

Educationalizing Instagram for Virtual Instruction in COVID-19: A Pragmatic Framework

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ABSTRACT

Learning through social media platforms is a nascent pedagogy that opens up new virtual online e-instructional modalities and avenues to be explored especially in these challenging emergency times of COVID-19. This research focuses on a self-directed initiative of a math teacher who taught her students in an open virtual class via Instagram. This study explores how the main features of Instagram—inherently used as social interaction platform—were maximized for educational purposes. It also investigates the effects, be they positive or negative, on the learning-teaching process in terms of engagement and communication. For this, a mixed-method sequential exploratory design was opted for to conduct the study which surveyed 100 students across 22 different high schools who took part in the virtual open math classes. The findings highlight the different patterns of Instagram use and platform features that lend this social media website the requisite feasibility to educationalize it. Furthermore, the results reveal both the favourable and disadvantageous aspects of Instagram.

KEYWORDS

Communication, Education, Instagram, Math Education, Mobile Learning, Virtual Class

INTRODUCTION

The use of digital technology for educational purposes has been rapidly expanding in the last decade, offering teachers and students around the world an endless number of possibilities for innovative teaching and learning experiences. However, as a result of the worldwide outbreak of COVID-19, the resort to online and distance education has exponentially escalated on a global scale. In an attempt to eliminate the spread of the virus, according to a study published by the United Nations Educational, Scientific and Cultural Organization in mid-April 2020, governments across 195 countries issued lockdown measures leading to the closure of educational institutions from pre-primary to tertiary levels and affecting 1.5 billion learners in the process (UNESCO, 2020).

Restricting orders with respect to social distancing has rendered teaching and learning online in the wake of a pandemic no longer an option, but an exigency, regardless of potential first-order barriers in terms of digital deficiencies in the infrastructure and second-order barriers rooted in potential teachers' beliefs that are not in favour of educational technology. This resonates with the initiative made by the Chinese Ministry of Education which was entitled Disrupted Classes, Undisrupted Learning

DOI: 10.4018/IJWLTT.287621

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(Huang et al., 2020). Such demands further accentuate the significance of ensuring the continuity of education during unprecedented times and ahead of an ambiguous future.

Major implications are to be considered in this regard especially in the case of developing countries such as Algeria, a context in which online education is still in its infancy. The compulsory and urgent transition from conventional instructional procedures based on face-to-face interaction to a virtually mediated one means that online learning has occurred in a manner that was a reactive, unplanned and lacking the requisite scientific evidence brought about by research. This has pushed institutions and instructors to engage in self-directed initiatives in under-explored territories for the purpose of sustaining teaching activities.

As a matter of fact, this was also the case of number of academic institutions in other countries with similar limitations who were more intent on “the transfer of educational content to the digital world and not specifically on online teaching and delivery methods.” (Adnan & Anwar, 2020, p. 46). The need to ensure a rapid and feasible transition into the online world demanded a pro-active use of available platforms which did not only include learning management systems (Google Classroom, Schoology, Zoom, Edmodo, etc) or video communication tools (Zoom, Google Meet, FaceTime, etc) -websites meant for educational purposes, but also social networking platforms (Facebook, Telegram, Instagram, etc) -the designs of which are not inherently educational.

Due to the quality of internet connection as well as the availability of technical resources, many students in the Algerian context are not able to effectively maximise a virtual learning experience on the aforementioned examples of online educational platforms. According to Adnan and Anwar (2020, p. 46), “a significant amount of online content is not accessible via smartphones”, a digital affordance which is oftentimes students’ only means of internet access. However, this is not the case for social media applications as they can be readily accessed using the same devices. With that being said, in particular cases, social media has been used as the initial and primary resort for carrying out and maintaining teaching activities in order to cater to learners’ preferences and existing digital competence that align with social networking websites.

LITERATURE REVIEW

Online Education and Social Media

Online teaching and learning refer to a set of formalised activities that are prepared, shared and carried out by means of digital technology. Dhull and Sakshi (2017) elucidate that “online Learning encompasses a range of technologies such as the worldwide web, email, chat, new groups and texts, audio and video conferencing delivered over computer networks to impart education” (p. 32). Connected via the internet, teachers and learners use an array of digital tools ranging from tablets, smartphones, laptops, to computers in order to remotely engage in educational practices on a shared platform.

Scientific attempts at investigations pertaining to online education have been growing in the last decade in a manner that incorporates a variety of empirical methodologies (Gonzalez & Louis, 2018). Nonetheless, the effects and efficacy of learning mediated by digital means has yet to be fully established (McPherson & Bacow, 2015). Thus, it is difficult to fully predict and envision the degree of success or failure of educational initiatives in this area. For this reason, researchers, educators and educational institutions across the world are still experimenting and adopting the modern pedagogy of delivering courses online using a diverse set of platforms, the original purpose of which is not always directed towards academic ends. A prominent manifestation of such digital corners of the virtual world is social media websites.

Social media has been conceptualised as “Internet-based channels that allow users to opportunistically interact and selectively self-present, either in real-time or asynchronously, with both broad and narrow audiences who derive value from user-generated content and the perception

of interaction with others” (Carr and Hayes, 2015, p. 50). Henceforth, social media platforms are highly interactive, enabling various modes and features of self-expression and communication and, thereby, lending this particular technology to multiple different considerations of use including formal instruction.

According to a Pew Report (2018) a total of 3.196 billion people are social media users, consisting of 42% of the world population. (Erarslan, 2019). Due to the enormous popularity and widespread adoption of social media by the youth, a growing number of research studies have been published to account for the feasibility and effectiveness of conducting online learning activities on websites such as Facebook, WhatsApp, Twitter. However, empirical lenses that address the use of social media for teaching and learning purposes are still limited. Put more clearly and specifically, Lambton-Howard, Kiaer and Kharrufa (2020) state that “a more fine-grained understanding of the differences between individual features of social media and how they are perceived by learners and teachers are rare”. Such evaluations of the current state of the literature provides the requisite validation for the necessity of the present research; understanding in-depth how remote learning occurs on social media by zooming into a particular tangle of its web, in this case: Instagram, will help advance pedagogical practices, especially during critical and urgent times.

Instagram as a Social Media Platform

Instagram, first launched in October 2010, is a social media platform on which users can create and share content in the form of photos or videos. Users can directly interact with uploaded and published posts through emoji-based reactions and textual comments. Instagram incorporates a list of photograph filters which enables photo uploaders to easily manipulate and alter images in multiple different ways (Whitney, 2020). This particular digital design sets Instagram’s platform interface apart from other social networking services, making it more appealing for millennials who are increasingly accustomed to the world of screens, imagery and so on. Instagram consists of a plethora of other available functions which legitimizes it as a full-fledged social networking application including: creating accounts, adding captions, tagging users, accessing and following other accounts, receiving notifications, commenting on content, and browsing a main feed which consists of recent content of other users’ profiles (Manning, 2014; Herman, 2014).

Not limited to that, further embedded within Instagram is a distinct combination of intersecting features which allow users to interact with others, share content and engage with it in a plethora of ways:

1. Instagram Stories

The Stories feature allow Instagramers to upload a photo or a short video for the duration of 24 hours as a component separate from regular posts shared on users’ profiles. The ephemeral nature of Stories feature may potentially exert a psychological effect on users as they are aware the content will expire eventually and, thus, must be viewed within the allocated time period. For this reason, users can make use of this option to share latest news, publicize and advertise their content, impart critical pieces of information, start polls, invite users to offer feedback through closed ended questions, etc (Kumar, 2019).

2. Instagram Live

This social networking application enables users to broadcast events, hold a discussion session, and impart audio-visual content through Live streaming. Although the application itself, by default, notifies followers whenever a given followed user launches a Live session (Keeley, 2020), an Instagramer can also use the aforementioned function, i.e., Stories, to invite followers beforehand to watch their Live videos. Followers may log in and attend it in real-time, post comments, and react

using emojis at any given moment over the course of the broadcast. A broadcast can be made to disappear as soon as it the Live video functionality ends or may be included within a user's story for 24 hours (Constine, 2017).

3. Instagram Direct

Another paramount option existent within this platform is the ability to directly and privately send and receive one-to-one textual, vocal, and visual messages at any time, both asynchronously and synchronously. In addition to this, Instagram allows users to create a conversation box with 2 or more users (Instagram Help Center, 2020), a possibility which can be exploited in multiple forms including group work collaboration, advertisement, initiating campaigns, increasing followers number on a given profile, etc

4. Instagram Story Highlights

Instagram Stories Highlights is a feature that permits Instagramers to permanently retain previously shared stories as an embedded part of their profile content. These highlights can be readily spotted as they are automatically pinned, in the form of circles, between the user's bio and his or her Instagram feed. By utilising Instagram Stories Highlights, users can selectively project active or archived stories and showcase them under specific textual headings, to purposively direct followers' attention to certain content elements (Chacon, 2019).

5. Profile Posts

Any account owner on Instagram is granted the functionality of posting photos and videos on their accounts to be viewed publicly or with pre-approved followers. A user's post appears both on their profile and on the main feed as part of other posts which are listed according to recency. People can interact with available posts in the form of likes or comments. Every comment within a post can be separately replied to by the original poster and other followers or users.

Posts, whether in image or video format, are accompanied by text, identifying hashtags and geographical tagging. These two latter details allow users to filter and organise the massive content accessible to them and search for it at will. As per the applications' latest updates, users can upload up to 10 photos and videos to be grouped together in one unified post (Instagram Help Center, 2020) with the content as a whole interfaced as one "swipeable carousel" (Constine, 2019) that is detached from other posts. It is imperative to mention the content on Instagram can only be created via phone or shared from an existing phone's library and not a desktop computer (Instagram Help Center, 2020).

6. Accounts Open Visibility

While many users choose to set their accounts as private, thus, requiring the user's approval to allow followers to view their content, accounts on Instagram are public to followers, non-following users as well as lurkers by default upon accounts' creation (Instagram Help Center, 2020). By using hashtags and geographical tagging, users can access the content of a public account from any physical location across the globe via their phones. It is worth noting that geographical tagging and hashtags are not only accessible functions within posts, but also when using Instagram Live and Instagram Stories. Videos, photos, and posts of a public account can be found by anyone on the Explore tab, a basic functionality which allows Instagramers to discover new content.

7. Outer-Sharing to Other Platforms

Every existent photo, video, post or story on a given profile can be further shared to other social networking applications, namely Facebook, Twitter, and Tumblr (Instagram Help Center, 2020). Instagram facilitates external sharing through allowing a user to connect his or her accounts with another owned account on these other social networking applications. Furthermore, when one's accounts on both Instagram and Facebook in particular are linked -by activating that option in the settings section of Instagram-, an Instagram story will be automatically displayed on as a Facebook and Messenger story as well. Instagram posts can also be directly shared on a Facebook timeline or page to be viewed, and interacted with, by users of that platform. In this manner, public accounts owners are able to rapidly engage incrementally larger audiences (FACEBOOK for business, 2020).

Instagram as a Mobile Learning Tool

As clarified by the Association of College and Research Libraries (2013), "Instagram is dedicated to the mobile experience, and part of its growth was fueled by the rapid adoption of smartphones with high-functioning cameras". Although it is possible to browse Instagram using the Desktop Web, it is still "primarily" regarded as a mobile application (Moreau, 2020). A number of critical functionalities such as uploading photos or videos, posting on a profile, deleting and archiving posts, and modifying certain accounts settings is not accessible to computer users (Moreau, 2020). This manifests as one of the prominent examples for how this particular social networking tool differs from its counterparts, namely Facebook and Twitter, both of which do offer full desktop experiences (Alba, 2017). Therefore, this implies that any pedagogical practices performed through the use of Instagram fall under the specific heading of mobile learning.

The unique assortment of features that Instagram encompasses has catapulted its status as one of the most popular social media outlets used by today's digital residents of the online world (Erslan, 2019; Solmaz, 2017). As individual ownership of handheld devices grows, the rates of using Instagram as a mobile application equally increases. The young generation of learners, in particular, is exceedingly "immersed in and accustomed" to Instagram (Handayani, 2016) as they are inclined to use it due its "appealing" interface (Khalitova & Gimaletdinova, 2016). With this knowledge in mind, practitioners at different educational levels have been gravitated to the idea of considering and experimenting with Instagram in their teaching processes which, in turn, has motivated researchers and scholars to approach it from scientific lenses and empirically expound on its use within an educational discourse.

In a study conducted by Erslan (2019) on university students, it was revealed that Instagram had a positive impact on this category of learners as it assisted their learning of English as a foreign language. It also made it possible for students to create "cooperative, collaborative and sharing atmosphere" as a hybrid supplementary to the face-to-face classroom environment (Erslan, 2019, p. 66). In a similarly favourable light, Pujjati and Tamela (2019) attest to the role Instagram plays in elevating students' motivation and enhancing their English language knowledge and skills. The findings of this study have been previously unveiled by other researchers (Aloraini, 2018; Listiani, 2016; Mansor & Rahim, 2017). Along with English language learning, Manaroinsong (2018) also found out that by engaging in an array of learning tasks while utilising Instagram, students are propelled to tap into and manage the complex digital mechanisms of the platform's functionalities. As a result, these users' technological literacy progresses further. Instagram also promotes learners' creativity and social skills (Manaroinsong, 2018). Notably, a dominant number of the research studies, as scant as they are (Gonulal, 2019), that have attempted to demystify the effects and roles this platform can have in fostering teaching and learning are contextually located in the area of language education, particularly English as a foreign language. The exploration of its potential as an educational platform in other academic disciplines, including mathematics, has been marginalised.

A comprehensive and critical examination of the literature leads us to highlight one protruding commonality prevalent within this body of knowledge. Most of the studies, irrespective of the empirical methodologies opted for, investigate the incorporation of Instagram in the pedagogical activity as a means to an end, the intricately distinguished features of which, along with their concomitant uses, are

not explicitly delineated in the research. An established framework that outlines and guides the use of Instagram for educational purposes does not exist, and no scholar or research has, thus far, proposed a model of any form to serve as a theoretical foundation to underpin the work of future researchers or, more significantly, structure teachers' endeavoured pedagogical utilizations of Instagram.

Confirmatory results as to the application's effectiveness, as made evident by the aforementioned studies, may function as motivational sources for practitioners who aim to venture into this digital territory of Instagram-enabled mobile instruction. Nonetheless, instructors still remain unequipped in terms of theoretical and conceptual knowledge of how to systematically educationalize the features of this social platform to facilitate instructional practices. Proceeding upon this revelation, it is significant to examine a full-fledged process of educationalizing Instagram using empirical methodologies, and, subsequently, arrive at a generalized framework which consists of the key features of this mobile technology.

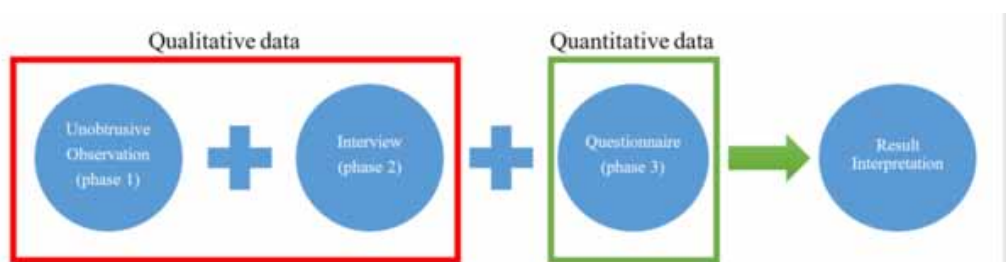
The present research explores in-depth the case of an Algerian secondary school math instructor who chose to leverage Instagram, as an increasingly popular social network application, to deliver her content to learners who have been quarantined as a preventive procedure to contain the spread of COVID-19. This study examines how the user options and platform features were re-purposed in a manner that made the teacher's educational objectives potentially possible to accomplish. In tracing this process, the researchers attempt to establish a pragmatic framework that demonstrates a feasible implementation of Instagram as a social media tool for pedagogical purposes. This study also investigates how the educationalization of Instagram affects students' engagement and facilitates student-teacher communication throughout the duration of the online course. Hence, our research endeavour is translated into the following research questions:

- Is it possible to educationalize Instagram? How does the process of educationalizing Instagram occur? What are the digitally in-built features that render Instagram a potentially effective platform for teaching and learning?
- How can educationalizing Instagram foster learners' engagement in an online course?
- How can educationalizing Instagram promote teacher-student communication in an online course?
- What are the merits and challenges of educationalizing Instagram for the teacher and the students?

RESEARCH METHODOLOGY

In this study, an exploratory sequential mixed method design alongside borrowed aspects of unobtrusive methods are employed to study the phenomenon of educationalizing a social platform namely Instagram and shed light on students' learning and teacher's teaching in this mobile-technology-driven modality of instruction. This method of research was chosen to explore, elucidate and depict the inner relations of the targeted process and attempt to trace the way the e-instructor educationalized the platform to optimize the teaching learning process. A focus is laid upon key Instagram features that were involved in the process. This approach combines qualitative and quantitative data collection and analysis in two consecutive phases (Creswell & Plano Clark, 2018). The first phase is qualitative and it served to explore the phenomenon and pin point what variables are to be studied in this research. For this, two data collection tools were used namely unobtrusive observation, to explore all the different e-practices that took place in the platform, and the recorded phone call semi-structured interview to cast light on the main prominent elements that emerged from the initial observation. The research was sequentially undertaken through two phase (see figure 1) from March to May 2020. After a careful study of the data collected in the first phase, The second phase is quantitative in which an online self-reported questionnaire was administered to e-students who took part in this educational ride. nature of our exploratory research along with the unobtrusive data collection tool that we chose prevented us from having a direct contact with the participants. A voluntary response sampling technique is used at this stage as it was the most adequate one. The

Figure 1. Exploratory Data Collection Design



reason is that the e-math-instructor is the one who administered the questionnaire, and the ones who completed it were the most involved in the process as she made the announcement in the ‘stories’, ‘live’ and ‘post’. A sample of 40% of the population completed the questionnaire. The processing of numerical data was done automatically as google forms provide the questionnaire designers with all the proper statistics drawn from e-students’ answers. All the data was combined through a thematic analysis. These themes are driven from the posed hypotheses.

Qualitative Phase

In this phase, qualitative data was collected through, initially, non-participant unobtrusive observation to explore the way math instruction was given to learners and the different nuances and stages of lesson delivery. It was unobtrusive as neither the students nor the instructor was informed that the researchers were observing the open class as anyone in the instructor’s Instagram contact-list have the ability to attend it. Subsequently, with a better understanding of this mobile-assisted mode of teaching dynamic,

a semi-structured recorded phone call interview was conducted with the math instructor to form an in-depth analysis of Instagramming instruction and trace the history of how it came about alongside identifying the intricate online teacher-student rapport, students’ engagement and communication mode. The semi-structured interview was conducted in colloquial Algerian Arabic language (non-standardized Arabic which is a commonly informal Algerian language spoken in the territory) to facilitate the communication with the interviewee and, then, translated into English to be processed. This qualitative phase is portrayed as “exploratory” because no conceptual framework is used. Instead, it is data driven (Creswell & Plano Clark, 2018, Mihas, 2019, p.3).

Qualitative Phase

Through careful reviewing of the collected qualitative data, the self-reported questionnaire is designed. This second phase consisted in using the e-instructor as a proxy to administer a self-reported online questionnaire via Google Form to students as an attempt to answer the research questions. This is another unobtrusive research method in which “people are recruited”, in this case the e-teacher who engaged in posting the link of the self-reported questionnaire on her Instagram profile and spoke about it before and during the live session (Given, 2008, p. 905). To avoid any ambiguity and ensure clarity of the data collection instrument, the questionnaire items were translated in Arabic as not all students are proficient in the English language since it is the second foreign language in Algeria. The interpretation of the gathered data was done in the last phase where inferences were drawn and correlated with state-of-the art literature to give more relevance and validity to the findings of the study.

Participants and Data Collection Instruments

This research was conducted to have an in-depth understanding on how math e-instruction came about in this mobile learning context. To do so, open virtual class (Instagram LIVE) observation

was conducted unobtrusively which is “a research strategy for gathering primary data about some aspect of the social world without interacting directly with its participants” (Given, 2008, p. 561).

It, thus, consisted in taking notes on how the online course was given and the manner with which the e-teacher used multiple Instagram features to communicate distinctively pedagogical material to her learners. After relatively grasping somewhat the online educational mechanism, in dint of the first data collection instrument, a recorded phone semi-structured interview was conducted with the instructor to fathom thoroughly the intricate step-by-step procedure revolving around the way the math e-instructor educationally re-purposed some of the main user options in Instagram and how it contributed to affect students’ engagement in the online course, all the while highlighting the divergent routes of communication between the two main actors. The e-instructor, thereupon, was in charge of administering the questionnaire to her students.

As far as the online population is concerned, more than 200 students were involved in the e-math-teaching online-class, but only 100 - 65% females and 35% males - of them filled the self-reported-survey which was posted on the platform by the instructor. 99 were accepted for data processing as only one reported back invalid answers. All e-students were in third year secondary schools from twenty (20) different high schools from the wilaya of Mostaganem in addition to two other wilayas namely Oran and El Oued. Students belonged to four streams notably economy and management (51%), natural sciences (39%), technical mathematics (11%) and mathematics (03%). Moreover, their age ranged from 18 to 23 years old and more specifically 63% of them were aged between 17 and 18 years old.

Data Analysis and Findings

The study is carried out to explore and trace back the process of educationalizing the social-network-platform Instagram by the math instructor who took it upon herself to e-teach her students during Covid-19. For this doing, she followed her students’ inclination for and competence in utilizing Instagram for non-educational purposes i.e., posting picture and sharing videos. She seized this opportunity long before this crisis to connect with her students in this social landscape for educational purposes. In other words, the e-math instructor educationalized, “configured” or appropriated (Lambton-howard et al., 2020, p.4) the platform to suits an educational need. In fact, Belyakova and Pyrkina (2021) exhort instructors to incite their students to use their hand-held tech-devices for academic ends. When students are asked about the social network platforms they usually use and prefer to study on. Nearly half of them (44,44%) chose Facebook; approximately a quarter of them (24,24%) chose Whatsapp; and the remaining ones opted for Telegram and Instagram respectively 20,20% and 19,19%. This indicates that their first choice was Facebook as it is popular amongst millennials and also because this platform offers more educational features and tools that many studies affirmed (Espinosa, 2015; Chugh & Ruhi, 2018; Inpeng, 2020). Unsurprisingly, students are not used to regard Instagram as an instructional tool which is one of the reasons that stimulated the researchers’ choice to conduct the study.

The Process of Educationalization

This study attempts to trace the way the e-instructor educationalized key Instagram features which were originally designed for social purposes, to educational ones. Further, through this exploratory research, our main target is the infer, elaborate and generate a pragmatic framework of the educationalization process of Instagram. This can be of prominent use for future educational-driven studies and instructional practices undertaken in this socially-mediated platform. In this regard, the educationalization of six major Instagram features are thoroughly studied as it is showcased in figure 2 all the while highlighting the two fold mode of e-communication and how the way this process impacted the dynamic of e-learners’ learning and e-teacher’s teaching.

Figure 2. Framework of Instagram educationalization process

	Public Account	Live	Stories	Stories Highlights	Profile Posts	IG Direct
	Educationalization of the platform 'Instagram'					
e-Teacher	<ul style="list-style-type: none"> Massive and open delivery of content 	<ul style="list-style-type: none"> Live e-teaching 	<ul style="list-style-type: none"> Announcements Promote choice & voice through polls and stickers Gather data to cater to students' needs Give assignments 	<ul style="list-style-type: none"> e-repository <ul style="list-style-type: none"> Lessons Summaries Task correction Organize instructional content 	<ul style="list-style-type: none"> Announcements Share to other platforms 	<ul style="list-style-type: none"> Personalized feedback Reach more students for inclusive instruction
e-Students	<ul style="list-style-type: none"> Open to any e-student 	<ul style="list-style-type: none"> Real-time interaction Ask questions Conduct self-assessment 	<ul style="list-style-type: none"> View/re-view the recorded live Participate in the decision-making of what to learn 	<ul style="list-style-type: none"> Access e-materials Conduct self-assessment 	<ul style="list-style-type: none"> Be informed Be up to date 	<ul style="list-style-type: none"> Ask the e-teacher Collaborate in chat group
Mode of communication	Synchronous		Asynchronous			

Public Account

The e-instructor used her public Instagram account as an open virtual-math-class portal that anyone can attend or visit simply by 'following' her account. This mere act of openness can be very significant as an unlimited number of students can access the account and thusly all the materials, virtual classes and so forth regardless of their geographical location. All it takes is having a tech-device as Instagram application mainly operates on mobile devices.

Instagram Live

Of chief importance is this feature as it enabled the e-instructor and e-students alike to interact in real-time in an online virtual class either synchronously or asynchronously. The first live session was aimed at "reassuring students in this critical time and letting them know that I'll be here for them, to help, guide and tutor them". She even told them: "I will not abandon you in this time of need" because they have the final secondary exam this year, which is a very sensitive period as it is decisive in students' academic journey. This act of prioritizing human connection in the context of education is called "pedagogy of care" by Bozkurt et his colleagues (2020, p.8). Accordingly, they emphasize its primordial value as it pushes educators to think about learners beyond their role in the classroom and, thus, provide them counseling and assistance that enables them to face the impact of this current crisis on their academic and personal lives. This act, amongst other factors, fostered potent student-teacher rapport as one can see that the e-instructor prioritized education over instruction.

From another perspective, during the live session, the e-teacher uses her mobile phone camera as the primary tool of delivery, and the e-students either see her face or the pen and paper which she utilizes to textualize and visualize her explanation. What is eye-grabbing is that during this give and take instantaneous mode of e-instruction, e-students interact with their teacher via emojis or written text in the comment section. As a case in point, a thumbs up emoji signals that the e-students have well-grasped a particular point and a thumbs down for stating the opposite. Equally eye-catching is the way the e-instructor explains the lesson as she uses a modern Algerian Arabic vernacular to convey her messages coupled with a little humor every now and then in the e-live-lesson. This infusion of lingual and cultural parameters in the e-class is what made students more engaged in their learning process.

Another element that was unexpected and unforeseen is the fact that this tech-enabled mode of instruction suits learners with disabilities; in this case, the researchers identified a student with an articulation problem. He always refrains from asking questions in a physical setting-class, but

online, he had the option to conceal his identity and was, thereby, significantly more active by asking questions and interacting with the participants. A choice that was made by 26% of the participants as the component of anonymity enables them to operate freely without as the possibility of being personally targeted and judged for potential mistakes is eliminated. On this note, 63.6% affirm that they feel less stressed when attending the live session in comparison with the traditional face-to-face class.

This finding mirrors, to some extent, a previous study of Sweet et al. (2020) who state that social media as a leading interactional pathway can support learners with disabilities so long as they have the ability to use and access it as well as to take advantage of its merits in terms of learning, collaborating, exchanging and sharing information.

Stories

This feature was used to forward e-students' voice and choice as they verbalize what they want to study or what difficult mathematical problem they want to tackle through "stories polls" or "stories questions". Additionally, the e-teacher schedules the sessions in the same fashion and, after agreeing on the time, she informs them at least 24h before-hand. This way of foregrounding learning-decisions on students' choice gives them voice and, hence, makes them more engaged in the e-teaching and learning process. Put differently, this feature is used to post any announcements related to any instructional activity that e-students' need to be part of

Another point was observed which is the embedded feature in 'stories' of being able to re-view the live session. This feature does not only suit latecomers and the one who missed it completely, but it also enables students who attended the live session to re-watch the e-lesson in case they have not fully grasped regardless of the reason behind. This is why the instructor affirm that three quarters, sometimes more, of the students tend to watch the recorded version. A tentative explanation to this behavior is explained by Lin and Gao, 2020 as this digital affordance offers students a certain flexibility, especially in asynchronous online lessons, by pausing the video anytime they had a problem during the lecture and searching for resources to solve any ambiguity they might have faced which, in turn, deepens learning as learners assimilate content at their own pace (Yip & Wong, 2019). Also, these claims are backed up by Ni et al., (2020, p.8), who conducted a study through students' brain-imaging to analyze and gauge difference in learners' attention vis-à-vis several types of learning media; they found out that "reflective learners were more suitable for learning with video media" as they have more time to process the pieces of information being viewed.

Stories Highlights

It was used as an e-repository which served to store e-text-format-lesson and corrections of mathematical problems along with some lessons' summaries to help students easily revise. Therefore, when e-students are given an assignment they can access the e-lessons needed from them to be able to complete the task either collaboratively with their e-peers or individually. The e-materials are short as the e-instructor mentioned that students have a short attention span and the more the material is less-complicated the more chances they will have in understanding it.

Profile Posts

The very essence of these social platforms is to share on posts personal multimodal information, be it text, picture, video or sound, which is what the e-instructor purposefully did. Wherefore having a glimpse of the teacher's life, in a way, brings the two actors closer which, in turns, solidifies their rapport and, in the same vein, keep students interested and up-to-date with whatever educationally-oriented content is being shared on that same platform. This finding contradicts Gromova's (2021) views on the distant modal of teaching regarding the existing format of relations between the student and the teacher. She argues that it erases the subjective and affective factor and describes it as a "weak emotional connection" (Gromova, 2021, p.25) but, in the case of this study, it actually reinforces it. Further, due to this high degree of personal contact with students, some of them point out that the

main reason they attend the online class is the instructor herself who is adept at stimulating students' engagement.

Instagram Direct

this feature of being able to send multi-dimensional-format material be it, text, sound, video or images, was leveraged into a context that provided e-students to communicate one-to-one, in a private mode, with the e-instructor in case they needed extra-help regarding a particular point. Consequently, they were able to receive customized feedback that allow them, in turn, to fully grasp what they could not before.

In this perspective, 76.3% of the e-learners confess that, after viewing the live session, they send the instructor private messages seeking for help to obtain, afterwards, a personalized feedback the form of voice messages where she tries to clarify any confusions they had with a particular point in the session. Of course, this is, to some extent, time-consuming according to the e-instructor; however, even if the feedback is not timely, it is tailored to the students' needs. This fact goes in the same line of Planar and Moya's (2016) thought as they identified three-dimension analysis for an effective personalized feedback which are respectively followed: students' perspective, the instructor's one and the media used convey feedback, i.e., text or audio recording.

Findings

All though this study, our prime focus was to puzzle up the way the e-instructor went about educationalizing Instagram's key features, in the process, the e-instructor and e-students' online experience was traced and the main aspects affecting their dynamic were observed and reported. In this section our findings are fourfold: 1. The generalized educationalization process that can be potentially applied on other platforms, 2. Students' engagement which highlights the whys that motivate them to migrate to the socially-mediated landscape, and 3. Student-teacher bond which stems predominately from mixing the social and educational aspect.

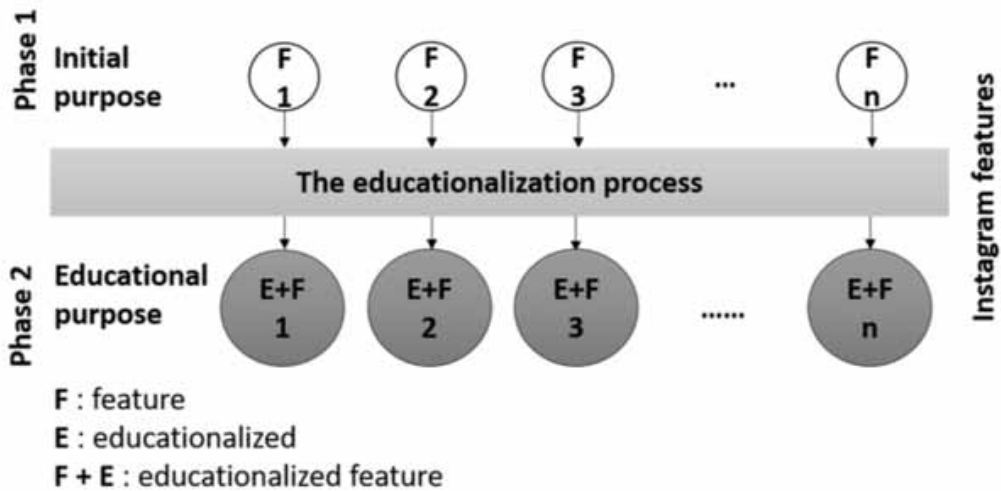
Generalized Framework

After mapping out the process of educationalizing Instagram's main features in Figure 3, we tried to elaborate a general framework that can be used as a guideline for any practitioner, researcher or educator who wants to pursue an e-teaching experience on social-media realm in general and on Instagram in particular. It consists of two phases. The first is identifying the main key social media features (F) available on the platform and then, in the second phase, try to figure out how they can be educationalized, or to put it simply, how they can be used for educational purposes in addition to their initial use. Educationalizing a feature, does not mean, in any way, changing the nature of the platform feature, but rather, adding on an educational perspective whilst preserving the social characteristic and that is what sets this instructional mode apart from educational-only platforms. Synergizing the educational and the social is the core attribute of this mobile-oriented e-instructional modality.

Leaners' Engagement

After the abrupt and hasty general lockdown of schools and other educational facilities, no official educational e-system whatsoever was put into use by the policy-makers as no one was prepared for this ambiguous situation. That is why a large portion of students were, most of the time, online, and more specifically on social media as it represents one of the few ways that students could be connected. Techers, on the other hand, were obliged to follow their students in these social platforms to give assistance to their students especially those who have to sit for the final national secondary exam. The context fostered students' readiness and acceptance to receive e-instruction from e-teachers, be them theirs or not, who were willing to take a try and help in any way possible as it is the case for the math e-instructor. In other words, all these elements pave the way for teachers and students alike to operate educationally in these M-based media.

Figure 3. Generalized Framework of the educationalization process



Teacher-student Bond

Students' are inherently curious about teachers' personal life especially those whom they have affection and inclination for. These private details are often times exhibited on social media and that is what the e-instructor used to attract students' attention and directed, intentionally, to an educational avenue. The e-instructor asserts that she did not know enough about the platform and how it functions, yet anytime she faces a challenge, students are the ones who help her get through the hoops and hurdles of the tech-driven platform. Her easy-going, funny and humble personality made of this situation an opportunity for all actors to cooperate together to achieve a successful and fruitful instructional venture. This element gave students agency and a certain responsibility of the well-execution of the learning and teaching journey. In tandem with this aspect, students' choice and voice were at the forefront of this online learning journey as the e-students chose what and when to study as a result of the educationalization process that was done collaboratively by the e-tutor and the e-tutees.

Limitations and Challenges

Throughout this study, the researchers identified two types of challenges that are either context or platform-related. The former addresses the shortcomings of operating on a mobile platform and the latter regards the limitations that the e-instructor faced because of the very nature of the social platform and its associated educationalized features.

Platform-bound

After the e-instructor finishes the live session, she always saves the recorded version in 'stories' but this last only lasts for twenty four hours and then it disappears. The e-instructor wishes it could be prolonged or even stored in 'stories highlight' so any e-student can have access to it. Later in May 2020, Instagram did not add this feature per se but rather one in which users can download the live after its end and hence, giving them the option to re-upload it as a video post.

Even though the e-instructor tried to take full advantage of this mobile-app platform in these arduous times through educationalizing some of its basic features, it remains teacher-led particularly in the live session. The reason is that e-instructor can interact with the e-students instantaneously only in live-sessions where she cannot see their faces, an element that is taken for granted in face-to-face setting but is, actually, primordial as it enables the instructor to gauge properly the extent to

which students' have grasped the concept being taught. Maybe future more elaborated features will facilitate a more well-rounded and seamless interaction.

Context-bound

Despite the benefits this social-media-enabled instructional model have yielded, it is not without its challenges. In fact, the main factors that hindered, to some extent, the learning journey within the bounds of the social media landscape are threefold. The first drawback was the slow internet bandwidth which prevented, in some cases, a satisfactory flow of the synchronous live-session. More than one time was the e-instructor faced with this issue. In this respect, Lin and Gao (2020) findings' corroborate the researchers' in that they experienced the same situation as while operating on synchronous online courses, their students missed, at times, content elements due to the slow internet speed.

The second pitfall is that while operating in an online mode, more specifically on a mobile environment, students were, occasionally, distracted by other phone applications in that they were studying and simultaneously receiving notifications and messages from other users. Hassana and Mirzab (2020) observed the same effect on their students which is a deficiency in focus while learning. Others, to whom physical human contact is important, could not be fully engaged and were, in some instances, bewildered and distracted because of the lack of physical presence of the instructor or even their peers.

The last challenging factor regards the fact that the synchronous class takes much more time than the face-to-face one which aligns with Mitra's (2020, p.14) view point as he asserts that the duration of the virtual classes needs to be about 25% more than a regular face-to-face class as the instructor need to speak in a clear and slow-paced fashion. He further adds that repetition practice can be equally efficient.

Conclusions

The aim of this study was to investigate the patterns of educationalizing the combination of the major features of Instagram by a secondary school e-math instructor. In this sense, unlike previous studies, this research focuses, in equal measures, both on how instructional process was carried out and the utilization of Instagram to fulfil educational objectives. It is critical to emphasize that maintaining the inherently social design of the platform in the teacher's successful attempt to educationalize is a prominent revelation which significantly distinguishes Instagram, and potentially other social media tools, from formally-driven and education-based platforms. Deriving from these findings, a generalized framework was articulated in a manner that encompasses the main features of Instagram along with their infused educational-social uses.

In further gauging the success of the e-instructor in her teaching trajectory and the effectiveness of her initiative, we shed light on learners' engagement and the teacher's rapport with her students as mediated by this mobile-based landscape. The e-instructor's decision to cater to the students' familiarity with the platform and its working mechanisms as well as learners' predisposed inclination for Instagram served to facilitate their engagement in the e-math course. Merging the educational aspect with the social one by the teacher aided, to a large extent, in creating and developing a bond with her learners. This is in addition to empowering them with the ability to customize their learning process.

The body of knowledge in the area of online learning in specific and social media use for educational purposes in particular is on the increase. However, Instagram as a specific example for the latter still, to date, scarcely features in scholarly discourse and educational research. Hence, the aforementioned results substantiate, on different levels, the field study of using social media in general, and Instagram in specific, to instructional ends. This article contributes to locating and corroborating past studies in the available literature while adding newer theoretical portions and empirical evidence to it. Stretching beyond prior work, the presentation of the framework of the educationalization process of Instagram can help future interested researchers and practitioners who aim to venture into this modern educational territory.

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