RECONFIGURING AND PROGRAMMING VISUAL ARTS EDUCATION IN PRIMARY AND SECONDARY SCHOOLS AMIDST COVID-19 PROTOCOLS

Attwell Mamvuto*
University of Zimbabwe, Department of Art Design and Technology Education
amamvuto@education.uz.ac.zw

Magdeline Mannathoko
University of Botswana, Department of Primary Education
mannathoko@ub.ac.bw

Abstract
Since the start of 2020, teaching and learning of the visual arts, which is primarily a hands-on discipline, has been disrupted by the insurgence of COVID-19. Frequent national lockdowns and adherence to World Health Organization (WHO) protocols seriously impacted on teaching and learning. This comparative study investigated how visual arts teachers have, in the disruptive process and environment, transitioned to the new normal in an effort to maintain quality teaching and learning of the visual arts. Online interviews with in-service undergraduate and postgraduate student teachers from one University in Botswana and another in Zimbabwe were used to establish their pedagogical strategies, students' learning as well as programmatic transformations to the curriculum. Results revealed that teachers were caught unprepared by the onset of the pandemic which compromised the quality of teaching and learning. Online pedagogy became the predominant model. However, access to e-learning infrastructure created a social rift between rural and urban schools. Collaborations and partnerships among stakeholders emerged as a critical strategy that could be used to combat similar pandemics in the future.

Keywords: COVID-19, online pedagogy, pandemic, virtual teaching, visual arts

1.0 Introduction

The ushering in of the COVID-19 pandemic late 2019 presented both opportunities and threats to the art classroom. It forced art educators to reconsider their teaching approaches (Calderón-Garrido & Gustems-Carnicer, 2021) while at the same time other challenges emerged in the process. The global pandemic resulted in 69% of the world's student population without direct or remote education (UNESCO, 2020a, cited in Coolican, Borras & Strong, 2020). This resulted in deterioration of the quality of learning and student productivity. The United Nations (UN) has since recommended the need to migrate from the traditional to new teaching and student learning approaches. Teachers are therefore challenged to provide quality teaching of visual arts in virtual classrooms using unconventional means (Sabol, 2021).

Calderón-Garrido and Gustems-Carnicer (2021) observe that teachers in Spain like in many other countries were ill-equipped and ill-prepared to embrace alternative instructional technologies in the wake of COVID-19. The pandemic also created social divide among the different categories of schools and among the learners themselves. Access to internet, electronic devices, availability of infrastructure and cultural transformations were among the many differential factors that have resulted in the social stratification (Mishra & Koehler, 2006). This has also created differential teachers' content knowledge, pedagogy, and technology. In addition to the limited art resources students had constrained access to digital technologies for online learning. Sabol (2021) observes that teachers have also encountered internal conflicts such as stress and anxiety and have subsequently re-examined their commitment to work. Equally affected were administrators who had to revisit teachers' working hours because the open-ended access to teachers as a result of the introduction of online pedagogy resulted in the emotional abuse of these teachers. Students similarly exhibited different levels of social, emotional, and behavioural variability (Knopf, 2020). One other area of serious concern was that of assessment for student feedback to which there were unexpected challenges.

Globally, teachers responded to the pandemic using various pedagogical strategies. Studies revealed that teachers transferred and transformed the curriculum to the digital format. Many subsequently embraced online and emergency remote teaching. According to Calderón-Garrido and Gustems-Carnicer (2021) online instruction entails teaching with planned technologies while the emergency remote teaching entails that teachers have to reorient themselves without receiving preparation or capacitation in the use of technologies. Argentina embraced new strategies to teaching and learning that can be grouped into three categories: protection, pedagogical support, and recognition (Coolican, Borras & Strong, 2020). The protection strategy includes enactment of regulatory frameworks to support online learning. The pedagogical support includes online training to support delivery skills while recognition includes award of allowances for teaching under difficult circumstances. Zimbabwe similarly adopted such strategies across the different categories of employees.

Sabol (2021) observes that teachers embraced video conferencing, social media, and other digital technologies to deliver instruction. Organizational strategies used in the United States of America (USA) included new and revised class schedules, de-densification of student groups in art classrooms to increase social distancing and reduce face-to-face contact, and integration of online learning. They embraced technologies such as Zoom, WebEx, Microsoft Teams, Skype, and other video conferencing programmes to reach out to the home-bound students. They created Facebook pages, Group Me teams, YouTube videos, virtual webinars and social media to support instruction. There was collaboration where facilitators consulted each other on how to migrate from face-to-face to online. They also staggered teaching schedules which in Botswana and Zimbabwe is called double shift arrangement. Sabol (2021) notes that in the USA, the National Arts Education Association (NAEA) produced two seminal documents to assist teachers manage art teaching and

learning. Issues contained in the documents include preparation, planning and pedagogy, supplies, materials, organization, communicating, and advocating. The NAEA produced a remote learning toolkit for use by teachers. In the discipline of art therapy, therapists transitioned in their work through strategies such as acclimatizing to teletherapy and adapting digital art therapy practices (Potash, Kalmanowitz, Fung, Anand & Miller, 2020). Art in such psychosocial contexts allowed for self-expression. In Liberia, art was used in awareness campaigns producing posters for display at various venues. The digital landscape turned into virtual art studios for continued immersion in art making. Like with the USA, instruction at the University of Botswana and University of Zimbabwe as well as meetings were conducted through Microsoft Teams, and Zoom and eLMS platform respectively, after training by information technology departments. This posed a challenge to art and design education students in terms of practical studio activities including assessment by lecturers and as a result some of the practical assignments were replaced with theory. In the context of this background, this article sought to find out how primary and secondary school teachers and learners from the selected study sites responded to the pandemic and embraced online technologies in the delivery and learning of art. It also sought to investigate challenges, if any, that were encountered in the educational process since art is a studio-oriented discipline.

2.0 Theoretical framework

The study adopted and adapted Parlett and Hamilton's (1972) model of illuminative evaluation which takes account of the wider contexts in which educational programmes function. Illuminative evaluation is characterised by open learning. The model is recommended by various researchers from different areas of specialisation. Its significance according to researchers such as Kumar (2022) is to uncover crucial underlying educational factors in a particular educational situation. It aims to explore the process of educational intervention. Thus, the methods are more qualitative and subjective in nature (Gray, 2014). It would therefore have been naive to neglect the fact that an instructional system when adopted undergoes adjustments that are highly important when evaluating student teachers' responses. The responses from the participants were seen as shared ideas, methods and approaches held by individual institutions and class teachers. We acknowledged the fact that teachers had different attributes and qualities which included different styles of teaching, experiences, personal or private goals and professional orientation (Mannathoko, 2009). Participants' perspectives and preoccupations in visual arts lessons were analysed, consequently appreciating the diversity and complexity of teaching and learning contexts. This diagnostic approach was a vital pre-requisite for understanding visual arts pedagogies under Botswana and Zimbabwe programmes. Innovative programmes cannot be sensibly detached from the learning milieux of which they are part. In analysing and discussing we took cognizant of the fact that each teacher was an entity in a distinct and peculiar environment with unique individual needs and interests. Each learning community or classroom has its own dynamics, and teachers need to choose practices that they believe are most beneficial to their learners (Mannathoko & Major, 2013).

We expected participants to teach different content, use different pedagogical styles and media depending on the school environment and location in an effort to achieve the required attainment targets, aims and objectives of the curriculum as well as address the challenges brought by the COVID-19 pandemic. Thus, independent case studies were endeavoured to offer an account of what transpired in each class. This study thus aimed to discover the student teachers' experiences, beliefs, and practices and in the process discern the most significant practices during the pandemic considering participants' past and present experience in visual arts education. Educational policies and the school national curricular from Botswana and Zimbabwe were considered in the discussion, as it is procedural for teachers to adhere to government policies and national curricular when developing and implementing an operational document within its system.

3.0 Methodology

This comparative study of selected school sites sought to find out how visual arts teachers and students were affected by the pandemic and subsequently adapted to the new teaching and learning environment. The study adopted a qualitative approach within a case study methodology considering its strengths of allowing collection of in-depth data (Creswell, 2018). As a result, the approach allowed us to modify the questions when we deemed it significant; we had the flexibility to ask probing questions for clarification. There was opportunity to gain considerable detailed information about informants' experiences and perceptions on the implementation of the primary and secondary school art programme during the COVID-19 pandemic. The study also employed purposive sampling in the selection of the study sites and participants. It also employed qualitative approaches to data collection. Participants were selected by virtue of their position as visual arts instructors, whereas the sites were preferred as they were convenient to researchers because we had information about student teachers' locations, and hence covering different contexts.

The case study teacher-trainees came from different geographical locations (urban, semi-urban, rural) and as such, there was representation from all the educational contexts in the two countries. The study was thus conducted within Parlett and Hamilton's (1972) theoretical model of evaluation as illuminative since it directs the need to realize flexibility of participants in approaching a curriculum operationalized in diverse educational contexts (Mannathoko, 2009). According to Parlett and Hamilton (1972), cited in Mannathoko (2009), "illuminative evaluation is not a standard methodological package but general research strategy aiming to be both adaptable and eclectic" (p. 26). Moreover, using qualitative methods allowed us to interpret participants' responses based on the emerging understanding of the circumstances confronting them (Gray, 2014). According to Makwinja-Morara (2007) and Yin (2012) the case study technique allows a researcher to retain the holistic and meaningful traits of real-life experiences.

Data were generated from 12 schools where the in-service undergraduate and postgraduate students from the two universities in Botswana and Zimbabwe were teaching visual arts education and deployed as full-time teachers. Botswana, however, does not have postgraduate programmes

in art education. Primary school instructors were generalist teachers while those who taught in secondary schools were visual arts education specialists. The fact that the participants were undertaking in-service study programmes meant that they were interested in the discipline to the extent of innovating in cases where they faced curricular and pedagogical challenges. As researchers we therefore assumed that the teachers were also knowledgeable visual arts specialists with vast teaching experience. It was of interest to the researchers to find out how the teachers had pedagogically responded to the pandemic.

The study employed online interviews with the art teachers. Interviews focused on the pedagogical strategies that the teachers employed in response to continued lockdowns as well as the related challenges that they were encountering. The teachers also provided information on how the pandemic had impacted on students' learning in both art practical and theory lessons. Mitigatory strategies in addition to future plans in case of further pandemics were also sought from the teachers.

Table 1 presents a summary of the attributes of the teachers who participated in the study. Participants were allocated pseudonyms to protect their identities in adherence to research ethics.

Table 1: Attributes of the participants

Participant	Sex	Age (Years)	Highest professional qualification	Degree being studied	Teaching experience (Years)	School level being taught	Position in school
Loice	M	49	Dip Ed Secondary	Bachelors A&D	21	Secondary	Senior Teacher
Ntombi	F	51	Dip Ed Secondary	Bachelors A&D	19	Secondary	Senior Teacher, Practical Subjects
TS	M	53	Dip Ed Secondary	Bachelors A&D	23	Secondary	Teacher
Loreto	M	49	Dip Ed Secondary	Bachelors A&D	22	Secondary	Senior Teacher, Practical Subjects
Leyona	M	48	Dip Ed Secondary	Bachelors A&D	23	Secondary	Senior Teacher, Practical Subjects
Defacto	M	48	BTech Art	Masters A&D	19	Secondary	Acting Head
Jay	M	42	BEd Art	Masters A&D	10	Primary	Deputy Head
Alice	F	51	Bed Art	Masters A&D	25	Primary	Teacher
Anie	M	42	BTech Art	Masters A&D	16	Secondary	Head of Depart.

Ms Kay	F	44	BEd Art	Masters A&D	3	Secondary	Teacher
Mrs Moyo	F	32	BEd Art	Masters A&D	4	Primary	Teacher
Cathy	F	42	BEd Art	Masters A&D	7	Primary	Acting Deputy Head

Five of the participants were pursuing an undergraduate programme while seven were doing a postgraduate degree in art education. It is good to note that the participants have decided to extend their art professional qualifications despite the many years in the teaching profession ranging between 10 and 21 years. The age of the participants ranged between 32 and 51 years which on average is a senior teacher range as reflected in their positions in the schools. These must be dedicated primary and secondary school teachers of art. Most of the participants pursuing the undergraduate degree were senior teachers while those doing the master's degree were mostly deputy school heads. Undergraduate teachers were all teaching in secondary schools while the master's students were teaching in both primary and secondary schools.

4.0 Findings
4.1 Readiness to teach art in a COVID-19 environment

The study observed that teaching during the COVID-19 period brought both opportunities and challenges. Most teachers were caught unprepared by the insurgence of the pandemic. The teaching and learning environment became restrictive because of persistent lockdowns. Schools were equally not prepared in terms of supply of provisions such as sanitisers, masks and various signposts on how learners could navigate around the school. There was also confusion amongst teachers and learners as explained by Ntombi "I felt much unprepared. Coupled with the fear of contracting the virus I had to change almost all my teaching styles as well as projects, especially with completing classes." Thus, teachers had to work extra hard for learners to understand what was being demanded of them mainly through the online teaching strategy. As one teacher indicated, there was need for a change of mindset and tolerance, "I was not prepared at all, but I had to acclimatize fast to cover the curriculum" (TS). Similarly, Mrs Moyo initially had challenges but later managed to adjust to the new working environment,

> My school had the opportunity to train us in Google Class and Zoom teaching and learning. I used YouTube and had learners download an application called 'learn how to draw' for them to cement concepts like sketching and different types of drawings. [Initially] most learners were sharing gadgets with parents which limited the extent to which they were participating in lessons. They however got their own gadgets as time progressed.

The study revealed that the pandemic opened frontiers of new opportunities for teaching and learning which helped teachers cope with the virus. Teachers started to be creative and managed to teach under difficult circumstances as students were not always in school. In terms of

school organization, there was reduction in the number of students per class coupled with maximization of time which was drastically reduced from an hour to about 40 minutes per lesson. Teachers started "incorporating teaching styles which were minimally used before COVID-19" (Ntombi). The onset of COVID-19 actually strengthened teachers' ICT technical knowhow and usage together with creative strategies in problem-solving. Art learners were encouraged to explore locally available materials, and they produced artworks using improvised tools and materials at their newly established home-based studios. As Ms Kay explained, there was also "social networking, use of online resources to foster creativity, better equipmentation in the use of technology, and improved interaction between the teacher and learner." In as much as the face-to-face lessons are important, there was serious adoption of online lessons. Jay recommended that there be improved connectivity and that "the Government should be an active player in this effort to avail [internet infrastructure] to our learners and their teachers."

4.2 Challenges brought by COVID-19

Since schools experienced extended lockdowns during the COVID-19 period, and the online became the dominant mode of delivery, it became difficult to administer practical lessons and effectively assess them. One teacher indicated that "most of our contact time was reduced leading to accelerated ways of teaching against the run of time. Practical work was compromised as a result of that." Some of the teachers could not engage students in online lessons due to shortage of technological resources, "my school is in a rural area with minimal resources, so the coming of COVID-19 induced lockdowns was a big blow to all efforts made by the administration. The school tried to urge teachers to do online teaching via WhatsApp but that failed dismally" (Jay). As a result, teaching became more teacher-centered, which puts further burden onto their shoulders. To counter this challenge one teacher said, "I used to deploy learners who grasp concepts quickly to peer-teach through demonstrations to those who were behind; it was a nightmare" (Ntombi).

Some teachers and students who contracted the disease had to go into self-isolation and quarantine, thus missing on lesson time. Continuous absenteeism from class resulted in schoolwork backlog. There was also increased number of classes (and fewer learning spaces) due to reduced number of students per class. However, in some schools, large class sizes remained an issue. Art materials became insufficient as learners were encouraged to avoid sharing. As Ms Kay explained, "art being a practical subject it was difficult teaching it. At first, I decided to teach the theory aspects but needed the production part. [Poor connectivity] at times would make it difficult for learners to see the teacher demonstrating." Ms Cathy reiterated the challenge, "[art being a practical subject], most of the learners needed a hands-on approach, [however] only e-learning was available which made it complicated to teach the subject." One of the major constraints was that children lacked the resources to use. As a result, the "work produced was rushed through and at times the work was done for them by adults at home" (Alice). Network was a major challenge and some lessons had to be rescheduled. One teacher summarized these challenges:

Learners could not brace the challenge of sharing materials and resources for fear of passing on the virus from one person to another, [and] high level of absenteeism due to high infection rates. Learners resisted masking up. Split of classes [double shifts] to decongest the classrooms meant that more teachers were required, yet Government couldn't provide such additional staff.

However, in the case of Botswana, temporary teachers were engaged to reduce the number of students in the classes because of the splits. While student performance was observed to have dropped by most participants, one secondary school art teacher indicated that "the performance was the same as we obtained results ranging from 65% to 70% pass rate in junior certificate examinations." Teachers like Defacto felt that student performance dropped due to the pandemic outbreak, "learner performance has gone down to deplorable levels." A similar view was expressed by Jay who said, "Personally, I feel there isn't much of a change because as a school we didn't have the resources to expose our learners to any other method of instruction [although] some work was well below standard. It was done for the sake of having done it and submitted." According to Anie, "students performed badly during COVID-19 as compared to the year before COVID-19 because of the limited engagements between the teachers and learners. The change could also be felt by most learners."

One teacher indicated that during lockdown there was minimal teaching, "to be frank it was more of a continuation from where we left. The talk about compressed syllabi didn't really make a difference considering the pace and availability of required resources" (Jay). Some chose to teach those components in the syllabus that were less complex. However, in the case of Zimbabwe, with the introduction of staff development programmes, teachers adapted their teaching and class management skills to the new normal though the transition was difficult. Teaching online did not guarantee learner attention. Teachers had limited opportunities to fully engage all learners as some had problems sending back assignments due to limited ICT competencies.

4.3 Transformative curriculum, instruction, and assessment

Teachers came up with several innovative strategies in their teaching. The following are some of the strategies that they said they employed in order to counter the adverse effects of the pandemic:

a) We adopted a more collaborative learning strategy; we also integrated the use of internet videos and learners were able to refer back to learnt lessons during their own time. The use of these strategies enabled the learner to be more reflective though it was also a challenge for those learners who learn better with a teacher giving instructions (Ms Kay);

b) Students were encouraged to research for the project themes on their own and the teacher assisted individuals and groups (Loreto);

c) I used both teacher and student- centered strategies in order to teach. For most of the time I would just give them topics to go and read from the internet and prepare themselves adequately (Leyona);

d) [I] had to do step by step instructions and also use video recordings of tutorials (Alice);

e) Offering online lessons and implementing compressed-based syllabus which integrates levels and certain objectives. For instance, Form 3 history of art topic would be interpreted with a Form 4 topic. Assessing practical exercises was very difficult though (Anie);

f) I organised and conducted weekend lessons for my 'completing class' so as to compensate for the lost time (Leyona);

g) Exploration and experiential teaching was my major teaching strategy (Loice);

h) I utilized morning and afternoon times, divided my students into groups of six and time-tabled them so as to attend to them (Ntombi);

i) At junior secondary no change was made in the curriculum and pedagogy. However as for assessment at national level some assessment time was modified (moderation of projects and examination times) and that mandated some changes at school level (Loice);

j) [I used] learner-centered methods that required problem solving skills (TS);

k) [I] had to use interactive methods although the time was limited such that some concepts were left uncovered (Cathy);

l) I provided online assignments to those learners with smartphones (Defacto); and

m) I ensured that there was sufficient demonstration first and set the bar for my expectation. Completed learners' artwork would then be displayed either in the classroom, on the WhatsApp group or presented during Zoom meeting for a class critique (Mrs Moyo).

The project and lecture methods were used to facilitate syllabus coverage. Adaptation of teaching methods by some of the teachers was difficult at first but improved after being trained by specialists, for example, through integration of demonstrations. Assessments were both formative and summative, "assessment was very effective in some cases as learners submitted their work as pictures and documents for marking" (Mrs Moyo), though limited interaction with the teacher made it difficult to assess at times. According to Defacto "adherence to the COVID-19 standard operating procedures like masking up, social distancing as well as regular sanitization of hands and disinfection of learning spaces and toilets helped the system to operate in the new normal environment."

The double-shift organisational model was introduced in most schools as an option to reduce class sizes and to maximize teaching and learning time. In Zimbabwe the model entailed that particular grade/form levels would attend school on Monday, Wednesday and Friday while the others attended on Tuesday and Thursday. The following week they would rotate the arrangement. In Botswana they had day shifts, some coming in the morning while others attended in the afternoon. There was introduction of electronic ways of teaching and learning such as use of WhatsApp and other compatible platforms. Sanitizing, social distancing, and the use of masks

as precautionary measures were emphasized while water was made available throughout the school. Sanitizing and cleaning of art studios was done every three hours though costly, and most schools had challenges meeting this requirement. According to Defacto, "there was provision of hand sanitizers, hand washing facilities, extra furniture to facilitate social distancing and also provision of psycho-social support to both staff and learners from the ministry of health personnel." Some schools introduced the intercom to replace physical meeting of students during school assembly (Loreto). Leyona stated that "the school helped in implementing COVID-19 protocols but due to unavailability of funds we couldn't get any help in as far as overtime payments was concerned."

Urban schools in particular that could afford online teaching created platforms for all learners and gave students individual accounts on which to receive learning material and "parents were informed on how they would help their children access their work and submit for marking" (Alice). Ms Kay however, indicated that "online facilities like Google classroom, Teams, Moodle were used but most of these were trial versions and would sometimes fail during the lesson."

4.4 Initiatives for the post pandemic period
Many suggestions were put forward for the post pandemic period. Teachers argued that trust should be placed on the internet and that the internet should be compatible to and be made part of teaching and learning. They suggested that schools should be encouraged to use research-based and project-based teaching to improve learning although there was need to reduce the number of projects given to students to avoid shortages and sharing of art materials. According to Leyona, "schools could reduce subject enrolment to aid completion of projects and not to compromise the quality of final products." They also requested for additional spacious art studios and teachers from the Ministry of Education to cater for social distancing, "in my previous and present school, normal classrooms were used for art lessons, obviously with no water fittings in those classrooms, with the possibility of poisoning being very high" (Ntombi). The additional facilities and teachers could help reduce congestion and workload. The school could also make use of the existing outdoor facilities for the teaching of art. In addition, reduced class sizes and hygiene rules should continue to be enforced.

Adoption of online lessons via the provision of gadgets such as smartphones, laptops and printers should be encouraged. Schools should be provided with the necessary internet-based tools, applications, and machinery to facilitate teaching and learning. According to Defacto, "installation of Wi-Fi in schools, provision of adequate learning spaces that accommodate few learners to avoid bigger classes, and a regular supply of technological resources, disinfectants, masks, and sanitizers are key requirements." As part of online lessons via Google classrooms schools should "come up with simplified modules for individual projects so that learners can work whilst they are at home" (Jay). He further reiterated that the

current effort toward use of air lessons via radio and TV is good but unfortunately the general populace in rural settings does not own radios or TVs. So, my suggestion would be to print modules for rural students to guide them during their projects. For those who have access to internet, the government may introduce affordable packages of data bundles for learners who will do lessons online.

Government and other stakeholders should work towards provision of necessary support to schools concerning practical skills development for the virtual instructor, these could include technological gadgets such as laptops, tablets or computers and connectivity and power. The Government, through the Ministry of Education should ensure adequacy of resources as echoed by Cathy, "the Ministry should make sure the schools are provided with enough resources for the teaching of art and design bearing in mind that some communities are in marginalized areas where network and resources are scarce." In addition, schools should train both teachers and learners in "alternative pedagogy regardless of their geographical location. Schools from disadvantaged situations should be prioritised by the government because parents there cannot afford to buy their children gadgets and their teachers have limited opportunities to be trained in alternative pedagogy. The use of technology should continue and be improved upon regularly, and teachers should continue improving their knowledge of such new developments. Applications that aid in teaching art should be encouraged as more learners now have access to such devices than before; this will foster zeal to produce good artworks" (Mrs Moyo).

Anie suggested coming up with more research based on disaster preparedness during pandemics such as COVID-19. In addition, there should be massive research on how learners may catch up on lost time and how teachers can handle classes during pandemics. The Ministry of Education could mount more staff development programmes and provide schools with more funding to upgrade their internet facilities and do follow ups on all schools to ensure all COVID-19 protocols are being observed. Cathy proposed that schools could be given enough learning media to cater for differences which occur due to different geographical locations of schools. Schools should offer remedial work to bridge the gap caused by COVID-19. Defacto suggested that "best practices must be solicited to match the pedagogical strategies that suit learners from different geographical settings where resource mobilization varies and at the same time expect better learning outcomes from all participants." In addition to schools being ready to deal with the natural disasters and cater for the welfare of both teachers and students, Government should organize post COVID-19 counselling sessions for those who might be affected.

5.0 Discussion and reflections
During the COVID-19 era art education became a collaborative venture with parents, teachers and learners engaging each other. Visual art teachers needed help from parents, particularly in the supervision of assignment tasks and acquisition of art materials. There was, however, failure to procure adequate art materials and equipment due to parents' negative attitude

towards art, lack of knowledge about art and financial constraints faced by parents. Thus, dialogue with parents was inevitable and prioritized. Personal relationships were established with both students and parents hence more cooperation was noted in the execution of work by students. Research on the part of both teachers and students became a critical feature of art education as teachers had to research, for example, on activities that could help the students engage more effectively with the content and the predominantly research-based assignments. Teachers explored students' diverse learning styles: the visual, auditory, tactile and the kinesthetic creating space for discovery learning unlike before when teachers tended to dominate the learning process.

The pandemic revealed teachers' unpreparedness in terms of utilization of technology and related delivery methods. Relatedly, not all parents could afford wireless fidelity (Wi-Fi), thus, some students were left behind, subsequently affecting the quality of work they produced. Failure to understand assignments and homework tasks by both parents and students due to the distance nature of teaching led to rather weak submissions showing limited visual exploration of ideas and concepts. There were competing energies as a lot of work was given to students online from various subject areas particularly in primary schools where they do many subjects. Students and parents would then prioritize subjects according to their perceived value. Visual arts was typically given the least priority, an attitude that prevails in a number of African cultures (Mamvuto & Mannathoko, 2021). Most often visual arts homework would not be done or would not be allocated deserving time. Supervision of visual art tasks was a problem because students had the option to choose whether to be engaged or to be aloof, despite that timetables were in place. Students themselves would decide the pace of engaging the tasks to be done.

While asynchronous online learning is self-directed, minimum effort was put toward art education. There was lack of knowledge and skill by teachers and students in the use of school recommended platform technology to facilitate effective online teaching and learning. Teachers had not been prepared for online teaching and learning as the pandemic surfaced as an apparition. Teachers had to struggle to learn the online tools while at the same time dealing with the research, content, and instructional modes. Individualized tuition which is viewed as one of the most appropriate teaching methods for visual arts was difficult to implement online due to non-availability of resources, limited time, and some students not hooking up for assistance. Online teaching proved to be time consuming as more work had to be done in the preparation and delivery of instructions as well as follow up on students. This was not anticipated.

We note that for the future parents are likely to play a big part in the broader teaching and learning as they monitor and participate in the education of their children. Assignments are sent to learners, and parents are requested to supervise the conduct of the assignments. This is now a critical dimension that is likely to be part of the instructional strategy going forward. Due to possible predominance of online learning, it means learners need to access a variety of electronic resources and thus need to interact more with such sources of knowledge. There is likely to be

more collaboration between schools, and galleries and museums as critical cultural resource centers (Adejumo, 2002; Downey, Delamatre & Jones, 2007). Such institutions would need to repackage their content in forms that are accessible to learners operating in diverse contexts. There is emergence of a virtual gallery and museum for both synchronous and asynchronous exploration. We foresee material developers such as publishers collaborating with educators so that they get to understand the new educational requirements and instructional strategies relevant to the pandemic environment. We also foresee the formation of e-classes consisting of students from diverse geographical and cultural contexts learning various skills and content together, in addition to what art class teachers provide during their usual contact times. There is likely to be more inter-school collaborations where students share knowledge and experiences, for example, through the use of different technologies and examination standards by examination boards notably the Zimbabwe School Examinations Council (ZIMSEC), Botswana General Certificate of Secondary Education (BGCSE), and Cambridge. Formation of communities of practice from a broad base of art enthusiasts including custodians of the arts and culture are likely to emerge. Students will not be limited to their class teachers for information.

Many aspects of art education need to be reconsidered for relevance and appropriacy. Content requires adaptation, for example, not much digital art was offered in Botswana and Zimbabwean schools. The curriculum has to be adjusted to ensure that such content is an integral part of the curriculum in the context of a pandemic. This is also in line with the needs of industry. Indigenous knowledge and practices have not been deliberately made part of the curriculum. We foresee emphasis being put on testing and examining of indigenous knowledge, skills, and practices. This will be linked to production of teaching and learning resources commensurate with such curricular changes. However, due to the conservative nature of custodians of national curricular worldwide, the curriculum, being the ideological tool of Governments (Mamvuto & Mannathoko, 2021) does not readily respond to emerging phenomena like the COVID-19 pandemic. Thus, the broader curriculum content which is tested by national/regional examination boards tends to be difficult to change significantly within a short space of time. However, teachers have greater latitude to make changes to their instructional strategies and processes. Assessment modes and strategies can surely change to include online assessment in line with the nature of assignments, both practical and theory. Depending on the individual country demographics, examinations can be difficult to change before completion of the curriculum implementation cycle. High level consultations are a prerequisite to such changes. There is also the possibility of abandoning examinations in favour of continuous assessments, online tests, authentic assessments, and portfolio assessments (Mamvuto & Kangai, 2021; Mannathoko & Mamvuto, 2019; Paulson & Paulson, 1991). Continuous assessment learning activities (CALA) in both Zimbabwe and Botswana is an attempt towards that realisation.

Teacher education has not been putting enough emphasis on technology-based teaching, learning and assessment. These now need to be an integral part of the teacher education art

curriculum. Art software is a must in the curriculum in addition to proficiency in diverse interactive virtual learning platforms. E-teaching, e-assessment and e-resource utilisation should be the bedrock to art education. Emphasis should be put on collaboration and partnerships between and among teacher education institutions and visual arts related institutions to enhance learning. Art educators can play a more active part in curriculum development and resource creation as they understand better the needs of students. Teacher education could explore learning models that are strongly inclined towards use of technology. Assessment modes in pre- and in-service teacher education should be enhanced.

6.0 Conclusion

Visual arts education has been greatly marred by the onset of the global COVID-19 pandemic. This was mainly because teachers were used to the traditional methods of teaching and engaging learners. The continued pandemic lockdowns however forced teachers to reconsider their pedagogical approaches to counter the continued loss of teaching and learning time. Art education being a predominantly studio-based subject was significantly affected. It is clear that both teachers and learners had challenges engaging the practical component of the subject. Variability in access to online facilities, especially between urban and rural schools caused equality and equity dissonance that governments and other stakeholders need to consider for educational inclusivity. Critical to teaching of the visual arts is introduction of online alternatives at various levels including teacher education as pandemics are likely to resurface in the future in one way or another. We are sure insights gleaned from this study will prepare art teachers for the future in terms of reorganizing the curriculum and related pedagogical strategies.

References

Adejumo, C. O. (2002). Considering multicultural education. *Art Education*, *55*(2), 33–39.

Calderón-Garrido, D., & Gustems-Carnicer, J. (2021). Adaptations of music education in primary and secondary school due to COVID-19: The experience in Spain. *Music Education Research, 23*(2), 139-150.

Coolican, M., Borras, J.C., & Strong, M. (2020). Argentina and the COVID-19: Lessons learned from education and technical colleges in Buenos Aires Province. *Journal of Education for Teaching*, *46*(4), 484-496.

Creswell, J.W. (Ed.). (2018). *Research design, qualitative, quantitative, and mixed methods approaches*. SAGE Publications.

Downey, S., Delamatre, J., & Jones, J. (2007). Measuring the impact of museum-school programs: Findings and implications for practice. *Journal of Museum Education*, *32*(2), 175–187. https//doi.org/10.1080/10598650.2007.11510567

Gray, D.E. (Ed.) (2014). *Doing research in the real world*. SAGE Publications.

Knopf, A. (2020). During and after COVID-19, anxiety and depression will increase: Study. *The Brown University Child and Adolescent Behaviour Letter*, *36*(9), 6-7.

Kumar, R. (2022). *Research methodology. A step–by–step guide for beginners*. SAGE Publications.

Makwinja-Morara, V.M. (2007). *Female dropouts in Botswana junior secondary schools: How much of a crisis is it?* [Unpublished EdD Thesis]. The College of Ohio University.

Mamvuto, A., & Kangai, P. (2021). Portfolio implementation for self-reflection and professional growth of students in the arts. *Visual Studies*. https://doi.org/10.1080/1472586X.2021.1940262

Mamvuto, A., & Mannathoko, M. (2021). The changing African art and design curricular: Narratives from teacher education. *Arts Education Policy Review*. https://doi.org/10.1080/10632913.2021.1952675

Mannathoko, M.C. (2009). *Interpreting the new lower primary art and craft component of the creative and performing arts, the Botswana national curriculum. Case studies of four primary schools in the South Central and Central North regions. An illuminative evaluation*. Cardiff: University of Wales Institute, Cardiff.

Mannathoko, M. C., & Major, T. E. (2013). An illuminative evaluation on practical art, craft, and design instruction: The case of Botswana. *International Journal of Higher Education*, *2*(3), 54–61.

Mannathoko, M., & Mamvuto, A. (2019). Assessment in art and design education. An analysis of practices in Botswana primary schools. In R. Hickman (General Editor), J. Baldacchino, K. Freedman, E. Hall & N. Meager (Eds.), *International encyclopaedia of art and design education, pedagogy* (pp. 1233-1249). John Wiley & Sons.

Mishra, P., & Koehler, M.J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, *108*(6), 1017-1054.

Parlett, M., & Hamilton, D. (1972). *Evaluation as illumination: A new approach to the study of innovatory programmes*. University of Edinburgh.

Paulson, F.L., & P.R. Paulson (1991). The ins and outs of using portfolios to access performance.

ERIC Document Reproduction Service, Article ED 334250.

Potash J.S., Kalmanowitz, D., Fung, I., Anand, S.A., & Miller, G.M. (2020). Art therapy in pandemics: Lessons for COVID-19. *Art Therapy*, *37*(2), 105-107.

Sabol, F.R. (2021). Art education during the COVID-19 pandemic: The journey across a changing landscape. *Arts Education Policy Review*. https//doi/org10.1080/10632913.2021.1931599

Yin, R.K. (Ed.). (2012). *Case study research, design and methods: Applied social research methods series, Volume 5*. SAGE Publications.