EDCI 336 Assignment 2 – Creating an Inclusive Classroom Using Technology

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Outline:

Opening

Idea 1

Idea 2

Idea 3

Conclusion

Ideas:

<https://www.etivision.org/blog-with-us/6-accessible-classroom-tech-resources-for-inclusive-education>

* Text-to-speech/speech-to-text
* Closed captioning
* Virtual classrooms
* FM systems

[https://unesdoc.unesco.org/ark:/48223/pf0000373655](https://unesdoc.unesco.org/ark%3A/48223/pf0000373655)

* “In particular it can provide multiple means of presenting, representing and expressing learning and through AT enable disabled learners to overcome barriers they would otherwise experience to participating in the curriculum. It also has the potential to increase enjoyment and motivation.”
* Gives options - “Personalised learning which takes account of interests and abilities could be obtained by combining DL with lessons and projects which take account of student needs and a focus on learning rather than didactic teaching (Ferguson, 2008).”
* “Storybird, Bookshare and Newselea provide access to reading materials at various levels and on different topics. Bookshareis an accessible online library for people with print disabilities and Newsela provides nonfiction articles on various topics. Students can choose the reading level and answer a quiz to provide feedback on their comprehension. QR codes are readable by mobile phone and can be used to provide information about assignments, meanings of vocabulary words and assessment directions and questions to allow individual assessments (Mahoney and Hall, 2017).”
* “Other technologies which have potential for supporting differentiated learning include (mobile) digital games (Hersh and Leporini, 2012, 2018), virtual worlds (Stendal, 2012), augmented reality (Akçayir and Akçayir, 2017) and problem based learning with real world problems presented in video format (Bouck and Flanagan, 2009). A combination of subtitles, audio description and traditional text-based presentations can be used to improve accessibility for all students. (Mobile) digital games and virtual reality have particular potential due to their versatility, their great familiarity to young people and findings that they can contribute to children’s social skill and academic development and academic achievement (Crompton et al., 2018).”
* “There is potential in using multiple apps or other technologies on one device to support DL. This could allow different students to carry out different activities to achieve the same learning goals and express the learning outcomes in different ways.”

<https://pulse.microsoft.com/en/transform-en/education-en/fa1-the-best-digital-tools-for-an-inclusive-classroom-a-teachers-perspective/>

* Immersive reader
* Microsoft Teams
* Reflect in Teams
* Flipgrid

<https://institute.global/policy/tech-inclusive-education-world-class-system-every-child>

* Nearpod
* Mindspark
* Sparx Maths

Could focus on one technology innovation ie. Nearpod, Virtual Classrooms, text to speech?

Do a demo of the technology/show how to use it

Talk about:

* How does it support teaching and learning?
* Pros, Cons, Risks
* Strategies and tips for using

Could screencast using the technology or record a video of us using it and talking about it.

* Text to speech
* Closed captioning
* Virtual classrooms
* Microphones in classrooms
* Giving alternative assignments ie. Typing instead of printing, recording a video instead of speaking in front of a class
* Interactive games ie. kahoot
* Delivering instruction in multiple ways

Creating inclusivity for every student, not just students with specific exceptionalities

Overcoming any barriers, using technology

**Video** – 9-12 min.

Intro – Hello and thank you all for joining us! As a group for our technology class, we looked at how we can use technology to help create a more inclusive classroom. Each of us took one tool to investigate and we wanted to share our findings.

Devices - (3 min. each)

Sarah – Virtual Classrooms

Emily – Immersive Reader

Morgan – Nearpod

Conclusion – By using tools like each of these, we can create a classroom learning environment that has more accessibility to everyone.

**Presentation** – 10 min.

Intro (30 sec. - 1 min. - Morgan): How can we create a more inclusive classroom using technology?

How does it support teaching and learning? -

By having these various technologies, they provide students with all abilities and exceptionalities with the opportunity to understand, learn, and participate in classroom activities. This is the goal for all teachers, to reach and teach as many students as possible.

We each took a form of possible technology that we could include in our teaching to help us reach that goal.

Strategies/tips (2 min. each):

Sarah – Virtual Classrooms

Slide 3

Virtual Classrooms are a tool used in post-secondary AND elementary and secondary schools. Virtual classrooms have been used for a while, but really became the norm once in-person instruction became impossible with Covid-19.

When someone says “virtual classroom” they might mean something like zoom or teams, where students and instructors can meet synchronously and learn over an audio or video call. A virtual classroom could also mean something asynchronous that can be accessed at any time like brightspace, blackboard, or google classroom where teachers can post lessons or assignment details, videos and other content, answer questions and talk to their class, or give feedback to students, and students can submit assignments, ask questions, share on discussion forums, communicate with their teacher and classmates, and engage with the learning material.

Slide 4

Pros - In my opinion, the biggest pro of having a virtual classroom for your class to use is that it can be accessed anywhere, at any time. Your students can access the course material whenever needed. If they have questions, they can read the assignment details online or reach out to you or a classmate directly through the virtual classroom.

An alternate mode of instruction means they are able to take their time with the material, revisit the virtual classroom multiple times and whenever needed.

If a student misses something in class, they might be able to catch it online.

Slide 5

Students who may not feel comfortable speaking in class can still type out and share their ideas and discuss with the class on forums. Every student can have a voice.

Slide 6

You can also share things on your virtual classroom that you may not share in class. Say, a video expanding on a science topic that your students learned about that day, or extra instruction on a math problem for students that might need more support with their homework.

The fact that it can be accessed anywhere, means that students can still come to class if they can’t be there in person for whatever reason. Even asynchronously, they can still catch up on the work that they missed that day by checking the virtual classroom. Virtual classrooms give each student the chance to participate, engage, and understand.

Slide 7

Cons - A con of virtual classrooms, is there can be a bit of a learning curve when first using them. With any technology, there will be things you need to troubleshoot, probably some things you may need help with, but because of the large amount of features on many virtual classrooms, it can be difficult to figure it out at first. Another major con is that in order for students to access the class outside of school, they will need a computer or another device at home - and that is simply not an option for some students. While a virtual classroom itself may boost inclusivity and engagement in your classroom, the platform and technology itself can be inaccessible for many students.

Risks -

Emily – Immersive Reader

Pros -

Cons -

Risks -

Morgan – Nearpod

Nearpod is a fun interactive program that can be used to create more engaging and inclusive lessons. In this program, you can create your own presentation or upload one you’ve already made and add their features into it. When you create a lesson, slides like PhET simulations, VR fieldtrips, quizzes, matching, collaborate boards, and polls can be added to engage and assess the participants. When presenting, students sign in like they would with Kahoot and they will see your presentation. You can go live or have it student-paced where they complete the lesson on their own, at their own pace. You have a whiteboard available for use that you can pull up to draw or explain something at any time, which would be helpful for online teaching. Activities can be added if the lesson changes or you need to explain or assess something. The student results of the presentation can be emailed to you after for assessment purposes.

Pros – Students have multiple ways that they can engage in the class. Student-paced gives everyone the same information, but allows them to learn, go back, and answer questions at the pace they need. In the settings, you can enable immersive reader for students, allow audio submissions, and require students to answer the question before continuing. With the premium version, you can also allow students to take notes on their devices and then they can email them to themselves. Teachers can assign Nearpod assignments to their Google Classroom (if they use it). Teachers can add a co-teacher to lessons who can also change the slides and see student results.

Cons – The biggest issue that you may run into is that every student will need a device to participate. This is not always feasible. Devices will be out and may be used to play games or do other things. A special note: Canva, the popular presentation forum, can’t be uploaded directly. It can be uploaded as a pdf file or I would suggest taking screenshots and posting them on the slides as a picture.

Risks – All of the presentations and assessments are online. If the internet or technology fails, how is it going to be presented or what if your report does not send or gets deleted? It is important to keep in mind that any of the premade materials are American based so need to be filtered and carefully considered.

Conclusion (30 sec. - 1 min. - Sarah): Altogether, these technologies can be used to help all students learn. These create options for student learning and representation. What is good for one is good for all.

Notes for presentation (what are the pros, cons, benefits and how can it make for an inclusive classroom environment?

What is immersive reader?

Immersive reader is a reading support system for anyone of any ability. It can be helpful for those who need the extra support with reading, someone who is learning English or those who may have difficulties seeing the computer screen. It also helps to develop reading skills as it makes the words bigger and emphasizes the sounds of words by boxing them while they are being read. I also discovered that you can colour code parts of speech. Additionally, if you pause then press on a word you may be unsure of, a picture of what that word means will also appear (I can see how this can be really beneficial for students who are learning English as a second language).



Pros/Benefits:

1.Offers support when there may not be enough in the classroom: Currently our school system seems to be low on EA’s and you may not have the privilege of having an EA in your classroom for extra support to help those who may be struggling. Although it is your job to ensure you are supporting each individual student, immersive reader can help while you work with other students one at a time, so that students aren’t just staring into their computer screens waiting for assistance.

2.You can change the colour of the background to suit learning needs, and for some students reading with a background that is a different colour actually makes reading simpler.

3.You can colour code parts of sentences such as nouns, verbs, adjectives, and adverbs to make them stand out so they can be identified.

4.The language can be translated: for students who are learning English as a second language in your class, immersive reader is a great way to translate sentences for them, allowing them to still be in the know.

5.You can choose how fast or slow you want it to read to you: we all learn at our own pace and students should understand that it is ok to read at the pace they are the most comfortable and confident with and speed is not the goal of learning to read.

6.There is a google chrome extension immersive reader that allows students to use it anywhere on google: this is nice so that students can branch out of microsoft office while still having that extra reading support.

7.You can use immersive reader on phones, tablets and computers.

Cons/Risks:

1.Students have potential to end up relying on immersive reader: Although this is a great tool to help students develop their reading skills, it should not be overused as students may get to the point where they rely on it and as we know in real life reading tools such as immersive reader will not always be available such as when your reading signs, buying groceries, reading menus etc…

2.Microsoft office is not free: although all/most schools have microsoft office 364 students may not have access to it outside of school since it is a system that has to be paid for, although until the student graduates they should have access to it through their student account?

3. The technology used for immersive reader does not always work or is even available to use: therefore, it’s important for students to be able to adapt and still be able to learn and have some reading ability if it is not available for them to use.

How does immersive reader make your classroom a more inclusive environment for ALL learning abilities?

1.Immersive reader has the ability to be adjusted to suit all learning needs: There are so many ways students can adjust immersive reader to make it the most helpful for their individual learning abilities and allows them to discover what works best for them, such as being able to change the speed of the reader, changing the colour of the background, being able to translate the language etc…

2.All students can learn from immersive reader: Whether students need reading assistance or not there are many other important skills all students can get from immersive reader no matter where they are at in their learning. Some of these skills include building reading fluency and identifying parts of speech (I also think there are activities you could do with this such as if the students are learning about adjectives, have them colour code all the adjectives in the sentence or paragraph using immersive reader).

3.It helps students who may need the extra support to read without feeling they are being judged:

Instead of always having the extra assistance from an EA or teacher, immersive reader also has the potential to help students feel more confident as they have the opportunity to learn more independently. Additionally, some students are self conscious when it comes to getting extra assistance in a general classroom environment so this is a way they could get that extra support while still feeling they are learning independently.

(it’s still important to consider that students will still need the support from EA’s and teachers, however there are ways students can have access to this extra assistance without feeling they are being singled out or judged by their peers).

Video:

Intro – Hello and thank you all for joining us! As a group for our technology class, we looked at how we can use technology to help create a more inclusive classroom. Each of us took one tool to investigate and we wanted to share our findings.

Conclusion By using tools like each of these, we can create a classroom learning environment that has more accessibility to everyone.