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Nonlinear educational model: technology learner content cognitive framework (TELECC)

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Abstract
The main educational objective is to ensure that students learn new concepts and should be able to apply them in new environments. This has called for the demand for new approaches in terms of the instructional process, use of technology, dissemination of content, and the definition of the learning environment. Coupled with the global upsurge and use of technology in learning, relevant instructional models have evolved from the traditional linear frameworks to ones with diverse and overlapping pedagogical approaches. This has yielded some nonlinear instructional frameworks, models, and theories that integrate a wide variety of learning components that overlap with each other to support the learning process. A successful and reliable nonlinear educational framework should express relevant instructional technology, learning content, characteristics of the educator, and the learning environment either as independent elements or as part of the whole process required during designing, planning, and implementing learning objectives. Technology Learner Content Cognitive (TELECC) Framework is one of the nonlinear frameworks designed to incorporate the four major dimensions of knowledge that focus on promoting successful instruction in learning and place the learner's cognitive values at the nucleus of the educational process. TELECC framework appreciates the role of an educational framework as a personal tool that serves as the foundation upon which the overall instructional process is built on. It further suggests that the overall frame should be tailored and customized to represent the respective institutional vision, philosophy, value, curriculum, and student's needs. The technological part of the TELECC framework examines suitable technology infrastructure in terms of hardware and software and how it fits into the instructional content and learning environment.

Keywords: cognitive, educational technology, educational framework, learning environment, learning content

Introduction

Interactive learning approaches focus on incorporating a variety of learning approaches and hands-on activities aimed at increasing learner engagement, retainment of learned content, and improving critical thinking and problem-solving skills (Koehler & Mishra, 2009) [14]. The Technology Learner Content Cognitive Framework (TELECC) generates these new dimensional forms of knowledge which are significantly important in enhancing effective pedagogical practice in a technologically augmented instructional ecosystem. Technology has endorsed a powerful shift in the approaches of classroom instruction and transformed the way teachers apply their pedagogical skills and how students perceive and adapt to the instruction process. There is, therefore, a need to come up with justifiable methodologies that will facilitate effective dissemination of knowledge through constructive connections between personal philosophies and theories, instructional content, engaging learning environment, and a focused learner's cognitive abilities. These components will help nullify the conventional linear learning approaches which are instructor-controlled, paper, and pen enhanced. TELECC is driven to become a learner-focused framework of the 21st century that is meant to generate a nonlinear approach that will guide instructors on how to integrate technology with relevant pedagogical procedures.

Meaningful learning takes place in a learner-centered environment where the teacher accelerates topics that are relevant to the needs and interests of the learner while facilitating active engagement and building connections between forms of knowledge (Keengwe, Onchwari, & Onchwari, 2009). This new framework will base its arguments on guidelines reinforced by TELECC framework as a fundamental and meaningful model of instruction that will foster effective instruction through a nonlinear approach of its elements (technology, instructor's attributes, learning environment, and content) with learner cognitive placed at the center of learning.

Background Information

Shala (2018) [20] defined an educational framework as a customized outline that represents the institutional philosophy, curriculum, student's needs, and defines the unique learning environment. It is useful in providing a foundation upon which everything in an educational institution is built upon and acts as a pillar that supports all activities that take place in the institution. This means that different institutions have different frameworks that are subjected to modifications based on the situations at hand such as a change in financial situations, type of learners, instructor attributes, and instructional materials. However, the common modalities of the instructional framework are that they should promote learning and meet significant learning outcomes, promote cohesiveness and learning culture, and appropriately define the learning environment of the institution.

Technological Pedagogical Content Knowledge (TPACK) Model

TELECC Framework was founded based on the Technological Pedagogical Content Knowledge (TPACK) model of learning and Badrul Khan's 8- Model Framework

of e-Learning. TPACK model focuses on three forms of knowledge namely Technological, Pedagogical, and Content, and offers a variety of instructional avenues to instructors facing dilemmas when directing learning using technology (Koehler, Mishra, & Cain, 2013) [14]. This model differentiates the three forms of knowledge into distinct categories and places content knowledge and pedagogy knowledge at the center of learning. It also exemplifies knowledge and content as core aspects of learning which should be placed at the center of instruction including the entire process curriculum design and classroom instruction in a technology-focused lesson.

There are unique challenges experienced during instruction using technology. It is, therefore, important to incorporate relevant models to guide instructors to understand how to integrate technology into teaching and learning in K-12 online education (Linton, 2012) [16]. Baran, Chuang, and Thompson (2011) [1] observed that TPACK places technology knowledge within the content knowledge, and pedagogy knowledge and is a relevant approach that may provide solutions to educational technology characterized class. Baran *et al*. (2011) [1] further observed that TPACK guides the teacher to make relevant and constructive choices on appropriate technology to use in teaching. Making choices on technology use should be goal-focused to meet the need and skills for learners that are essential in the 21st century and successful attainment of the learning goals. This procedure of selecting relevant educational technology should be guided by evidence-based approaches and well-researched methodologies that are founded on published frameworks and theories that are have worked before.

Educational frameworks are not limited in promoting the teaching and learning process in the learning environment but go beyond to express the unique role of the administrators and curriculum coordinators in conceptualizing their work (Foulger, Wetzel, Lindsey, Buss, & Pasquel, 2016) [7]. This is an exceptional role that has defined the function of TPACK in promoting its educational programs beyond the classroom instructional process.

These are some of the key components that TELECC borrowed from TPACK in developing its functionalities that promote learning in a technologically facilitated learning environment. Most importantly, TELECC is learner-centered and diverts from TPACK in that it situates learner's cognitive attributes at the core of a technological learning environment. Song, Wong, & Looi (2012) [26] attributed that placing learner's cognitive attributes at the center of the learning process is one of the approaches that can be used to promote personalized and adaptive learning in a seamless science learning environment using mobile technology. Technology can be used to avail vital tools useful in generating a learner-centered environment and enhance access to unlimited resources that can transform learning by promoting collaboration, creativity, critical thinking, and problem-solving skills (Chen, 2010; Hannafin & Land, 2000) [4, 9].

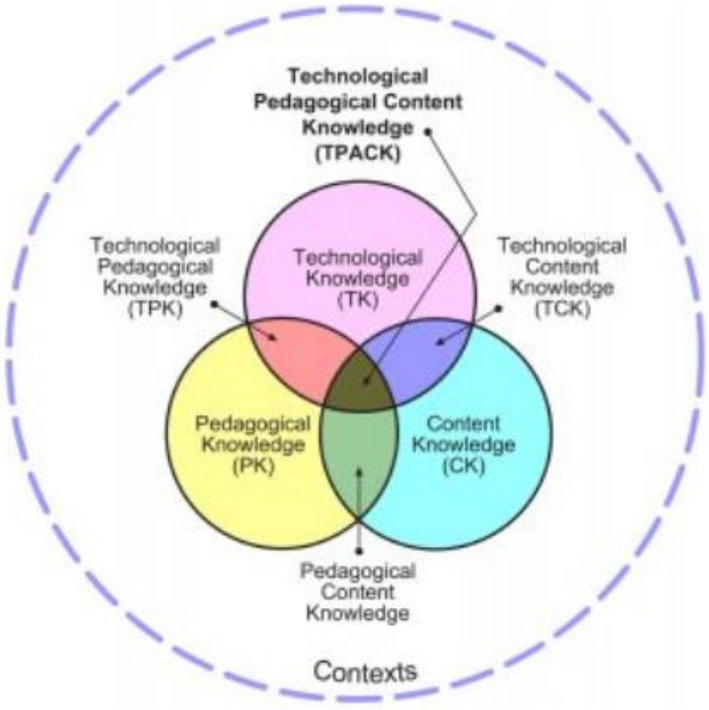

Fig 1: TPACK model of instructional Design

Badrul Khan's 8- Model Framework of e-Learning

Development of the TELECC is guided by Badrul Khan's 8-Model Framework of e-Learning. Badrul Khan's model consists of eight linear elements that define the process of designing a flexible e-Learning environment enriched with well-designed resources. In his design framework, Khan (2005) [13] suggested that designing a flexible learning ecosystem requires meticulous examination and review of how the relevant learning attributes and available technological resources align with the tenets of instructional design to avail reliable online instruction. The eight components suggested by this model include dimensions associated with pedagogy, technology, interface design, evaluation processes, management of resources, support for technological resources, ethical factors, and institutional factors.

Khan's framework for e-Learning delivers suggestions borrowed by TELECC that are applicable during planning,

designing, and organizing resources that can enrich e-Learning environments in a variety of educational settings which may include corporate educational programs, traditional learning environments, and online learning environments (Singh, 2003) [25]. This framework further offers constructive procedures for evaluating e-learning programs, authoring tools like the Learning Management Systems, and blended learning environments.

Designing a flexible e-Learning and distributed learning environment comes up with totally different approaches compared to the conventional classroom environments which are a more closed system and space-bound. TELECC conforms with Khan's eight model framework and integrates its components to address how they can promote easy access to educational resources and promote interactive learning activities from anywhere. A poorly designed learning environment is prone to be rigid and noninteractive resulting in unmet learning outcomes. However, TELECC diverts from linearity and fixed nature of Khan's eight components of the instructional design. Learning ought to be more flexible than what is suggested by Khan's framework and should begin and end at unset points that are not dictated by the framework but by diverse learner's abilities to conceptualize instructional content. This setpoint is defined by TELECC as the learner's cognitive baseline which is located at the nucleus of the framework. Instructors ought to focus on learner's cognitive attributes at any point in instructional design, planning, implementation, and evaluation processes as a way of promoting personalized learning and attending to diversified learning abilities in the learning environment.

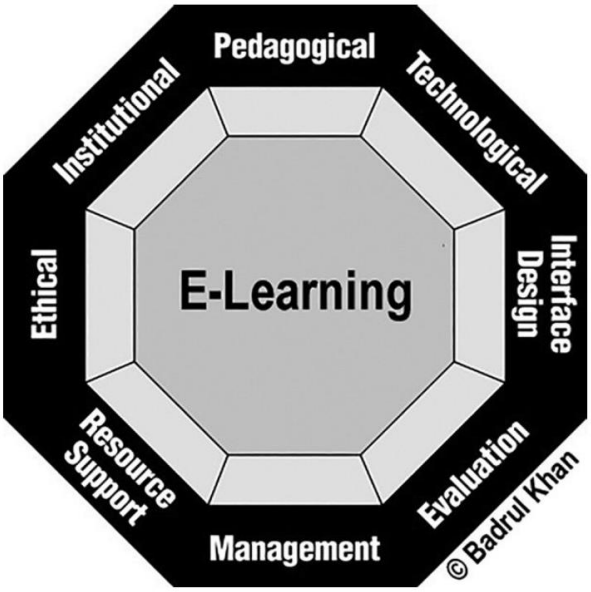

Fig 2: Badrul Khan's 8- Model Framework of e-Learning.

A learning environment is usually characterized by diverse learning abilities with fast, slow, visual, kinesthetic, social, and aural learners placed under one roof and all whose interests must be taken care of in the learning process. Both TPACK and Khan's eight models address these parameters however, in a different format suggested by TELECC. In as much as TPACK conforms with the nonlinearity nature of TELECC, its central focus is an amalgamation of technology, pedagogy, content, and knowledge. TELECC finds that addressing all the four components in tandem as a weighty process in the learning process that might culminate in underutilization or overutilization of certain aspects in the learning process. This might generate instructors' biases and ethical dilemmas which may result in underachievement of learning outcomes. On the other side, Khan's eight components of instructional design outline the eight linearly design elements. This framework is more rigid and does not allow the flexibility that is important in addressing diverse learning abilities. TELECC borrows all these components and bends them in a continuous concentric manner that allows flexibility in learning with an unfixed start and endpoint in learning.

Summary of Typical Scenario

The TELECC model consists of five nonlinear elements namely technology, learning environment, learning content, educator, and learner. The educator is the instructor or teacher and the learner is defined by cognitive characteristics while the content consists of the instructional material. The learning environment is the designated location where instruction is taking place.

The teacher comes to class and realizes that one of the students has not completed the last two assignments. The education framework reminds the teacher that the learning process should focus on the learner. Based on this, the teacher understands that different learning abilities may be attributed to diverse cognitive abilities, and a student who is not be turning in his or her assignments may be a slow learner. The teacher is compelled by the framework to change the learning environment and decides to move the student to the front desk where supervision can be easily done. To motivate the learner, the teacher decides to introduce technology that may equally serve as a form of personalized learning.

Current Issues

Education Technology in Teaching and Learning

There is a global surge in the demand to use technology in teaching and learning and changes in the delivery of instruction towards a more e-Learning, distributed, and online form. This use of technology is characterized by different forms which include virtual, online, blended, open educational resources, and use of digital resources among many others (U.S Department of Education, n.d.). Data from the National Center for Educational Statistics (2018) depict that 94% of the students aged between 3 and 18 have access to a computer at home and 61% of students of the same age have unlimited access to the internet at home. It also shows that in by Fall of 2017, 6,651,536 students were registered in some sort on online instruction in post-secondary education in the US. Another survey conducted by Educause Center for Applied Research (EDAR) observed that students demand the use of a technology-enriched learning environment. Data from EDAR realized that 49% of the students' participants prefer the use of learning management systems (LMS), 57% prefer open educational resources, 46% were for online videos, while 55% desired for game-based learning environment (ICEF Monitor, 2012; Rau, Gao, & Wu, 2008) [23, 19]. The question here is as to whether these forms of instruction meet the basic tenets which have naturally been characteristic in the conventional and traditional methodologies of instruction.

Technology Learner Content Cognitive Framework (TELECC).

The TELECC framework is designed to address matters to do with the institution, educational resources, learner needs and environment, and instructional content while focusing on the learners' cognitive attributes. This is because one of the important qualities that define the learning environment is the diversity of students' cognitive levels (Ke, 2010). That is why the structural model of TELECC is nonlinear with the learners cognitive situated in the middle of all the other components implying that the main focus of the overall learning process is the learner. The nonlinearity nature of this framework provides opportunities for the flexibility of the instruction process guided by the diverse needs of learners. This flexibility also addresses questions to do with student's interactions and adaptable utilization of time. Brand-Gruwel, Kester, Kicken, & Kirschner (2014) [3] alluded that a flexible learning environment enables learners to significantly develop self-directed and regulated skills and establish their personalized learning trajectories on their own. It is therefore crucial that a relevant instruction design framework be devised to allow the advancement of self-directed and regulated learning skills to enable students to cope up with changing demands of the society and skills necessary for the 21st Century (Brand-Gruwel *et al*. 2014) [13]

The four-element of TELECC framework are technology, educator, learning content, learning environment, and the learner are shown in the framework below.

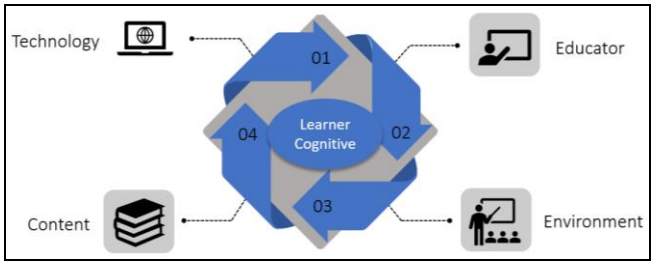

Fig 3: Structural model of TELECC Framework

Technology

Technology is becoming a very important tool in boosting the relationship between the instructor and the learners and making learning more meaningful and pleasurable. There are driving forces, more so from education technology companies and politicians, that are compelling institutions and teachers to adopt technology without taking into other parameters that may influence the successful utilization of these resources. Equally, relevant educational stakeholders and policymakers continue to disagree on the relevant models they should adopt due to the rapid global emergence and dynamism of educational technology (Maccombs and Vakili, 2005) [18].

Not every technology is good for learning and neither not all instructors are technocrats in using education technology. There is, therefore, a need to effectively plan on the nature of the technology that inclines with the pedagogical beliefs, curriculum, and teaching practices of the respective institutions (Lim & Chai, 2008) [15]. Gülbahar (2007) [8] noted that planning and designing for a remarkable technology for instruction is a complex process that requires expertise, proficiency, and experience in the field of educational technology. Teachers can effectively achieve this process through proper planning using well researched and documented frameworks, models, and theories developed based on their institutions.

TELECC Approach for Educational Technology

Incorporating technology in teaching can be overwhelming to some educators. This is one of the reasons that theoretical models, frameworks, or theories have been developed in teaching to assist them to effectively integrate technology in meaningful ways. It is this view that Hur, Cullen, & Brush (2010) suggested that a technologically related educational framework should create a community of learners, enhance the development of technological pedagogical and content knowledge, and support the application of knowledge in real-life experiences. These factors are essential in confronting the challenges raising from teaching learners' skills and expertise that are required to cope up with technological advancements of the 20th century. The TELECC framework was developed based on these attributes.

The approach presented by TELECC framework on education technology use is guided by questions responding to needs on infrastructure planning, software, and hardware development, developing a technologically enriched learning environment, and digital tools. Educational stakeholders should ask themselves whether available technology can accelerate deep understanding, easy to use, cost-effective, and sustainable. The same questions should guide instructors when planning, designing, implementing, and evaluating their learners based on technology integrated lessons or curriculum. Most important is that the technological elements of TELECC focus on the students' needs, adaptability, and capabilities to demonstrate learning.

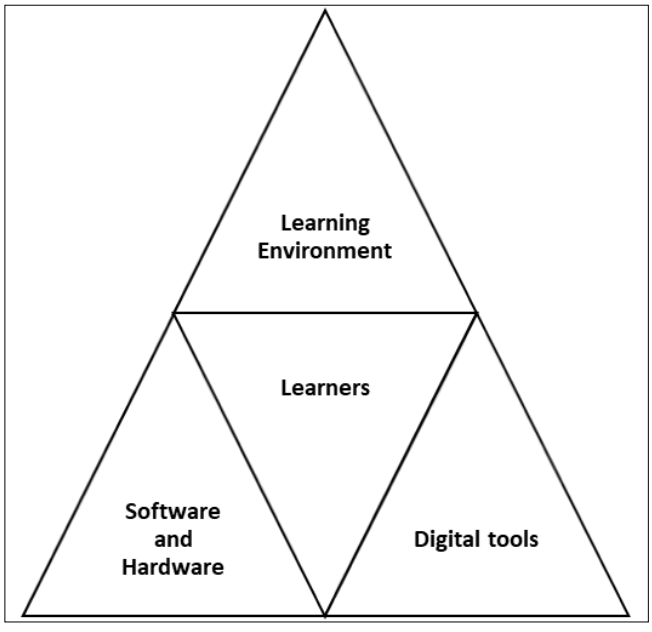

Fig 4: TELECC Technological Framework

Educator

TELECC defines educators as the teacher or instructor who leads the instructions process. In the conventional teaching method, the teacher leads and controls the entire learning process and is deemed to be the sole source of information while using relevant resources such as textbooks. This approach is more of a lecture method that is not guided by

appropriate learner-centered models which are known to motivate and invoke interactive environment, constant feedback, personalized and adaptive learning. Jaebi (2018) [11] noted that the overreliance of the teacher in learning does not encourage the learners to develop critical thinking skills and the ability to apply new information in new environments. This is because most traditional methods of learning focus on standardized requirements, completion of the syllabus, and students excelling in exams at the expense of student-focused learning.

The Role of the Teacher in TELECC Framework

The demerits experienced in the traditional learning approaches call for educational frameworks and models that explicitly define the role of the teacher in integrating technology and being part of the learning process in the classroom. The TELECC framework addresses the relevant designations of the instructors in terms of teacher competency, ownership of personal philosophies and guiding theories, and knowledge of ethical dilemmas such as biases

Personal Teaching Philosophy

Teachers ought to consistently reflect on the core values and beliefs of their professionals as educators as a means of motivating themselves, rejuvenating their egos, and staying focused on their role as educators. TELECC calls for ownership and posting of a personal teaching philosophy where it can be constantly viewed by the teacher. Constant viewing and reflection of the personal teaching philosophy statement will help create connections between the shared values within the teaching fraternity and constantly keep updating the teacher on classroom practices (Beatty, Leigh, & Dean, 2009) [2]. TELECC suggests that while addressing personal and professional growth in their philosophies, the focus should be on the learner. This is because the learner is the overall beneficiary of the educational process.

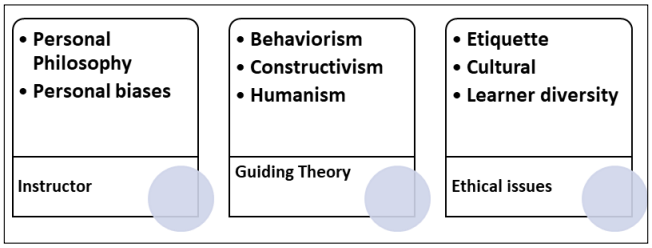

Fig 5: The educator component framework

Personal Guiding Theories

The teaching profession was founded on principles that were driven by learning theories that seek to guide through educational processes and create appropriate strategies in educational practices (Wilson & Peterson, 2006) [27]. Just like the personal philosophy of teaching, educators need to own and conceptualized a relevant personal theory of learning which should be integrated into the overall framework of the educational process. This is because learning is a complex process that consists of vital elements of human development over a very long time and therefore studies involving humans have resulted in different learning perceptions which include behavior, cognitive, social learning, and constructive (Conradie, 2014) [6]. These perspectives have led to the development of important paradigms in the form of learning theories that play important roles in instructional design to address the unique and diverse learning environments. Conradies (2014) [6] further noted that most studies do not authentically ascertain that traditional approaches of learning are supported by these learning theories (behaviorism, cognitivism, humanism, and constructivism). However, this study notes these learning theories support blended learning which is bolstered by educational technology and therefore prudent to have them with the relevant educational frameworks.

TELECC framework of learning conforms with the concept of integrating the leading personal and learning theory to guide the teacher in planning and implementing the learning outcomes. This framework advocate for ownership of a learning theory that can explain the observable learning characteristics of learners and relate them to specific problems. Educators should modify their learning theories to align with the learner's or educational observable characteristics, institutional needs, available resources, and the already established solutions. Most importantly, individual learning theory should inspire creativity and predict zones that may require further attention within the learner's cognitive abilities.

Professional Ethics

Teachers not only support and guide learners through academic progress but also serve as role models on valuable life and society matters. Professional ethics guide and facilitate the teacher's ability to deliver good quality teaching and instill decent values to the learners (Sherpa, 2018) [21]. This constantly reminds teachers about their major role in addressing and informing their students about positive values and changes in their behavior. Conceptualizing professional ethics helps teachers to understand their responsibility as professionals and supreme figures in their classrooms. Sherpa (2018) [21] further noted that having a sense of professional ethics propels the teacher’s commitment to treat their students with dignity, love, and compassion, and decisions form the student's perspective.

The TELECC model of instruction design alludes to the teacher's professional practices from the student's perspective. Focusing on student's behavior while having the concept of professionalism in mind will help understand the student's diverse behaviors and their responses to different situations. Understanding the significance of professional ethics in the respective educational framework as accorded by TELECC will act as a constant reminder to the teacher on the importance of professional ethics and defining their crucial role as instructors. Teachers are guided by professional ethics to perform their duties, however, as human beings, they are prone to forget some parts. TELECC presents the significance importance of incorporating students centered professional development programs in its framework as part of professional growth and modeling best practices that help conceptualize professional ethics and overall development of the learner.

Learning Content

Teachers use content in the form of PowerPoints, links, lectures, or rich media to communicate new information and learning materials to learners. Appropriate content should be designed in alignment with the set standards of the instructional curriculum and learning objectives so that the required education outcomes can be effectively achieved.

Academic standards and learning objectives are usually intended to meet the needs of all the learners in the classroom and, therefore, the focus while working on content should be the learner. However, one of the challenges facing instructors is generating and presenting new learning content (Steininger, 2016) [22]. An efficient instructional content should draw remedies based on a variety of learner's attributes such as age, learning styles, learning environment, and time limits required to complete the instruction curriculum.

TELECC addresses problems associated with constructing learning content by integrating key innovations that have proved to work for some time in arrays of educational fields but have not been incorporated into instructional frameworks. As such, this model brings in a configuration of best instructional tenets that address the process of developing content, presenting, and modifying it to suit the dynamic learning process and diverse student abilities. It is within these facets that the TELECC model suggests pertinent solutions on the best pedagogical approaches of presenting learning content and practices used in designing learning content based on already established instructional practices. Below is a model of designing learning content presented by TELECC

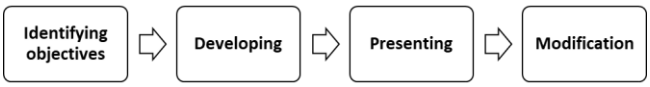

Fig 6: Component of developing learning content.

This model depicts that developing and presenting learning content is not a continuous or constant procedure, but a dynamic process that is subject to modifications based on learner's factors that may arise in the process of instruction. The focus of these modifications is mainly attributed to the challenges and diversity of learners which propels the instructor to amend the content as a means of addressing the need of all the learners in the classroom.

Learning Environment

A learning environment is characterized by diverse instructional demands that differentiate learners into categories of which the teacher ought to respond to. Accounting to all needs of learners in the classroom is a challenge to most instructors and requires impartial approaches that enhance cohesiveness and promote learning within the norms of professional ethics.

The diversity of physical, social, cultural, and psychosocial elements that brand learning environments contribute to challenging situations to some teachers when setting up favorable learning environments. Such challenges may result in an unconducive learning environment that may hinder students from achieving new skills that are supposed to define the outcome of their learning. It is therefore important for teachers to investigate and integrate relevant teaching strategies that are known to promote a positive learning environment which will account for the diverse learners' needs and establish a sense of connectedness among the learners. To effectively enable a good learning environment, instructors should first and foremost appreciate that a learning environment can be quantified from different learner's perspectives that constitute the learning process. McCombs and Vakil (2005) [18] concurred with the existence of different definitions of learning environment when they were designing a learner-centered framework for e-learning and suggested that a learning environment is defined by learning culture, learning activities, instructional goals, and assessment strategies. A learning environment is not definite, it is created to adapt to the immediate environment.

The TELECC framework merges all the elements that characterize the learning environment and categorizes their roles in the context of the learner attributes. This framework acknowledged teaching goals, a positive environment, recognition of learner's needs, safety, and appropriate evaluation procedures as significant features that should be considered in a learning environment. Like the learning content, this framework advocates for a learning environment that is not fixed but a learner-centered and subject to modification depending on the immediate needs of the learners.

Fig 5: The components of the learning environment

Safe Learning Environment

A safe learning environment should exist devoid of any form of intimidation, bullying, and all forms of harm. Such a learning environment should inspire learner's creativity, inquiry, and development of problem-solving skills, factors which are characteristic in successful learning environments. This environment also propagates and enhance good leadership among learners' skills both in and away from school. It is therefore important for teachers to be conscious of the warning signs or triggers of intimidation, bullying, and harassment in their classrooms and instill intervention measures (López *et al*. 2015) [17]. The TELECC framework appreciates that teacher's knowledge of the student's culture, social, and economic background as crucial factors that can be used to create a secure, strong, and supportive learning atmosphere.

Positive Learning Environment

One of the most important skill-based elements that define a healthy learning environment is a positive learning environment that recognizes the value of connectedness among students and teachers. A positive learning environment should cultivate the culture of trust among the learners and their teachers which will subsequently motivate them to actively participate and engage in the learning process. This process creating a positive learning environment should start with the teachers reflecting on themselves, their students, and what they are planning to teach (content) and then plan based on the outcome of their

reflections. Finally, they must ensure the continuous and flexible implementation of the curriculum. It is important to note that all these components of self-reflection are found in the TELECC framework as independent entities that portrays the flexibility of this framework.

Learning Needs

A learning environment is characterized by diverse learning demands that differentiate learners into categories that the teacher ought to respond to. Accounting to all needs of learners in the classroom is a challenge to most instructors and requires impartial approaches that enhance unity and promote learning and should be within the restrictions of professional ethics.

Preparing Teaching Goals

The TELECC framework recommends that teachers self-reflect on their teaching goals, most likely the ones posted in their philosophies, and reflect on their role in the growth of the student's intellectual and personal development. Teachers are encouraged to distinguish teaching goals from lesson goals and should reflect the overall objective designed by the institution and the overall framework. This framework believes that one cannot plan for curriculum instruction without having the overall view of the institutional demands, available resources, and set standards in mind. This framework will act as the baseline that will guide the teacher in developing a suitable curriculum that focuses on the specific learning demands which should be posted in some sections of the general framework.

The focus of teaching goals under the TELECC framework is wide and does not only emphasize the importance of the classroom environment but also address matters that mentor learners to grow as intellectuals and inspire them to realize their potential.

Conclusion

The shift towards the use of educational frameworks that promote effective teaching and learning mechanisms have been seen to produce significant results in learning outcomes. A good framework should create a common roadmap of instructional practice and set a vision of instructional excellence that can easily be conceptualized and interpreted by all stakeholders of the institution. This study further noted that teaching and learning frameworks should be grounded on evidence-based educational research studies founded on psychological, cognitive, sociological, and educational fields that affect teaching and learning processes and help teachers to connect instructional goals with classroom activities. They should incorporate a variety of instructional models, create an interactive and motivating learning environment, and ensure that assessment procedures are set at the end of the instructional process.

Best teachers may be characterized by personal traits such as commitment, long experiences, academic qualification, and good classroom management skills. However, the implementation of the curriculum requires reinforcements from conceptualized structures or protocols in the form of frameworks that are learner-centered to guide and support them through the stages of planning, designing, executing, and evaluating the learning process. The TELECC framework distinguished and documented important teaching and learning factors that have been identified through empirical studies and theoretical research data conducted to investigate how to improve learning outcomes in schools. These factors focus on learner's diversity and seek to answer questions on what teachers should know and practice while executing their duties.

This study identified the significance of the simultaneous application of nonlinear and interconnections of learning domains namely technology, content, learning environment, and educator attributes while focusing on the learner. Research on cognitive science has depicted that learning is a nonlinear process because of the multiplicity demands of learner needs. Therefore, different students require different accommodations based on their cognitive abilities. The concept of “uniform curriculum” is null and void in any learning environment. This necessitated the construction of the TELECC framework by merging most of the elements of successful learning that were extracted from literature into its four core components. Each component defined distinct learning traits that revolved around the leaner and provided remedial opportunities on learner weaknesses which enhanced the achievement of learning outcomes.

Research has also shown that teaching is among the most cognitively and emotionally demanding profession. Teachers are required to track student's performance, make decisions, communicate to parents, and attend to administrative and personal duties. These factors may increase stress levels and even generate mental health problems that may affect their performance. Most educational frameworks have not addressed nor documented these concerns. Documenting self-reflection activities in an educational framework under personal philosophies and learning theories motivates teachers to understand their professional challenges, student's abilities and needs, and how to address them.

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