimedia resources with an online mind map showing the links among them.
   Modification
5. The learners participate in an online pen pal programme with learners from across the world, commenting on provocative lead questions on important topics.
   Redefinition
6. Learners answer questions about the topic using a Microsoft Word instead of filling out a worksheet.
   Substitution
7. The learners watch a video clip of how the Group Areas Act was imposed in District 6 during apartheid.
   Augmentation

About the Final Assessment

At the end of this training session, you will be asked to complete the Final Assessment.

If you complete the Final Assessment successfully, you will qualify for your virtual badge and certificate (refer to the sample certificate and sample badge on this page).



Final Assessment

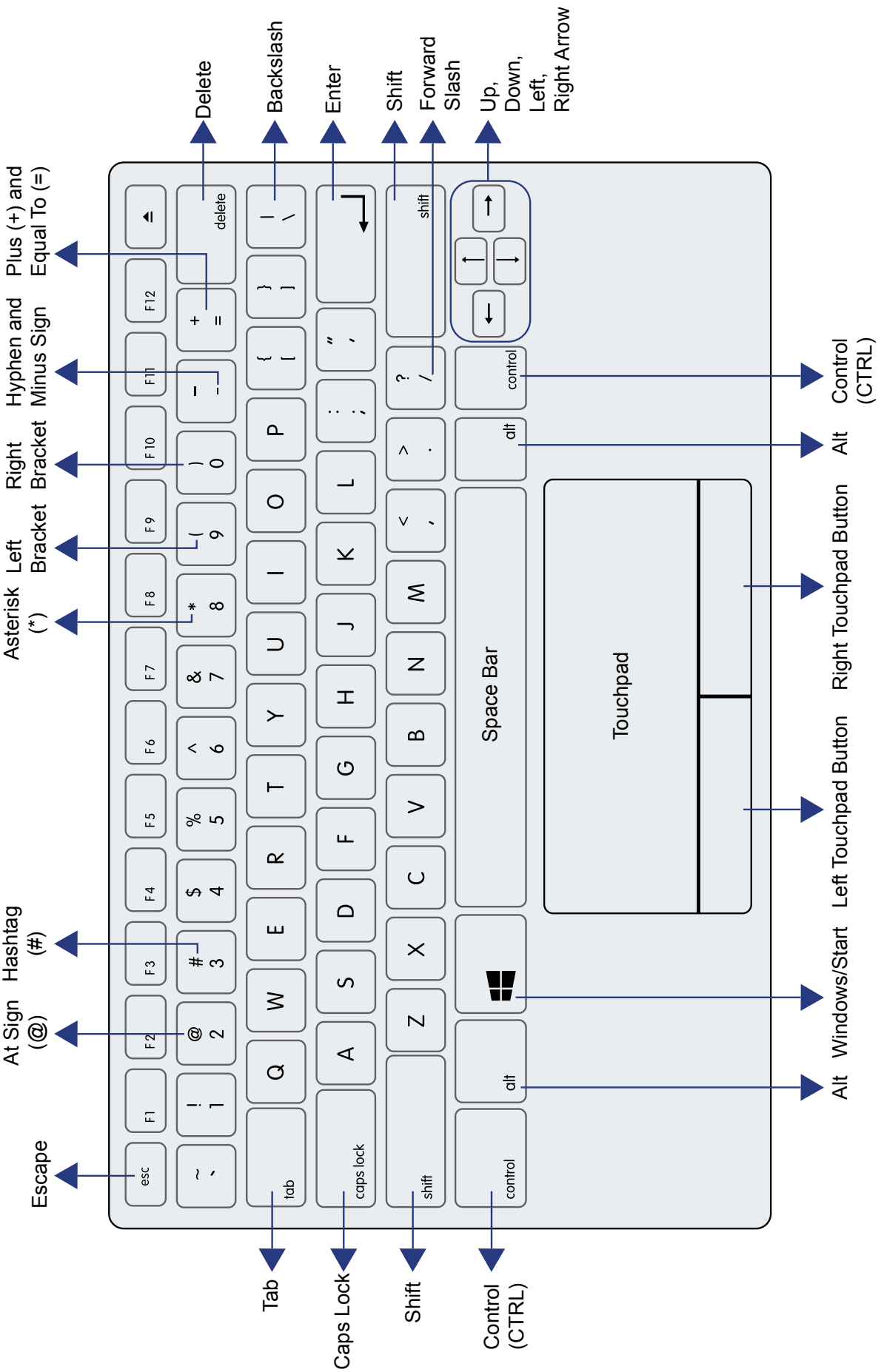
Indicate the ONE correct response for each question.	
1	Select the option that completes this sentence accurately. Information _____Technology Literacy suggests that the person can select _____and relevant applications and knows what to do with them at a _____level.
a	Communications, software, basic
b	Communications, hardware, basic
c	Communications, hardware, expert
2	Which option lists the categories of Bloom's Taxonomy Revised?
a	remembering, understanding, applying, analysing, evaluating, creating
b	remembering, understanding, augmenting, analysing, evaluating, creating
c	redefining, understanding, augmenting, modifying, evaluating, transforming
3	Select the option that completes these sentences accurately. ICT _____ suggests that the person not only knows which hardware and _____ to select and what to do with them but can _____ why they work in the way they do. They can also explain how they might _____ what they do if the context were to change.
a	Fluency, peripherals, explain, apply
b	Fluency, peripherals, explain, adapt
c	Fluency, apps, explain, adapt
4	Select the option that completes these sentences accurately. _____ Fluency suggests that the person not only knows how to use various elements of the internet and _____, but they also have a strong understanding of the need for _____. They can _____ critically what they find and appreciate the impact the internet has on them and the world.
a	Internet, apps, cybersecurity, evaluate
b	Internet, social media, cybersecurity, evaluate
c	Internet, software, cybersecurity, consume

Final Assessment (continued)	
Indicate the ONE correct response for each question.	
5	Select the option that completes these sentences accurately. _____ Digital Fluency means having the skills, knowledge and values to take the _____ from where they are to Digital _____. It also means having the knowledge and skills and values that enable them to teach the learners how to use apps to create and produce data not just how to _____ it.
a	Professional, learners, Literacy, consume
b	Professional, learners, Fluency, consume
c	Professional, learners, Fluency, learn
6	Examples of classroom teaching apps that focus on enhancing content include:
a	Geogebra, YouTube and EdPuzzle.
b	Socrative and WhatsApp.
c	Moodle and Socrative.
7	An example of an app that increases learner engagement is:
a	Geogebra.
b	WhatsApp.
c	Socrative.
8	Guo's research into the ideal length of an educational video that is best able to keep the attention and interest of the viewer shows that the length to aim of is:
a	between six and nine minutes long.
b	between one and three minutes long.
c	between six and 16 minutes long.
9	SAMR stands for _____
a	Substitution, Amplification, Modification and Redefinition.
b	Substitution, Augmentation, Modification and Redefinition.
c	Substitution, Augmentation, Modification and Replacement.

Final Assessment (continued)	
Indicate the ONE correct response for each question.	
10	Some researchers argue that SAMR could be better understood as RAT:
a	Redefinition, Amplification and Transformation.
b	Replacement, Amplification and Transformation.
c	Replacement, Augmentation and Transformation.
11	A teacher with Pedagogical Content Knowledge:
a	knows the content and knows how best to teach it.
b	knows the technological aspects and knows how best to teach it.
c	knows the content but does not know how best to teach it.
12	A teacher with Technological Pedagogical Knowledge:
a	knows how to use pedagogy and knows how to teach.
b	knows how to use technology and knows how choose technology.
c	knows how to use technology and knows how to teach.
13	A teacher with Technological Content Knowledge:
a	knows how to use technology and knows what to teach.
b	knows how to use pedagogy and knows what to teach.
c	knows how to choose technology and knows how to teach.
14	The term we use when technology allows us to do something is _____ .
a	affordance
b	ability
c	aptitude
15	Select the option that completes this sentence accurately. Open Educational _____ (OER) which are _____collections of useful material created by various donor organisations and academic institutions in which they have placed _____ materials that you are able to download and use _____.
a	Resources, online, educational, at no cost
b	Repositories, online, educational, at a cost
c	Repositories, online, educational, at no cost

Additional Resources

The keyboard of a laptop



Paper worksheet generators

https://www.canva.com/create/worksheets/ Free, signup

https://helpingwithmath.com/printables/generators/ Maths, sign up, free

https://www.education.com/worksheet-generator/ reading, maths, fund, free sign up

https://www.worksheetfun.com/ Primary school maths, free

Research related to Immersive Reader

Classroom technology that benefits low vision students

Lewis, Veronica: free online resource https://veroniiiica.com/

Font spacing

Yeatman, J. et al. (2018). Optimizing text for an individual's visual system: The contribution of visual crowding to reading difficulties.

Zorzi, M. et al. (2012). Extra-large letter spacing improves reading in dyslexia.

Line length

Schneps, M.H. et al. (2013). Shorter lines facilitate reading in those who struggle.

Breaking words into syllables

Doignon-Camus, N. et al. (2013). The syllabic bridge: The first step in learning spelling-to-sound correspondences.

Yu-Chi, T. et al. (n.d.). Within-word text segmentation on lexical processing and reading.

Page colour

Wilkins, A.J. et al. (2005). Coloured overlays, visual discomfort, visual search and classroom reading.

Text-to-speech (Read aloud) and word or line highlighting

Andreou, G. et al. (2019). Accommodations on reading comprehension assessment for students with learning disabilities: A review study.

Simultaneous highlighting and voicing text

Floyd, K. et al. (2012). The efficacy of assistive technology on reading comprehension for postsecondary students with learning disabilities.

Pacuilla, H. (2007). Assistive technology and adult literacy: access and benefits.

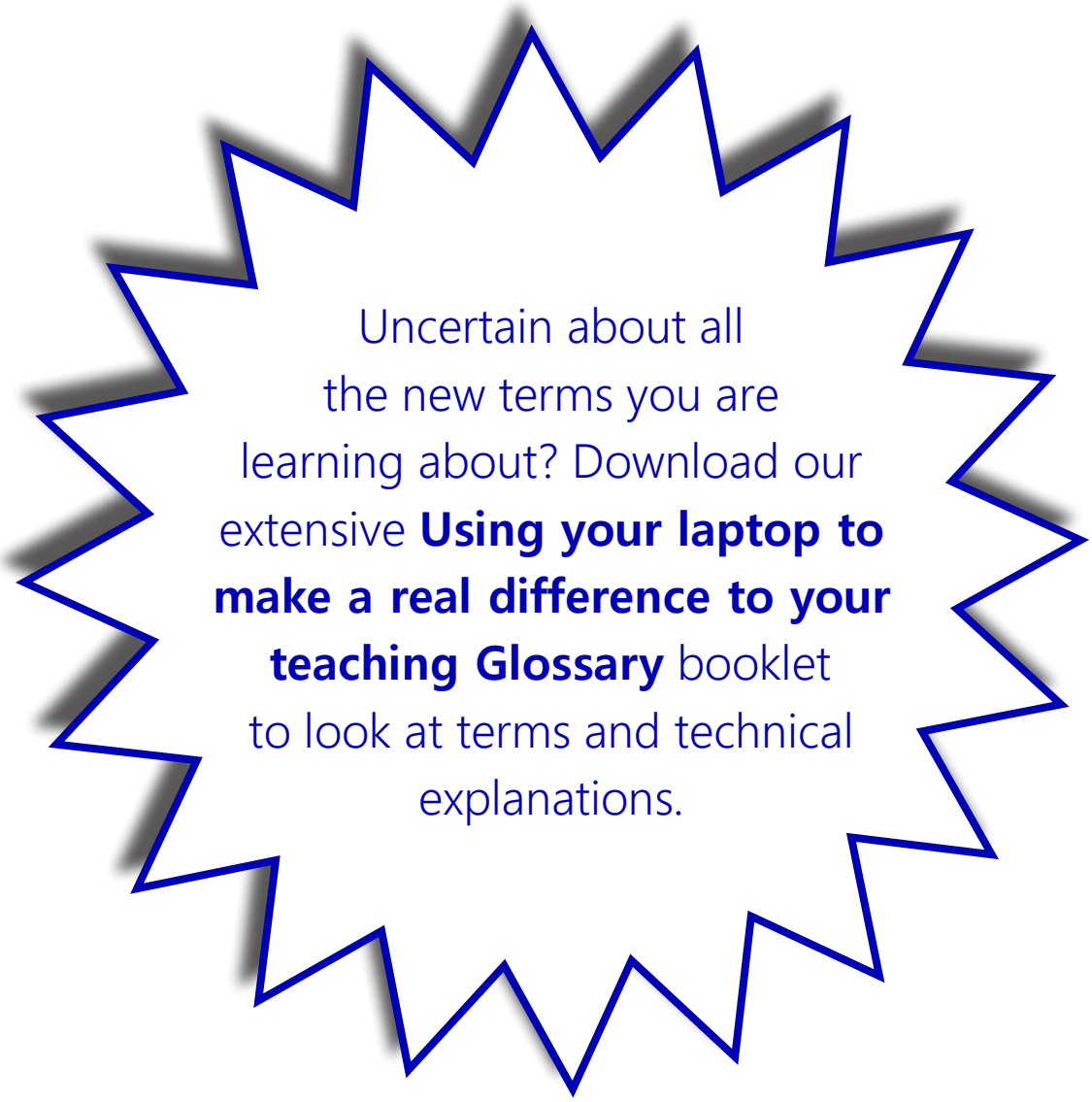
Wood, S. et al. (2017). Does use of text-to-speech and related read-aloud tools improve reading comprehension for students with reading disabilities? A meta-analysis.

Sitka font

Larson, K. et al. (2016). Sitka font: A collaboration between type design and science.

Hyperlinks to these articles may be found on the Microsoft Website noted below.

Source: https://education.microsoft.com/en-us/resource/9786fb2a



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Puentedura, R., SAMR Flowchart. https://www.researchgate.net/figure/The-SAMR-model-Puentedura-2014_fig1_305149184/download

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Our Teachers. Our Future.

Via Afrika
40 Heerengracht, Cape Town, 8001
PO Box 5197, Cape Town, 8000

www.viaafrika.com

Please note that the technical specifications, app features and icons, and hyperlinks to online content contained in the notes were accurate at the time of going to print.

These are subject to change as devices, apps and software develop, and as online content is moved, changed, or removed by content creators.

Notes

