

Programme Design in the Digitalised New Normal and Learner's Academic Achievements in the Cameroon Higher Education: The Case of University of Yaoundé I

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ABSTRACT

This study investigates the influence of programmes design in the digitalise new normal and learner's academic achievements in Cameroon state universities. The problem of this study emanates from low quality of knowledge and skill acquired by university students in the context of digitalisation. This quantitative study employs the descriptive survey research design. The simple random sampling technique used collect a sample size 205 participants. Data was collected using questionnaire and interview guide. The Framework technique was used to analyse qualitative data and the spearman ranked correlation with the help of SPSS version 23 was used to test the research hypotheses. Findings revealed that programme design in the digitalise new normal significantly influence learner's academic achievements: RH1: The correlation coefficient is $r = 0.878$, $P_{=0,000} < 0,05$; indicating that the degree of significance is high. RH2: The correlation coefficient is $r = 0.780$, $P_{=0,000} < 0,05$; indicating that the degree of significance is moderate. RH3: The correlation coefficient is $r_{=} 0.532$, $P_{=0,000} < 0,05$; indicating that the degree of significance is high. RH4: The correlation coefficient is $r_{=} 0.867$, $P_{=0,000} < 0,05$; indicating that the degree of significance is high. All the four specific hypotheses were confirmed and all null hypotheses rejected. We recommend that these universities in Cameroon and in the sub-Saharan Africa should redesign its programme to suite the digitalise new normal context, organise workshops to train staff on course content, teaching style, simulation and how to exploit the available digital space.

Keywords: programme design; digitalise new normal; academic performance

INTRODUCTION

Higher education is verily the most important institution in charge of transforming learners from mere individuals to skilful human capital. In the 21st century, higher education processes have quickly evolved from the traditional classroom to online (synchronous and asynchronous) approach via the digital technology, describing this era as the digitalise new normal. The digitalise new normal is evoking tremendous shift, deconstructing systems and breaking most limits which hitherto existed in higher education. According to Levine (2020), With people now sheltering, learning, working and shopping from home and looking for contactless delivery and trying to obtain basic services in the new normal is creating challenges and opportunities for both businesses and education. In this light, higher education is fast adopting the online or E-learning approach. both learners and teachers no longer study in a large amphi, but via online avenues like Zoom, Google Classroom, Thinkifics, Khan academy, Coursera, open culture online course amongst others. These institutions have varied programmes for learners all over the world to take at their pace and in the comforts of their homes. Some are actually free of charge while others charge a smaller fee comparatively to traditional education. Learners in this century learn everywhere with internet coverage via their smart phones and laptop computers.

The massive shift from traditional classroom to E-learning is fast gaining grounds around the world. It took a more rapid move when the whole world was stroked by the covid-19 pandemic. Most institutions hurriedly adopted the online study mood in order to keep learning while staying safe. The ministry of higher education in Cameroon and universities took strategic and drastic actions towards online studies to ensure learning was not disrupted. This E-learning which came in rather very abruptly might have had different challenges in curriculum design such as digital course content, digital learning space, digital didactic material, and simulation. Online studies have embraced E-learning curriculum where in the course content are specifically designed, the learning space considered, the didactic material digital, digital teaching techniques, and the curriculum is simulated to inculcate the realities of the environment. The limitation on these aspects could disrupt learner's academic achievements and learners might not have acquired any knowledge and practical skills via the programme. Curriculum in the digitalise new normal have some specific exigencies that the system is expected to consider during the application of E-learning. It is called the digitalise new normal because it came to stay and the earlier the institutions redesign the curriculum, the better.

CONCEPTUAL FRAMEWORK

Curriculum design in the digitalise new normal

The perception of curriculum design in the new normal contains numerous essential characteristics. For many teachers and students, a curriculum and its design generally mean certain documented requirements for curricula, which are related to specific areas of knowledge. Curriculum design is a "high level process", "curriculum development can be made more agile, flexible and responsive with the support of technology", "curriculum design entails two types of activity: educational design – the decisions taken by curriculum teams as they design the learning experience; and connected institutional processes – for example, information management, market research, marketing, quality enhancement, quality assurance and program and course approval". The design of a curriculum is treated as a technique. "Enhancements to design practices have included: a greater focus on the design process, allowing for light-touch approval events; richer ways of engaging stakeholders, including students, in the development of curricula; effective ways of representing and modelling curricula; reduction in the time spent on administrative tasks; improved understanding of educational principles as a benchmark for design quality

Digital Content

E-learning content is developed according to a set of learning objectives and is delivered using different media elements, such as text, graphics, audio and video. It must provide as much learning support as possible (through explanations, examples, interactivity, feedback, glossaries, etc.), in order to make learners self-sufficient. However, some kind of support, such as e-mail-based technical support or e-tutoring, is normally offered to learners (Akhlaghi, 2011). If you want to design an online training course that will engage your learners, then you shouldn't limit yourself, regarding your content: produce video, create graphics, shoot photographs, record talent voices, score and record music and sound effects. Well-developed e-learning content can be delivered many times to different learners using the same materials. In addition, individual content components (e.g. units, lessons and media elements such as graphics and animations) can be reused in different contexts. For example, interactive e-lessons developed for a given self-paced e-learning course can be integrated into facilitated courses or can become part of another self-paced e-learning curriculum.

Learner-centred content E-learning curricula should be relevant and specific to learners' needs, roles and responsibilities in professional life. Skills, knowledge and information should be provided to this end. The aspect of content of e-learning course is probably the most challenging to the process of online teaching in the University of Yaoundé 1. All is just block notes uploaded, not use of other media devices like audios, videos, graphics, and elements. Due to this shortage of the content display, the learners encounter challenges that hamper their understanding of the course. As a result, they may not achieve any lesson.

Digital Teaching styles

It involves the different types of teaching strategies used by teachers in their efforts to facilitate students learning via the available technological means. In the course of this activity, curriculum goals and objectives are being translated into experiences. The different types of teaching techniques are stipulated earlier during designing the online curriculum. Different types of teaching strategies include: Lecturing, demonstration, illustration, experimentation, cooperative learning, experiential learning, discussion, dramatization, role play, simulations, democratic learning, project and research learning.

Without your physical presence in the classroom, it's vital that you establish a virtual presence at the very beginning of the eLearning course. Online teachers need to be engaging and supporting student's right from the start and for the duration of the course, to maintain an effective learning community. Feedback is an essential component of all effective learning environments – including online. As an online teacher, your feedback will help to create an eLearning experience that is informative, engaging, and motivational for the learner. Your feedback should be continuous during the eLearning process, with constructive feedback offered as soon as possible so that students can clearly identify which behaviors or skills need to be improved. You can encourage group feedback through collaborative exercises, which also helps to promote peer engagement.

Looking at the online study that takes place in Cameroon (university of Yaoundé 1 specifically) teachers were probably not trained on the various online teaching approaches and so they did not master the art of encouraging students. Most of the programs were never evaluated. They had to stop and wait till the lockdown was open in order for them to evaluate students. This was too much a long time to waste for youths in this century. This probably effected students' academic achievement negatively.

Digital Simulation

Simulations are highly interactive forms of e-learning involved in curriculum design. The term "simulation" basically means creating a learning environment that feigns the real world, allowing the learner to learn by doing. Simulations are a specific form of Web-based training that immerse the learner in a real-world situation and respond in a dynamic way to his/her behaviour. The most powerful tool that you have at your disposal when developing an interactive eLearning strategy is reality-based eLearning scenarios. Integrating real life examples and problems into course is simulation. It enables you to draw in the learners and show them, first hand, how knowledge acquired can be applied outside of the learning environment. For example, if you design a scenario that allows the learners to tap into the skills, they have learned during the eLearning course, such as technical problem solving or customer service, they gain invaluable experience that can be used on-the-job later on. Making these scenarios interactive by including video, images, and audio, enables you to create an immersive and effective learning environment that motivates and engages the learners.

This practice of simulation seems to be very absent in the eLearning curriculum used in the University of Yaoundé 1. Most of the notes uploaded by lecturers are not practical enough, real life situations are not imbedded nor is any chance given for practice. Such traditional presentation of lengthy notes could impede or difficult to understand, hence a challenge in academic achievement.

Digital Learning Space

Learning space or learning setting refers to a physical setting for a learning environment, a place in which teaching and learning occur. According to *Cebrián et al. (2020)*, The term is commonly used as a more definitive alternative to "classroom" but it may also refer to an indoor or outdoor location, either actual or virtual. Learning spaces are highly diverse in use, learning styles, configuration, location, and educational institution. They support a variety of pedagogies, including quiet study, passive or active learning, kinesthetic or physical learning, vocational learning, experiential learning, and others.

Then came various initiatives of distance learning such as educational radio, television and open universities, creating new opportunities for adults to study at distance from these institutions and to acquire degrees at their own rhythm. Today, the digital transformation opens entire new spaces of education and learning. Smartphones (mobile learning) tablets and Apps are becoming central media for informal learning.

Learning in the digitalise age has practically gone online. Learners have access via their smart phones, computers connected to internet. Prior to the outbreak of covid-19 online studies were not practiced in the university of Yaoundé I. as a result, most learners and teachers faced challenges to adapt to the immediate introduction. This may be the reason for which many learners could not achieve their academic goals, during the online studies in this universities. Then came various initiatives of distance learning such as educational radio, television and open universities, creating new opportunities for adults to study at distance from these institutions and to acquire degrees at their own rhythm. Today, the digital transformation opens entire new spaces of education and learning. Smartphones (mobile learning) tablets and Apps are becoming central media for informal learning.

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Virtual learning environments or learning space, by definition, exist in a digital space (or cyberspace). For Cook, (2010), to access them, students require both technology and a physical environment that supports that interconnectivity. The internet and digital communications technology allow students to access information and knowledge, tools, instructors, mentors, fellow students and collaborators, and the actual educational material or project they are producing from areas well beyond the educational institution. With highly mobile devices, these locations may be anywhere with access to the internet or communications network, on the planet or beyond. To be effective, the physical environment from which the student accesses the virtual environment needs to have several key components: connectivity, either wired or wireless, power for the device, if not directly in the space within reasonable access for recharging, suitable ergonomics, environmental conditions that provide basic needs and comfort; that eliminate distraction and support focus, personalization for students to choose what is preferable for them (also applies to the virtual environment. Among the most popular learning space today, we have Socrative, Scratch, Prezi, SelfCAD, Quizlet / Quizlet Live, Google Classroom, Adobe Spark Video and Khan Academy. These spaces are used by both students and teachers for online teaching and learning. According to Ekarani (2018), there is certainly no shortage of tech-based tools to use in the classroom. He examined some of the best, focusing specifically on those that are designed for encouraging, enhancing, and managing learning in higher institutions. Among which we have;

Academic achievement

There is an international concern on academic achievement of students (Banihashem 2014). In Cameroon, improving students' academic achievement is also among the basic goals of educational planning. It is through these achievements that students can fully actualize their talents and capabilities in line with educational goals.

Notably, academic achievement is considered as one important criteria of educational quality. Academic achievement is a major issue among students, teachers, parents, school administrators, and the community at large. Researchers have made several attempts to unravel the complexities surrounding students' achievements especially in universities (Ikpi, Enya & Johnny, 2014). According to Ikpi, Enya & Johnny, (2014), a lot of attention had been paid to external factors such as type of school, teaching methods, school location, instructional materials, quality of lecturers and their experience.

Academic achievement or even performance is considered an intellectual competence indicator. Opinions vary as to why some students excel academically while others appear to be underachievers. As a result, many psychologists have consistently attempted to identify the major predictors of individual academic performance. Academic performance on examinations is the result of interactions among multiple variables such as learning. Learning occupies a significant role in the life of students (Mangal & Mangal 2009). It means modification of behaviour (Dutt, 2007) that is measured using the yardstick of academic performance. People have different learning styles that are reflected in different academic strengths, weaknesses, skills, and interests. It has often been asserted that academic performance can be explained largely by factors such as individual initiative, effort, and merit. (Timothy, & Kammeyer-Mueller, 2007).

Although education is not the only road to success in the working world, much effort is made to identify, evaluate, track and encourage the progress of students in schools (Bell, 2018). Parents care about their child's academic performance because they believe good academic results will provide more career choices and job security (Bell, 2018). Similarly, schools invested in fostering good academic habits for the same reason. For example, they often influence concerns about school's reputation and the possibility of monetary aid from government institutions, which shows the overall academic performance of the school.

Academic achievement for some researchers is defined by students' reporting of past semester CGPA/GPA and their expected GPA for the current semester. The grade point average or GPA is now used by most of the tertiary institutions as a convenient summary measure of the academic performance of their students. The GPA is a better measurement because it provides a greater insight into the relative level of performance of individuals and different group of students. Academic performance is the extent to which a student has achieved their short or long-term educational goals (Annie, Stoker, & Murray-Ward 1996). Cumulative GPA and completion of educational degrees such as High School and bachelor's degrees represent academic performance.

Academic achievement is commonly measured through examinations or continuous assessments but there is no general agreement on how it is best evaluated or which aspects are most important — procedural knowledge such as skills or declarative knowledge such as facts (Bhagat 2013). Furthermore, there are inconclusive results over which individual factors successfully predict academic performance, elements such as test anxiety, environment, motivation, and emotions require consideration when developing models of school performance (Mosche, 1998). But individual differences in academic performance have been linked to differences in intelligence and personality. Students with higher mental ability as demonstrated by IQ tests and those who are higher in conscientiousness (linked to effort and achievement motivation) tend to achieve highly in academic settings.

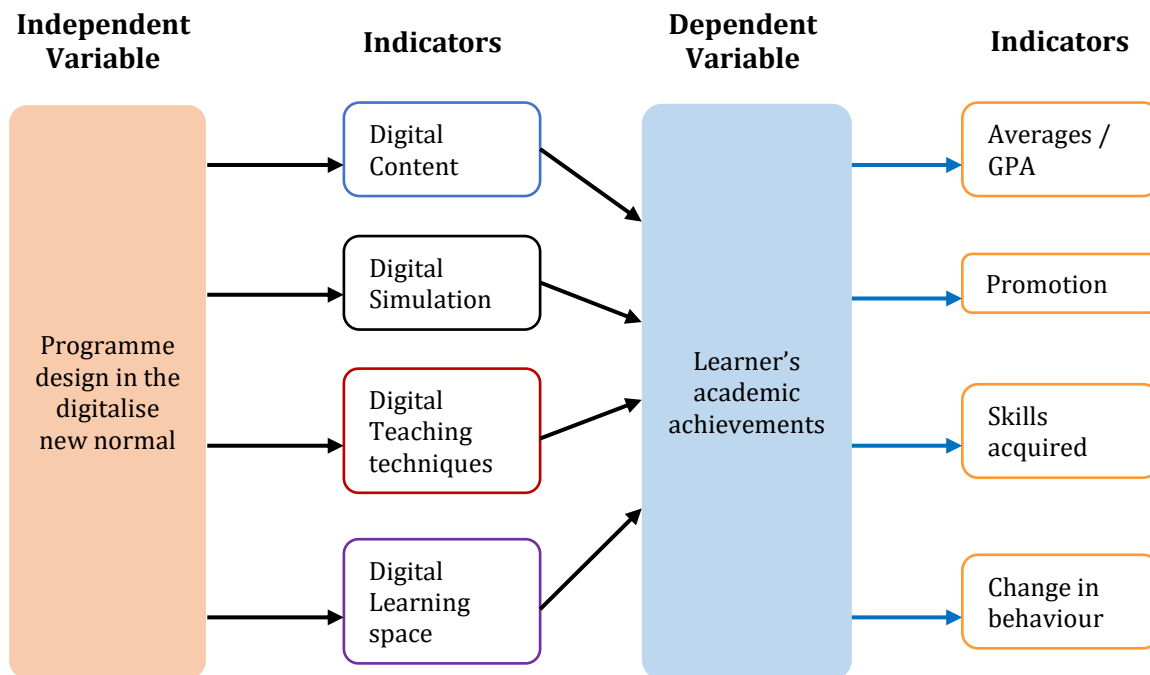


FIGURE 1: Conceptual diagram showing the theoretical relationship that exist between programme design in the digitalise new normal and learner’s academic achievement.
Source: Researcher (2021)

Problem statement

It is observed that more learners in Cameroon state universities perform poorly with the present statuesque of the country’s education system. The system’s inability to embrace digital technology fully placed learners and staff at the crossroad. The Covid-19 spur unprecedented start of online studies in these universities, but the programmes remained adapted for traditional classroom. The courses were unavailable online, teaching method, quality of the content, and lack of engagement of students in the online lessons. A majority of the lessons were never evaluated; programme coverage was uncertain.

Because of these limitations, the student’s academic achievements were questionable, performances were comparatively low and many students dropped out.

METHODOLOGY

This mixed method study employs the survey research design. The simple random sampling technique used and a sample size 205 participants partook in the study. Data was collected using questionnaire and interview guide. The Framework technique was used to analyse qualitative data and the spearman ranked correlation with the help of SPSS version 23 was used to test the research hypotheses.

FINDINGS

TABLE 1: Correlations between digital content and learner’s Academic achievements.

		Curriculum content	Academic achievements
Spearman's rho	Correlation Coefficient	1.000	0.878**
	Sig. (2-tailed)		0.000
	N	185	185
	Correlation Coefficient	0.878**	1.000
	Sig. (2-tailed)	0.000	.
	N	185	185

According to table 1, there is a significant relationship between digital content and learner’s academic achievement. According to the results, the Ha was confirmed. This implies that the content of the curriculum in this digital age is very impactful to the way and degree of learner’s academic achievement. We confirmed this result by looking at the very high correlation value which is significant at $r = 0.878$. This is equally based on the fact that the level of significance is 0.000 which is largely less than 0.05, (alpha) which is the standard error margin, therefore, nor error was made in the process.

The confirmation of the results explains why many learners achieved little or nothing the during the Corona-19 break in Cameroon state universities. Many lecturers and school systems were never prepared to teach online, the system had not made ready the technological system and the student were not also ready (technological and psychologically) to study online. Many never had the gargets (smart phone, and internet connections). Most lecturers did not design the content to reflect the online learning method, some simply uploaded material on PDF for students to download.

TABLE 2: Correlations between digital Teaching style and learner’s Academic achievements.

		Teaching style	Academic achievements
Teaching style	Correlation Coefficient	1.000	0.780**
	Sig. (2-tailed)		0.000
	N	185	185
Spearman's rho	Correlation Coefficient	0.780**	1.000
	Sig. (2-tailed)	0.000	
	N	185	185

Looking at table 2, there is a strong correlation between digital Teaching style and learner’s Academic achievements. There is a significant relationship between Teaching style and learner’s academic achievement. According to the results, the Ha was confirmed. This implies that the Teaching style in this digital age is very impactful to the way and degree of learner’s academic achievement, it must be remembered that the process of teaching-learning is no longer onsite, but online. We confirmed this result by looking at the very high correlation value which is significant at $r = 0.780$.

This is equally based on the fact that the level of significance is 0.000 which is largely less than 0.05, (alpha) which is the standard error margin, therefore, nor error was made in the process. The confirmation of the results explains why many learners achieved little or nothing the during the Corona-19 break in Cameroon state universities. Many lecturers and school systems were never prepared to teach online, the system had not made ready the technological system and the student were not also ready (technological and psychologically) to study online. Many never had the gargets (smart phone, and internet connections).

TABLE 3: Correlations between Simulation and Academic achievements.

		Simulation	Academic achievements
Simulation	Correlation Coefficient	1.000	0.532**
	Sig. (2-tailed)		0.000
	N	185	185
Spearman's rho	Correlation Coefficient	0.532**	1.000
	Sig. (2-tailed)	0.000	
	N	185	185

In view of table 3, there is a significant relationship between digital simulation and learners’ academic achievements. There is a significant relationship between simulation and learner’s academic achievement. According to the results, the Ha was confirmed. This implies that the simulation in this digital age is very influential to the way and degree of learner’s academic achievement, skills acquisition, practice and internship. We confirmed this result by looking at the high correlation value which is significant at $r = 0.532$.

This is equally based on the fact that the level of significance is 0.000 which is largely less than 0.05, (alpha) which is the standard error margin, therefore, the chances of making errors was minimized in the process. To further strengthen the result we have, results from the interview further affirms by lecturer B that “I can authoritatively say simulation can influence the way learner’s acquire knowledge these days. Knowledge is more of practice these days, learners centered, and total involvement.

TABLE 4: Correlations between digital Learning space and learner’s Academic achievements.

		Learning space	Academic achievements
Learning space	Correlation Coefficient	1.000	0.867**
	Sig. (2-tailed)		0.000
	N	185	185
Spearman's rho	Correlation Coefficient	0.867**	1.000
	Sig. (2-tailed)	0.000	
	N	185	185

Source: field data (2021)

Looking at table 4, there is a strong correlation between digital Learning space and academic achievements. There is a significant relationship between simulation and learner’s academic achievement. According to the results, the Ha was confirmed. This implies that the learning space in this digital age is very influential to the way and degree of learner’s academic achievement, skills acquisition, practice and internship. We confirmed this result by looking at the very high correlation value which is significant at 0.867. This is equally based on the fact that the level of significance is 0.000 which is largely less than 0.05, (alpha) which is the standard error margin, therefore, the chances of making errors was very minimized in the process. The confirmation of the results explains why many learners achieved little or nothing during the Covid-19 break in Cameroon state universities; this implies that if the concept of learning space through

which the courses, systems, implementation and evaluation were enhanced, the level of learner’s academic achievement will also improve.

The learning space in the digitalise new normal is essentially important to both the learner and the teacher. According to results from teacher A in the interview, new digital changes in the societies and in schools, it is very interesting to say, the learning space now is everywhere. So long as the learners or anybody has a smart phone, or any devise that connects to internet, they can explore and acquire as much knowledge as possible. Nowadays the processes of teaching-learning are elastic and diversified. It is rather regretful to acknowledge that many lecturers and even the university systems were not prepared to teach online, the system had not made ready the technological system and the student were not also ready (technological and psychologically) to study online.

TABLE 5: Recapitulation of results.

Hypotheses	Alpha	Degree of significance	Correlation coefficient	Decision
RH ₁	0.05	0.00	0.878**	H _a retained and H _o rejected
RH ₂			0.780**	H _a retained and H _o rejected
RH ₃			0.532**	H _a retained and H _o rejected
RH ₄			0.867**	H _a retained and H _o rejected

Source: field data (2020).

Table 5 is the summary of the results. Since all four specific research hypotheses have been confirmed, this confirms the main research hypothesis of the study as well. Therefore, the uneven Academic achievements situation is strongly blamed on the gap in programme design in the digitalized new normal in the University of Yaoundé 1. The programmes have remained unchanged whereas the system has taken the digital turn, although not yet in full swim.

CONCLUSION

The unavoidable shift from traditional to digital learning style in higher education around the world is a call for concern. Technological development is leaving no one untouched and higher education is surely the going through transformation. Studies have gone on-line, access to internet has become learning prerequisite, different moods of learning have been developed to provide knowledge to everyone around the world and low cost, telephones have become learning tools. In the center of it all, the curriculum has been redesigned to meet with the E-learning realities. In this study, the result showed us that the type of curriculum design used in this digitalise new normal is unique and has significant influence over learner’s academic achievement. Therefore, every higher institution is expected to redesign the curriculum to enable its convenient use in this new era.

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