Exploring the use of Facebook in the classroom: The case of a workshop on the history of cinema in Mozambique

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Abstract
This paper discusses the use of mobile technologies and social networks in the context of higher education. It states that the integration of teaching and learning methodologies and practices with new social resources are not yet a current and widespread practice in Mozambican educational institutions. In this perspective, the study seeks to contribute to this body of research, analysing the use of digital media and the Facebook social network, during a semester, in the context of a workshop taught in a graduate programme on Film and Audio-visual, in a public institution of Mozambique. This social network resource, consisting of a closed group, served as a facilitator of communication, thematic dialogue and sharing of study material and exercises, between teacher and students, and among students themselves. The study examines practices and habits within a blended learning environment, based on the perceptions of the subjects, reports on the observations and difficulties/satisfaction expressed by the students. It was supported on the analysis of interactions, on a comprehensive field diary and on two questionnaires carried out at the beginning and end of the semester.

Keywords: Facebook, asynchronous communication, mobile learning, blended learning, Higher Education, digital skills, mobile devices.

1. Introduction

Many of today's students interact with information and communication technologies (ICTs) creatively and collaboratively through personal mobile devices such as smartphones and tablets. Most see them as fundamental components of the world in which they live and are more willing to get involved in the process of telling a story when the result is presented as a multimedia activity (Frazel, 2010). In fact, these users are already telling their own stories on YouTube, Facebook, and many other platforms. When publishing to a different audience, students understand that authoring activities go beyond the school task and consider this is a useful tool in many aspects of their lives. Furthermore, educators can use these technologies to foster their students' learning, creativity and enthusiasm in areas linked to the school curriculum, but also in other areas of knowledge.

While reviewing the literature on this subject, we found several definitions of "learning with mobile devices" (mobile learning). For example, the perspective of Sharples (2000), which defines it as learning that happens

"without being limited to a fixed location and taking advantage of mobile technologies". If we consider the popularity of mobile devices, we realize that most researchers have adopted this definition, which has remained valid since the beginning of the 21st century. Traxel (2009) also defines learning with mobile devices simply as the kind of learning that is supported by a portable or mobile device, and encourages learning through the access to information and management of diverse content (text, image, audio, video, animation, etc.). The integration of these devices into pedagogical models is assumed, according to the same author, as a possible way to increase the effectiveness of learning and these have been used in the past in curricular areas such as languages (Bomar, 2006; Patten & Craig 2007; Shoemaker 2007; Moura, 2010), mathematics (Lary, 2004), social studies, (Royer & Royer, 2004; Vess, 2006) and the sciences (Roschelle, Penuel, Yarnall, Shechtman, & Tatar, 2005; Tinker, Horwitz, Bannasch, Staudt & Vincent, 2007).

During an investigation carried out in 2009, at the University of Wisconsin Madison, we've found that there are well-defined patterns in the use of mobile devices by students (Bidarra, 2010), namely:
- mobile learning evolves around the social environment of the individual, and not in the classroom (with sharing of podcasts, images, texts and notes);
- learning activities are mainly based on online resources and contact with others (often due to academic work in a group);
- collaborative networks and group work are an important aspect of mobile interaction anytime, anywhere;
- the ease of instantly publishing online content encourages students to become researchers and content authors;
- the ability to easily capture, record, and publish multimedia transforms students into producers and critics (for example, interacting on Facebook or YouTube).

Currently, due to the massification of portable devices, it makes sense to consider the integration of mobile learning into systems managed by students, allowing them to choose digital tools, set personal goals, control content and communicate with each other autonomously. These personal learning environments are made up of various elements, which can include social networks, virtual worlds and open tools (Google Docs, Skype, YouTube, etc.), interconnecting various learning resources that may be appropriate to the pedagogical contexts and the knowledge to acquire by each individual student.

In this ecosystem, the teacher has to take an attitude of openness, always trying to build with his students the sense of acquiring knowledge, organizing and creating learning situations with the new technologies, evaluating them on a sustained way, implying them in all steps of the process, respecting and valuing their individual differences, coordinating the whole formative path and, finally, reflecting on the pedagogical practice. On the other hand, the teacher must also possess and develop a set of skills that require a range of new competences, knowledge and attitudes. Many developed countries have already defined and adopted what they consider as the set of teachers' digital competencies (UNESCO, 2009; INTEF, 2017; Lucas & Moreira, 2018).

> "Both in-service professional development programs and future teacher preparation programs should provide appropriate technology experiences at all stages of training." (UNESCO, 2009, Introduction)

In view of the current teaching practice in Mozambique, we support the need for investment and planning of teacher education in digital technologies, and we believe that it should occur both through the implementation of public policies and programs offered by the institutions themselves, and by way of teachers own initiative, at all levels of education.

2. Digital media and social networks in an educational context

Considering that traditional learning is extensively based on memorizing knowledge and performing evaluation activities, today there is a change, and games, simulations, virtual environments and augmented reality have become ideal platforms for scientific experimentation, and for other varied forms of (inter)active learning.

The relationship between technology and pedagogy has also changed substantially and must be considered in the light of the latest developments in educational technologies, which allow us to break with the tradition of a directive education, exclusively based on the "recommended manual", on the teacher's dominance as "source of knowledge", and in the observance of an "established curriculum".

However, it can be seen that the current pedagogical model in universities and schools continues to be essentially teacher-centred and based on one-way communication. This practice runs against the thesis that students learn more when they collaborate with teachers and peers in the context of educational narratives (Pachler & Daly, 2009). Evidence shows that a new, student-centred, personalized, collaborative model of networked education is emerging, one that seeks to create mechanisms through which unique experiences and rich environments are established (Shaffer, 2004).

It is also important to consider that the learner has become an active player, capable of expressing a critical opinion about what he sees, able to select what he wants to see and to create his own content. These are innovations that derive from the emergence of a new society, networked, in constant interaction, fast in the decisions, globally informed and based on the integration of several digital media, with narratives appropriate to this new context (Oliva, Bidarra & Araújo, 2017).

Nowadays, digital media in support of learning takes multiple forms, in many cases with advantages for project-based teaching, for example, using available software for the recording and editing of sound and video, for the treatment and cataloguing of still images and to share this content. Ideal options would be: Twitter for quick messaging and Facebook for all types of networked media; synchronous communication systems such as Skype, interesting for group and project work; and search engines such as Google or Bing. With all this support available, students, individually or in groups, can create, edit, publish, share, communicate, as long as there is time and opportunity.

In the context of this study - focussed on a Film and Audio-Visual Degree - the use of professional software for the production of teaching content is frequent, for example, Adobe Premiere and Final Cut Pro video production suites are used. This is usually made available by the institution or by a wider circle of amateurs and professionals. It is also frequent to use social networking groups to support communication, information

sharing and quick messages between peers and teachers, the most popular among young students being WhatsApp.

Although e-learning platforms today represent a secure investment for educational institutions, they constitute an overly closed environment, and in the context of developing countries (like Mozambique) financially challenging for the institutions' budget. There is, therefore, the need to expand this environment through social networks such as Facebook, free of charge and offering spaces that extend the classroom (Niu, 2017), but having both risks and opportunities for educational processes (Gámez et al., 2015).

Some authors (Fogg et al., 2013) developed resources to guide teachers in the use of these tools in education, describing some of the main features of Facebook while advising the educational community. Others (Gámez et al., 2015) identify risks and opportunities, presenting a "guide with recommendations and considerations" and indicating a series of data protection measures, in addition to general recommendations for teachers. In the context of higher education in Mozambique there is also an article by Gamito (2018) about his research carried out at the Pedagogic University of Maputo, which is the only work we have identified about the use of the social network in the same context.

In our case study, the decision to use Facebook was made based on its popularity among students as a social networking system (Gámez, 2015; Niu, 2017), and because the teacher intended to establish a virtual communication space beyond the classroom allowing for "anywhere and anytime" access. In this sense, our study sought to contribute to the corpus of research on the use of social networks in the Mozambican context, presenting a qualitative reflection based on direct observation and in class records, but also on data analysis of the initial and final questionnaires of the semester.

3. A Case Study in Mozambique

3.1 Context

Mozambique is a developing country with an estimated 28 million inhabitants, the most recent data published on the site NapoleonCat.com indicate 2,409,500 registered Facebook users in December 2018. These data indicate that less than 10% of the population uses this service. Of these, 38.8% are between the ages of 18 and 24 and 28.2% between 25 and 34 - making it possible to state that it covers the population of higher education students - with an internal distribution of 62, 1% of men and 37.9% of women.

Our study was carried out in a public institution of higher education in the surroundings of the capital - Maputo - during the first semester of the academic year of 2018. The object was a class of 23 students (3 female) enrolled in the 3rd year of the degree on Cinema and Audio-visual, an undergraduate course with a total duration of 4 years. This same year, the degree graduated its first class.

The practical course (workshop) used for the study was called "Introduction to the Co-construction of Film History(ies) in Mozambique" and essentially addressed issues of "history" as a constructed narrative of memory, collaborative and democratic processes. The subjects' (students) perceptions about the use of active methodologies, digital tools and mobile teaching-learning resources, was the object of our research, which took place during the 16 weeks of the workshop, the whole duration of the semester.

3.2 Methodology

To provide support for teaching and learning processes requiring a new posture and a new relationship with knowledge (Diesel et al., 2017), we created a “restricted group” on Facebook (Gámez et al., 2015) to facilitate communication between teachers and students. This was also intended to facilitate and stimulate communication, collaboration and debate among students about the themes and exercises proposed, in a space and time external to the classroom (Saxena & Majumdar, 2015). The creation of the group would extend the space-time interaction of the classroom, and this would have advantages for a collaborative learning process.

We also estimated that it would allow for the regular use of mobile learning within the context of flipped classroom or inverted class methodologies (FLN, 2014), as well as other active pedagogies ”beyond the simple use of new technological resources", for which "planning and organization of learning situations should be focused on the activities of students", occupying “the center of educational actions" (Diesel et al., 2017), through reflection and collaborative work - much like the modus operandi of film production crews.

Having started the workshop, students were informed of the plan and guidelines for the use of the Facebook group (Gámez et al., 2015) and added their previously existing individual profiles.

3.3 Empirical study with Facebook

As exposed by Gamito (2015), we could also observe that Facebook is not commonly used by the institution's teachers for teaching and learning activities. But it turns out that a lot of teachers use *WhatsApp* class groups, for general communication and information.

The *Facebook* group had 28 elements, from which 23 were students, 1 teacher / researcher, and 4 faculty and course direction. Created on March 7th, 2018, it was in activity between that date and June 5th, when the semester ended.

To analyse the interactions in the closed Facebook group, we defined a macro structure: Introduction and Blocks 1 to 9 (table 1). A total of 159 posts were reviewed. Next, we analysed these interactions according to three criteria: the authorship and initiative of the posts, the typology of their content and the typology of the reactions, these being subdivided into *views*, *likes* and *comments*. We considered both Teacher’s posts (TP) and Students’ Posts (SP).

Table 1: Facebook posts characterization table. TP (Teacher’s posts) and SP (Students’ Posts)

BLOCKS	TP	SP	DATES
Introduction	4	0	7th to 9th of March 2018
Block 1	4	10	12th to 22nd of March 2018

Block 2	2	15	23rd to 30th of March 2018
Block 3	5	18	29th of March to 6th of April 2018
Block 4	3	22	11th to 19th of April 2018
Block 5	2	14	20th to 27th of April 2018
Block 6	3	15	30th of April to 9th of May 2018
Block 7	4	16	11th to 28th of May 2018
Block 8	12	7	25th May to 2nd of June 2018
Block 9	3	0	5th of 8th of June 2018

The duration of each block allowed us to identify a weekly structure of interactions, which corresponded to the structure of the workshop itself and guided all planned tasks and exercises. Blocks 7 and 8 had, respectively, a longer duration and a greater number of TP, since these included practical group interview production and editing activities, and some posts referred directly to the organization of production and the sharing of audios and photos.

Describing the TP, 12 out of 42 can be classified as flipped classroom initiatives, with the introduction of themes and supporting materials for further development in the classroom. The remainder being attention calls to meeting deadlines, citing of sources and spelling of mistakes. Most SP are uploads of written work files and some are requests for tips for the use of certain computer tools such as PDF converters, spell checkers and access to shared links.

In general, all the interactions on Facebook were asynchronous and the platform's synchronous communication tools - written chat / audio / video - were not used.

3.3.1 Posts authorship and initiative

We may conclude from the group's observation that each block has one "opening post" (or more) by the teacher, followed by a series of student posts, usually close to the number of students in the class, and a "closing post" by the teacher.

Out of the total 159 posts, we can point that 42 are authored by the teacher / researcher and the remaining 117 by the students / research subjects. Almost all the SP are reactions to an assignment, submission of written exercises or reflections, originating in the said "opening post". There was one single autonomous SP, not in response to a TP, just the video sharing of the group work (edited interview file). We also found that was better to organize the authorship category into authorship / initiative and authorship / creativity. In the first case, when the author of the post shared a con-tent from another author - for example, when they shared videos

links - and in the second, when the content of the post was original. Some, of course, were mixed-category posts.
In this sense, if the SPs were characterized by the submission of written exercises, all these would be categorized as original. Otherwise, most of the TPs were links to content and attachments with bibliography from various authors and the Film Museum project itself. This evidence is in line with the planned strategy of student-oriented teaching, in which the teacher plays the role of a facilitator between students and content.

3.3.2 Posts' Content Typology

Since almost all SPs were submission of proposed tasks' materials, we would say that there was a relatively passive relationship between the students and the tool. There were few or none direct interactions between students and the only situation where the group was used for organizing collaborative activities was for the group interview exercise.
We divided the content typology into:
a) text;
b) text file attachment;
c) audio;
d) video;
e) image or photo;
f) link to external site;
g) others.

Observed typologies involved four types of content - text, image, video and audio - that appeared in isolation or combinations. For example, SPs that are exercises' submissions often only include the attachment file without any introductory text, while others are merely photos of group activities.

On the contrary, the TPs usually used a combination of kinds of content, with explanatory introduction text for the proposed exercise, often with external links (videos tutorials and complementary tools, support software) and, on one occasion, using Facebook's survey tool to collect students ongoing perception about the methodology itself.

3.3.3 Reactions to posts

Reactions were classified and described according to three main types: views, likes, and comments. In general, it is possible to conclude that the likes were reactions more common to posts that contained fixed visual elements, namely images or photos. Views were the most common type of reaction, with the initial posts of each block often having a number of views almost identical to the number of students in the class. Posts about the group exercises also had a high number of views while posts for individual exercises had fewer views (less than 4). Finally, comments were the typology that provided us with more detailed information and data about the perceptions of the subjects. They were sometimes longer texts. In the study we could observe that they were, most times, requested by the teacher.

During the last few weeks of the workshop we asked for reflective comments on the tools and methodologies used during the semester. In this case, the students made suggestions on ways to improve the use of a quizz game. Each suggestion / comment was followed by a teacher reply. In summary, students' suggestions were about the games' countdown settings and suggestions of different levels and age groups targeted content. In this case the subject was the interdisciplinary character taught in collaboration with external faculty.

Students also reflected on the lack of practice centred activities that characterize the course and the importance of shared experiences of real film shooting and editing situations. This kind of reflective activity could also provide a method for evaluation of teaching practices and institutional management practices.

Reference literature (Manca e Ranieri, 2013; UNESCO, 2008) usually indicates speed and ease of access, rapidity of teacher's response, information sharing, interaction, innovation, mobility, collaboration and participation, favouring community culture, informality and user friendliness as some of the characteristics of Facebook associated with education. For some authors, the platform also compensates for the lack of moments and spaces of face-to-face interaction (Abeywardena, 2011), which are sometimes characteristic of the curricular organization. But the same literature also informs us about the main conditioning factors, such as concentration difficulties due to hypertextuality, and the lack of privacy in social networks.
In the experience reported in this paper, the teacher could verify some of the most positive characteristics. Because the institution does not have a VLE it turns out Facebook is allowed to fill in for its absence. On the other hand, the time of interaction and knowledge construction, reduced to a weekly face-to-face 2-hour class, was extended, allowing for more curricular themes and greater student-teacher, student-content and student-student interaction (Moore, 2011).

From the challenges point of view, we could verify that the socio-geographical data access issues in the city of Maputo have a direct impact on the students' experience, making their perceptions about the tool somehow oscillate. We felt the need for prior training in the use of tools that facilitate the use of mobile technologies and social networks in teaching. This we did not anticipate would be important to the students.

This was a pioneering experience in that institution, which imposed a slow learning curve from the start. However, we believe that one of its main achievements was to stimulate reflection about the opportunities that networking tools and mobile technologies offer to the teaching community. The advantages that can be drawn from them also means a challenge for teaching institutions policies: academic, faculty, logistical, tool development and others.

Our perspective has been to continue collaborating in this direction, providing a greater number of experiences and deepening the initiated research. We argue that in-service teacher training is a fundamentally important element to develop the reflection about practices, and a factor for changing traditional attitudes and behaviours towards the effective use of social networks and mobile devices in teaching.

3.3.4 Preliminary questionnaire: data collection and analysis

Two questionnaires were developed, structured around groups of mixed open, closed and multiple-choice questions. Both were printed and filled in the classroom, with the supervision of the teacher / researcher.

Since the respondents were the exact same group as the workshop group, an effort was made to avoid a low response rate (frequently reported for many online questionnaires). The themes of the questions followed the trends of other similar studies, adapted to the new context. Authors Gonzalez et al. (2016) point out the most frequent themes related to positive impacts of the use of social networks for learning: collaboration, interaction, satisfaction and motivation. Also, they indicate some of the negative impacts to consider: attention / distraction, privacy and trust.

The preliminary questionnaire (PQ) was submitted at the beginning of the semester, before performing any learning activities involving digital media and social networks, with the purpose of characterizing the group, their habits and general perceptions. It was answered by 18 students, in a non-compulsory manner.

The data collected indicated that about 89% of students have mobile devices (MD), both smartphones and/or laptops, and use data services over mobile telephony. Two students had phones that could not access internet and they used university desktop PCs. Students confirmed there were free internet access spots on campus, but about 80% acknowledged that they were not informed about any institutional policies regarding use.

As for the regularity with which they use mobile devices in everyday life, 87% of students said they use it more than once a day in at least one of their MD, and 72.2% said they use the internet with the same regularity. These data confirm that mobile technology and network access - although we do not have data on other dimensions of use - are daily actions for the vast majority of students, at least in the context researched.
Although there were initial doubts about the stability and internet speed within the campus, during all the 2-hour face-to-face classes held during the semester, and despite some power and viruses' events, everything was very much functional. The Library is still the place indicated by two thirds of the students where the use of the internet is more frequent, and 5 students refer the use in public transports.
As to whether teachers use or suggest the use of digital content, half of the students stated that some teachers do it, and that text and digital books (.pdf) are the most used type of such digital content, followed by videos (movies and tutorials).

3.3.5 Final questionnaire (FQ): data collection and analysis

The 17 students who answered the Final Questionnaire (FQ) were the same (minus one) who answered the first questionnaire. This comprised a group characterized according to an age span 19 through 41 years old.

The FQ was also filled in the classroom, in the presence of the researcher, anonymously, each one being randomly assigned letters A through Q. With a total of 47 questions divided into 6 groups (the last one being on the use of digital games, a topic that will not be analysed in this paper). Two groups of questions provided us with specific data on the habits of both students and teachers, regarding the use of digital accessed content and tools, in teaching-learning practice, in the classroom and for autonomous study.

Essentially, we gathered evidence that all students have MD with Internet access, that this access is not of the best quality - stability and bandwidth - and that most use the mobile data service from telephone providers, for some an expensive and unreliable service, not having access to personal wi-fi connections. Because of this, on campus, the preferred access points were the Library and the Computer Room, where students had free

but limited connections (no downloads are allowed) through desktop computers. This shows that access is still seen as a complementary resource, for occasional use, with many budgetary and content limitations.

According to students, the most common places for the general use of MD with internet connection - including smartphones and laptops - are the home and the college campus, with 35% saying that classroom use in learning activities is rare, despite teachers suggesting the use of digital content materials on a regular basis. Cultural centres and public transports come in third and fourth place as where students use online connections. The weekly average usage of the internet for learning purposes as indicated by the students shows over 76% of responses between 1 and 5 hours, the second largest group being between 5 to 10 hours.

The social media most used for learning and study activities are: Facebook, YouTube and WhatsApp. Google is the preferred search engine. Wikipedia is used for general information and e-mail as the most common communication tool. These numbers bring Facebook to the top and the usage made seems to have had great impact on the way the students in this group learn with it. Regarding teachers' use of social media to communicate and develop learning activities, almost two thirds of students indicate that less than 3 teachers do it on a regular basis and as a prearranged methodology.

Finally, a couple of more specific questions asked about the use of a closed group on Facebook as a complementary methodology to the classroom time-space, and 11 students (65%) indicated using their own MD, while the remaining 6 used college equipment, namely desktop computers. From the perspective of a study on “mobile learning”, we could say that one third of the class was not always mobile (connected).

Students also pointed out that they consider using Facebook as being a motivating (53%) and very motivating (47%) tool for the introduction and development of curricular activities outside the classroom interactions.

In an open-ended question, asking for individual suggestions to improve the conditions for Facebook use in the context of a curricular activity, the comments were not conclusive and suggest the need to carry out individual interviews, which could complement the answers providing extra indicators of the subjects’ perceptions and motivations.

However, we can highlight some of the general ideas summarized from the comments received that we consider to confirm our own observations, and suggest useful and simple ways to implement improvements.

Students suggested:

- that other courses and other schools should adapt this communication model for learning activities, including a weekly task schedule with notifications that serve as reminders;
- that peers should be more constructive on comments made on peer review tasks;
- that the learning curve of Facebook's use for learning activities should be analysed because it is a change in the “normal” use of the social tool and it entails new habits;
- that video content sharing could / should be more regular;
- that peers should increase the number and depth of the comments they share on the platform;
- that the teacher should give assignment feedback on Facebook;

- that the social background of each student should be taken into consideration because of the way it influences (costly) internet access at home and on personal MDs.

3.4 Direct observation

All the students already had a private profile, which facilitated the process of inclusion in the Facebook group but, overall, some factors stand out as deserving more reflection and deeper investigation.

The direct observations made during the 16-week semester were recorded on a notebook with comments, allowing us to perceive the general behaviours, highlighting the need for a period of adaptation to the use of Facebook in an educational context, and to further study the learning curve for the adaptation of a social tool in a classroom environment.

An ironic comment made loudly by a student in one of the last face-to-face sessions demonstrates a change in attitudes towards the use of the social network. As it was an exciting experimental class, and in the Computer Room there were 4 students from other classes finishing work assignments, in conversation one of the workshop students told the others: -”Hey guys ... in this class we use Facebook for studying!"

We can sustain that this experience and the associated expectations were positive, but that more research and a greater quantity and diversity of data are necessary to generalize any kind of preliminary results that this work may have originated, and that its greatest virtue has been to outline paths for future research.

4. Conclusions and recommendations

Contributions to understanding the relationship between Facebook and learning are that social media need not be defined as "essential tools" or "advised methodologies" but rather as contemporary human creations whose diverse forms and cultural meanings are strategic for education. In this regard, educational institutions need to adopt these innovative models and bring them into education in order to meet the expectations of new generations of students, who have “grown up digital”.

Overall, the attitude of all students in this new experience was very positive and the resulting motivation improved. In this sense, perhaps teachers should combine social media with predetermined learning objectives so that experiences are relevant, taking into account potential distractions when using Facebook, and providing relevant guidance.

We acknowledge the limitations of our study, with a small group of students, and indicate as first recommendation the need for more studies, and more diversified research in this area, specifically in the African educational context. Perhaps repeating our process and methodology with other groups of students in future semesters can make the results clearer and more robust.

Finally, in the course of our work, we invited two course directors and three teachers to participate in the Facebook group. This invitation originated in the group and based on the internal resources and models that it makes available for the creation of groups. Unfortunately, the teacher interaction was very limited (it was

used only once by a director and once by a teacher), not significant for the analysis, but certainly suggesting the need for future reflection on teachers' pedagogical positions on the use of social media for teaching and learning activities.

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