VIA AFRIKA DIGITAL EDUCATION ACADEMY

Using social media to teach

SESSION 7

WhatsApp in the classroom

CLASS NOTES

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Course content

Using social media to teach

Session 1: The place of social media in education
Session 2: YouTube in the classroom
Session 3: Instagram in the classroom
Session 4: Facebook in the classroom
Session 5: Pinterest in the classroom
Session 6: Blogging and podcasting in the classroom
Session 7: WhatsApp in the classroom
Session 8: TikTok in the classroom

Using social media to teach

Session 7: WhatsApp in the classroom

Class Notes

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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 SACE.
4. Please remember that devices and apps are updated all the time, so the device specifications, app features and icons that you see here might differ slightly depending on the device you're using and any subsequent app updates.

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.

PD Points: Professional Development Points [See SACE]

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]

SACE: South African Council for Educators. Awards Continuous Professional Development Points (CPDP) to teachers.

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, you will:

- be familiar with a brief history of WhatsApp
- be able to talk about the educational uses of WhatsApp
- have created a WhatsApp Account on a mobile device and in a browser
- know how to navigate the various WhatsApp Pages and Buttons
- be able to explain the uses of WhatsApp Groups, Communities and Broadcast Lists
- appreciate the importance of copyright
- understand what Digital Citizenship is
- appreciate the importance of pedagogically sound use of WhatsApp in the classroom
- understand four ways of evaluating WhatsApp-based lessons
- analyse lesson plans where WhatsApp is used

Content of the session

This session will focus on:

- a history of WhatsApp
- creating a WhatsApp Account in the app
- WhatsApp Pages and Buttons
- creating WhatsApp Groups, Communities, and Broadcast Lists
- copyright, Creative Commons, Public Domain
- Digital Citizenship
- TPACK and WhatsApp-based lessons
- SAMR and WhatsApp-based lessons
- Bloom's Revised Taxonomy and WhatsApp-based lessons
- criteria for including social media in a lesson
- analysing lesson plans

Overview

Welcome to **WhatsApp in the classroom**, Session 7 of **Using social media to teach**. The aim of this session is to enable you to create a WhatsApp Account and use it for your teaching in a pedagogically sound way.

We will cover four key areas in this session.

1. An introduction to WhatsApp.
2. Getting started with WhatsApp, where you will learn about the social medium and how to use it.
3. Ideas for using WhatsApp in your classroom.
4. Lesson plans using WhatsApp.

There are regular tasks and quizzes just to check that you are developing the knowledge needed to move on.

Remember that devices and apps are updated all the time, so the app features and icons that you see here might differ slightly from the app in which you are working.

An introduction to WhatsApp

A quick overview of messaging apps

There are quite a few messaging apps out there, including Telegram, Signal, Slack, and Google Chat. Telegram is known for its user security and privacy, because if offers end-to-end encryption. However, several other apps (including WhatsApp) offer this security measure. End-to-end encryption is a way to secure messaging apps so that only the sender and recipient can read the messages. When you send a message in an end-to-end encrypted app, your message is encrypted before it leaves your device. This means it is converted into a code that only the recipient can decrypt. The encrypted message is sent across the internet to the recipient. Along the way, no one can intercept and read the message, not even the app provider. When the encrypted message reaches the recipient's device, their app decrypts the message using a special key. This displays the original message so the recipient can read it. The service provider never has access to the encryption keys, so they have no way to decrypt the messages. Only the sender and recipient can. This means your messages are secure and private between you and the person with whom you are communicating.

One outstanding feature of the Telegram App is that it allows for large group sizes of up to 200 000 members. The app has limited mainstream adoption compared to WhatsApp, and most educators will never need to create such huge groups.

Signal is another app that is considered to be among the most secure messaging apps. It is also not as widely used as WhatsApp.

Slack is another messaging app particularly popular in computer software development circles. Slack offers threaded conversations, where most other apps offer sequential chats, where messages are displayed one after the other. In a threaded chat, when you reply to a specific message, it creates a thread stemming from that message. Your reply is indented under the original message. Additional replies continue to be nested under the same thread, creating branching conversations. This groups relevant messages together, making long chats easier to follow. You can see which reply is tied to which original message.

This makes following and participating in conversations in large group chats much easier.

Slack also has organised channels and excellent searchability, which is very useful for class discussions or project collaboration. However, the desktop/web focus makes Slack less user-friendly on mobile devices.

Google Chat offers easy integration with Google Workspace and Google Workspace for Education, which makes it a convenient option for users. Chat history is saved to the cloud. But advanced features require subscription upgrades, and the app lacks WhatsApp's global use.

WhatsApp has become one of the world's most widely used messaging platforms since its launch in 2009. The platform provides an easy way for teachers to communicate instantly with learners and parents, share educational material, and keep everyone in the loop with class activities.

Reflection

- Make notes in your PD Journal.
- Which messaging app do you use most often?
- What made you choose that app?

The early history of WhatsApp

WhatsApp was founded in 2009 by Brian Acton and Jan Koum, former employees of Yahoo. The app was initially launched for iPhones in November 2009 as an alternative to SMS texting. At the time, the App Store was less than a year old and was still a novel concept. It was one of the first messaging apps available for the iPhone.

The name 'WhatsApp' is a play on the phrase 'What's up?' The founders also considered other names like 'Textem' and 'Recycle' before settling on WhatsApp. The app proved popular right from the start, amassing 250,000 downloads within the first few months after launch.

A key innovation of WhatsApp was its use of the internet to send messages, allowing users to avoid SMS fees. The app made use of the iPhone's data connection to send messages instantly between users. This made it a cheaper and faster alternative to traditional texting.

An Android version of the app was released in August 2010, immediately becoming the top free app in the Android Market (now Google Play). With Android support, WhatsApp's growth accelerated further. By 2011, it had over 10 million active users and was handling over 10 billion messages per month.

One of the major milestones came in December 2012 when WhatsApp added the ability to send photos. This feature helped set WhatsApp apart from the competition and kicked off the trend of enhancing messaging apps with multimedia capabilities.

Despite being bought by Facebook in 2014, WhatsApp has continued to operate as an independent app. And its rapid growth has showed no signs of slowing down. By 2016, WhatsApp was processing over 60 billion messages per day. And by 2020, it had over 2 billion users globally.

Despite adding features over the years, the app's design has remained straightforward. This simplicity and focus on core messaging capabilities is key to WhatsApp's global popularity.

Thirteen years after its inception, WhatsApp has become the world's ubiquitous messaging app. Its founders probably never imagined how big WhatsApp would become back in 2009. But by focusing on a fast, ad-free messaging experience across many platforms, WhatsApp has changed the way billions of people communicate today.

More than just a social medium

WhatsApp is an excellent messaging app for teachers. Let's consider some of its useful features.

- Group chats mean you can create class groups to send announcements, reminders, share files, links and have discussions.
- Media sharing means you can send documents, images, audio messages and videos up to 100 megabytes to explain concepts.
- Broadcast Lists are useful. One-way broadcasting allows you to share updates and resources with many classes.
- End-to-end encryption means messages are secured with encryption for privacy.
- Offline messages are useful. Messages are queued if learners or other recipients are offline and sent when they are back online.
- With read receipts you can see when learners have read messages, so you know information was received.
- Location sharing allows you and learners to share locations for field trips, events, or meetings.

Reflection

- Make notes in your PD Journal.
- Have you used a messaging app like WhatsApp in your classroom?
- If so, what did you find most useful about it? What were the problems, if any?
- If you have not used a messaging app, what stopped you?

Getting started with WhatsApp

WhatsApp in the app or on the web?

It is better to use WhatsApp in the mobile app, and not in a browser. The mobile app has more functionalities than the web version. However, you can link the web version to the app on your mobile device.

Here is an overview of what you can and can't do on the app compared to the web.

Feature	Mobile app	Web app
Test messaging, photo sharing, video sharing, document sharing	YES	YES
Group management	YES	YES
Voice messages	YES	YES
Voice and video calls	YES	NO
Add contacts	YES	NO
Location sharing	YES	NO
User profiles	YES	NO
Chat back-up	YES	NO

Core messaging features like text, media, and documents work across both platforms. But only the mobile app supports voice/video calling and additional features, for example backups.

The web app has more limited capabilities focused just on messaging and group administration.

Creating a WhatsApp Account

Creating an account on a mobile device

You can open a WhatsApp Account on a mobile device. The device must have a phone number and the capability to receive SMS messages. For this reason, WhatsApp works better on a smartphone than on a tablet device.

You can open a WhatsApp Account.

1. You can download WhatsApp on your smartphone from the App Store (iOS) if you use an iPhone, or from the Google Play Store if you use an Android phone, for example, a Samsung.
2. Open WhatsApp and tap Agree and Continue to accept the Terms of Service
3. Verify your phone number by entering your country code and phone number. Tap Next.
4. WhatsApp will send a verification code via SMS to your phone. Enter the 6-digit code when prompted.
5. Tap OK to allow WhatsApp to access your contacts. This helps connect you with friends who already have WhatsApp.
6. Enter your name and optional profile photo that will be visible to your contacts.
7. Tap the Settings Icon to further customise your profile and notifications.
8. Review and accept WhatsApp's Privacy Policy.
9. You can now start using WhatsApp by tapping on the Chats Tab and messaging contacts who also have WhatsApp.
10. Tap the Calls Tab to make voice and video calls through WhatsApp.

In the training video, you will learn more about the Camera Button, Search Button, Three Dot Menu, Community Tab, Chats Tab, Status Tab, and Calls Tab. You will see how to search for a contact in the App Search Function and how to start a new message. The training video will also demonstrate how to use the Video Call Button, Call Button, Three Dot Menu, Add Media Button, and the Voice Message Button.

Using WhatsApp in a browser

You can use the **web app** for some things. Remember, as we mentioned earlier, not all functionality is available on the web app. The app on your smartphone is the primary one, and the web-based one is an add-on.

1. Open your favourite browser.
2. Type in https://web.whatsapp.com.
3. Click Link With Phone Number.
4. Enter your primary account phone number by selecting your country. Type in your phone number. Click Next.
5. You'll see an 8-character code on the screen.
6. On your primary phone, tap the Enter Code Notification from WhatsApp.
7. Unlock your primary phone if it is locked.
8. Your primary phone will show the location and name of the device you're trying to link. If this is correct, tap Confirm.
9. You now have access to your WhatsApp Account on your laptop, on condition that you log into the app on your phone at least once 14 days.

Task

- If you do not have WhatsApp installed on your phone, please go to your App Store and install it now.
- Install WhatsApp on a browser and link it to the app on your phone.

Adding content to your account

Creating a contact

You can create a new contact in the app.

1. Open WhatsApp and go to the Chats Tab.
2. On the Chat Screen, tap the New Chats Button.
3. Tap New Contact.
4. Fill in the New Contact Form – enter the name and phone number at a minimum, but you can also enter any additional details you like.
5. When you're done, tap Save. You can now start using WhatsApp by tapping on the Chats Tab and messaging contacts who also have WhatsApp.

Attaching a media file to a message

Sending resources to your class is an excellent use of WhatsApp. You can attach a PDF file to a WhatsApp Message.

1. Open the WhatsApp Chat where you want to send the PDF.
2. Tap on the Attach Button (Paperclip Icon).
3. Select Document from the menu.
4. This will open your phone's File Explorer. Navigate to the folder containing your PDF.
5. Tap on the PDF file to select it.
6. A preview of the file will appear at the bottom of the WhatsApp Screen.
7. Tap Send to attach the PDF to your message.
8. The PDF will now be sent in the chat as a file attachment.
9. Your recipient can tap on it to view/download the PDF.
10. You can also tap the Trash Icon to remove the attached PDF before sending it if you need to.

Remember that the maximum PDF size you can attach on WhatsApp is two gigabytes. WhatsApp works on data, either mobile data or WiFi data depending on where you are, so sending large files can be costly for you, and the person who receives them.

Attaching a photo or video will follow the same steps. Tap the Camera Button to send photos or videos to your contacts.

Using WhatsApp to send messages to more than one person

WhatsApp allows you to do more than message a contact. It is possible to create groups, and even communities. Communities are made up of several related groups that you bring together under one umbrella. For example, imagine that you teach two subjects, and two classes in each subject. You are likely to have a group for each of these classes. But sometimes you may want to send a message to more than one class doing the same grade and subject at the same time. You can put these groups into a community.

Creating a WhatsApp Group

The steps to creating a group are very easy. You must start with having the future members in your Contacts List.

You can create a WhatsApp Group.

1. Tap the Chats Tab, then tap the Three Dot Menu.
2. Tap New Group.
3. Select contacts to add to the group.
4. Tap the arrow after selecting members.
5. Enter a group name and add a photo or icon.
6. Tap the Green Tick Mark Icon to create your group.

Remember, when anyone in the group sends a message, everyone in the group gets it, and they can reply to it.

Creating a WhatsApp Community

A community can have up to 50 groups in it. Creating a community is very easy. You can do it on your mobile phone or your web app.

You can create a WhatsApp Community.

1. Tap the Community Tab.
2. Tap Start Your New Community.
3. Tap Get Started.
4. Add a name and a photo.
5. Tap the arrow. Tap Add Group.
6. Select your groups.
7. Tap the Green Tick Mark Icon

Using Broadcast Lists

You can use a Broadcast List to send a message to many of your contacts at the same time. A Broadcast List is a saved list of contacts to whom you may wish to send messages. Why not just send a group message?

The answer lies in the fact that all contacts on a Broadcast List will receive your message, and if they choose to respond they will respond only to you directly, they cannot respond to everyone on the Broadcast List. There is just one thing to remember: the contact must also have you saved as a contact in their contacts list, otherwise they will not get the broadcast message.

You can create a WhatsApp Broadcast List.

1. Tap the Three Dot Menu.
2. Tap New Broadcast.
3. Search for and select the contacts you want to add.
4. Tap the Green Tick Mark Icon

Task

- Create a WhatsApp Group and send everyone in the group a photo you want to share.
- Create a Broadcast List. Broadcast a message to the members.

A note about content

Just as with other social media, it is important to keep on the right side of the law when it comes to copyright on WhatsApp. Unfortunately, WhatsApp's ease of use makes it a very easy way to distribute copyrighted material illegally. It is vital that we teach our learners to be responsible Digital Citizens. Paying attention to copyright is an important element of that. Let's explore some important concepts.

Copyright

In South Africa, the Copyright Act determines the duration of copyright protection, which generally lasts for the life of the author plus 50 years. Please be aware that copyright laws in South Africa are in the process of being changed, so check this information for the most up-to-date rules.

You, or your learners, may not do any of the following.

- Distribute or share a complete literary work or textbook in PDF or any other format that is copyright protected.
- Distribute or share a complete piece of music, song, or album or album art that is copyright protected.
- Distribute or share an image, cartoon, or photo that is copyright protected.

Public Domain

The Public Domain consists of works that are not protected by copyright or whose copyright has expired. These works are freely available for anyone to use, share, and modify without permission.

Public Domain resources offer a vast array of materials, including literature, art, music, and scientific works that can enrich classroom activities.

You can access these resources through platforms such as Project Gutenberg, Europeana, and the Internet Archive. It's important to note that even within the Public Domain, certain works may have specific usage requirements or conditions, such as acknowledging the original creator.

Creative Commons

Creative Commons is a global non-profit organization that provides a set of licences enabling creators to retain copyright over their works while granting certain permissions to others.

Creative Commons licences are designed to make the legal sharing and reuse of creative works easier, fostering a more flexible and accessible approach to copyright.

Creative Commons licences offer a range of permissions, allowing creators to choose the level of freedom they wish to grant to others.

Licence	Description
Attribution (BY)	This condition requires users to credit the original creator when sharing or adapting a work.
ShareAlike (SA)	Works licenced with this condition must be shared under the same or a similar CC licence when redistributed or adapted.
NonCommercial (NC)	This condition restricts the use of a work for commercial purposes without the explicit permission of the creator.
NoDerivatives (ND)	Works with this condition cannot be modified or adapted without the explicit permission of the creator.

These four conditions can be combined in various ways. When you are searching for an image or video, and it says that it is distributed under Creative Commons you will know what you can do with it by visiting the Creative Commons website.

You can search for CC-licenced materials through platforms like the Creative Commons website, Flickr, Wikimedia Commons, and more.

By understanding the different CC licences and respecting the conditions attached to each work, you can access a wealth of resources for your classroom, ensuring compliance with copyright law while benefiting from a wider pool of content.

Digital Citizenship

Digital Citizenship is the responsible and ethical use of technology. Teachers must educate learners about proper online behaviour, including how to engage with their WhatsApp Messages respectfully.

Messages that will get you into trouble

The law is very clear in South Africa on what messages are not acceptable when sent by any means, including WhatsApp and other social media.

- You may not send a message that incites damage to property or violence. Remember, to incite means to encourage.

- You may not send a message a message that threatens persons with damage to property or violence. It is an offence to distribute messages that endanger a group of people in relation to violence, or with damage to their property. The definition of a person is very wide, and includes, but is not limited to a group of persons that is identified as being a group because they share the same characteristic(s). These characteristics include without limitation:
  - race
  - gender
  - sex
  - pregnancy
  - marital status
  - ethnic or social origin
  - colour
  - sexual orientation
  - age
  - disability
  - religion
  - conscience
  - belief
  - culture
  - language
  - birth and nationality
- You may not send a message that contains an intimate image of a person without their consent. It is worth noting that the message is an offence if the person is female, and her covered genitals or breasts are displayed in a manner that violates or offends her sexual integrity or dignity.

Evaluating information

People are very quick to send around messages posing as news and information on WhatsApp. We need to teach our learners how to evaluate information critically. Giving them some simple guidelines like these will help.

- Where is the person who posted the message? The location of the poster is important. Are they in the place they are messaging about?
- Do I know this person or is this a message that has been forwarded many times?

- Where can I check this information? If you cannot find the same information on a reliable news site, the message must be treated carefully.

Digital footprints

We need to help our learners to be mindful of their digital footprint.

Your digital footprint is your unique online identity, created by the trail of data left behind by your internet activity over time. It includes the websites you visit, online posts, photos you upload, every search, click, like, share, and your social media posts and comments. These all create digital breadcrumbs that make up your footprint. Devices like phones and tablets track your location and activities.

These bits of data combine to create a picture of who you are, what you do, where you go, and what you like online. Your digital footprint can catch up with you at any time.

One way in which you can develop this vital digital fluency skill in your learners is by always making sure you are a role model in the way you manage your WhatsApp Account.

Task

- Create a checklist for yourself of the different ways in which an image or text can be protected, like, for example, copyright, Public Domain, or the various Creative Commons licences.
- Keep the checklist in place that is easy to find so you can check any image or text you want to use in a tweet or short text post.

Ideas for using WhatsApp in your classroom

Using WhatsApp in education

Some tips

When used thoughtfully, WhatsApp provides teachers with an additional channel for lesson engagement, resources sharing and parental communication. But face-to-face instruction remains essential, so WhatsApp should supplement rather than replace in-class teaching. With some care and planning, teachers can harness WhatsApp to enrich the learning experience for learners by paying attention to these tips.

- Enable privacy settings and moderate groups actively.
- Don't overuse broadcasts and keep usage purposeful.
- Consider learners with limited internet access.
- Maintain professional language and boundaries.
- Abide by your school's social media and mobile device policies.

Possible drawbacks

As with any digital technology, there are potential drawbacks or concerns regarding the use of WhatsApp in education.

- There is a risk of distraction. WhatsApp's constant notifications and chat features can distract learners from focused class work and study if use is not well-managed.
- Receiving too many resources or frequent messaging on WhatsApp Groups can overwhelm learners and make key information hard to locate. As a teacher, it is important for you to be mindful of this.
- There is an ongoing concern about especially young people and screen time. Frequent WhatsApp use throughout the day can increase total screen exposure for learners and this may be unhealthy in the long-term.

- We cannot forget digital inequality. Some learners may lack sufficient mobile data or smartphone access at home, and this excludes them from the benefits of educational WhatsApp usage. What's more, the app is almost exclusively mobile driven. This may present problems if not all your learners have access to a mobile phone.

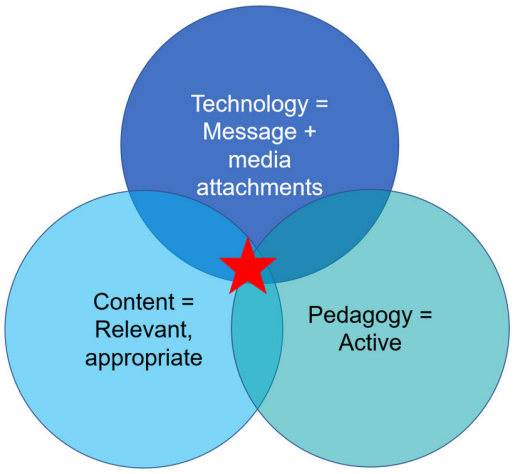
First things first: Pedagogical considerations

There is no doubt that WhatsApp can enhance teaching and learning in the classroom. It has become an important resource for educators looking to engage learners, supplement lessons, and create a more dynamic and interactive learning environment. But as you know, you cannot simply throw technology into a classroom and hope for great results. Technology needs to be carefully integrated into the teaching and learning process to ensure that what we are doing is educationally meaningful.

You can use the framework provided by three key pedagogical theories and models: TPACK (Technological Pedagogical Content Knowledge), SAMR (Substitution, Augmentation, Modification, Redefinition), and Bloom's Revised Taxonomy to successfully incorporate WhatsApp into the classroom.

TPACK

The TPACK Model is a framework that emphasises the importance of integrating Technological, Pedagogical, and Content Knowledge in teaching and learning. As you know, the key feature of WhatsApp is the message, whether it is audio, video or text-based, as well as any other media attached to the message. So how can you use the technology, WhatsApp Messages, in a pedagogically sound way?



Consider Content

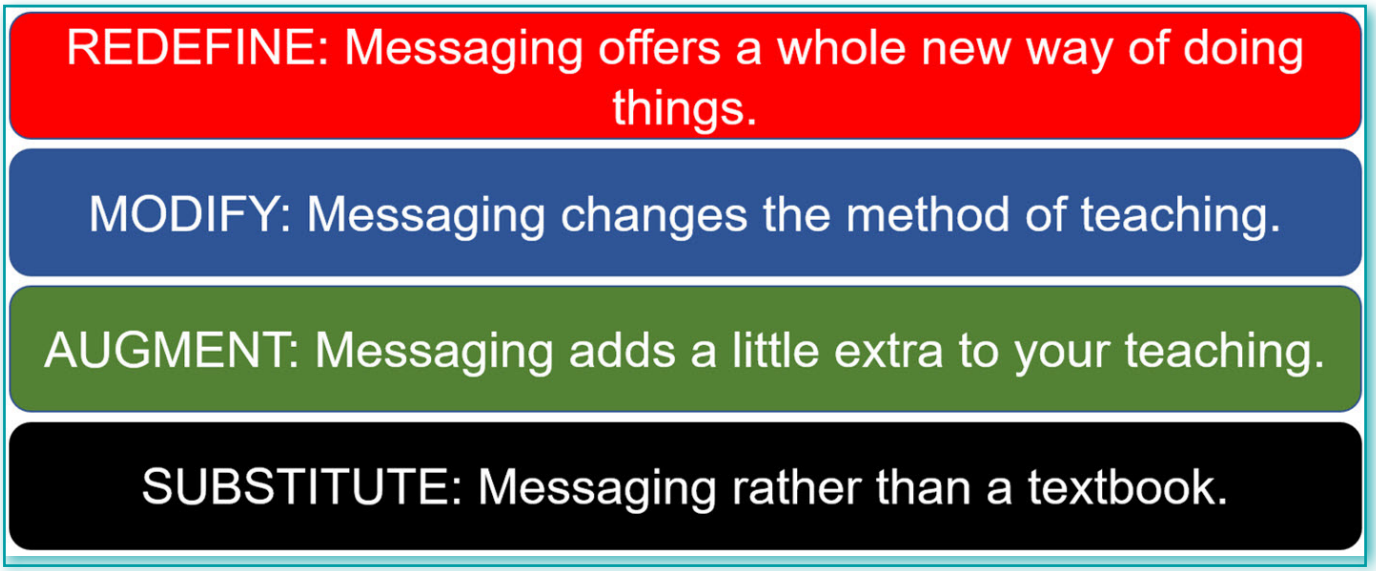
- Is it relevant to the topic?
- Are the content choices appropriate to the learners' level?

Consider Pedagogy

If you simply use message as a text that the learners view passively, you are not achieving the full benefit of using WhatsApp in your classroom. Learners need to be active; they must question the messages, evaluate them, and/or create messages. If it is an informational message, they must act based on the message,

With all this in place, you will have achieved the sweet spot of TPACK where technology has enhanced the learning experience, improved learner engagement and motivation, and increased the effectiveness of the lesson.

SAMR



The SAMR Model is a framework for understanding the progression of technology integration in teaching and learning. The model is based on four levels of technology integration: Substitution, Augmentation, Modification, and Redefinition.

What are you aiming for?

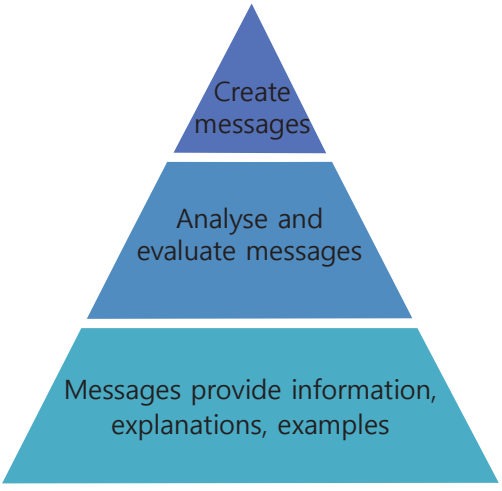
When you decide to use a messaging app in your classroom, you need to be aware of what your aim of using that technology in the lesson is.

- The technology is working at a **Substitution** Level if it is a direct replacement for traditional methods of teaching. In this case, the message, and its attachments substitute for your standing in front of the class or for a textbook. The message and attachment are just another text.

- The technology is working at an **Augmentation** Level if you are using WhatsApp to enhance traditional methods of teaching. When you use the technology to add to or provide a little extra by making short voice notes or videos that you send to the class, the content is being covered in a novel way, but the technology is only augmenting the traditional way of teaching.
- If WhatsApp **Modifies** the way the lesson is taught because instead of your having to teach in the front of the whole class, groups of learners can interact with each other while you are working with other learners and in doing so modify their experience, then the technology has achieved the modification level.
- If WhatsApp is used to create entirely new learning experiences that were previously impossible the technology is working at the **Redefinition** Level. An example of this would be when your learners use WhatsApp to communicate with people all over the world quickly and efficiently. This could never have been achieved without the app, so the learning has been transformed by the technology.
- In all these options, you will keep TPACK in mind, and remember how to hit the sweet spot during the lesson.

Bloom's Revised Taxonomy

Bloom's Revised Taxonomy is a framework for understanding and categorizing the different levels of cognitive skills that learners can demonstrate. The framework is based on six levels of cognitive complexity, ranging from lower-order thinking skills such as remembering and understanding, to higher-order thinking skills such as analysing and evaluating, and finally to creating new knowledge through synthesis. Please be aware that the diagram below is not the complete taxonomy. It is a simplification for our needs here.



WhatsApp can be used to support all six levels of Bloom's Revised Taxonomy.

- At the lower-order thinking level, WhatsApp can be used to provide information, explanations, and examples to help learners remember and understand key concepts. For example, teachers can send messages to teach vocabulary or provide historical context.
- At the middle-order thinking level, WhatsApp can be used to promote analysis and evaluation skills. For example, teachers can use messages to teach critical thinking skills, such as identifying bias or evaluating sources.
- Finally, at the highest order thinking level, WhatsApp can be used to promote creativity and synthesis skills. For example, teachers can ask learners to create their own messages that synthesise information from different sources, or to create messages that demonstrate their understanding of a concept through a creative project.

Criteria for effective social media implementation

The following criteria can be used to check whether the social medium used has been used effectively in a lesson. These criteria have been drawn from John Hattie's book *Visible Learning* (Routledge, 2009) in which he provides criteria for effective technology implementation.

1. Is learner diversity met through the use of the technology?
2. Are there many opportunities for learner learning?
3. Are the learners rather than the teacher in control of learning?
4. Is peer learning possible for learners?
5. Is feedback from peers as well as from teachers available to learners?

These five criteria are useful for evaluating the soundness of a lesson using social media.

Reflection

- Make notes in your PD Journal.
- How comfortable are you with these models and the set of criteria?
- Do you feel confident enough to explain them to a newly qualified teacher?
- What do you need to do to gain more confidence?

Some ideas to try

At first glance, it may seem that because it is only messaging, WhatsApp has limited usefulness in schools. However, WhatsApp can have direct benefits for learning, and encourage sharing, enable global connections, and build Digital Citizenship skills.

Create class groups for discussions

Set up a WhatsApp Group for each class providing a space for learners to continue class discussions outside of school hours. You can pose questions and prompts for learners to respond to, encouraging active engagement with what is being taught in class. Learners can also ask each other questions and explain concepts to one another.

This facilitates peer-to-peer learning and collaborative problem solving. You can contribute from time to time to provide guidance and feedback as well. Class groups are useful for essay subjects like History, Languages, or Social Sciences where debate and analysis are key skills.

With respect to TPACK and SAMR, class groups for discussions would mean that if the discussion topics were well constructed and the process carefully monitored, you would be redefining the activity since there is no way this activity could take place without WhatsApp. It is very likely that the lesson would hit TPACK's sweet spot: The content is at the right level and appropriate; the pedagogy is not traditional since it allows learners to be active and construct knowledge and the technology fits into the way the activity is constructed.

Share educational resources

WhatsApp Groups allow you to easily share educational resources like documents, images, videos, and links. This is helpful for sharing class notes, assignments, study guides or multimedia content. Learners can access materials for review or catch up if they missed a class. Files shared on WhatsApp also remain available in the chat history, creating a searchable digital archive of class resources.

Keep the following in mind.

- Always send only relevant, high-quality resources.
- Don't overwhelm learners with too many messages.
- Be mindful of copyright in terms of what you do share.

Purely sharing the resources would not meet all the criteria for TPACK's sweet spot since there is no pedagogy that is defined. If there were a clear activity that allowed the learners to be active participants in using the resource they have received, then the sweet spot is more likely to be achieved. Similarly, sending resources could be purely at the Substitution Level in SAMR – you could have printed the notes and given them to the learners. It could be that the resources are an addition to the classwork, in which case this is an augmentation of the lesson with the technology. If there is a transformative activity too, then we could move higher up the SAMR levels.

Communicate with parents

You can use WhatsApp to update parents or guardians regarding their child's progress, achievements, or concerns. General class announcements can also be shared via WhatsApp Broadcast Lists. This facilitates regular teacher-parent communication outside of formal parent-teacher meetings.

However, be mindful of sharing too much informal information and maintain separate private numbers. Any confidential student discussions should happen directly with parents or guardians only. Using a Broadcast List rather than a group would make it easier to keep this level of confidentiality.

Create a poll

Sending out a WhatsApp Poll is a quick and easy way to do a formative assessment at the beginning of a class to check prior knowledge, during the class to check understanding, and at the end of a class to check that the learners have grasped the content that has been covered.

You can create a poll

1. Open the relevant group on WhatsApp.
2. Tap the Add Media Button.
3. Tap the Poll Button.
4. Add the question.
5. Tap Send.
6. You can watch the learners vote on your phone.

Task

- Do you currently use WhatsApp or another messaging app to do any of these three things: Communicate with parents, share resources, and form discussion groups?
- What worked well, what did not work well?
- Is there an idea here that you have not tried? Experiment with it and see how it goes.

Lesson plans using WhatsApp

A Grade 7 lesson plan using WhatsApp

Read through this lesson plan using WhatsApp for a Grade 7 Maths class with the comments as numbered below it.

Grade 7 Mathematics lesson plan

Topic

Data handling

Lesson

Collecting and analysing data on social, economic, and environmental issues

Time required

6 x 45 minute lessons

(1) **Learning outcomes**

- Learners can pose questions around social, economic, and environmental issues relevant to their community.
- Learners can identify appropriate sources to collect data on these issues.
- Learners can create surveys and questionnaires to collect data.
- Learners can collect, organise, and analyse data in graphs/tables.
- Learners can interpret data and draw conclusions about the issues.
- (2) Learners can use WhatsApp to collect data and collaborate with peers.
- (2) Learners can use Google/Microsoft Forms to collect data and collaborate with peers.

2 ➤ Learners can use Sheets/Excel and PowerPoint/Slides to present project.

3 Materials required

- ➤ Smartphones with WhatsApp.
- ➤ Access to internet data.
- ➤ Computers/laptops with spreadsheet software (for example, Microsoft Excel or Google Sheets) and the internet.
- ➤ Projector and screen.

4 Teacher preparation

- ➤ Create WhatsApp Groups for the project and add learners.

5 Introduction and discussion (45 minutes)

- ➤ Introduce the concept of data handling and explain that we collect and analyse data to gain insights into issues around us.
- ➤ Lead a class discussion on social, economic, and environmental issues learners observe in their community and country. Prompting questions could include the following.
  - What social issues do you notice around you (for example, crime, poverty, inequality, lack of services)?
  - What economic issues exist in our country (for example, unemployment, rising prices, low incomes)?
  - What environmental issues are people concerned about where we live (for example, pollution, littering, lack of recycling)?
- ➤ Record issues mentioned on the board and facilitate a discussion on why these issues matter.
- ➤ Emphasise that data helps us understand key issues more objectively.

6 Part 1: Posing meaningful questions (45 minutes)

- Explain that asking meaningful questions is key to useful data collection.
- Review some principles of effective questions (specific, objective, answerable, etc.).
- Ask learners to brainstorm possible survey/ questionnaire questions about the issues discussed during the last class.
- Record ideas on the board and provide feedback on how to improve questions.
- Group similar questions into categories/themes.
- Explain a project to design a questionnaire on one or two issues using WhatsApp, and survey at least 15 people.

7 Part 2: Designing questionnaires (45 minutes)

- Ask learners to decide on one or two key issues to which to focus the questionnaire.
- Remind learners that questions should cover the scope, causes and effects of the issue.
- Circulate to assist groups in drafting survey questions. Provide guidance on refining questions.
- Emphasise importance of demographic questions (for example, age, location) to categorise responses.
- Post samples of well-designed surveys on WhatsApp Groups for reference.
- Set deadline for groups to share draft survey via WhatsApp for teacher approval.

8 Part 3: Administering questionnaire (45 minutes)

- Review the surveys submitted and provide improvement suggestions if needed.
- Ask learners to contact at least 15 people to complete questionnaire via WhatsApp.

- Encourage learners to approach diverse respondents (different ages, backgrounds).
- Set deadline for completing surveys and uploading responses to assigned Microsoft Excel /Google Sheet.
- Remind learners to thank respondents and explain that it is for a class project.
- Post guidance on Microsoft Excel/Google Sheet formatting expected for survey responses.
- Circulate to assist groups with administering survey via WhatsApp.

9 → **Part 4: Analysing and interpreting data (45 minutes)**

- Explain principles of data analysis: Creating graphs, calculating averages, identifying trends.
- Demonstrate using Microsoft Excel/Google Sheets to create different graph types and formulas.
- Share sample graph templates to WhatsApp Groups.
- Set a deadline for learners to analyse survey data and prepare short presentation.

10 → **Part 5: Presentations (45 minutes)**

- Allow the learners to present their findings to the class. Have their peers comment on their work in addition to your comments.
- Use the presentations as a summative assessment.

Analysis of the lesson plan

Summary of analysis

Refer to the numbers in the lesson plan to follow the summary below.

1. The learning objectives are clearly stated.
2. The last three learning outcomes are focussed on technology, the first on WhatsApp, and the last two on using productivity software. This is making sure that the T in TPACK is covered in the objectives. The Content in TPACK is explicit, and there is a sense of the Pedagogy too, although it needs to be expanded upon.
3. In our materials list, we have a clear indication that technology is being used. None of the technology has any introductory learning outcome so, we can assume that the learners know about, and how to use the various technologies listed. There are digital devices and internet access. The projector and screen would be for the teacher's use and for the presentations the learners will be doing.
4. The teacher has some work to do before class starts. The teacher must create WhatsApp Groups for the learners. Not mentioned here is that the teacher will need to check that all the devices are working and that there is data available for the learners to use.
5. In the introduction the teacher will introduce the various content concepts and lead the discussion.
6. It is only in the second part of the lesson that the teacher indicates that there is a WhatsApp Project. Clearly for this teacher, the content comes before the technology. The class is still strongly teacher led with input from learners.
7. In the next part the teacher gives control over to the learners who work in groups to complete the work. The teacher introduces the technology component by posting examples on the WhatsApp Group. This means the learners can individually download these examples and have them as reference when they need to.
8. Next, the learners get to use WhatsApp to conduct their surveys. There is a little uncertainty for me here as to whether the questions will be answered in a survey form, or via WhatsApp Messages. I wonder if the teacher would explain that more clearly to the learners. The learners use more technology than just WhatsApp since they work on productivity software too.

9. From a pedagogical perspective, too little time is given to this part of the lesson – analysing and interpreting data. It seems a lot of time was taken up getting ready for the survey and not enough time is given to the analysis and interpretation. This problem was not caused by technology and a better use of time in the early stages would have helped.
10. The learners present their work and have the benefit of both the teacher's and their peers' comments.

TPACK and the lesson plan

- **Technological Knowledge:** Learners will use smartphones and computers or tablets and WhatsApp and productivity apps like Excel or Sheets and PowerPoint or Slides.
- **Pedagogical Knowledge:** The lesson plan has several pedagogic practices. The teacher spends time leading knowledge sharing and then moderating the learners' work. The learners are active constructors of knowledge. They research and create surveys, analyse data, and do presentations. Then they can present their research. All of this is done with the whole class, in small groups and individually.
- **Content Knowledge:** The lesson plan focuses on Data Handling – collecting and analysing data on social, economic, and environmental issues.
- This lesson plan does get to the sweet spot of TPACK.

SAMR and the lesson plan

The lesson is constructed in such a way that it could not have been done without the technology: WhatsApp as well as the productivity and presentation apps **Redefine** the learning. The non-technology alternative would be to have the learners create their surveys on paper and then go from person to person to have the surveys answered before doing their analysis. Presentations could be done without presentation software. But, by incorporating the technology in so many different activities – reading, research, thinking, surveying, analysing, and presenting, the teacher has moved way past the technology simply being a Substitute or being used to Augment the lesson.

Bloom's Revised Taxonomy and the lesson plan

When it comes to Bloom's Revised Taxonomy, the lesson plan touches on each of the levels.

- **Remembering:** Learners will make notes on what they learn from their teacher and each other.
- **Understanding:** Learners construct messages, surveys, and presentations. All of these activities need understanding.
- **Applying:** Learners will apply their understanding of the topic to create and analyse their surveys and messages.
- **Analysing:** Learners will analyse their research.
- **Evaluating:** Learners will evaluate the validity and reliability of their research.
- **Creating:** Learners will create surveys and a presentation to present their findings.

Criteria for effective social media implementation and the lesson plan

- **Is learner diversity met through the use of the technology?** Learner diversity was not met in any particular way through the use of technology although accommodations could have been made for it.
- **Are there many opportunities for learner learning?** There were many opportunities for learning from the teacher and from each other.
- **Are the learners rather than the teacher in control of learning?** The teacher managed the lessons, but the learners took a great deal of control of the lesson.
- **Is peer learning possible for learners?** There were opportunities for this in the group work and the class work.
- **Is feedback from peers as well as from teachers possible for learners?** Yes. There are opportunities for feedback from peers and teacher.

Conclusion of analysis

- The teacher had a good idea – use WhatsApp to make the learning event more interesting and the lesson more engaging. The use of technology always adds some variety to a lesson, and, as you know from TPACK, Technology plus Content plus Pedagogy makes for a strong lesson. The pedagogy could have been a little stronger since difficult concepts were squeezed into too short a time period.
- This was a good lesson in which technology transformed the lesson according to SAMR criteria.

- The different levels of Bloom's Revised Taxonomy were covered effectively and in different ways.
- The criteria for effective social media implementation were met in some instances, but not all of them.

Task

Read through the Grade 10 Geography lesson plan in your Class Notes. Evaluate the lesson using the following questions to guide you.

- Do you think the use of WhatsApp is effective? Why do you say this?
- How well do you think the lesson meets the sweet spot of TPACK?
- Consider the lesson plan with respect to the SAMR model. Do you think that WhatsApp is used as Substitution, Augmentation, Modification or Redefinition? Why do you say this?
- The lesson plan makes no reference to the criteria for effective social media implementation. What can you do to ensure that all the elements of the lesson plan meet these criteria?

A Grade 10 lesson plan using WhatsApp

Read through this lesson plan where WhatsApp is used in a Grade 10 Geography class.

Grade 10 Geography lesson plan

Topic

Population Movements – Causes, types, and effects

Time required

Three hours (3 x 60 minute lessons)

Learning outcomes

- Learners understand key terminology related to population movements.
- Learners can explain different types of population movements.
- Learners can discuss causes of various population movements.
- Learners can analyse positive and negative effects of population movements.
- Learners can evaluate real-world examples of population movements.

Materials required

- Smartphones with WhatsApp.
- Internet access.
- Computers/tablets for research.
- Projector and speakers for video clips.

Teacher preparation

- Prepare PowerPoint presentations on the topics.
- Create video clips on push/pull factors for migration.
- Create WhatsApp Groups and a WhatsApp Community.

Lesson Part 1: Causes and types of population movements (45 minutes)

- Define key terminology – immigration, emigration, migration.
- Use a PowerPoint presentation to explain types of population movement.
  - International vs regional migration.
  - Rural-urban migration.
  - Voluntary vs forced migration.
- Share relevant maps, diagrams, and flowcharts via WhatsApp.
- Post video clips explaining push/pull factors causing migration.
- Instruct learners to use WhatsApp to discuss push and pull factors for migration in WhatsApp Groups and share examples of different migration types seen in South Africa.

Lesson Part 2: Effects of population movements (45 minutes)

- Recap key terminology and types of population movements.
- Run an activity to brainstorm positive and negative effects of migration using WhatsApp Groups.
- Post prompt questions to guide brainstorm in WhatsApp Groups.
- Have the learners summarise their group's discussions.

- Remind learners to build on each other's ideas respectfully.
- Collect summaries from each group and share them with the rest of the class.

Lesson Part 3: Case studies (45 minutes)

- Select real-world examples of migrations for learners to analyse.
  - Immigration patterns in Europe.
  - Rural-to-urban migration in China.
  - Refugee crises in Middle East and North Africa.
- Assign a case study to different groups.
- Provide guidance questions for analysing the cases.
- Share relevant articles/materials via WhatsApp to inform analysis.
- Use WhatsApp to check on groups' progress and respond in WhatsApp Chats.
- Bring all the groups together into a WhatsApp Community and have them share their case studies via WhatsApp. Have the learners peer review the other groups' work via message.

Analysis of the lesson plan

We will examine the lesson plan and TPACK, SAMR and Bloom's Taxonomy as well as the criteria for effective social media implementation in a lesson.

TPACK and the lesson plan

This lesson plan does not get to the sweet spot of TPACK.

- **Content Knowledge:** The lesson plan focused, as it planned, on Population Movements – Causes, Types and Effects.
- **Technological Knowledge:** The teacher mentions in the requirements of the lesson that the learners need access to smartphones with WhatsApp, internet access, and computers. However, their use is not mentioned in the learning outcomes. During the lesson, the use of WhatsApp seems to be a fun add-on rather than a pedagogically sound decision.
- **Pedagogical Knowledge:** Things go somewhat haywire here. The way in which the teacher planned to present concepts, discuss them, and evaluate case studies as a whole class and in groups gave the learners the chance to participate actively. The learners are active the whole way through the lesson.

So why bother with WhatsApp? It was nothing more than a modern way to have learners speak to each other and to distribute notes. There was no pedagogical benefit to using WhatsApp here. If you compare this to the earlier lesson plan, we discussed, you will remember that the learners were able to access 15 people easily and safely **because** of WhatsApp. There was a benefit to it that allowed the teacher to do things that would not have been done easily before.

There are video clips that are distributed via WhatsApp that the learners watch and then discuss. Could this have been done on a tablet or computer in a class? Absolutely.

SAMR and the lesson plan

Technology is really used at the bottom levels of SAMR. It is a **Substitute** for face-to-face discussions and information sharing. Perhaps one could argue that the distribution of the clips and the group discussions via WhatsApp **Augmented** the lesson, perhaps even **Modified** it. But the lesson would have been stronger without the distraction of WhatsApp.

Bloom's Revised Taxonomy and the lesson plan

When it comes to Bloom's Revised Taxonomy, the lesson plan gives learners the opportunity to do activities that move across the spectrum of thinking that Bloom's Revised Taxonomy suggests. The early work functions well at the Remembering and Understanding Levels, and then they are tasked with creating a presentation that demands higher-order thinking skills when they apply what they have learned, analyse, and evaluate information as they create the presentation. They discuss these activities throughout, making the learning active and impactful. But all of this could have been done without WhatsApp. It was just an add-on. The video clips were useful, though.

Criteria for effective social media implementation and the lesson plan

The lesson could have operated without WhatsApp, and it met almost all these criteria anyway. Accessibility could have been enhanced with larger font texts, and captions for the various clips and WhatsApp would not have been necessary.

- **Is learner diversity met through the use of the technology?** No. The notes could have had larger font texts, and captions for the various clips.
- **Are there many opportunities for learner learning?** There are many opportunities for learners' learning already in the lesson plan. These include talking about the concept, listening, viewing, creating short text posts, preparing presentations. The learners work in groups and as a class. But the social medium WhatsApp does not add much to this.
- **Are the learners rather than the teacher in control of learning?** The learners are in control of the lesson with guidance from the teacher.
- **Is peer learning possible for learners?** Peer learning occurs throughout, and the learners work in groups, discuss, and create collaboratively.
- **Is feedback from peers as well as from teachers possible for learners?** There are many opportunities for peer and teacher feedback.

Summary of analysis

- This is a problematic lesson.
- The technology is merely an add-on to the lesson in many ways and serves little pedagogical purpose.
- Technology is used only at the substitution and augmentation levels. The technology could have been left out with little damage to the lesson.
- The spectrum of thinking skills that form Bloom's Revised Taxonomy are covered but would have been covered without the technology being present.
- The lesson meets the criteria for effective social media implementation overall, but truthfully not because of the social medium.
- This teacher needs to rethink how they want to use technology to ensure it is used to transform education for their learners.

Task

- Create a lesson plan for any topic of your choice using WhatsApp.
- Make sure that you have considered all the pedagogical issues.
- Try the lesson plan out in class and then write a reflection on your experience.

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. You can see a sample here.

Final Assessment

Indicate the ONE correct response for each question.	
1	When was WhatsApp initially launched?
a	2007
b	2009
c	2011
2	How many downloads did WhatsApp get in its first few months?
a	50 000
b	100 000
c	250 000
3	When did WhatsApp add support for Android smartphones?
a	2009
b	2010
c	2011
4	How many active users did WhatsApp have by 2011?
a	5 million
b	10 million
c	15 million
5	At what level of SAMR does technology allow new learning experiences not possible before?
a	Substitution
b	Augmentation
c	Redefinition
6	WhatsApp can help develop which thinking skills in Bloom's Revised Taxonomy?
a	Only lower-order
b	Only higher-order
c	All levels

Final Assessment (continued)	
Indicate the ONE correct response for each question.	
7	What are two benefits of using WhatsApp Class Groups?
a	Share resources and facilitate discussions.
b	Send announcements and share resources.
c	Check-up learners and share resources.
8	What are two things to consider when sharing resources on WhatsApp?
a	Send only relevant quality resources and consider copyright.
b	Send as many as possible resources and don't worry about copyright.
c	Only send images and avoid copyright.
9	What does a Broadcast List allow you to do in WhatsApp?
a	Send messages to many contacts at the same time and receive replies from all recipients.
b	Send messages to many contacts at the same time, but recipients can reply only to you directly.
c	Send messages to many groups simultaneously.
10	What is the purpose of creating a community in WhatsApp?
a	To send messages to many contacts at the same time.
b	To organise groups with similar interests or subjects into one larger group.
c	To restrict the number of groups a user can join.
11	What is needed to link WhatsApp Web to your mobile device?
a	A WiFi password.
b	An 8-digit code.
c	Bank account details.
12	What action is illegal according to South African law?
a	Forwarding viral videos.
b	Sharing intimate photos without consent.
c	Creating memes.

Final Assessment (continued)	
Indicate the ONE correct response for each question.	
13	What contributes to your digital footprint?
a	Your browser history.
b	Your offline activities.
c	Your phone calls.
14	How can teachers demonstrate good Digital Citizenship?
a	Oversharing personal details.
b	Modelling responsible online behaviour.
c	Ignoring copyright law.
15	What does it mean to incite violence according to South African law?
a	To encourage or provoke violence.
b	To report on violent events.
c	To promote peace and non-violence.

Acknowledgements

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