

Group Project 1:
Digital Tools for the Classroom

Danielle Kellum

Katrina Sheely

Molly Speed

Pearlina Jones

Songtao Yi

IT 648

March 18, 2018

Revised March 29, 2018

Introduction

Education has considerably changed since the beginning of the twenty-first century, suggesting new methods and strategies. From being teacher-centered, education has transformed into a student-centered education, where the main focus is on the learners' needs. Along with this, new technologies have emerged, opening more learning opportunities at educational institutions.

Social media is one such technology that has had a rapid and overwhelming development. With the advent of *Six Degrees* in 1997, to *Facebook* in 2004, and *Wechat* in 2011, social media has become a way of life (History Cooperative, 2016). It is no surprise then that educational institutions are incorporating similar digital platforms into the classroom.

Digital communication tools are becoming standard use in the classroom, in both K-12 and upper education. According to the National Center for Educational Statistics, roughly 62.8% of children age 5 and older use some kind of internet tool (NCES, 2016). This is a staggering statistic. It has stimulated K-12 and upper education institutions to incorporate more digital tools in the classroom than ever before.

There are many different types of digital tools from which to choose. These can be either synchronous or asynchronous. There are tools that can incorporate the whole class or those that can be incorporated into a section of the lecture. Both can greatly enrich the classroom experience.

The IT 648 class was tasked with evaluating digital communications tools. Groups were formed. For Project 1, individual team members were required to choose a digital tool that had been articulated in earlier semesters. The project allowed cohorts to acquire knowledge and skills about various unfamiliar digital tools, as presented by the other group members. The group members then discussed and interacted with their chosen tool. Group 4 members chose digital tools that are both asynchronous and synchronous.

Group 4 utilized different conference platforms to assist in the meetings and subsequent discussions of the digital tools. The first meeting was held using *ZOOM*, a video and web conferencing tool. There were issues with video and voice over lag. It was decided that *Skype* would be used to facilitate the next meetings. The group also communicated through the activities within the various chosen tools and email exchange within Canvas and the university's email system.

AppleTree - Katrina Sheely

AppleTree is an interactive communication tool for use between teachers and parents. The application can be downloaded to any smartphone or it can be accessed online at <https://www.goappletree.com>. Katrina assumed the role of teacher with the rest of the group portraying the students. Messages, events, pictures, videos and emergency notifications can be communicated. This platform is only two years old.

Periscope - Danielle Kellum

Periscope is a live streaming interactive video application usable in classroom instruction. The application can be downloaded for use with a smartphone, android, tablet, or for viewing online at <https://www.periscope.tv>. Danielle presented 2 live broadcast streams and acted as the teacher/presenter. Group members responded to and “liked” the broadcasts.

Quizizz - Songtao Yi

Quizizz is a game show style online activity, which involves each student in the class. It is an educational and fun game, which can be implemented in most of the modern equipped classrooms. It is available for download at <https://www.quizizz.com>. Songtao presented the quizzes in 2 of the groups online meetings. The members took tests and were then given the statistics available to the teacher about the tests.

Tango - Pearlina Jones

Tango is a cross platform application that allows for national and international phone calls and messaging. It was established in 2009. The application is available for download from the Google and Apple stores as well as online at <https://www.tango.me>

Twitter - Molly Speed

Twitter is a social networking and news service. The posts are known as “tweets” and were originally restricted to 140 characters. This application is available for download from the Google and Apple store. It is also available on the web at <https://twitter.com>. The group utilized Twitter to receive postings from Molly. The group was also invited to participate in a poll within the designated hashtag created for the group.

Findings



AppleTree is a free interactive platform that has been created for educational use as a communication tool between teachers and parents. It can be accessed using an app on a smartphone or online at the website: www.goappletree.com. AppleTree can use emails and phone numbers also to communicate between parent and teacher.

Functions

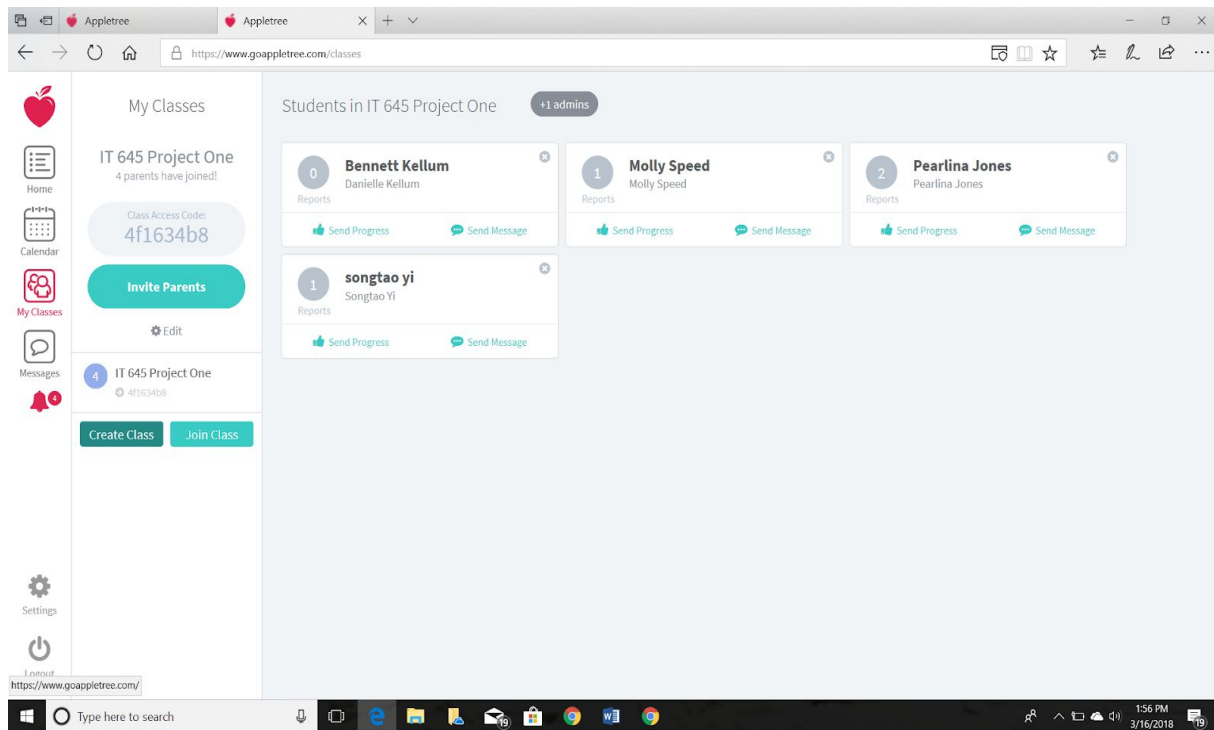
I began a free AppleTree account by setting up a username (which must be an email) and password on the website. A prompt will ask me if I would like to sign up as a Teacher or a Parent. I chose 'Teacher' and another window opened asking for the school and its location to be entered. A virtual "guide" named Annie prompted me through the various aspects of the site.

Next, I set up a class, and chose a name for it (IT648 Project 1). This generated a code that I can send via email to whomever I would like to join my "class". I could have chosen to add an email or a phone number of persons would like to invite, but I chose to copy and paste a URL into separate emails to my classmates.

I was sent a message in AppleTree stating that my group members were able to join successfully. One person sent a "request for a progress report". Both of these came through to my phone as a text message and also to my email box as a notification.

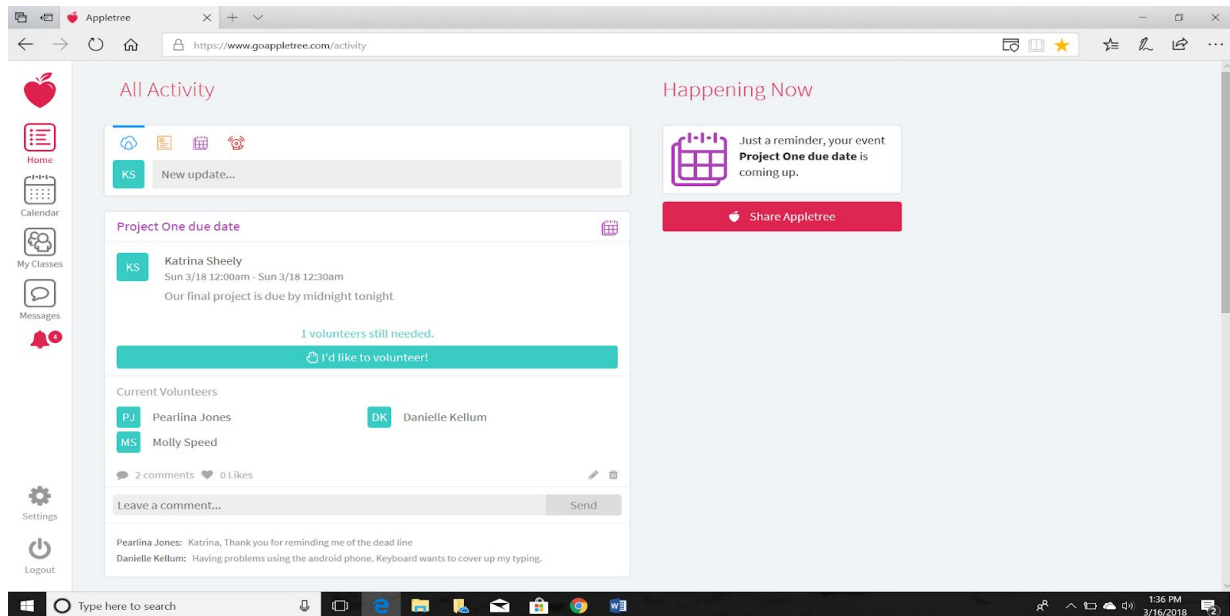
The **Progress Reports** have a 'badge' and once selected, then a comment box at the bottom allows for an explanation to the parent of its purpose. For instance, if a child was having a bad day then the teacher could select the 'Social Challenge' badge and explain what happened.

In the **My Classes** icon, the teacher will find the collection of parents that can be selected to message, or send a progress report to. Here are my Group mates in the class I created.

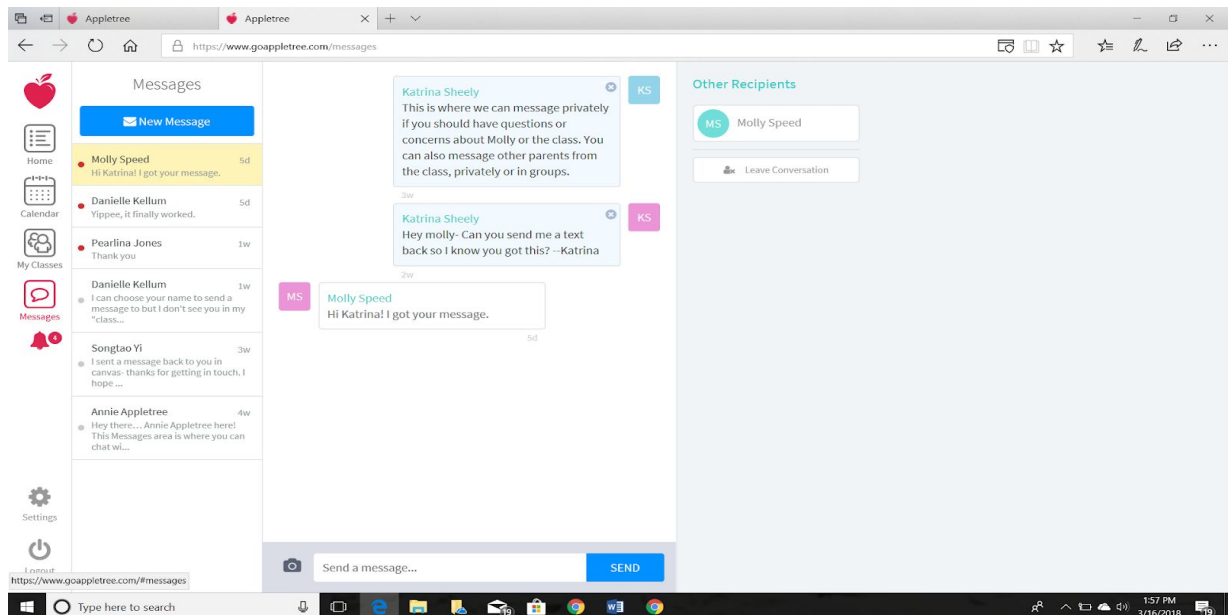


Another feature of AppleTree is the **Calendar** option where teachers can post assignments, field trips, parent meetings and other classroom events. I added Project One due on

March 18th, then I asked for “**Volunteers**”, and chose a number. Participants can select the button on the specified date to notify the teacher that they are a volunteer.

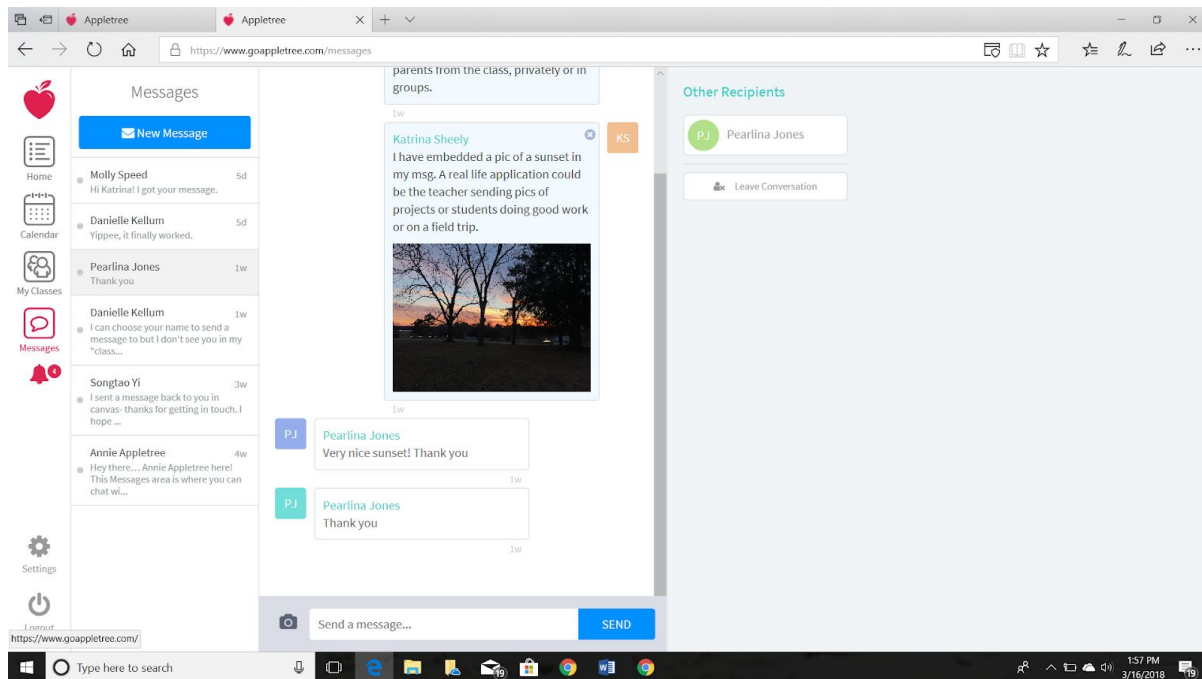


Inside the **Messages** icon, the teacher can see all recent interactions, similar to what the text message page looks like on a cell phone.



Here the teacher can choose to send individual messages or select group chats (Educational Technology, 2016).

There are additional features inside the Messages including an **Emergency Alert**, embedded pictures and video, and add new assignments and new events. A user who cannot respond immediately but would like to let the sender know they received a message can **‘Like’** the message by clicking on a heart icon in the bottom right corner. Here I created a message with an image of a sunset in it; my group mates were able to view and comment on it.



Finally, the **Notifications** ‘bell’ at the bottom of the vertical taskbar allows the user to see the most recent activity from any of the features on the platform.

Advantages

This platform mimics the very popular ‘Remind’ app in many ways, but has a much more broad use of applications including an online option, the calendar and volunteer option, progress reports and embedded image and video. Teachers can create as many classes as they want, then delete and start over again each new year or semester. Parents also can join multiple classes.

Another feature that the teacher can choose when setting up the class is to allow parents to be able to message one another. Because AppleTree requires a password and invitation to join, teachers can safely monitor who is receiving messages and seeing notifications. This feature is certainly an advantage when considering the safety and privacy of children (Educational Technology, 2016).

The Emergency Alert is another unique feature that is reflective of the growing concern over the safety in schools. The calendar allows parents to know when homework and projects are due and sends notifications when the due date is close. The real time messaging allows for

information to transpire when each participant can attend to it, unlike in a phone conversation or meeting.

The website and the app are easy to use and navigate. I had no problems setting up the class, inviting my group members to join, messaging or using the calendar. Inserting an image from my phone was simple and took no time at all. I have received notifications on my phone each time one of my group mates sent a return message or accessed the calendar.

The app is available in seven languages (iTunes, 2016).

Challenges/Possible Solutions

There are a few drawbacks to this platform. One obvious one is that its design appears to be geared toward elementary and early middle school. The progress report feature would not apply to a high schooler. The calendar may be good for social events and major projects, but by high school age the parent no longer is deeply involved in ensuring that homework is done and tests are studied for.

This is a relatively new program having only been developed in June of 2016, and it has only had a little over 5,000 downloads (applify, 2016). The last update was in January of 2017, well over a year ago (applify, 2016). Furthermore, many of the reviews on iTunes and applify.com (for Android) report that often users did not receive notifications and experienced ‘bugs’ in the application (2016; 2016). There is supposed to be a translation feature, but since there has not been an update in over a year, then it is still not added (Education Technology, 2016).

Finally, although it is a beneficial safety feature for the class to be available only upon invitation, that can also be a drawback if the teacher does not gather the appropriate information to be able to extend the invitation. Also, as with all forms of technology, the users must have internet access, a smart phone and/or ‘data’ in order to be able to use Appletree. This may be a sensitive issue if a family does not have access to these things, even temporarily.

Teaching Strategies

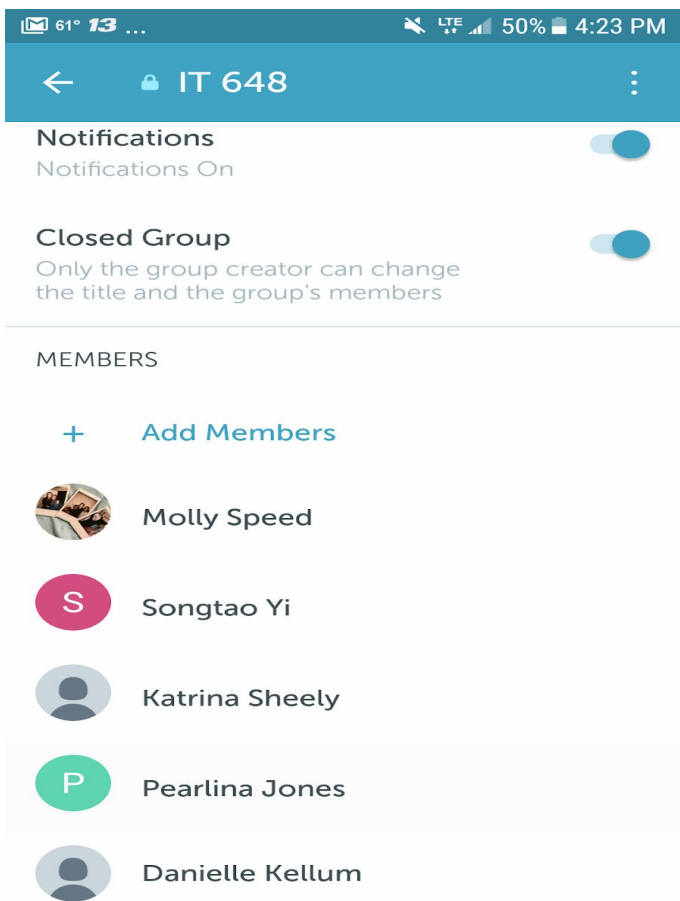
Since AppleTree is categorized as an educational tool, then it is, in its entirety, beneficial for classroom use. There are many features that make this tool unique and particularly useful at the elementary level, all of which are discussed under ‘Functions’. Given that this platform is maintained and upgraded, it could serve to be very beneficial for those who do not speak English as a first language. The translation feature will be a great benefit in the classroom that is growing ever diverse.

The Emergency Alert may be a comforting function for parents. A notice could be quickly sent out in inclement weather assuring parents that children are in a safe place and warning them that travel to pick them up from school would be dangerous. Given the unfortunate violence that schools have been experiencing lately, then this feature could alert parents quickly.

Busy families can benefit from notifications that projects are due, tests are coming up or field trips that may require certain clothing or money. The video and image feature can help parents feel involved in their child’s daily experience in the classroom as they maybe see their child’s art project or watch the school debate. A quick message to the teacher can put a parent at ease that their child remembered their permission slip. A received progress report that a student needs improvement can prompt a parent/teacher conference and help the family stay alert on how to help the child. The uses are truly endless.



Periscope is a live streaming video application for android, IOS, and web. The app is



available to download for android devices from the Google Play Store and Apple IOS devices from the Apple App Store. Web devices can download the application directly from Periscope.tv.

Periscope is owned by Twitter and utilizes the Twitter social media network service. This allows the Periscope application to tap into Twitter followers. The application allows for live streaming anywhere in the world with the potential for a world-wide following.

It is easy to create an account for Periscope. First, the application is downloaded to the phone or tablet. The creation of a username is easy. Typically, you would sign up using your phone number. If you are a Twitter user, like some of the Group 4 members, you can use your Twitter member name and information. It is possible to sign up utilizing your phone number, Facebook, or Google account

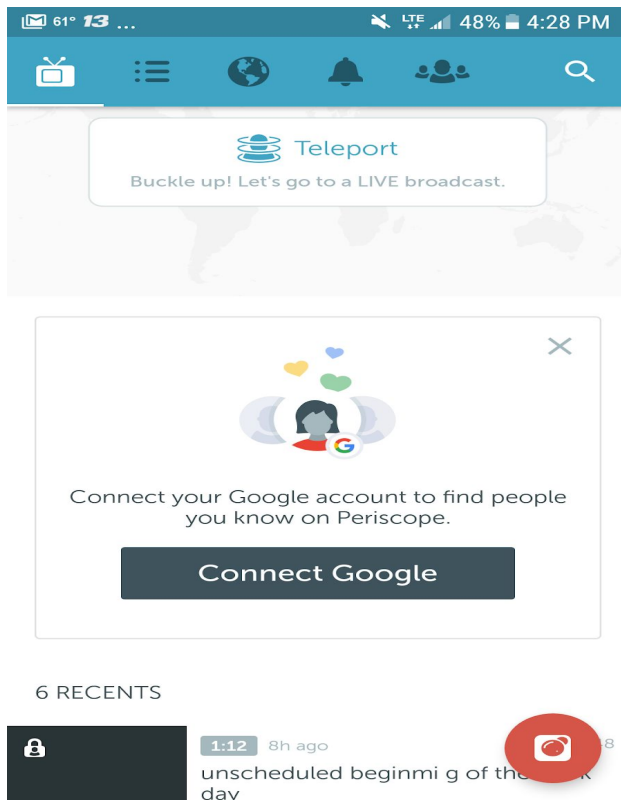
information. If you signed up using the phone number option, you will be requested to input your username and password to verify the phone the next time you sign in. Once you sign in, the app will take you to the home page (Pscp.tv, 2017).

For this project, the students were tasked with creating activities for each digital tool used. For Periscope, a private group called IT 648 was created and group members were invited to a live broadcast. Invitations can only be sent out if the person, student, has downloaded the application and is following the initiating member or teacher. The teacher then has to follow the student. We found that if there is no two way communication, a request to follow and corresponding acceptance, then a broadcast could not be shared. Even after the student and teacher established a communication link, it was difficult to include that student in a broadcast that was already past the “live” event time.

There is a window of only 24 hours in which the video can be viewed. Due to the possibility of members missing the first broadcast, a second broadcast was made and sent out. Members responded by sending “hearts” to let me know if they were viewing the broadcast and how they liked it. The number of hearts received, allows for the presenter to know how the audience likes and understands the information presented. The students were given the opportunity to send their own live broadcast.

Functions

There are only a few functions in Periscope. The first is the Periscope **TV** icon. This is the home page. Here you can keep track of broadcasts of people you are following. If there is a live Periscope broadcast or “scope”, it will show here. The next is the **List**. This is where one can find a scope, based on topics like sports or history. If one scrolls down, the list becomes more random. The Periscope **Globe** allows the viewer a graphic representation of scopes, either nationally or internationally. Current live broadcasts are in red circles and are by area and the number of live broadcasts in that area. Blue circles are broadcasts that have happened within the last 24 hours. The **Bell** is where you see the activity of people that are following you. The **People** icon and the related **Person** icon show together. The **People** icon allows you to find persons or broadcasts you would like to follow. The **Person** icon is your personal listing. It is here that personal broadcast groups are created. This function makes it relatively easy to tailor Periscope to



broadcast groups are created. This function makes it relatively easy to tailor Periscope to

classroom sessions and to view what is happening at the moment, as opposed to reviewing material later. However, while the broadcast is a live stream, it is possible to save broadcasts for viewing at a later date using other application software.

Advantages

Periscope is simple to download and creating an account is uncomplicated. Creating a broadcast requires nothing more than tapping the “camera” tab, selecting the audience and giving the broadcast a title and tapping the **Go Live** button.

Another advantage is that the application is available for IOS, Android, and web. As long as there is some internet connectivity, Periscope can be viewed.

Even though Periscope is a live streaming video application, it is possible to interact with the broadcaster. Periscope allows the broadcaster to authorize chats. This is especially helpful doing a broadcast in the classroom. It gives the broadcaster feedback on the scope. The presenter can tell if the audience understands the material presented. The audience can ask questions and get instant feedback. Periscope also has a “heart” system of approval. The viewer can leave hearts if they like the presentation. The more hearts, the more accepted the presentation.

Periscope broadcasts default to public making it both an advantage and a challenge. This means the broadcast is available for viewing by everyone. With the ability to create private groups, it is also possible to turn off the location function. This does not mean the broadcast is not posted on the map, it is. However, the exact location is not posted. So, a broadcast from Gulfport would register as being in the southeast area of the country. This gives another layer of security to classroom discussions and posts.

In keeping with the security of minors, the Periscope service falls under the Twitter rules and regulations for account activity. One of the requirements is that it is unavailable to children under 13. This means that 7th grade and higher could use the broadcast functionality. Teenagers are more likely to understand about internet safety issues than a younger child.

Challenges/Possible Solutions

Videos disappear in 24 hours. This can be an issue unless the videos are saved to the Gallery (android) or camera roll (IOS) and then uploaded to another service like YouTube. This allows the presenter the opportunity to utilize the broadcast for future classes.

All profile information is public. To make the information private, the settings need to be changed. Periscope has its own settings, separate from Twitter. One of the problems is figuring out the settings for a private or closed group. It is imperative for the safety and privacy of students that this is done.

Another issue was the “help” page of Periscope. There is not a single tutorial for signing on and beginning usage of the application. There is a wealth of information in the “help” section, you just have to look for it. YouTube has many informative videos on how to set Periscope up and how to broadcast. It was more enlightening to view the videos than to look at each “help”

topic. Since Periscope is a live streaming broadcasting application, and it is possible to save the broadcasts, it would be nice to have a beginning video on the subject.

Teaching Strategies

In the classroom, Periscope has an assortment of potential uses. It can be employed as a means of taking virtual tours or hosting a special lecture series with offsite lecturers. In addition, museums, research labs, parks, and many other venues could be utilized for enhanced learning for students. Teachers could also be the presenters. Pathology is a good example of what can be done with Periscope with live stream lectures on current information in this field (Fuller, 2016).

Teachers could expand their office hours and at the same time, offer tutoring by using a guided chat and broadcast. This would help students by offering tutoring at a time that is convenient for both parties.

Parents could view children at school functions typically held during the day. Collaboration amongst students is also a possibility.

One of the biggest issues has to do with privacy. Periscope falls under the auspices of Twitter. This means that Twitter's terms of use dictate who can view broadcasts and whether information can be sold to marketers. In addition to this, all profile information, when and where broadcasts occur, your followers and who you are following, is public information.

In discussing this with the group, I voiced my concerns with the use of Periscope in the classroom. It is hard to control chat comments as the broadcast is live. Any harmful or inappropriate comments could not be edited from the broadcast once made.

The security issue is seen as the largest hurdle for Periscope use in the classroom. The idea that many people, not just the group members, could view the live stream is off putting. It is too easy to view broadcasts and the possibility of something being inappropriate is a possibility. Periscope is a digital tool that should be used cautiously. While I can see the potential use Periscope has in the classroom, it is a digital tool that is not a panacea to classroom interaction.



Quizizz is a free multiplayer classroom game that practices both the individual and group work. The platform works on any device with a browser and an Internet connection. Furthermore, it does not require registration from the students, which saves in lesson time. The teacher simply needs to create the game and share the six-digit access code with the students.

Functions

The quiz begins, and at the end of it, the teacher can download the report on how each student or the whole class has performed. Apart from this, the statistical data lets the teacher see each question, and can determine which ones most of the class has answered wrong. Hence, the teacher will have an idea of the main weaknesses in the class and the material, which he or she can then review with the students. The main goal of Quizizz is to assess the students' knowledge and to check their progress in a particular area. Likewise, the quiz can function as a comprehensive home task, which is quite convenient for a teacher, since he or she has an opportunity to keep track of the class' performance (“Quizizz”).

Advantages

Quizizz is a convenient formal assessment platform, which has plenty of advantages. Formal assessment, unlike a summative one, helps teachers better plan their lessons, based on the strengths and weaknesses of the learners (Garrison, pp.1-2). In addition, a great benefit of the online platform consists in its flexibility. There are numerous ways for the educator to customize a quiz including the regulation of time given for answering a question and choosing the accompanying music. Apart from creating a unique and good-looking quiz, a teacher can make it funny. Also, there is an opportunity to include memes in the feedback. The memes' content depends on the answer, which a person gives. For instance, if a student answers correctly, he or she will see a popular picture with an approving statement. On the other hand, if the answer is incorrect, there will be a meme that expresses pity and disappointment. Furthermore, Quizizz is notable for its detailed feedback after each game, which can be in the form of leaderboards, visible to everyone on the teacher's screen. Similarly, at the end of the quiz, every student will have an opportunity to review the questions and receive a personal report of his or her correct and wrong answers. Another advantage of Quizizz consists in its integration with the Google Classroom, which allows for distributing quizzes among a particular group of people at school (Major, 2017).

Challenges/Possible Solutions

As for the challenges and disadvantages, Quizizz gives an opportunity to design only multiple-choice tasks, where students can choose one correct answer among the four possible. Indeed, the maximum number of suggested variants is four, which limits the complexity level of the test (Bindel, 2018).

The best and most reliable place for implementing Quizizz is a computer class, where every student has access to the computer. Otherwise, the teacher should make sure that each student has an electronic device in order to proceed with the quiz. The game can be conducted at the beginning of the class, in order to revise the material from the previous lesson. Similarly, the teacher can organize another quiz at the end of the class in order to check the students' understanding of the topic.

Among the challenges, which the teacher may face when implementing the online platform in the classroom, is the considerable gap in knowledge between the learners. Hence, there may be people, who lag behind others, and cannot solve the tasks, which may be feasible for most of the students. Consequently, in order to make the practice more useful and to reduce the knowledge gap, it is better to encourage students to review and discuss their results with their peers.

After the quiz, the students can be encouraged to work in small groups, in which they have to share the right and wrong answers. It promotes their higher-order thinking and encourages them to explain the unclear and difficult parts of the material to each other. Hence, the teamwork aims to help a student understand his or her mistake through discussing them with their peers, who may have answered the question correctly. Similarly, working in groups improves interpersonal relationships. Consequently, after the discussion, the teacher should suggest the groups take another quiz together (Guhlin, 2016).

Teaching Strategies

On the students' side, Quizizz helps students learn at their own pace, but on the instructors' side, Quizizz still can be integrated into online teaching to promote instructional interaction by integration between Quizizz and Google classroom. Teachers can assign quizzes in the Google classroom directly, the quiz results and grade will be updated in Google classroom gradebook as well. What is more convenient for both instructors and students is that a link will be generated instead of entering a game code. Besides, this encourages students to create their own quizzes for the purpose of self-practice. This can be an effective teaching strategy to foster students' creative ability and reinforce the concepts they have learned. In addition, teachers can select some good student quizzes and replay them in class as a class activity to promote interaction between students and motivate students' initiative.

In general, Quizizz is one of the best game show platforms and methods of formative assessment. Although it has a few disadvantages, on the whole, Quizizz suggests interesting and bright games, which aim to check the knowledge of the students. Since the technologies have progressed, nowadays, an average classroom is equipped with at least one computer, and an average child owns a smartphone or a tablet, which is enough for using the platform during the lesson. In addition, the in-depth feedback at the end of each quiz is useful and informative for both the learners and teachers.



Tango

Tango is an Android and IOS app that allows video calls, voice calls, text, and picture sharing. It was established in 2009 as a cross platform video and messaging application. It allows users to connect utilizing Wi-Fi, 3G, and 4G networks. Tango is a very useful and helpful app. It has more than 350 million users. It can be used for school or work presentations. It can also be used socially to connect with family and friends. It is a great tool to use in the classroom setting because it allows the sharing of multimedia content. You can discuss and share the results of projects. Tango also has a live feature allowing real time communication.

Functions

It is simple to create a Tango account. First you have to download the app , and then create an account and enter the code sent to your device. Once you create an account you can start chatting via video message or text. Tango will sync to the contacts on your device.

I prepared an introduction video, added my group members email addresses, sent out an invite to log on and view the video. Katrina and I have used Tango to video chat, inbox and leave messages on several occasions. Once you accept my invitation we can chat individually or as a group.

Advantages

Tango is available in up to 14 languages. The app is free! You can share videos, photos and audio messages. You can also create big or small groups to communicate. There is very little call dropping with Tango.

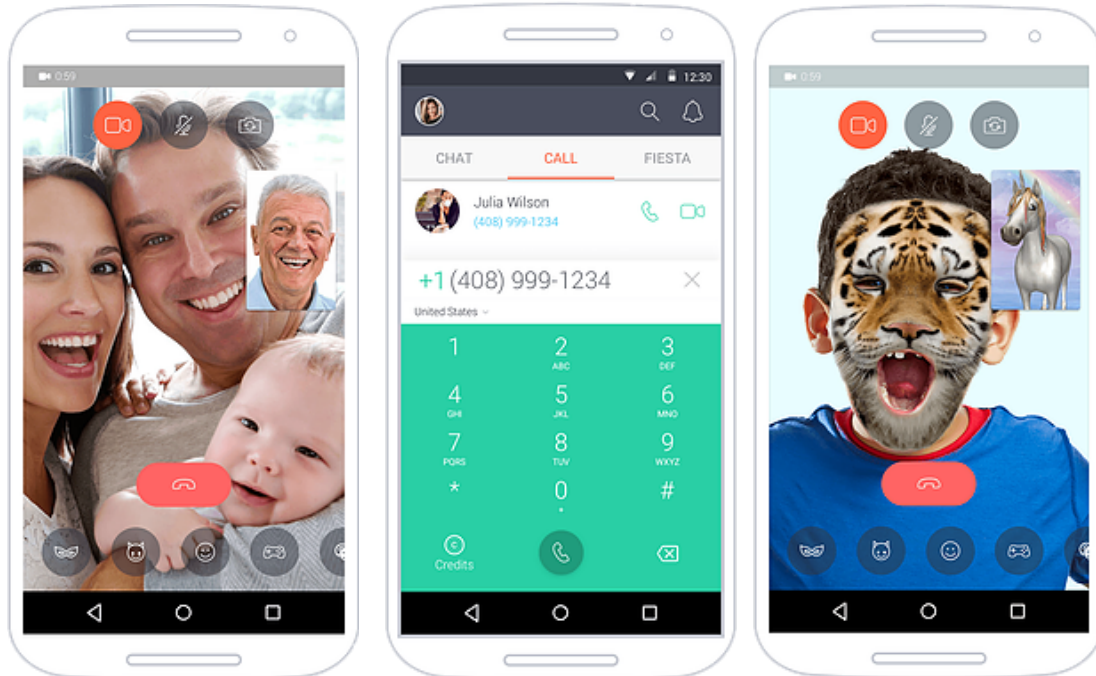
Challenges/Possible Solutions

Tango has challenges that are still being worked on. One is that sometimes the audio lags the video. Tango also offers games that can be played. While working on projects, if you receive game notifications, it can distract you from the task at hand. To be used for classroom purposes, the settings would have to be managed to set certain notifications to be blocked. Tango sometimes has inconsistent video quality.

Teaching Strategies

The benefit for Tango in the classroom is that you can communicate via video chat in real time. It's also a great way to communicate with foreign language students in other countries,

since it is available in 14 languages. It can also be used to collaborate on group projects and share documents on Tango, versus using several different tools to complete a project.

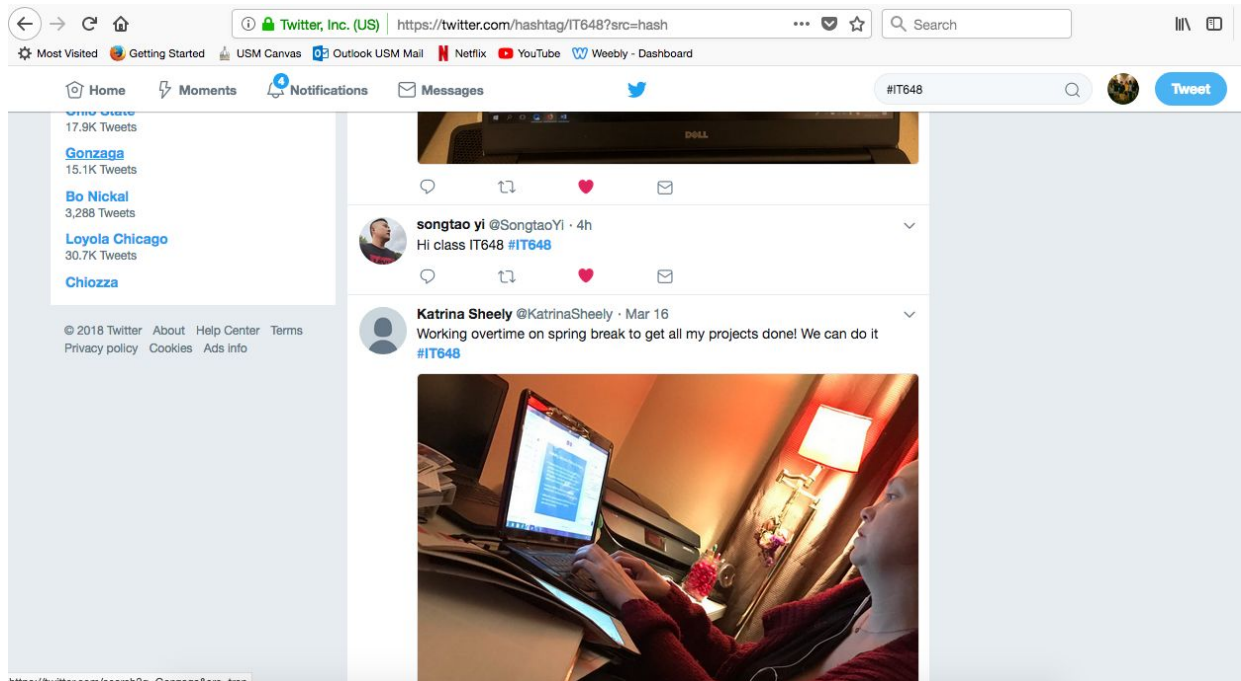
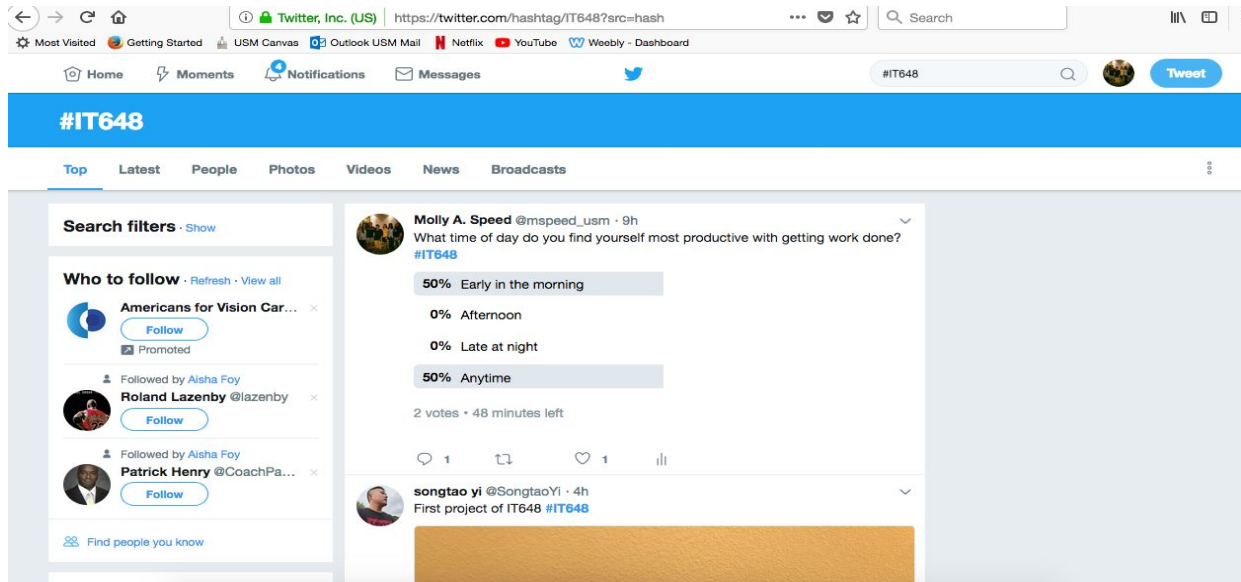


Twitter is a social media website and application (available for iOS and Android devices) in which people communicate and share thoughts through a maximum of 280 characters. Twitter was founded in 2006.

Functions

The main function of Twitter is to share information in small increments of 280 characters or less. This can be done through text, video, pictures, or gifs. The setup process for Twitter is fairly simple. You must use your email address in order to setup an account where you will choose a username also known as your “twitter handle.” This username will appear as @mspeed_usm (or whatever you choose). Once you have setup an account you are able to choose a profile picture, a header picture, and fill out a short bio. After these steps, you are good to go!

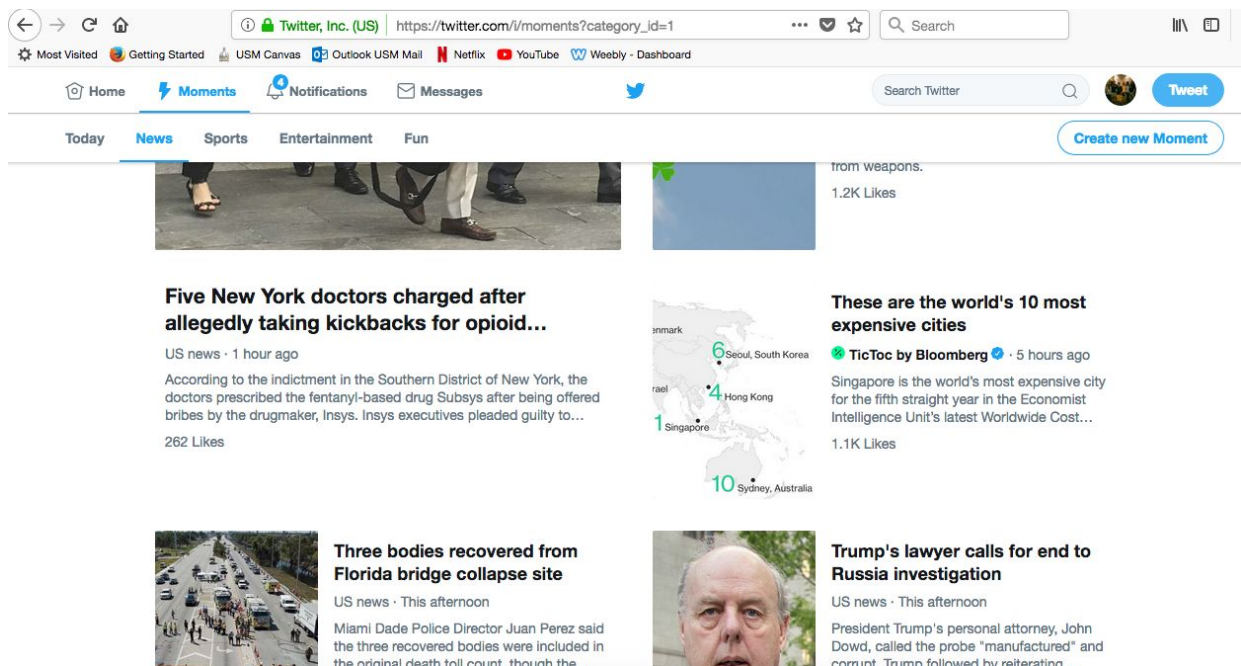
Twitter is a social media platform that people use for news, sports, entertainment, fun, and their personal lives. Twitter was the first social media sight to use the hashtag symbol (#). Since, other social media platforms have adopted the hashtag feature into their design. The hash tag enables Twitter users to use # plus any words or numbers without spaces within their tweet and then links all of these tweets together. (See examples below).



Let's take a look at some ways Twitter can be used in an educational setting and both the advantages and disadvantages that may come along with that.

Advantages

Twitter is an application that is easy to setup and is user friendly. It is available through the web (<https://twitter.com/>) or through the app store on both Android and Apple devices. The application is almost twelve years old, and has undergone a number of changes, but remains a source for short snippets of news, entertainment, sports, etc. Twitter allows one to protect their account and only accept people they know to "follow" them. Twitter is a great way to reach people and get insight from people all over the world. I believe Twitter could be advantageous to the classroom in that it provides students with news and other articles at their fingertips. In today's society, everything is fast paced and the attention of our youth is not what it used to be. Twitter provides "flashes" of information that can catch their eye and then be explored more if they are interested.



The screenshot shows the Twitter Moments page with several news articles and a map. The articles include:

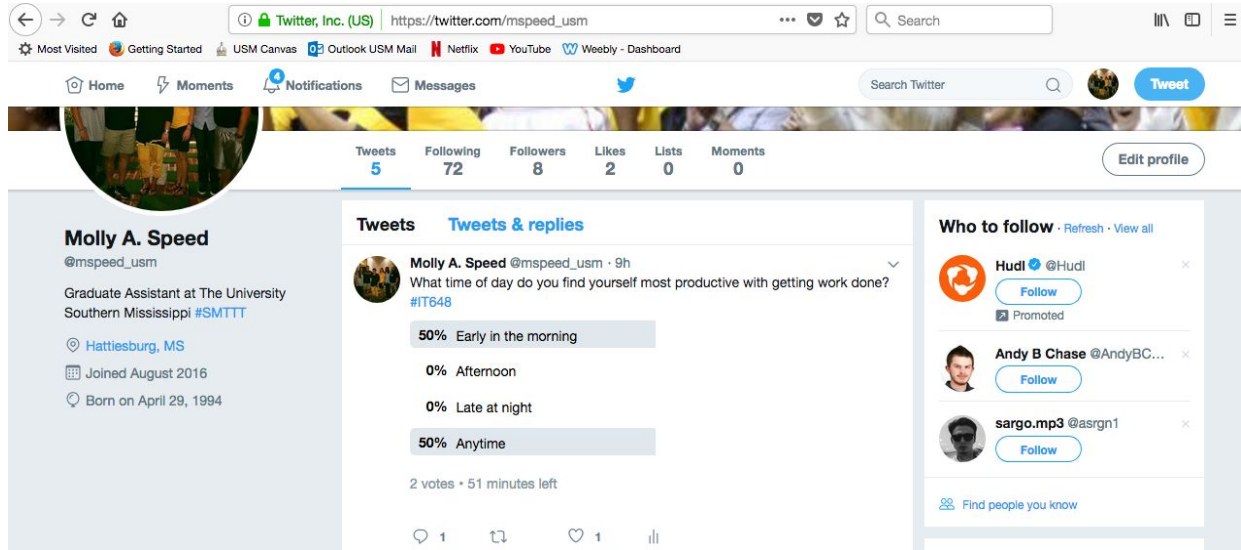
- Five New York doctors charged after allegedly taking kickbacks for opioid...** (US news · 1 hour ago, 262 Likes)
- These are the world's 10 most expensive cities** (TicToc by Bloomberg · 5 hours ago, 1.1K Likes)
- Three bodies recovered from Florida bridge collapse site** (US news · This afternoon)
- Trump's lawyer calls for end to Russia investigation** (US news · This afternoon)

The map shows the following cities and their rankings:

- 1 Singapore
- 2 Seoul, South Korea
- 3 Hong Kong
- 4 Hong Kong
- 5 Sydney, Australia
- 6 Seoul, South Korea

The use of the hashtag is also something I find to be of good use in the classroom. I have seen in semesters past teachers/professors use it as an assignment or extra credit. The student's assignment is to attend an event or find some information and then tweet about it. They would then use the hashtag that the teacher created ex. #IT648, #ENG101, etc. This then links all of the tweets together through the specific hashtag.

A fairly new feature on twitter is the voting tool. This allows a user to ask a question or make a statement and then provide up to four answers/response in which their followers can vote on.



Challenges/Possible Solutions

Although there are many advantages to the use of social media and learning tools in the classroom, there are also a number of disadvantages to be named. The first being that all content may not be appropriate for students. There are safeguards and parameters that can be put on accounts, but there is always room for things to slip through the cracks. Cyber bullying is always a downside to the use of social media. The last disadvantage I will note is that it could be distracting. I may be alone here, but I have before found myself only going to look through *Twitter* or another social media sight for a few minutes and then 15 minutes later I am still on it.

Teaching Strategies

While there are both advantages and disadvantages that I have found for the use of *Twitter* in the classroom, I still believe it can be used to the advantage of the educational setting. In my eyes, the majority of students have the application already, so why not incorporate it into their education and learning. Whether it be for fun, extra credit, finding what is “trending” in the news today, or any other use that a teacher finds for it, I believe we should work to incorporate these things into our classroom settings.

Summary

After introducing functions, advantages, challenges, solutions, and teaching strategies of *AppleTree*, *Periscope*, *Quizizz*, *Tango*, and *Twitter*, it is clear to see that both synchronous and

asynchronous digital communications tools could contribute a lot in instructional design and teaching process for all educational and learning needs.

AppleTree provides direct messaging, class progress reports, and instant photos and videos as a classroom communication tool that keep teachers, students and parents together, creating a tight connection. This makes it easy to communicate for the purpose of improving students' learning efficiency. *Periscope* could achieve the same educational purpose as *AppleTree*, which is communicating instantly with students and parents through live meetings. Additionally, we can now link *Periscope* to the *Twitter* web profile, making it easier for followers to discover and watch live videos. *Twitter*'s hashtag and voting feature also can be used in classroom to increase student engagement. *Tango* is another video chatting application, allowing for instant access to teachers, parents, and students. In addition, both synchronous and asynchronous communication experiences can be achieved on *Quizizz* live-online quiz and posted online, in the classroom, or after class.

No matter how we apply these digital communication tools, whether into instructor teaching or student learning, the ultimate goal is improving the learning process and promoting the academic communication between instructors and learners. These five communication tools not only monitor learning progress of each student but also guide students in a better way to improve their learning efficiency, and finally to construct an efficient classroom together.

References

- Admin. (2017, December 5) Appletree: Teacher Parent Communication App Apk Review & Download Link For Android/iOS Smartphone. Retrieved from:
<https://tech24talk.com/appletree-teacher-parent-communication-app-apk-review-download-link-for-android-ios-smartphone/> Accessed February 16, 2018.
- Apple, Inc. App Store Preview. Retrieved from:
<https://itunes.apple.com/us/app/appletree-teacher-parent-communication/id1112315544?mt=8> Accessed February 16, 2018.
- AppleTree. (2016) ApplifyMe. Retrieved from: <https://applify.me/android/com.goappletree>. Accessed February 16, 2018.
- Bindel, A. (2018, February 15). Quizizz. *Common Sense Education*. Retrieved from www.commonsense.org/education/website/quizizz Accessed March 13, 2018.
- Educational Technology and Mobile Learning. A New Great Communication Tool for Teachers and Parents. (2017, July 10) Retrieved from:
<https://www.educatorstechnology.com/2016/07/a-new-great-communication-tool-for-ht>
[ml](https://www.educatorstechnology.com/2016/07/a-new-great-communication-tool-for-ht). Accessed February 16, 2018.
- Fuller, F, S. Mukhopadhyay, and J. Gardner. (2016). Using the *Periscope* live video-streaming application for global pathology education. Retrieved from
<http://www.archivesofpathology.org/doi/10.5858/arpa.2016-0268-SA?code=coap-site>. Accessed March 6, 2018.
- Garrison, C. & M. Ehringhaus. Formative and Summative Assessments in the Classroom. *National Middle School Association*. Retrieved from
schools.nyc.gov/NR/rdonlyres/33148188-6FB5-4593-A8DF-8EAB8CA002AA/0/2010_11_Formative_Summative_Assessment.pdf. Accessed March 13, 2018.
- Guhlin, M. (2016, March 25). Gamifying Learning with Quizizz. *Teach Notes Blog*. Retrieved from www.tcea.org/blog/gamifying-learning-quizizz/ Accessed March 13, 2018.
- History Cooperative. (2016). The history social media: Social networking evolution!. Retrieved from <http://historycooperative.org/the-history-of-social-media/>. Accessed February 20, 2018.

Major, E. Kahoot! vs. Quizizz: What's the Best Formative Assessment Tool for Your Classroom? (2017, December 19). *Common Sense Education*. Retrieved from www.commonsense.org/education/blog/kahoot-vs-quizizz-whats-the-best-formative-assessment-tool-for-your-classroom Accessed March 13, 2018.

NCES. (2016). Digest of Education Statistics. Retrieved from https://nces.ed.gov/programs/digest/d15/tables/dt15_702.10.asp?current=yes. Accessed March 2, 2018.

Periscope. (2017). Periscope. Retrieved from <https://www.periscope.tv/>

Quizizz: Fun Multiplayer Classroom Quizzes. Retrieved from quizizz.com Accessed March 13, 2018.

Tango. (2016). Tango. Retrieved from <https://Tango.me/>

Twitter. (2018). Twitter <https://twitter.com/>