Sustaining Education in a VUCA World: Experiences of Higher Education (Re)Designers of School Curricula in Mauritius

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Abstract

The outbreak of Covid-19 has shaken the foundations the education system. Since the first industrial revolution, schooling has been founded on students physically attending classes. The decision to close schools and universities around the globe has significantly unsettled the routine of stakeholders in education: policy makers, educators, learners, and parents. Whilst many schools and universities have embraced the use of online teaching and learning to address the challenge, policy makers are struggling to find strategies to cater for all learners. The policy makers in Mauritius have chosen to take recourse in television programmes to broadcast lessons for different subject areas at primary and secondary levels, targeting a larger community of learners in contexts where substantial number of learners possibly do not have access to technology and internet. This chapter reports on the effects of policy responses towards the unprecedented 'de-schooling'. However, to take full advantage of the different formats and modalities of media and to avoid pitfalls that could result from its limitations, several factors including curricula, technology,

DOI: https://doi.org/10.29086/978-0-9869936-6-4/2021/AASBS08
Chapter URL pp 314 – 339: http://alternation.ukzn.ac.za/Files/books/series/08/15-udhin.pdf

educators and students' preparedness must be carefully considered and balanced. Learning through media requires different sets of dispositions from the teachers and learners who are used to learning within the four walls of the classroom. We, the authors of this paper, were called upon to design the television programmes referred to, although we hold another set of beliefs, quite different from the policy maker. Our experiences while designing the television programmes led us to oscillate between diametrically opposed positions (as characterised by the metamodern context), and feelings such as working with sincerity and irony, given two sets of technological practices and approaches, television and the digital world. This paper is based on a *bricolage* of methodologies. It includes personal experiences designers of the television programme captured in vignettes. The data also consists of interviews learners and parents, and elements of netnography that discuss online education in these troubled times. We end by discussing the possibilities for a new educational model that could suit a volatile, uncertain, complex and ambiguous (VUCA) world.

Keywords: Policy makers, teaching, learning, metamodernism, VUCA, technology

1 Introduction

Since the advent of mass schooling after the First Industrial Revolution, several disasters like war and climate change have disrupted the education of millions of children worldwide. In 2020, the outbreak of COVID-19 has taken its toll on the modern schooling system. According to the latest statistics, the COVID-19 pandemic has compelled 1.53 billion learners to be out of school and 184 country-wide school closures (Education Cannot Wait 2020). Government and private systems are mobilized to cater for the critical services such as health and sanitation. The educational needs of learners are also addressed during the pandemic because most of the governments around the globe have taken the decision to shut down educational institutions in order to prevent the spread of the COVID-19 (UNESCO 2020). These sudden interruptions to education may have long terms implications.

Figure 1 provides a global indication of the impact of COVID-19 on education worldwide.

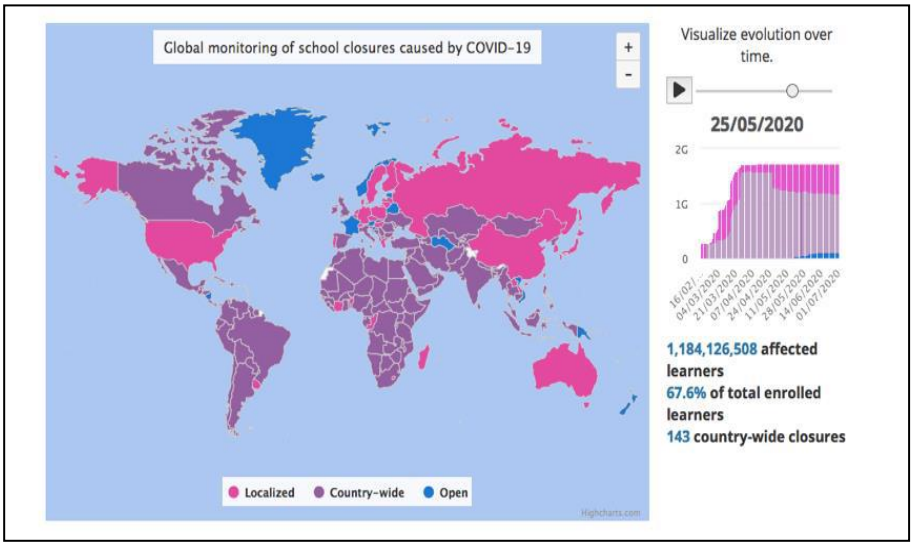

Figure 1: COVID-19 impact on education by UNESCO Institute for statistics data

In an effort to mitigate the impact of school closures, policy makers around the world sought for best possible ways to facilitate the continuity of education through remote learning. The term 'remote learning' is used when the teachers and the students connect and engage with the content from geographically remote locations (Cain, Marrara, Pitre & Armour 2007). In the context of this research, the term 'remote learning' is used to describe students learning from their locations via TV Programmes, mainly in an asynchronous manner. During the COVID-19 pandemic, most of the institutions around the world have been compelled to shift to remote learning. However, the transition to this new normal is dependent on several factors: teachers and learners' preparedness, technology tools and set-up available to teachers and in students' homes (Ray 2020). The preparedness for any remote learning strategy has to be ensured at various stages, namely, at the planning stage, designing stage, implementation stage and evaluation stage. Both the teacher and the learners have to be accustomed to remote learning and the use of technological tools.

An important distinction is useful at this stage: while e-learning allows students to have access to educational curriculum outside the classroom with

the aid of electronic technologies, remote learning happens when the teachers and learners remain connected and engaged while working from home. Many tertiary institutions around the world are focusing on delivering online courses with rich repositories but this is not the case for primary and secondary education. Since the industrial revolution, schooling at primary and secondary levels has always been done within the four walls of the classroom. Learners have been accustomed to learn in this mode for decades, if not centuries. The teacher was seen as the sole source of knowledge and the learners as recipients of knowledge. The COVID-19 pandemic has forced policy makers and tertiary education designers to rethink the way teaching and learning happened. The policy makers, teachers and learners are required to move from their comfort zone to adopt new strategies to ensure continuity of education. Consequently, during the lockdown period, policy makers in Mauritius had recourse to remote learning where TV programmes broadcast lessons from the primary school curriculum. Transitioning to this new mode of learning was a challenge for both policy makers and the Higher Education designers of school curricula in Mauritius. Unlike virtual classrooms, where things are tested prior implementation, remote learning through TV programmes had to be implemented instantaneously without any prior testing. We were not in state of preparedness. We had a rough welcome to a volatile context; indeed, the situation changed suddenly and unexpectedly.

This chapter thus explains and describes our experiences as Higher Education personnel working in the field of teacher education and curriculum development. We were in fact the designers and managers of the video-making process. These videos were developed and customized in line with the primary school curricula in a systematic manner. The designers were put in front of a '*fait accompli'* and had to execute the decision of policy makers in order to address the issue of massive 'de-schooling'.

2 Learning

2.1 Learning through TV Programmes

Learning through TV programmes has always been a feature of documentaries or programmes for children (Rey-López, Fernández-Vilas & Díaz-Redondo 2006). In 1973, Robert Heyman coined the term ***edutainment*** to describe this form of entertainment, which is also educational at the same time (Rey-López, Fernández-Vilas & Díaz-Redondo 2006). The programmes with this content

on TV are often referred to as t-learning; for example, games and interactive stories for children are broadcasted on TV for remote learning. Figure 2 illustrates the processes involved for the t-learning experiences.

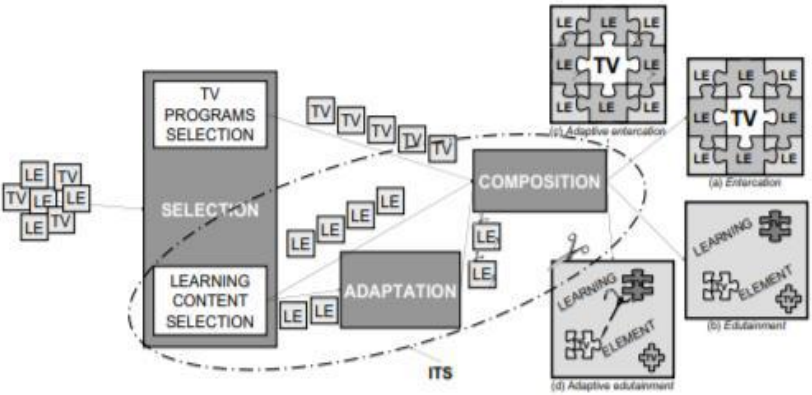

Figure 2: Creation of t-learning experiences

Rey-López, Fernández-Vilas and Díaz-Redondo (2006) argue that learners construct knowledge and experiences while watching educational TV programmes through three main stages: selection, adaptation and composition. The students select the information according to their learning interests, adapt the learning according to their needs and beliefs, and finally, compose their own mental representations of their learning. It was found that adding some relevant audiovisual elements to the learning contents help to make the learners' experiences more entertaining. However, it should also be noted that young students, especially at primary level, normally have a passive attitude while watching TV programmes. Indeed, they watch TV with different mindsets and purposes. In the context of Mauritius, the objectives of broadcasting the educational TV programmes were not for entertainment but rather for continuous learning during the lockdown period. Since schools were closed and students were confined at home, the educational TV programmes were designed to promote self-learning in an environment different from the classroom. The students had to frame their mindsets to attain specific objectives aligned to the curriculum framework.

However, education in 21st century has increasingly gone digital. It focuses on the development of 21st century and ICT skills. Policy makers are emphasizing creative skills that contribute to lifelong learning. The motto is to shape learners to function in this competitive world. It can be argued that we are evolving in an era where there is an increase in demand for critical thinking and creativity, while the daily tasks are taken care of by computers. We can call this era the 'new renaissance era', as there is a need for renaissance workers with problem-solving skills, judgment, creativity, collaboration and empathy, in contrast to just applying facts to algorithmic problems (Ventures 2019). As an example, in Mauritius, massive investment was made in classroom technologies such as tablets and interactive projectors.

2.2 Learning in a Metamodern Era

Learning through TV programmes involves different sets of methods and predispositions from normal schooling. It reflects a state of affairs where the modern and the postmodern coexist within a single sphere of interactions. Two social institutions, the home and the school, have coalesced into one single space. They are normally kept separate and although both are socialization agents, they have different sets of functions. Home and school have merged and have been glued together during the lockdown by TV. This mix of old (home and school) and new 'TV', may be captured through the lens of metamodernism (Udhin 2019).

Metamodernism is characterized by oscillations of society from one set of discourses to another. These sets of discourses are sometimes diametrically opposed. For example, it is not uncommon to find oscillations from irony to sincerity (Syundyukov 2017) or conservatism and futurism. Vermeulen and Van den Akker (2010) and Williams (2015) define metamodernism as a new cultural branch and a 'structure of feeling'. In other terms, metamodernism is presented as post-postmodernism. The nature of learning experiences from the metamodernist perspectives is mediated by digital technologies and their social interaction features. For instance, learning in the 21st century is ubiquitous. As a modern institution, school must share the brain space of learners with platforms such as YouTube. We as Higher Education designers of curriculum embrace the dual nature of the 21st century learner. The learner is both active on social media and at times a passive consumer of artefacts on the same platforms. This phenomenon has been explained as digimodernism (Luebeck

2015). In the same vein, as designers of curriculum, we have been socialized into theories and approaches to learning. This corpus of knowledge influences our professional practice to some extent. For instance, some tend to believe that technology does not influence the way learners learn.

This multiplicity of frames of reference and oscillations make our practice highly volatile and complex. There is a fleeting impression that, since opposing views and feelings are admitted, anything and everything goes, and everyone could have an equally valid opinion on anything. The VUCA concept explains situations characterized by the above.

VUCA is an acronym for 'volatile, uncertain, complex and ambiguous'. The term is often used to characterize the 21st century. The term was first used by the US Army to explain the work during the Cold War period (Kinsinger & Walch 2012). As we unpack the four aspects of VUCA, we can relate the concepts to the current world. Volatility denotes dynamic, rapid and powerful changes in the environment that results in unexpected and unprecedented challenges. For instance, COVID-19 was unexpected. Currently, we do not even know when the pandemic will end. It is also not possible for us to predict how COVID-19 will evolve. This definitely relates to uncertainty. COVID-19 is assuredly a complex phenomenon. It is multi-dimensional and can be fully understood only through a multipronged approach. There is no precedent for COVID-19 and it is a phenomenon that brings opportunities along with threats to human societies. Many other 21st century phenomena are equally VUCA: other examples could be climate change or geo-political issues. Therefore, it is ambiguous.

Dimensions of VUCA also resonate with the metamodernist explanation of the world. Indeed, ambiguity could mean that societies, organizations and individuals experience swings between contrasting feelings such as hope and despair or threats and opportunities. From the metamodern perspective, it needs to be highlighted that the situation is quite uncertain since the way societies will react to events cannot be anticipated. The speed of changes and oscillations in the metamodern world could also mean that human societies and discourses are highly volatile. It took only a declaration from Donald Trump for the US to walk out of the Paris Agreement on climate change mitigation. Many North African countries were swept by a social movement called the Arab Spring (Salam 2015). The movement evaporated as suddenly as it had appeared. These examples clearly elaborate the VUCA nature of our world.

3 A *Bricolage* of Methodologies

This chapter exploits the *Bricolage* method. It is important for the reader to understand what is implied by this method of inquiry and how useful it is in the context of research during the COVID-19 pandemic. The conceptualisation of b*ricolage* research is generally accredited to Denzin and Lincoln (2000).

Firstly, b*ricolage* involves critical, multi-perspective (sometimes competing), multi-theoretical, multi-methodological approaches to inquiry. It is increasingly popular in the social sciences (Rogers 2012), but it remains an underutilized and misunderstood methodology for qualitative inquiry (O'Regan 2015). One of the main misconceptions is that *bricolage* is a mere patchwork of methodologies.

Secondly, *bricolage* is messy, complex and not straightforward, as compared to traditional methodologies. It revolves much around how researchers artfully combine multiple disciplines, methodologies and varying theoretical lenses. The multiplicity of methodologies, instruments and disciplines often yield a vibrant dialogue of diverse types of texts. This offers a fertile terrain for self-critique which is not possible in one-sided texts. For instance, data from designers of videos, viewers and teachers produce different texts. Designers contribute personal accounts of processes and tools while engaging viewers. This would generate netnographic data. The interaction of such varied scripts or weaving of stories as Weinstein & Weinstein (1991), put it, offers wide-ranging possibilities to explore social phenomena.

Moreover, *bricolage* is quite useful when dealing with contexts and events that are irregular and ambiguous (O'Regan 2015). We can relate 'volatile' to the previous sentence and it would aptly reflect the context of this study. A multi-methodological and multi-perspective approach could help to explore how the phenomena under the research lens are lived, practised, enacted, sustained and so on (Law 2014). For instance, in the case of this study, as researchers and participants, we can contribute to how we implemented the process of video making during the confinement period, with no physical contact with collaborators and denied of the capabilities of a workspace. Other participants told us how they experienced the videos as different audiences, with students going through the novel experience of learning from home and parents having to add another dimension to their parenting roles.

To write this chapter, we have tried to work with two avatars of b*ricolage*, namely, the methodological *bricoleur* and the interpretive *bricoleur*

(Kincheloe 2001). The methodological *bricoleur* is a researcher who puts together multiple research instruments to achieve meaning making. The experiences of Wickens (2011) in this regard are evocative. Indeed, the combination of methods yielded a rich, deep and fluid data. Furthermore, the availability of a multi-methodological framework allowed Wickens (2011) to make use of the contextual exigencies to guide data production. In the case of this study, the context of total lock-down and the mushrooming of social media instances to support education, led us as researchers to produce data from social media. We had created a Facebook page to support students and parents during the pandemic. The interpretive *bricoleur* incarnation has more to do with the interpretation of the findings. The findings enabled us to explore the myriad of epistemological and political dimension of the emergency educational set-up. Indeed, an event can be reported from different perspectives if not from a single perspective. Furthermore, such an approach also ensures that the researchers give due consideration to the complexity of meaning making (Denzin & Lincoln 1999).

3.1 Autoethnographic Vignettes

The Mauritius Institute of Education (MIE) was called upon to set-up, manage and design educational videos for primary and secondary education. We have been deeply involved in the implementation of the main strategy of the policy makers to sustain education during the confinement period. We used an autoethnographic method, namely vignettes, to tell our lived experienced of working-from-home during the pandemic. Autoethnography is a qualitative research methodology that connects ethnography, biography and self-analysis (Ngunjiri, Hernandez & Chung 2010). The three interconnected aspects of this methodology are the *auto* (the biographical), the *ethno* (the cultural) and the *graphy* (the methodological) (Ellis, Adams & Bochner 1996; Chang 2007). Autoethnography can be conceptualized as the telling of an experience accompanied by critical reflection.

Vignettes have been used as an autoethnographic method to bring forward personal stories and emotional aspects to describe a lived experience (Pitard 2016). As vignettes deal with lived experiences, they inscribe themselves in an autoethnographic phenomenological framework. The experiences of the individual are the focal point of any cultural interaction. Through the vignettes, we explored the impact of the work-from-home mode

and the demand of the policy maker to sustain education through educational videos to be broadcasted on TV. The vignettes relate our personal experiences to the wider social context of the pandemic. We disclosed our innermost feelings during this very stressful period. The vignettes also include how we negotiated through several layers of staff and personnel of other organizations.

The vignettes can be textual or pictorial (Hill 1997). They have been written as brief accounts of our lived experiences. Vignettes are designed to facilitate the study of attitudes, perceptions and beliefs over a wide range of social issues (Barter & Renold 2000). The vignettes in this paper also have the same aim. Vignettes are useful for providing authentic insights into the researchers' lives. In this way, the readers of an autoethnographic paper can have, to some extent, an experience of the researchers' field (Jarzabkowski, Bednarek & Lê 2014). It was an experience we felt was worth telling through vignettes: never in living memory had the world witnessed such an event impacting on all spheres of life and human activity.

3.2 Netnography

The Mauritius Institute of Education (MIE) created a Facebook page in March 2020 to support parents, teachers and students during the confinement period. This page was meant for posting worksheets, links to educational sites and repositories, demos, articles and learning strategies amongst others. The page has, to date, over twenty thousand members, mostly from Mauritius. The page quickly gelled into a vibrant community of sharers, likers and commenters. The Facebook page was also a space for different stakeholders to comment on the educational Television (TV) programme that we designed.

We had recourse to netnography as a methodology to produce data from the Facebook page. Netnography is used in social media research. Netnography was conceptualised by Kozinets (2019). Netnography is used to explore virtual communities and in particular the cultural experiences that can be studied from traces, practices, networks and systems of social media platforms. For instance, on the Facebook page, we were particularly interested in the 'likes', 'comments' and 'shares' made by the community members. These features gave us insight into how well our work was being received by the general public, including parents, and other stakeholders.

Netnography is evidently constructed from ethnography. This methodology shares a lot in common with ethnography. For instance, both method-

ologies are concerned with human experience and cultural understanding. Just like ethnography, netnography also focuses on human context and social systems of share meaning. To achieve its purpose, netnographers have to undergo a three-step process: immersion, interaction and investigation. As the creators and the moderators of the page, we were fully immersed in the immediate experiences and activities of the page members. Our immersion was *de facto*. As moderators, we often had to interact with users, dealing with sensitive issues. Our interaction was also in terms of posting regular page-level announcements that were visible by all members. Netnography has enabled us to become more aware of other views of the world (different ontologies). This experience connected to our personal experiences on the design of educational videos, resulted into a powerful brew for us, with the possibly long-lasting effects.

3.3 Interviews with Parents and Learners via Zoom

The recent developments in communication technologies have impacted greatly on social research methods (Kenny 2005). One such advance, Zoom, has been quite useful to us while carrying out this research. Zoom is a cloud-based, videoconferencing system with many other features such as file sharing, screen sharing, webinars, group meetings and so on (Zoom Video Communications Inc. 2016). It allows for real-time communication over distance and can be deployed on a multiplicity of devices (laptops, mobile phones, and tablets). Zoom video conferencing has been used for qualitative data collection (Archibald, Ambagtsheer, Casey & Lawless 2019). The pros and cons of using Zoom as a tool for data production has not been fully investigated (Weller 2015). For instance, there is little conclusive evidence that using Zoom improves participants' experience.

However, the confinement period during the COVID-19 pandemic left us with very little to choose from in terms of tools for research, especially to carry out interviews. Improved connectivity in the Mauritian context, better hardware capabilities and convenience of using Zoom underpinned our decision to remotely interview students. It was out of the question to move to the respondents' places (parent and students', in this case) due to the strict sanitary measures that prevailed. So, we had recourse to parents whom we knew had kids studying at primary school level and would possibly watch the

educational TV programmes. As a matter of fact, we interviewed both parents and kids on Zoom, with the parents speaking to us after the kids had left.

Beyond the technological convenience that Zoom provided us, we were able to build excellent rapport with the interviewees. There are many reasons to this. During the confinement, almost everyone had started using some form of videoconferencing application to stay in touch with relatives or to work from home. Therefore, the participants were quite at ease during the interview. Also, both researchers and participants were able to see and hear each other, almost like in a face-to-face conversation. Viewing each other facilitated the conversation; non-verbal cues were available for both researcher and participants. These resonate with research done by Deakin & Wakefield (2014) on the use of Skype for social research. They also confirmed that it was not difficult to established rapport via the videoconferencing tool.

4 The (Re)Design Process

4.1 Autoethnographic Vignette 1

O pandemic, you had struck the world forcing us off our routine. We had to turn off everything. No work. No school.

But that, you did not know; we have immense resources. We could go underground, but we would be still alive and kicking.

No work, no problem; we would work from home. No school, no problem; we would learn from home.

There would not be any disengagement from schooling. If learners could not come to school, school would reach out to them via their TV screens. If teachers and students could not have in-person interactions, they would be connected via the TV screens. COVID-19, we would retreat, but we would not surrender!

O COVID-19, after we would have defeated you by shutting ourselves down temporarily, we would rise up without any lost. Our children would have lost nothing to you because we had the Educational TV channel.

Yes, we had immense resources: skilled teachers, who would make videos for students over all grades and subjects. We had planned everything. The whole process was set-up very fast. We knew it had to be TV; we would reach everyone. We knew how to design for TV; everyone loves watching TV. We knew what the students needed. They needed to keep in touch with their schools, with their routines and their copybooks. Above all, we had the capabilities to provide for everyone, every grade, every subject.
COVID-19, we are only human.

4.2 Autoethnographic Vignette 2

We are tired. We cannot go on like this. It's been many weeks now. We cannot make so many videos on a daily basis…You don't understand. We cannot produce videos in a factory-like settings. It is impossible…We are asking too much to all the parties involved, especially the teachers and those who are ensuring the design aspects are appropriate for the viewers.
I hope you know…that the visuals should be properly designed…so that the viewers have an optimal learning experience. Right?
Oh, [this means] aspects like contrast, size of fonts and choice of pictures, for example. You get it?
It's part of the message design. We cannot dissociate this from the whole design process…Yeah, the content is what is important. I agree. But what if good content is poorly conveyed?
Oh, and we need to have some content vetting as well. Yeah, we badly need that. You've seen the feedback in the press, I hope.
No, I'm not slowing down the process. I'm all for it but…

You got to listen to me…I mean…It's not fair to us and the viewers. We need to craft a good message for them out there.
Hello? You still on the call? You got to tell them. We can do better.
Can we just pause for a few days? I can get things right with the team if we pause.
What?
Oh.
They wouldn't agree to a pause? You are sure?
I just don't get it. We want to make things well. We can do it, but this way? We need some breathing space.
Come on! We don't even know how these poor kids are taking it. Give us a chance to design from their perspective.
Hello? You there? Hello?
<your connection is slow>

4.3 Our Lived Experiences

It was a very weird feeling to work-from-home during the pandemic. The team of curriculum designers, who usually work for designing or re-designing print-based curricular materials for digital platforms, held a set of beliefs regarding learners' learning. These beliefs were confronted to the new context: total confinement of the population, closure of schools and workplaces. We tended to believe that we knew the 21st century learner and we relied a lot on constructs such as digimodernism (Luebeck 2015). Our first reactions, when asked by the policy makers to contribute to sustain education, was to go for solutions that would be in line with our beliefs: the learner was more suited to digital solutions. The 21st century learners would thrive in a situation where they could have a choice of what to learn, when to learn and possibly how to learn.

However, our beliefs were not shared by the policy makers. They opted for a much 'older' solution: the television. With hindsight, they could have been right. The internet penetration in Mauritius is roughly 70%, while above 96% of households own a television. In terms of accessibility, this was the right thing to do. However, it was difficult for us, as a team, not to oscillate between our views of the 21st century learners and the plain assessment of the policy

makers that a means to reach the maximum number of learners should be chosen.

The choice of software to make the videos was PowerPoint. This is where the oscillations mentioned above became severely stressful for us as we were part of the design process. It was assumed, as mentioned in the vignettes, that as designers, we had the expertise to design for TV. The fact that a tablet screen is much smaller than a TV screen and requires an altogether different set of design principles, was brushed aside. It was painful to us that we were not being listened to. Another bone of contention between us and the policy makers was the fact that the school routine was being copied and pasted onto the home environment. There was no real consideration of whether this was a viable possibility. We just had to do it. We had to deliver.

The other key actors in the process of video making, the teachers, were also chosen on a voluntary basis, and were assigned a daunting task: make the videos from home and send to our team. The process was long and complex. It is described in the infographic (Figure 3) below:

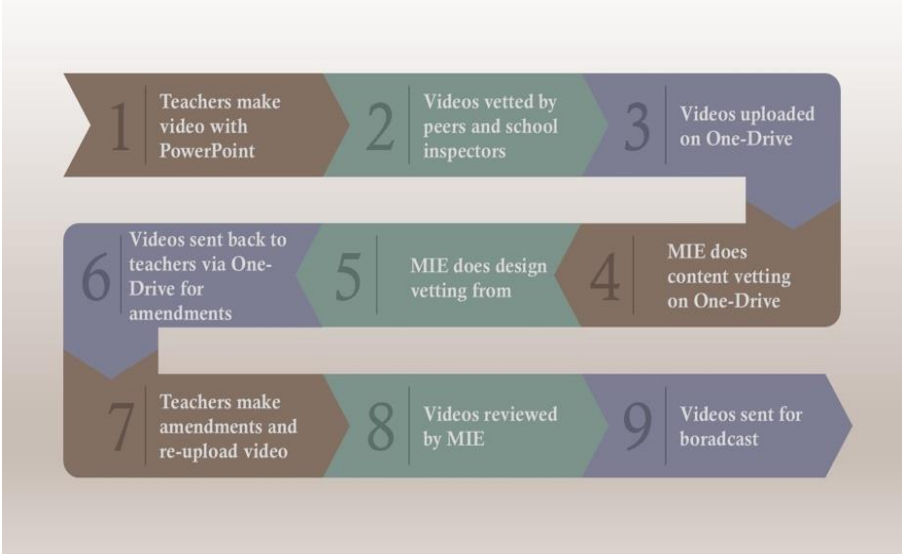

Figure 3: The video making process

The video making process had nine different steps (Figure 3). It should be noted that the participants were not in physical contact. Everything was

being done on a cloud-based platform, which is ironic. This resonates with Syundyukov (2017), as it was deemed that the Internet was not the appropriate solution for our learners. The process flow chart resembles a snake: we could say that it was really like snakes and ladders, with the snakes appearing randomly at any level and causing us unanticipated difficulties. We managed to produce thousands of videos, but at what cost? The process was rife with tension among partners. We tried to apply our professional standards as designers (or re-designers) of curriculum. However, this was perceived by teachers and policy makers as a time-wasting device. We did make thousands of videos, but what did we actually produce? Yes, learners were not given the opportunity to forget school during confinement, but did they learn? We could not measure if there was real engagement or disengagement.

The second vignette is more poignant, in the sense that it is a phone conversation one of the authors had with a high-level official. It is written as a monologue as the author felt that it was a cry in wilderness. We did not feel that we were heard. Managing the work of the educators, mediating the vetting process with subject matter experts and trying to respond to the demands of the policy makers to develop a given number of videos per day, took its toll on the team of designers of curriculum. We tried to crawl back to our comfort zone where we could engage with a learner profile and solutions that would tie up to it by asking for a pause, but to no avail. In this sense, the vignettes give an account of our lived experience resonating with the uses of autoethnographic vignettes identified by Pitard (2016).

The netnographic data shows that an expectation was created within the population. They shared the belief of the policy makers that the TV programmes would not cause learners to disengage from school. Figure 4 is a post by a member of our Facebook page asking for the TV programme schedule. Figures 4 and 5 below illustrate a parent asking for the timetable so that he/ she could plan with the children prior to the programme on TV.

Alhough the programmes were very much in demand, this did not mean that they were to the satisfaction of the consumers. For instance, parents were requesting programmes in the mother-tongue of the learner, as illustrated in Figure 6. They also had issues with the number of programmes, and the repetition of videos was not welcomed by parents, as illustrated in Figure 7. They wanted programmes over a variety of subjects and grades. This was not really possible to produce, given the complex production chain that we had and the tensions among the stakeholders.

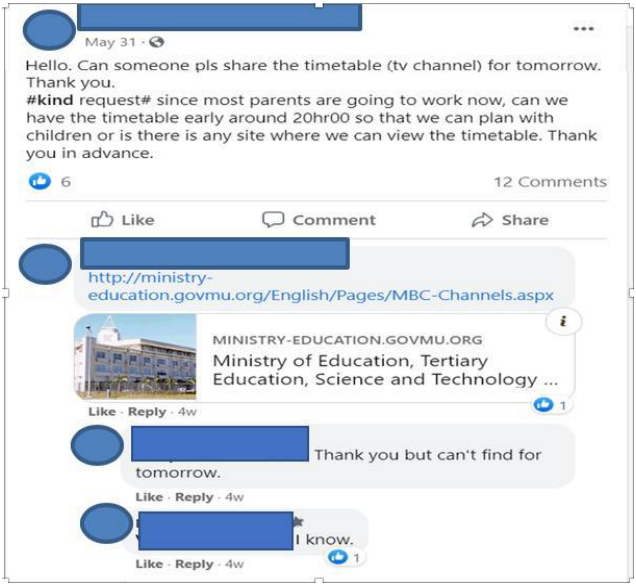

Figure 4: Request for TV programme 1

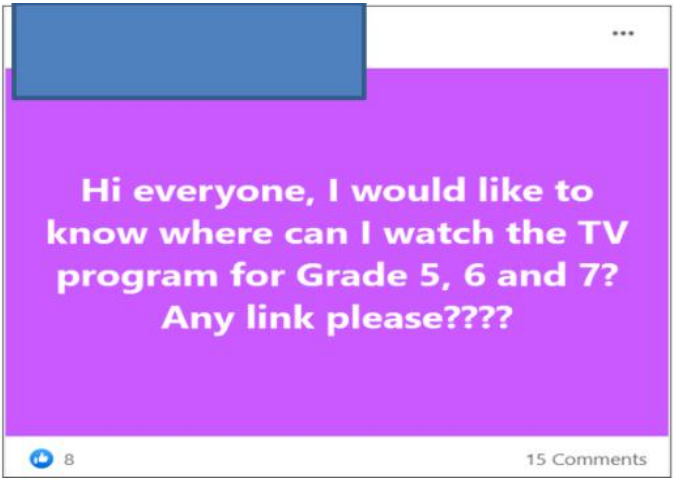

Figure 5: Request for TV programme 2

Furthermore, teachers who were producing videos were not in great in number. Many of them discontinued their collaboration with us. They were being discouraged by two factors. Firstly, our design requirements such as using the proper fonts, colours, pace of lessons, quality of audio, tone of voice and above all no use of copyrighted assets such as pictures and YouTube content, was off-putting, and a challenge. Secondly, there was a chasm between subject matter experts from the MIE and teachers, regarding what was the correct version of content. Teachers were also discouraged by the fact the public focussed on mistakes made while producing the videos rather that the efforts made by teachers (Figure 8). However, there were also many 'likes' (to use Facebook jargon) regarding the programme. Some of the page members showed their appreciation, as illustrated in Figure 9.

Figure 6: Request for programmes in mother-tongue

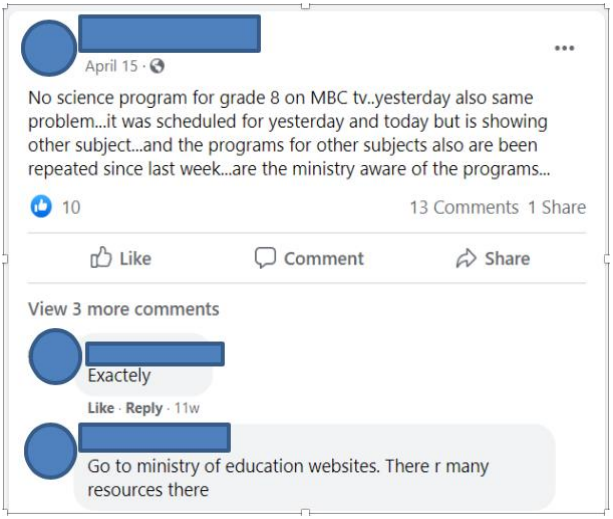

Figure 7: Request for programmes on Science

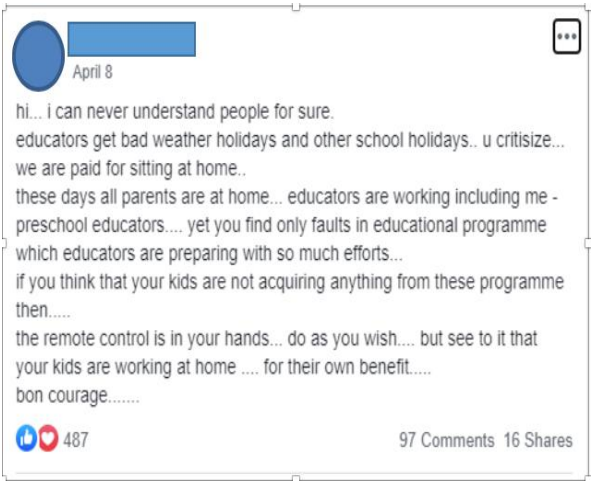

Figure 8: Teacher complaining about lack of understanding from the public

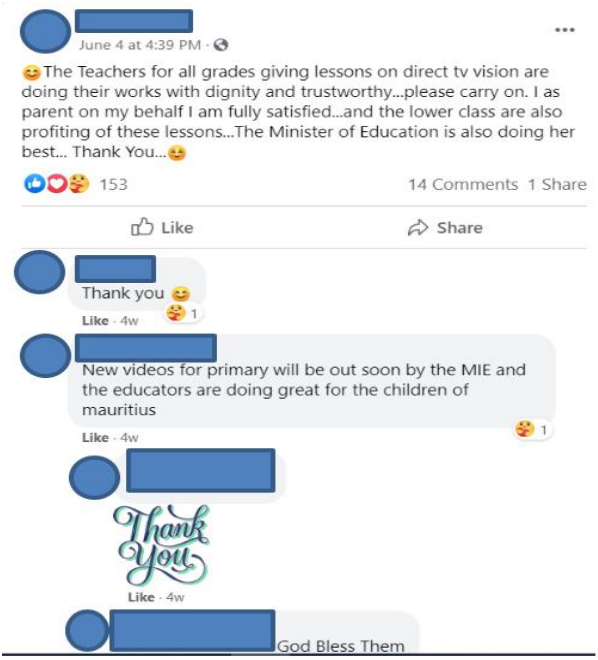

Figure 9: Appreciation expressed by parent for TV programmes

Based on an interview with parents and learners on Zoom, it was revealed that a key aspect in the design of a television programme is the pace of the videos within the programme. Programme pace is defined as the amount of information presented per unit time while cognitive pace referred to the amount of information processed per unit of time (Wright *et al.* 1984). Comprehension and learning depend on whether the cognitive pace of the student can keep up with the programme pace. The pace of a programme presentation on television is usually not sensitive to the cognitive pace of the viewer; it progresses whether comprehension has been achieved or not. Viewers who are familiar with the information presented are able to keep up with the programme pace, even if it is fast. Moreover, if some information is missed, knowledge about a similar domain may be helpful to fill in missing information from long-term memory. By contrast, if the learner has little background knowledge, his or her cognitive pace will be slower, perhaps dropping below the pace at which information is presented. Since there is also

less information in long-term memory that would be useful to fill in missing information, this situation could rapidly lead to comprehension failure.

According to parents and learners interviewed on Zoom, there needs to be a fair balance in terms of the pace of the programme as the learner remains passive with no interactions with the content. A pace needs to be selected that is slow enough so that the students can understand the concepts, and at the same time, fast enough so that it will hold the audience's attention. In order to accommodate a large number of viewers, it may be most useful to select an intermediate pace, and make special provisions for slower learners to review the materials (e.g., downloading options and reviewing the programme at home; engage slower learners in special review activities in more structured classroom settings). In addition, programmes should include straightforward segments following complex ones, to allow students to assimilate and make sense of the information presented before extra information is added. Explanatory examples can give viewers time to make inferences and elaborate on the information presented to deepen learning.

The findings also reveal that the selection and organization of the content present challenging design issues for educational television programming. Materials that relate to viewers' personal experience and deal with the human and social aspects of real life, are remembered best. Programmes that embed contexts that are familiar to the students may therefore be most effective to hold their attention. Parents advanced that the organization of information can have a significant impact on how well it is understood and memorised. They also pointed out that useful strategies to help students recognize the main point of a broadcast lesson include its repeated exemplification and highlighting in the commentary.

Lesson designers play a pivotal role in facilitating the use of educational television programmes and learning, and use tools such as: enhancing student learning by articulating learning goals; fostering learners' self-confidence and pride by having a friendly attitude; creating connections between the broadcasted programme and students' lives; establishing, sustaining, and reinforcing pupils' interest in the programme, and modelling the use of the programme. The interviews also reveal that high-continuity programmes (programmes for which the lessons follow the syllabus or textbook in an ordered way) lead to better recall and understanding compared to low-continuity programmes, in which lessons are independent and unconnected.

However, the transience of information broadcast on television presents a set of issues. Learners sometimes have difficulties integrating separate content sequences into an organized whole. Although these students may understand the content sequence by sequence, they have difficulties integrating them to derive main points. Moreover, it was noted that lessons on television where the presenter becomes an actor are more effective than a segment with the same content in which the same presenter is only a narrator. Nevertheless, characteristics of presenters that can enhance students' learning outcomes and attitudes are an upbeat, self-assured and enthusiastic portrayal; being intrinsically interested in the subject matter and being eager to share knowledge with others.

5 Conclusion

We managed to get through the confinement period and Mauritius is currently no longer under sanitary confinement. However, we can say that we have emerged from this unprecedented situation bruised. Our beliefs and practices have been severely tested. We have both succeeded (in making a number of videos) and failed (in not considering alternative solutions). Therefore, we oscillate between two diametrically opposed sentiments, success and failure. This is true for metamodernist contexts. We are living in what is now called the 'new normal' (Cahapay 2020), and we are acutely aware that we are living in VUCA times. We believe that our experience in trying to maintain schooling and to prevent learner disengagement has been a steep learning curve for us as designers of curriculum. We were so certain that the world only moves forward (with digitization and more use of digital artefacts in education), that we would never have considered going back to old methodologies and technologies. This was quite hurtful and challenging as we were confronted with a political imperative to maintain the system and we were seen as those who were not cooperating. Perhaps we should now be considering how curricula and teacher education should be re-engineered to suit VUCA times. However, this is easier said than done. It needs empowerment and concerted actions at several levels. It is important to note that teachers did not have the necessary training nor the proper logistics to make good videos.

To end, our prime concern remains the learner. In brief, many aspects of the design of educational television programmes for broadcast influenced learners' understanding of the information presented, including the pace and

continuity of a programme, the attitude of the presenter, and the content. Whether or not learners will be suited to the variety and pace of the information presented, is dependent on such factors as their age, their expectations of the television medium, and their knowledge background.

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