# Let's Play, Video Streams, and the Evolution of New Digital Literacy

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**Abstract.** The use of videos, video streams, and user created videos has recently surged as consumer based websites are allowing increased access to high quality learning assets. You Tube, Let's Play, MOOCs, and the Khan Academy are discussed in order to understand how they differ in their offerings of multi-media based assets. As these assets evolve, a new digital literacy in which a learner transforms into a reviewer, a commentator, a curator, and possibly a creator of new content emerges.

**Keywords:** Digital literacy  $\cdot$  Video based learning  $\cdot$  User created content  $\cdot$  Let's Play  $\cdot$  You Tube  $\cdot$  Informal learning  $\cdot$  Curation

# 1 Introduction

Educators have used video in classrooms for years, and the flipped classroom has brought video based education home, however, the rise of learning through participatory video streams and Let's Plays has gone largely overlooked. While previous generations have engaged with websites, blogs and social media based learning channels, the current generation is quietly learning more through YouTube Let's Plays, and Twitch based video streams than they do with books, webpages, or any of the technologies adults have traditionally used. The new digital literacy required to participate in these largely ad hoc learning environments are the ability to record and edit video, capture and stream gameplay and other on screen actions, high levels of technical communication, and the ability to inform and educate others while accomplishing complex tasks. At the same time the participants feel like they are playing and being part of a community, not learning or teaching.

The learning process is similar to the tried and true 'see one, do one, teach one' methodology.

- 1. Observe Let's Plays and Streams
- 2. Develop new skills based on applying what was learned and personal experiences
- 3. Create streams and recordings, and answer questions

By engaging through video streams learners are feeling like they are part of a community. They strive to help each other in an effort to build up their own viewership, and gain status in the community. They also learn important skills in video editing, public speaking, teaching, and sharing their knowledge. As the new generation grows they will be expecting this level of engagement and participation in their learning. This paper will explore how Let's Plays and video streams are being integrated into a classroom setting and how students are engaged in both learning and teaching each other.

### 2 The Minecraft Example

While it may superficially appear that the current generation is spending most of its time playing games like Minecraft together online, much of their time is being occupied by watching other people play and learning new techniques and secrets about the game and its world. Minecraft has sold over 18.5 Million copies on PC alone [1]. It is widely considered the best selling game of all time [2]. It has also been acquired by Microsoft for 2.5 billion dollars [3]. The obvious conclusion is that there is a huge group of people actively playing Minecraft.

This is of course true. Yet, the community that plays Minecraft doesn't spend all of their time interacting with the community in the game. A quick search of the game Minecraft yields 94,200,000 results on YouTube. This is more than 5 videos per copy of the game sold. Granted it cannot be concluded that every Minecraft owner makes 5 videos, it is clear that there is more to this game than the game world alone.

More to the point is the actual content of these videos. Many of these results are fun videos made to entertain other players, but large numbers are actually video based training disguised as entertainment. A search for Minecraft tutorial yields 6,300,000 results, explaining simple things like how to get started in the game, to complex building tasks and programming skills.

This is not a phenomenon isolated to Minecraft. The game League of Legends is a Multiplayer Online Battle Arena (MOBA) that has over 27 million players a day [4]. It is arguably the largest massively online game in the world right now. There are hundreds of thousands of videos explaining in detail how to play as every character in the game. Minecraft, however, has somehow captured the ethos of our youth, replacing Lego as the building blocks of choice among American boys. At MineCon 2013, a convention celebrating Minecraft, Devon Loffreto presented the results of a study in which 95 % of boys and 45 % of girls reported that they would learn anything, regardless of subject matter, as long as it was presented in Minecraft [5]. The potential educational power of this one game may never be fully tapped.

#### 3 The New Use of Videos in Education

The use of videos in education has been reinvigorated through the availability of high quality learning programs like the Khan Academy [6] and the surge in popularity of Massively Open Online Courses (MOOCs). The Khan Academy makes thousands of videos available free online in areas that include math, science and test preparations.

The Khan Academy is primarily geared towards K-12 learners, but parents and teachers may also use these videos as resources. Historically, videos were used to replace traditional classroom models by providing increased access to standardized learning assets. Now however, videos are often used in single serving chunks of just in time learning and performance support. The instructors of the videos hosted by the Khan Academy are teachers and lecturers as well as subject matter experts.

MOOCs follow a similar model of increased accessibility by using videotaped lectures for an entire semester of college or graduate level course topics often hosted by a single instructor or professor for an entire semester. In these examples homework and assignments are handled using learning and content management systems and online discussions hosted synchronously whenever possible. They will often leverage existing or previous students as instructors or lab assistants. By making educational content universally available, these examples are creating new possibilities for those who are not able to access traditional classroom experiences for a variety of reasons, one reason being a preference to not be in a classroom.

To conventional learning scientists these forms of course structure seem new, but YouTube has provided a similar experience in a less formalized fashion each day. Where individual videos are providing small chunks of authentic learning, channels and collections are acting as courses and classes where students are learning through informal means.

#### 3.1 Providers

One of the key components to informal video based education is access to large providers of video content. One of the most prolific repositories of videos available is YouTube [7]. In order to access an array of videos all one needs is internet access and a computer or mobile device on which to view these videos. While YouTube does not have a specific instructional focus, YouTube's one billion users need only search for "how to..." almost anything and a variety of videos will likely appear that will literally walk one through a process. It could be argued that YouTube is the world's largest repository of learning content, video or otherwise. Some videos are geared towards specifically completing a task while others might be informational about the concept itself. A person in need of baking tips, car repair instructions, makeup application advice, or help solving complex algorithms has access to a huge range of information.

Provider's major contribution to the ecosystem is content. Of course, this content is meaningless without also providing the ability to search that content and find relevant results. YouTube and other providers give video creators a place to store videos, the ability to control how videos are watched, and the ability to grow a community of viewers. In many cases, content creators are gaining significant income through others watching their video, thus providing an incentive to improve the quality of the created content.

#### 3.2 Channels

Channels are individual pages that contain collections of videos. Content creators create a channel and post relevant videos there. Of particular interest is the Let's Play community and its channels centered around videos of people playing through video games. These videos are generally created for one of a few reasons: showing others how to play through a game, and exploring if a game is worth playing at all, and doing something interesting with the game.

Most video game players understand how frustrating it can be to get stuck within a game. Video games offer problem solving and puzzle like encounters that sometimes exceed the ability of their players. A player might feel that they have tried everything and exhausted all of their resources within the game, but still not be able to proceed. This led to the genesis of some Let's Plays where players explore a game from start to finish showing others how to play the entire game. It was not uncommon for players to video tape themselves successfully navigating portions of a video game that could be problematic for other players in order to share their knowledge and skills on how to be successful. Later, this evolved into a dedicated space for video game walkthroughs named Let's Play [8].

Some Let's Plays focus on playing the game in ways the designers did not intend them to be played. One of the largest of these communities is the speed run community. These are players who attempt to finish a game in as fast a way as possible. These players find exploits and paths that could cut huge games down in fractions of the normal time.

Today Let's Play often includes videos of the game being played, but also of the players while they play it (think picture in picture). This allows players to gain notoriety and to attract followers of their specific videos. Some players have millions of followers, giving them a certain level of celebrity and in some cases monetary gain through sponsorship. While many of these videos might center on humorous or critical narrative of the game being played, they still demonstrate tips and tricks for successfully navigating games.

#### 3.3 Streams

While outlets for videos such as YouTube provide an archive of previously recorded educational material, many players are moving to live streams of their gameplay. These live events can draw more viewers than televised sporting events and are studied by the viewers who are attempting to learn new techniques and strategies. The finals of League of Legends, a tournament played by the best players of the year, were watched by 32 million people overall and by 8.5 million concurrent viewers. With 8.5 million concurrent viewers it had more viewers than the Super Bowl with 3 million unique viewers, according to Nielsen's figures [9].

One of the most interesting facets of these videos is that they are often created by players themselves. These players, combined with their viewers, are creating personal learning networks that can harness the same power that esteemed academies geared towards providing educational content are harnessing. They are similarly authentic, and learners are utilizing them with similar outcomes.

Video streams allow their viewers to watch online in real time, live. This has become very popular both on You Tube via Let's Play, but also for real time learning experiences such as briefings on space missions and live war time reporting on TV. These sorts of experiences allow for synchronous viewing and are often archived for asynchronous viewers who can't be online during the stream.

# 4 Digital Literacy

Digital Literacy is the ability for people to knowledgeably participate in networked communities [10]. While computer literacy might relate to an individual's ability to understand the working parts of a computer and how it functions, digital literacy relates to an understanding of how to navigate and access the internet from the perspective of utilitarianism. Today's learners must understand where to find the information they need and how to determine if that information is valid when using the internet. Unfortunately, digital literacy is also a factor of availability of the internet and a device from which to access it. This puts students without those resources at a significant disadvantage.

The ability to search for multi-media assets such as "How to" videos requires the ability to use an appropriate term in the search, as well as an ability to refine any videos produced in that search into those that might be most useful. Once determined useful, a user might share that information with other users, often via social media tools such as Facebook or Twitter, or might find a need for more or better content if their search is deemed as not valuable.

Digital literacy in the Let's Play community can be broken down into the three segments, curation, creation, and participation. These three concepts also reflect Schugurensky's three part model of informal learning, self-directed, incidental, and socialization [11].

#### 4.1 Curation

Self-directed informal learners are intentionally learning about a particular concept primarily on their own, or with a group without the assistance of a formal educator [11]. These learners are consuming content, often for selfish goals, like being a better player in an online game. These consumers of content, however, often become curators of the content.

In the process of providing their own self-directed learning they find content that is also useful to others. Content curation happens when a user finds something of perceived value from either a search engine or from a trusted source that they follow and compile it in a useful way. The user may then share that finding with their followers. Curators of content often become valuable resources for those interested in a concept and may be viewed as experts or trusted sources for others. In order for a curator to be considered trusted and valuable, they must review the information they have found and share it with others.

The quality of that sharing over time becomes the basis for their perceived trustworthiness or level of expertise in an area. A curator often also develops a following of persons who are seeking the information they are sharing. This concept of curation allows users to increase their personal knowledge and more importantly their perceived knowledge in a particular area. A follower may share their information with their own followers, further increasing their demonstrated level of expertise through their own curation.

Although curators may have broad shallow knowledge bases on a topic. Curators are often considered experts by others who have already moved past curation into creation. These creators find themselves without the time to stay abreast of all the newest developments and thus rely on curators to keep them informed.

#### 4.2 Creation

In order to demonstrate true digital literacy, a user must be able to find the information they need and curate it meaningfully. Curators of content might perform this in order to find the information they need, or to share information with their followers. Sometimes, however, in the process of locating high quality information, a user may find the available assets lacking. This provides a tertiary opportunity for a user or curator to become a creator of content. For example, a user seeking a recipe online might find a recipe that indicates amounts, but not the steps required to make a cake. Similarly, a viewer of a video game walkthrough might find that the player/creator of a video doesn't sufficiently cover the details needed to successfully defeat a boss. In these cases, a user/curator has found a need for better video to be made and posted. Some users/curators take this opportunity to become creators of their own videos, with the goal of making a more cohesive of better video.

Content creators often have specific deep knowledge to share. They may not have the same breadth of knowledge as a curator, but they have the need or ability to fill in games in the knowledge base of the community. Neilson describes this level of participation in a community with the 90-9-1 rule of participation inequality [12]. This rule stipulates that 90 % of a community is made up of lurkers. These are people who read everything but don't participate in any meaningful way. Then 9 % are creators of content, and 1 % are heavy contributors of content.

Creators often learn through the process of creation. They develop deep knowledge through the process. The learning they achieve is considered incidental learning [11] as they are learning as a side effect of the creation process as opposed to setting out to learn.

#### 4.3 Participation

In determining what videos might be most helpful or the highest quality representations of a desired process, a user will often consider three things:

- 1. The rating of the video
- 2. The number of views the video has had
- 3. The comments left on the video by other users.

Video rating is often done in a typical 5 star format. The more the viewers like the video, the more stars they assign it. This often is considered in conjunction with the number of views however. A video that receives 5 stars, but has only been viewed 10 times might not carry the same value as a video that receives 4 stars but has had 150,000 views. Often these two values are considered together. A user might also choose to read or perhaps contribute to the comments for a particular video. Comments often discuss the strengths or shortcomings of a video and are often fairly honest due to the anonymity of online commenting.

These groups, while fitting into to the 9 % on Nielsen's scale [12], are learning through socialization. They are gaining tacit knowledge through interacting with others in a social environment. They may or may not be setting out to learn, but through discourse and participation they are learning [11].

### 5 Game Design Education Through Videos and Let's Plays

To visualize the process of curation, creation, and participation students in DIG 4720 Casual Games Production at the University of Central Florida are introduced to major concepts in casual game design primarily through lecture, but also through a series of curated videos describing various aspects of casual game design. These include, paper prototyping, design mechanics for casual games, play testing to inform design, and many other topics. These videos act as supplement to the course presented by often times famous game design professionals with multiple game credits to their name. In some cases the videos are previous students in the course, often held in the same regard as the video from clear professionals. All of the videos are relevant to their major task of developing a casual game. In this case the curator is their professor.

Students also get in on the curation process and are asked to participate in the curation of development tutorials that they find useful in the creation of their projects. Early on this sharing is difficult to spark, but once students realize they will be recognized for their contribution by the rest of the class, more sharing occurs.

Students are encouraged to explore casual games in general. This course is one of the earlier classes in the program's game design curriculum, so students are often less experienced with a varied array of games often including casual games, and are commonly primarily players of core game titles. As they explore casual game design it is also clear that their tastes in games are also changing to include more genres.

Their primary objective in the course is to work in a team to develop a casual game, but they are also assigned to make a Let's Play video of a casual game of their choosing. These Let's Play videos are short, roughly 5 min in length, and concentrate on the design of the core game mechanics of the game. This is a popular assignment, where is it clear that the students are enjoying the process of playing but are also articulating their new game design knowledge as well. The act of filming the video is simultaneously allowing them to entertain themselves, entertain others, and practice articulating their newly formed design analysis skills.

After the videos are created they are shared with the rest of the class and also kept for future classes. This allows students to explore each other's work and participate in the social aspect of learning. This peer to peer exploration of the topic has allowed some students, who often do not have a voice, to begin to articulate their ideas to the group, and improved the overall educational outcomes of the course.

# 6 Conclusion

The resurgence in videos for learning as a topic of interest for educators and researchers has necessitated consideration of new tools available for learners. Following models that

include both formal education, the upside down classroom, and informal education the aggregate of these resources have begun to allow a new educational paradigm for user created content to exist in the same ecosystem as formal learning constructs. Consumers of these videos are more interested in authenticity and trust than the credentials of the presenter and bring instructors and students into similar roles.

By design viewers can easily become curators of content and then eventually become creators. Creators of content are able to demonstrate their expertise but are also subjected to the scrutiny of the community. The community becomes more valuable as raters. Further, the ability for content creators to identify gaps and attempt to close them has valuable underpinnings in this educational model. The ability for those gaps to be closed and juried by peers is the tip of the spear for a new era of digital literacy where consumerism is not as valuable as creation.

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