Constructive alignment and the curriculum: A call for improved pedagogical practices in higher education

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Abstract
Throughout the years, the age-old practice of higher education learning and teaching has evolved in different ways, benefiting some students and forsaking others. From the turn of the century, there have been fervent calls to reform the curriculum in such a way that all students benefit. In light of heated debates, ‘constructivism’ was embraced as the new learning theory that would cause an improvement in student learning outcomes. Much later, ‘constructive alignment’ emerged, which sought to revolutionise the curriculum, significantly modifying pedagogical practices. Consequently, this article seeks to address constructive alignment in the curriculum and the urgent need to improve didactic practices in higher education. To this end, a discussion ensues on the curriculum and its necessity in pedagogy. The different approaches to curriculum design are highlighted and briefly discussed. The theory of learning is discussed, with special emphasis on constructivism and its off-shoot, social constructivism. Outcomes-based education is discussed, paving the way for constructive alignment. The necessity of constructive alignment in educational practices is highlighted, together with Biggs’ SOLO taxonomy. Information and Communication Technologies are presented as a prerequisite in a constructively-aligned curriculum. Further, educational leadership, pivotal to the entire process, is also considered, with special reference to pedagogic/instructional leadership, as part of the management of change process. Conclusions are drawn from the information, establishing that a constructively-aligned curriculum has the power to maximise student learning outcomes. As an appendix, the design of one constructively-aligned lesson is presented, as an example, crystallising the relevance of constructivism in instructional practices.

Keywords: higher education, curriculum, constructive alignment, curriculum planning, curriculum design, curriculum development, constructivism, intended learning outcome, learning-teaching activity, assessment task.

Introduction
Learning and teaching are appreciably connected. Throughout the years, these phenomena have evolved in different ways, benefiting some students and forsaking others. In the olden days, the teacher was the sage on the stage who directed the show from start to finish.

For too long, pedagogical practices were teacher-centred, with no real concern for the student or what he was expected to do. He was either bright or not. And whether he was bright or not determined if he succeeded or not. This kind of scenario was counter-productive and only ensured that students used low cognitive skills to complete tasks, thus resulting in a surface approach to learning.

Consequently, in tertiary learning and teaching, there is a growing concern about the teaching methods used to maximise student learning. Educators agree that these must eliminate surface approaches in favour of deep approaches to learning (Ramsden, 2003; Hattie, 2009; Biggs & Tang, 2011).

“Since 2000 there have been dramatic changes in the nature of higher education. It is not just that participation rates are higher than ever […], but that these and other factors have altered the main mission of higher education and modes of delivery” (Biggs & Tang 2011, p. 3).

Owing to this, and together with the Bologna Process (2010) of 1999, which has had a profound impact on the delivery of Higher Education (HE), there have been fervent appeals for teaching effectiveness, a situation which heightened with the passage of time. In other words, there has been a felt need for tertiary learning and teaching to divorce itself from teacher-centred approaches and espouse student-centred approaches. This call has been primarily due to the fact that there has been an influx of students, entering HE institutions, with distinct learning abilities.

To this end, apart from academic programmes, there is an urgent call for the integration of professional, technical and vocational education programmes to meet the demands of this diverse student population. An outcomes-based teaching and learning (OBTL) approach - constructively aligning teaching to achieve intended learning outcomes (ILOs) (Biggs & Tang, 2011) – is not only the answer to this student diversity, but is also the way to respond to growing concern about 21st century learning and teaching.

It is in this light that the concept of curriculum takes centre stage. Livingstone (2014, p. 1) offers the following information about the curriculum:
“It is the curriculum that determines if a teacher-centred or student-centred approach will be adopted. The curriculum is a blue-print of the pedagogical process. It clearly depicts all the desired expectations for student learning. According to Prevedel (2003, p. 8), “Most simply put, a curriculum is a guide for learning”. The term curriculum has been derived from the Latin word ‘currere’ signifying a ‘race course’ or a runway on which one runs to attain an objective. Accordingly, a curriculum is the instructional and the educative programme through which learner achieve their goals, ideals and aspirations of life. It is curriculum through which the general aims of a school education receive concrete expression”.

Given that traditional curricula are teacher-directed (Fraser & Bosanquet, 2006), and may not necessarily address student learning outcomes, there has been a cry for improved pedagogical practices. To address this call, the curriculum of HE institutions has been undergoing significant change to embrace student-centredness (Ramsden, 2003; Fraser & Bosanquet 2006; Biggs & Tang, 2011) and to address the current student learning diversity. It must be constructively aligned [CA] (Biggs & Tang, 2011). It must be all about “what the student does” (Shuell 1986, p. 429).

The Curriculum

Any project, concept or initiative in life needs to be properly planned, if it is to be successful. It must have a framework which defines it. This is the method to be followed for everything, in which Education is no exception. When embarking on an initiative, one needs to ascertain that all of the plans have been appropriately drawn up. What is to be offered? What resources are available? What resources are required? What steps need to be taken? What are the likely goals to be attained? These are important questions that are addressed. Similarly, when applied to the field of education, and in educational institutions, these procedures to be followed give birth to curriculum (Livingstone, 2014).

The curriculum is an important element in which educational aims are reflected. In fact, the curriculum is determined by the aims of life and society, which are subject to constant change. Consequently, the aims of education are also subject to change and dynamism. A curriculum is a strategic plan of action, a structured document, a process, which promotes and fosters creativity, application and life-long learning by means of carefully defining the psycho-sociological philosophy of learning and teaching, goals and objectives, learning experiences, instructional practices and resources and assessments that encompass a programme of study. It verbalises the roles of students and teachers, throughout the pedagogical process. In essence, its purpose is to maximise student learning outcomes while ensuring that they have significant educational experiences (Livingstone, 2014).

The key components of a curriculum are the goals and objectives, content, method, and evaluation. The goals and objectives are the nucleus of the curriculum. The goals are the general categories of content to be addressed. The objectives must be crystal clear and ‘specific, measurable, achievable, realistic and time-framed’ (Maki, 2004), listing the particular knowledge, skills and attributes that learners are to achieve throughout the process. They are intended learning outcomes [ILOs] (Biggs & Tang, 2011). The content is the “what” of the curriculum. This is another very important facet of the educative process as the body of knowledge selected must be authentic, relevant and real-life to the students. It must not be abstract, but must be information with which the students can readily and easily engage. The method or instructional strategies are the “how” of the curriculum and include the methods to be used to assist learners to attain the determined goals and objectives. These are learning-teaching activities [LTAs] (Biggs & Tang, 2011). The evaluation strategies determine “how well” the learner outcomes are achieved, assessing learner, teacher and lesson/course/programme performance. These are assessment tasks [ATs] and grading (Livingstone, 2014).

As espoused by Squires (2004, p. 5),

“Curriculum is the container that holds the institutional knowledge of what was the best of past instruction. Curriculum, viewed in this way, is a historical document. Curriculum is also a plan for the present. Curriculum represents how to improve in the future. Curriculum, while rooted in the present, takes the best of the past to make the future better”.

Paying careful attention to what Squires (2004) has said above, it is not unfair to say that this is the primary reasons why the curriculum has experienced mutated over the years. In other words, the curriculum has transform to suit the context in which it finds itself. Given the clamour for teaching effectiveness, there is a felt need that the curriculum must seek to address student learning; in fact, students must be the central focus since it is all about ‘what the student does’ (Tyler, 1949; Shuell, 1986; Biggs & Tang, 2011).

The curriculum has experienced four major changes to its theory and practice over the years (Smith, 2000), and these are discussed below.

Curriculum as a body of knowledge – In this discussion, the curriculum is seen as a syllabus which focuses...
on content delivery using effective teaching methods. It is very basic, theoretical and discipline-specific in nature. It basically provides a list of knowledge for students to learn. This list is compiled by the teacher or subject matter experts, and the teacher will implement with little or no guidance to aid learning progression. In fact, since curriculum is equated to syllabus, which emphasises content, teachers who adhere to this belief feel that the issue of curriculum no longer concerns them, once the content is taught to the learners effectively (Livingstone, 2014).

Curriculum as a product – This approach, based on Tyler’s (1949) linear model, and ratified by Taba’s (1962) model, affirms the importance of setting behavioural objectives. It focuses on what the learners are able to accomplish upon completion of studies. Based on systematic and organised planning, it assumes all learners have common goals and the required resources available to aid in learning. A needs assessment for such a curriculum is usually accumulated based on specific job skills required in a professional environment. It relies on the assumption that for any specific job, a full set of skills is readily identifiable (Livingstone, 2014).

Curriculum as a process – This approach typifies the constant students-teacher-content interaction, and fosters curriculum preparation and evaluation. It is not rigid and less structured, recognising variations in social groups and individual behaviours. It may be adjusted according to the needs communicated and evaluated by those involved in the learning process. It acts as an intervention strategy. Emphasis is on the ever-changing communication mediums between people and their environments. Such a curriculum attempts to identify learning outcomes on an individual basis. Stenhouse’s (1975) and Sharpes’ (1987) exploration is regarded as one of the best conceptualisations of the process model (Livingstone, 2014).

Curriculum as praxis – This approach, in many ways, is an expansion of the process model. Curriculum as praxis makes unequivocal statements about the interests it serves. Continual reference is made to collective human well-being and social justice. It highlights explicit commitment to the emancipation of the human spirit by collectively encouraging students and teachers to confront the real problems of their existence and their relationships through interaction, reflection and informed actions. This model is an expression of critical pedagogy (Grundy, 1987) which goes beyond positioning the learning experience within the experience of the learner (Livingstone, 2014).

In the traditional curriculum, the goals set; learning experiences are chosen; the curriculum is proposed, planned and evaluated; knowledge exists, thus is neutral, equitable, organised, transmitted, observable and measurable; goals are pre-determined; learning is linear and chronological; expert knowledge is needed; it is skills-based, or competency/performance-based; assessment is objective and measurable to provide comparative scores and grades (Livingstone, 2014).

In the learner-driven curriculum, the learning goals from real-world roles are articulated by students, who help plan curriculum; there is student-content interaction; it builds on students’ declarative knowledge; it is relevant to students’ daily context; learning and teaching happens in social contexts, is transparent and is based on student-determined purposes; active participation in necessary for knowledge construction; assessment is on students’ contextualised goals, is continuous, and it involves meta-cognitive strategies (Livingstone, 2014).

In the critical curriculum, the classroom sessions are teacher-facilitated; students are experts; there is no fixed structure; it is dependent on complex student-content-teacher interaction and is autobiographic; knowledge creation takes place; education is political; language and power are connected; important social and community issues are addressed; technician mentality is abandoned; the curriculum is not pre-determined, emerging from action and interaction of participants; assessment is done via portfolio/other assessment instruments; socio-personal change is measured, and critical consciousness levels are attained (Livingstone, 2014).

The curriculum development models put forth by both Smith (2000) and Prevedel (2003) complement each other. In this century and beyond, it is of paramount importance for the focus of the curriculum to be on student learning.

Theory of Learning
The learning theory that orients this article is constructivism. It is discussed briefly, justifying its necessity for quality educational practices in HE.

Constructivism
In recent times, there has been a shift to constructivism (Ally, 2004). Constructivist theorists (Piaget 1928, 1962; Vygotsky 1926, 1962; Dewey 1929, 1933; Dewey & Bentley, 1949; Bruner 1960, 1966, 1973; Jonassen, 1999) claim that learners interpret information and the world based on their personal reality, and that they learn by observation, processing, and interpretation, and then personalise the information into personal knowledge. In other words, learners learn best when they can contextualise/situate what they learn for immediate application.
and to acquire personal meaning. Constructivists see learners as being active protagonists of their learning (Cooper, 1993; Wilson, 1997; Tapscott, 1998). The learner is the centre of the learning, with the teacher playing an advisory and facilitative role. Duffy and Cunningham (1996) postulate that learners should have the opportunity to construct knowledge instead of being the receivers of knowledge through instruction. It therefore follows that learning must move away from teacher-centred instruction to knowledge discovery and construction.

Social Constructivism

“The level of potential development is the level at which learning takes place. It comprises cognitive structures that are still in the process of maturing, but which can only mature under the guidance of, or in collaboration with, others” (Vygotsky 1978, p. 50). Social constructivism was developed by Vygotsky (1978), a post-revolutionary Soviet psychologist. Its emphasis is on the collaborative nature of learning. Vygotsky, though being a cognitivist at the time, discarded the hypothesis made by other cognitivists like Piaget (1962) that separating learning from its social context was possible. He defended his stance that all cognitive functions originated in society, and should therefore be explained as products of social interactions, since learning was not simply the assimilation and accommodation of new knowledge by learners; in fact, it was the process by which learners were integrated into a knowledge community.

According to Vygotsky (1978, p. 57)

“Every function in the child’s cultural development appears twice: first, on the social level and, later on, on the individual level; first, between people (inter-psychological) and then inside the child (intra-psychological). This applies equally to voluntary attention, to logical memory, and to the formation of concepts. All the higher functions originate as actual relationships between individuals”.

This relationship between individuals can blossom into a community of learner, or learning community, where this is mutual interdependence.

Vygotsky’s (1978) four principles of social constructivism are: (1) learning and development in a social, collaborative activity; (2) school learning should occur in a meaningful context and not be separated from learning and knowledge children develop in the ‘real world’; (3) out of school experiences should be related to the child’s school experience and, (4) Zone of Proximal Development. It is important to mention that these principles highlight the critical weight of culture and the significance of the social context which is largely responsible for the development of students’ cognitive skills. His ‘Zone of Proximal Development’ is perhaps his best-known theory, which argues that, with assistance from adults or more advanced learners, the less advanced students can master concepts and ideas that, on their own, might pose challenges to them.

The constructivist approach to learning and teaching is absent from the pedagogical practices of many higher education institutions (HEIs). Educational practices in some of these HEIs are still based on the traditional approach (Livingstone, 2013). Teacher-centred strategies are still employed, where the teachers impart knowledge and students absorb it. Students are not the centre of learning; in fact, they are passive learners. It is a very daunting situation, as students are not given the opportunity to have autonomy over their learning. Most learning-teaching activities are still largely individual. There is not much interaction and communication to complete assigned tasks.

Since learning is not static, learning theories must change to suit the broader educational context in which they are found. ‘Quality learning’, as noted by Biggs and Tang (2011), is all about ensuring that learners use the appropriate cognitive skills required to construct knowledge and negotiate meaning during task completion, thus paving the way for creativity, application and lifelong learning. They must be provided with a broad-based learning and with a repertoire of learning tools and sources. Employing the social constructivist approach will ensure quality learning for all students at the tertiary level. Such an approach paves the way for the outcomes-based approach and constructive alignment.

Outcomes-Based Education

Given the ever transforming scenarios in HE institutions, and the need for quality assurance, outcomes-based education (OBE) sprung forth. According to Biggs and Tang (2007), OBE has been used in a variety of views, including for enhancing learning and teaching and for further a managerial agenda. In some instances, and in some circles, OBE is synonymous with competency-based education (CBE); however, Biggs and Tang (2007, 2011) are not at all in agreement with this assertion. These authors affirm that CBE is but an example of OBE. The difference lies in the definition of the outcomes in OBE, as against the specification of narrow competencies and skills, typical of CBE.

The first version of OBE is owed to Spady (1994) who offered an individualised programme for underprivileged school children. He referred to it as ‘outcome-based education’. Instead of focusing on the typical subject areas, he proposed targets for each child to attain, so that in that way they could all reach some level of success.
What angered his fiercest opponents was the fact that his targets included a values component that some felt was of no particular concern to the school. In spite of all of this, Spady’s (1994) model gained ground in several education departments in Australia, with some modifications here and there.

With the passage of time, the second version of OBE emerged. This version emerged to respond to the needs of accountability in HE institutions in the United States (Ewell, 1984; Miller and Ewell 2005). Its main focus was on institutional level outcomes which were made up of average student performance and various other types, with a view to meeting the specific requirements for accreditation and those requests made from external stakeholders. Consequently, many North American HE institutions now have outcomes statements incorporated into their curriculum.

The third and final version of OBE resulted in outcomes-based teaching and learning (OBTL), with its origins in Professor John Biggs (Biggs 1999a, 1999b). OBTL had its genesis in the Dearing (1997) Report. In this Report, the outcomes are specifically defined to promote and foster teaching and assessment. The first critical feature of OBTL moves off from the notion of defining the outcomes of a study course or programme. In this regard, the outcome statement expresses what students should learn, and how well they have learned what they were supposed to. These outcomes statements are referred to as learning outcomes. Such a principle completely distances itself from the traditional curriculum which embraced ‘coverage’. In OBTL, space is created for unintended but desirable learning outcomes.

The second critical feature of OBTL is that pedagogical practices should be executed in such a way that the majority of students are able to achieve the learning outcomes. In other words, learning and teaching activities need to be created, with the primary objective of engaging students. Engaging students in meaningful didactic activities is a primary indicator of their attaining the learning outcomes. The third critical feature deals with evaluating student performance. After having provided students with the necessary stimuli, it is therefore necessary to measure how effective the stimuli has been, ascertaining whether or not the learning outcomes have been met. These various features reach their peak in constructive alignment.

Constructive Alignment

Constructive Alignment (CA) has its origins in Professor John Biggs, and it symbolises a fusion between a constructivist understanding of the nature of learning and an aligned design of outcomes-based learning and teaching. Biggs attempts to bring together a theoretical approach to learning (constructivism) with the practice of instructional design.

CA (Biggs & Tang, 2011) is the unity between intended learning outcomes (ILOs), learning and teaching activities (LTAs), and assessment tasks (ATs) and Grading, in an educational programme, where the connections between them are aligned intrinsically on the basis of the learning activities expressed in the outcomes statements. It is an approach to curriculum design that optimises the conditions for learning, where the teaching activities of the teacher and the learning activities of the student are both directed towards the same goal.

Constructive alignment is constructive because it is based on the theory that students construct meaning from the activities they do to learn. Alignment reflects the learning activities in the intended outcomes, expressed as a verb that has to be activated in the teaching to achieve the outcome. Once the verbs (such as reflect, hypothesise, solve, generate) are specified, it becomes clear what the LTAs to engage the student might be, and what the student needs to perform in the ATs. ATs verify that the outcome has been achieved. The LTAs as well as the ATs should be designed to meet the ILOs.

SOLO Taxonomy

In relation to the achievement of the learning outcomes, one significant contribution of Biggs is his Structure of the Observed Learning Outcomes (SOLO) taxonomy (Biggs & Collis, 1982; Biggs 1999a, 1999b). This notable structure describes the level of increasing complexity in a student’s understanding of a subject, through five stages: prestructural, unistructural, multistructural, relational, and extended abstract. In the prestructural stage, students are merely getting bits and pieces of disjointed information that do not make any sense to them. In the unistructural stage, students make easy and clear connections of the work, but they do not grasp its meaning. In the multistructural stage, students make various connections, but fail to grasp connections between them. In the relational stage, students are now able to grasp and relate the meaning of the parts, in conjunction with its whole. In the final stage, the extended abstract stage, students not only now have the capacity to make connections within and beyond the boundaries of the subject area, but also to make generalisations and transfers of principles and ideas. Figure 1 presents this SOLO taxonomy, as taken from Biggs and Tang (2011), which presents a staircase of verbs to be used when writing learning outcomes.
In designing constructively-aligned tasks, it is advisable to use this SOLO taxonomy. A course is constructively aligned when the learning objectives are clearly stated and communicated to the students, and the learning and teaching activities and the assessments match the learning objectives. In an aligned course, the teacher aligns the assessment tasks with the learning objectives such that the learning objectives are evaluated to see how well they have been achieved. Biggs and Tang (2011, chapter 1) present the tale of ‘Susan’ and ‘Robert’. ‘Susan’ is an intelligent student, self-motivated, and always derives deep learning from her studies, even if the approach is superficial. ‘Robert’, on the other hand, seems not too interested and adopts a surface learning style, since his aim is to pass the course only. The external motivation of Robert is effectively used to make him learn. In an unaligned course, it is the teacher’s intention that the students learn to ‘analyse’ and ‘apply’. The assessments measure the ability to ‘identify’ and ‘memorise’. The ‘Roberts’ will complete the minimum requirements and will only study what is directly required in the exam, thus totally ignoring the ILOs.

Therefore, it can be summarised that for CA, the following principles are pre-requisites, and must be carefully considered: (1) Defining ILOs; (2) Designing ATs to see how well students have met the ILOs; (3) Specifying TLAs to achieve ILOs, and (4) Determining Grading Criteria and Grade. CA is the keystone concept behind the current requirements for programme specification, and especially for its promotion of the use of criterion based assessment (CBA). This kind of assessment is a strong reaction against the norm based assessment (NBA), as it is concerned with grading students holistically and not analytically, as is the case with NBA.

The value of CA in learning and teaching is priceless. CA is all about ensuring that there is harmony in the way students are expected to learn course content. This is not to be done haphazardly, but should be thoughtfully planned and crafted with the students in mind. The principal objective is to make learning student-centred, which is in sharp contrast to the traditional teaching approach. Shuell (1986) reveals that “it is helpful to remember that what the student does is actually more important in determining what is learned, than what the teacher does” (p. 429). In essence, students are encouraged to be the protagonists of their own learning. They are the ones who are responsible for taking control of their own learning during task execution. During task execution, students are expected to use high cognitive skills to realise tasks, stimulating higher order thinking and a deep approach to learning.
Information and Communication Technologies

Information and Communication Technologies (ICTs), according to Tech Terms (2010, p. 1) “[...] refer to technologies that provide access to information through telecommunications. It is similar to Information Technology (IT), but focuses primarily on communication technologies. These include the Internet, wireless networks, cell phones, and other communication mediums”. This therefore establishes that the boundaries of communication are now limitless.

In the past few decades, ICTs have paved the way for the use of a vast array of new communication facilities. Irrespective of an individual’s location, communication can be done through real time with others through the use of instant messaging (IM), and video conferencing, among others. In terms of social networks, websites like Facebook provides the capabilities for users worldwide to keep in touch regularly. It would not be unfair to say that modern ICTs have created a global village, in which communication between peoples can be done frequently.

Traditionally, in the field of Education, learning and teaching took place within the four classroom walls. Supporting the various dimensions of life-long learning was not possible due to a lack of innovation in pedagogical practices. With the passage of time, thankfully, newer approaches to learning and teaching developed, one of them being the integration of ICTs in the pedagogical process. As noted by Lai (2011, p. 1263), “Education policy makers see digital technology as a transformative tool in teaching and learning”. Technology has made the process even more convenient, as information is exchanged with rapidity over the WWW. ICTs have now taken over the world by storm, so much so that new concepts like ‘online learning’, ‘technology-based learning’, and ‘Internet-based education’, among others, have become synonymous with sound educational practices.

ICTs are now viewed as currently integral to many educational changes throughout the world (Laurillard, 2012; Allen & Seaman, 2010; Sharma, 2008). Due to them, the learning and teaching landscape have been dramatically altered and, consequently, new opportunities and accessibility to educational resources well beyond those traditionally available have now been opened up. In fact, Lai (2010, p. 1488) establishes that “Students are provided with the skills to pursue life-long learning with the support of ICTs and they are encouraged to engage in collaborative learning. Additionally, students can be supported by mobile learning and digital content where learning environments would include both physical and virtual space”. Such an affirmation unequivocally signals that the potential benefits that can be derived from embracing ICT tools and content are significant and can assuredly enhance learning and teaching.

Laurillard (2005) shares some benefits of ICTs in educational contexts. These are: (1) Internet access to digital version of materials unavailable locally; (2) Internet access to search, and transactional services; (3) Interactive diagnostic or adaptive tutorials; (4) Interactive educational games; (5) Remote control access to local physical devices; (6) Personalised information and guidance for learning support; (7) Simulations or models of scientific systems; (8) Communication tools for collaboration with other students and teachers; (9) Tools for creativity and design; (10) Virtual reality environments for development and manipulation; (11) Data analysis, modeling or organisation tools and applications and, (12) Electronic devices to assist disable learners. From the list provided above, the fact that ICTs provide, develop and sustain a range of competencies and skills is irrefutable. In essence, effective use of ICTs will produce ‘Technology Literacy’, ‘Knowledge Creation’, and ‘Knowledge Deepening’ (Clark, 2010).

Given the diversity of learning styles in tertiary institutions and the inability of the traditional approach to adequately address student learning needs, it has been proposed that ICTs be incorporated into the learning-teaching process. Laurillard (2008) postulates that ICTs have been used effectively in sustaining traditional forms of teaching and administration in HE institutions. This statement rings true because in many such institutions, lecture theatres and seminar rooms equipped with data projectors and Internet-ready computers are ostensible. It appears to be common practice now for lecture sessions to be aided by some form of presentational technology and for lecture notes and reading materials to be stored electronically for easy access.

However good this tendency may be, even though it is a step in the right direction, Rossiter (2007, p. ) ratifies that “These are surface uses of digital technologies, with pedagogical practices seldom affected deeply, and there is little shift of focus of control of learning from the teacher to the learner”. In support with Rossitier (2007), Lai (2008, p. 216) purports that “In some educational institutions, ICTs are used primarily to support existing teaching practices, being an ‘add-on to the traditional classroom experience’ but have not fundamentally transformed it”. This is the situation that needs to be urgently addressed so that HE institutions could take the fullest advantage of the potential benefits that can be derived and sustained from the effective use of ICTs.

Sharma (2008) establishes that ICTs in educational contexts can have positive, lasting effects if they are fully embraced, adopted, implemented and institutionalised by
all stakeholders. To this end, this author provides an adapted list of recommendations on how ICTs can be integrated and rooted into the curriculum. These are:

a) Develop and implement ICT policy in education.
b) Develop, review and implement ICT curricula at all levels in education.
c) Integrate ICT in the school curriculum.
d) Introduce ICT in the teacher education institutions so that all teachers are familiar with ICT pedagogy.
e) Develop ICT leadership at all levels in the education system.
f) Conduct ICT awareness programs for teachers, students and the members of the school community.
g) Establish ICT centres in remote areas, equipping them with portable generators and IT hardware, including Internet installation, where possible.

Educational Leadership
In the ambit of teaching and learning today, there is a growing concern about learning and teaching effectiveness (Ramsden, 2003; Lunenburg & Irby, 2006; Biggs & Tang, 2011). To this end, there is consensus that leadership within educational institutions must be effective enough to foster the delivery of quality education to students (Duignan & Cannon, 2011). Biggs and Tang (2011, p. 291) affirm that “The most important factor in the implementation of any pedagogical method in a department or faculty is leadership”. According to Fisher (1993), leadership is the ability to influence people to willingly follow one’s guidance or adhere to one’s decisions, obtaining followers and influencing them to setting and achieving objectives. Northouse (2001) establishes that leadership is a process whereby an individual influences a group of individuals to achieve a common goal.

In recent years, Educational Leadership has attracted considerable attention in terms of research endeavours and improvement efforts in educational institutions. Recent studies on leadership in educational contexts and its impact on students’ academic performance (Lingam, 2012; Lunenburg & Ornstein, 2012) have contributed significantly to the knowledge surrounding this issue. If an educational institution is not properly led, the students will of course suffer. Ineffective leadership in a school may result in a lack of support from teachers, parents and the immediate school community. According to Musungu & Nasongo (2008), the role of educational leaders is to encourage academic performance. It is very important for the performance of a school to be judged against that of the persons who lead it.

The significance and benefits of effective leadership remain unquestioned. With good leadership, students will be influenced and encouraged to maximise their learning. In support of this contention, Rutter & Wil-
not be therefore unfair to say that the two are interdependent, as one cannot exist without the other. Pedagogic Leadership is primarily concerned with what students learn and how they learn, and how well they have learned what they are supposed to.

This leadership style lends itself to new and creative ways of learning and teaching. Leaders exercise faith and confidence in their teachers to use their initiative in planning for learning-teaching process. Teachers are encouraged to share their ideas and develop their talents. Teachers are given the freedom to explore new and creative ways of teaching their students. Students are taught using a repertoire of didactic strategies that will enable the teachers to meet the needs of each student within their classroom. This increases the students’ academic performance through the concept of ‘No Child Left Behind’.

Instructional leaders have to work together with their staff to ensure that learning and teaching is student-centred, that it is all about what the students do maximise their learning. They need to ensure that a professional learning community (Spillane, 2005) is created and maintained, so that the objective would be to enhance learning that matters. Through the strength of their vision and personality, pedagogic leaders are able to inspire their staff to change expectations, perceptions and motivations positively to work towards common goals (Lingam, 2012). They are generally energetic, enthusiastic and passionate. Not only are these leaders concerned and involved in the process, they are also focused on helping every member of the group succeed as well.

For the adoption and implementation of any educational proposal within an educational institution, there must be a commitment from leaders and staff to ensure that instruction always takes centre stage. With regard to employing current pedagogical methods in learning and teaching, instructional leaders need to encourage staff members to undergo Professional Development (PD) sessions (Mizell, 2010), as often as it is required, so that they come up with the best and most current methods to deal with student diversity, ensuring that positive learning is promoted, that learner enthusiasm for learning is sparked, and that a strong foundation for life-long learning is provided.

Mizell (2010) affirms that “Educators who do not experience effective professional development do not improve their skills, and student learning suffers” (p. 6). Staff professional development has the objective of familiarising staff with (a) classroom management, school culture, operations and administration, and (b) the necessary skills to deal with students’ learning challenges. In other words, it deals with administrative issues and pedagogical issues. It is vital for the sustenance of any educational institution, since it promotes quality assurance. PD is the strategy that educational institutions use to ensure that educators continue to strengthen their practice throughout their career. Strengthening their practices, as often as it may be demanded, will ensure that staff members improve on what they do, and that they keep on doing so.

There first needs to be consciousness-raising about the need to ensure good teaching and its vitalness in improved student learning outcomes, before trying to implement current pedagogical practices and methodology. To improve teaching and learning, lecturers need to undergo constant transformative reflection through action research, reflective practice, doing research. Once teachers are frequently involved in it - to improve themselves in their area of expertise - then student learning will improve. There are no ifs and buts about this. Further, a learning team could be established. The objective of the learning team is to facilitate self-development and interdependence. Each member of the team is actively involved in upgrading themselves and their colleagues. They are involved in an ongoing cycle of improvement.

Another suggestion would be to have a departmental teaching and learning committee or even a centre for teaching and learning to make on-the-ground decisions relating to the setting up, design and implementation of courses and programmes to monitor teaching, define problems and solve them collaboratively. Added to this, it would also be best to have a Quality Enhancement Team/Department/Committee which has the responsibility of reviewing not only how well the institution works in achieving its mission, but also how it may keep improving in doing so.

Conclusion

Learning and teaching are appreciably connected. Within an educational context, the two phenomena – learning and teaching – are inextricably intertwined that it is impossible to imagine one without the other. The goal of education is learning and the vehicle used to achieve this goal is teaching. In order for students to learn effectively, teachers must teach effectively.

Little of the early literature on curriculum development calls for HE teachers to take active roles in defining curriculum. Early work clearly centers teachers’ curricular role within the classroom and focused on instructional practice. The relegation of teachers to an ancillary role in curricular development reflects common assumptions regarding women and the responsibilities of teachers in the first half of the 20th century. Examinations of teacher preparation programmes offered at the time and of contemporary teacher job descriptions provide additional
evidence of such limited assumptions (Ogren, 2005). This sheds light on the point that teachers, who are the implementers of the curriculum, who are usually with the students for the longest periods, ought to be very much involved in the entire process of planning, designing and developing the curriculum, and even to its very implementation.

Even in these modern times, many teachers are still principally employing the traditional pedagogical methods, because that is all that they know. Some universities, unfortunately, still adopt the traditional approach to learning and teaching, proof of which can be found in their existing traditional curriculum. Such universities view curriculum as a body of knowledge and as a product. Their approach to curriculum development is inflexible since “students like this approach, they are used to it, and it fits their idea of what school should be” (Prevedel 2003, p. 8). Consequently, even though, at times, their pedagogical practices may evidence snippets of a learner-centred teaching, they would normally revert to the traditional method, conforming to the status quo, without considering the implications for their students. It is clear, from the discussions in this paper, that the traditional view that identified the teacher as ‘sage on the stage’, who took all the learning-teaching decisions, has become obsolete.

This paper has sought to discuss the HE curriculum in the light of CA. It has made a call for improved pedagogical practices. The need for CA has been clearly put forward, as it promotes the development of creative, critical and complex, cognitive skills in students. In an age where students are bombarded by multifaceted tasks and activities, it is wise for Universities to move away from traditional approaches to learning and teaching and embrace more modern approaches: approaches that create spaces for students to be constructive in their learning process; approaches that encourage students to negotiate meaning during task completion; approaches that give them protagonism and autonomy of their learning; approaches that engender significant educational experiences, which undoubtedly will result in the improvement and maximisation of their learning outcomes. It has been posited, to this end, that ICTs significantly lend themselves to student autonomy, learner engagement, and the creation of a learning community through collaborative efforts.

With this present knowledge of these curriculum development approaches, HE teachers must realise that learning and teaching must transform in these modern times. Biggs and Tang (2011) establish that 21st century learning and teaching need to be founded on constructive alignment, hence the need to incorporate more current approaches in their pedagogy. These various approaches ought not to be seen as contradictory to each other; rather, the best aspects of each should be integrated into the curriculum. Since the curriculum must respond to societal needs, values and beliefs, it must embrace a critical approach and consider the social milieu of learners to help them cope with problems and derive lasting solutions. To this end, as learners are the nucleus of the educative process, the curriculum will have to learner-centred and emancipatory. Owing to this, the curriculum will also consider a product approach (proof of what students do as a result of learning) and a process approach (how each student learns).

The whole idea is for teachers to interweave the best features of these approaches into the curriculum to provide optimum learning to students to realise their potentials. With this knowledge in hand, tertiary teachers are now in a position to play an influential role in curricular reforms at their respective universities. If any university intends to remain credible and authentic, then it must embrace educational sustainability. Educational sustainability, through a cutting-edge curriculum, will guarantee the promotion of positive learning, the ignition of learner enthusiasm for learning, and the provision of a strong foundation for creativity, application and life-long learning.

The adoption of constructive alignment (Biggs & Tang, 2011) is worthwhile since it caters for student learning diversity. Constructive alignment will ensure that each student is considered and that he is able to embrace a deep approach to learning. For this to happen, teaching faculty must be disposed to rethinking their pedagogical practices, with a view to upgrading them for the benefit of the students. Additionally, HE institutions must also seek to be the precursors of change, hence the urgent call for effective educational leadership and, more specifically, effective instructional/pedagogical leadership. An institution can only be as effective as its staff. For staff to be effective, therefore, they have to be engaged in transformative reflection. In other words, the entire HE institution must see itself challenged to transforming itself into a 21st century institution.

For all course curriculums in those HE institutions that are yet to reflect a constructivist approach to learning and teaching (and constructive alignment), it is advisable that the best features of this method be integrated in order to ensure learning effectiveness. Learning effectiveness is the key to high-quality education and, ultimately, the success of the educational institution. Given that the core business of any HE institution is learning and teaching, all energies must be channeled into ensuring that it meets everyone’s expectations.
References


Appendix

An example of a constructively-aligned lesson

ENG 116, Research Methods, is a one semester core course in the first year of a four-year Bachelor of Arts Degree in English, Linguistics, Literature and Modern Languages, offered by the Department of Language & Cultural Studies, School of Education and Humanities, of the University of Guyana. The number of students for this course is usually about 30. The duration of the following lesson is two hours.

Lesson Aim

Apply principles of paragraph development to strengthen writing skills.

Intended Learning Outcomes (ILOs)

On completion of this lesson, students will be able to:
- Explain the paragraph and its components (ILO 1)
- Construct sentences for the paragraph (ILO 2)
- Create paragraphs on specific topics and Reflect on individual/group participation (ILO 3 [a & b])

Learning and Teaching Activities (LTAs)

LTA 1

Students are welcomed to the class by the lecturer, who subsequently invites them to comment on what was learnt in the previous lesson. Advanced organisers are also provided. Facilitated by the lecturer, students discuss the ILO and LTAs with colleagues. Then there is a brief interactive session on the concept of paragraph writing.

Subsequently, students are invited to form 3 groups of 4. Group members explain to each other the paragraph and its components and share their submissions with the class. They discuss the relevance of the local images used in the discussion to emphasise the cohesiveness/completeness of a paragraph. After this exercise, the lecturer distributes three topics (‘Education’, ‘University Life’ and ‘Academic Writing’), and each group selects one and creates the paragraph, using the Jigsaw method (Each group members contributes one or two sentences for soon-to-be-created paragraph). Group members discuss with each other the constructed paragraph. (Major focus: ILO 1, ILO 2 and ILO 3a).

A 2 minute discussion break ensues

LTA 2

Students get ready to publicly present their individual report. Each student reads the sentence(s) that he has contributed to the paragraph. One member from the group reads the created paragraph. These are publicly discussed and corrected. Each group member publicly reflects on his individual participation, while one designated group member reflects on the group participation. Each group exchanges paragraphs so that they all have three paragraphs per group. (Major focus: ILO 2 and ILO 3a & 3b; Minor focus: ILO 1).

A 2 minute discussion break ensues

LTA 3

By means of a case study, students are again invited to form 3 groups of 4 where the lecturer presents to each group a developed paragraph taken from a Journal. They, in their respective groups, are to analyse [study and compare] the paragraph given to them with the paragraph they have previously created. Subsequently, their findings are publicly presented and discussed, facilitated by the lecturer. In addition, each group member publicly reflects on his individual participation, while one designated group member reflects on the group participation. They exchange the information gathered so that each of them has all three case-study analyses. They then, together with the lecturer’s aid, discuss publicly what they have learnt from the classroom session on paragraphs. (Major focus: ILO 2, ILO 3a & 3b; Minor focus: ILO 1).

A 5 minute discussion break ensues

Assessment Tasks (ATs)

AT 1

The students are invited by the lecturer to form two groups of 6 students each. Once in the groups, each group is allowed to select one of three topics (‘Teaching’, ‘Learning’ and ‘Research’) on which to create a paragraph. Individually, using the Jigsaw method, each student (of a group) contributes no more than one sentence for the paragraph. After this exercise, they piec them all (the sentences) together to create the paragraph. After developing the paragraph, it is publicly presented (each student reads the sentence he has contributed, and then one group member reads the entire developed paragraph), discussed, corrected and assessed, facilitated by the lecturer. In addition, each group member publicly reflects on his individual participation, while one designated group member reflects on the group participation. (Major focus: ILO 2, ILO 3a & 3b; Minor focus: ILO 1).

A 2 minute discussion break ensues

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1 I have decided to split ILO 3 into two parts – 3a and 3b – as there are two main verbs there (create [3a] and reflect [3b]).
AT 2
Conserving their two groups, the students are given 2 paragraphs (per group) which they have to analyse (study and compare) with the paragraph they have just created. After this activity, students form one large group and together they discuss their findings from the case study done. Subsequently, these findings are publicly presented, discussed, corrected and assessed, under the guidance of the lecturer. In addition, each group member publicly reflects on his individual participation, while one designated group member reflects on the group participation. The teacher then collects all of the assessed paragraphs, together with the case-study analyses, in order to make his final judgments on them, based on the holistic grading criteria. (Major focus: ILO 2, ILO 3a & 3b; Minor focus: ILO 1).

AT 3
Individually, students are asked to write a reflective report, (not more than 2-3 paragraphs), explaining where and how their contribution fits into the task as a whole and how they think they have achieved the ILOs through their participation during task execution. This is handed to the teacher for grading. (Major Focus: ILO 3b).

Students discuss publicly what they have learnt from the lecture session on paragraphs. They are given three evaluation questions, for teacher assessment, student/self assessment and lesson assessment, to which they are to respond and discuss publicly. They are given a case study as a take-home assignment, in preparation for the next class, as the teaching session comes to an end.

(See Grading Criteria below)
Grading Criteria

<table>
<thead>
<tr>
<th>Grading Criteria(^2) for Paragraph Writing and Reflection (20 marks)</th>
<th>A- Excellent (17-20, out of 20)</th>
<th>B- Good (13-16, out of 20)</th>
<th>C- Satisfactory (9-12, out of 20)</th>
<th>D- Unsatisfactory (5-8, out of 20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of the Paragraph</td>
<td>The first sentence is excellent and outlines the theme of the paragraph. It uses the key words and grabs the reader’s attention. Everything in the paragraph supports the topic sentence. The paragraph clearly focuses on the topic, the purpose and the audience. The final sentence clearly ends the paragraph. It demonstrates sophisticated thinking and leaves the reader with something to think about.</td>
<td>The topic sentence is clear and relevant, and outlines the theme of the paragraph. It uses some key words. Most ideas in the paragraph support the topic sentence. The paragraph focuses on the topic, the purpose and the audience, to a great degree. The final sentence ends the paragraph well. It demonstrates very good thinking, and the reader is able to grasp the general idea purported.</td>
<td>The topic sentence is clear to some extent, and outlines the theme of the paragraph satisfactorily. It used one or two key words. Some ideas in the paragraph support the topic sentence. The paragraph focuses on the topic, the purpose and the audience to a certain extent. The final sentence ends the paragraph satisfactorily. It demonstrates good thinking and the reader is able to understand the intent.</td>
<td>The topic sentence is unclear and does not clearly outline the theme of the paragraph. It does not use key words and does not grab the reader’s attention. The supporting sentences minimally support the topic sentence. The final sentence may be there, but it is not clear. It demonstrates poor thinking and the reader has great difficulty in grasping the general idea.</td>
</tr>
<tr>
<td>Quality of the Reflective Report</td>
<td>The report is very well organised and has an excellent structure or logic that engages the reader. It shows a clear purpose and direction and there are a lot of details supporting the subject matter. The report shows an in-depth of self-reflection on what was done, skills learned, what was liked and disliked, as well as projections. A strong connection made between individual and collaborative learning and future activities.</td>
<td>The report is organised and has a clear structure or logic that is easy to follow. It shows a clear purpose and there are supporting details on the subject matter. The report shows a general amount of self-reflection on what was done, skills learned, what was liked and disliked, as well as projections. Some connection made between individual and collaborative learning and future activities.</td>
<td>The report shows some organisation but lacks an overall structure and logic. There is a lack of focus and only a few details to support the subject matter. The report shows minimal self-reflection on what was done, skills learned, what was liked and disliked, as well as projections. A weak connection made between individual and collaborative learning and future activities.</td>
<td>The report is not well organised and does not have a clear structure or logic. The subject matter is not clear and there are no strong details to support it. The report shows no self-reflection on what was done, skills learned, what was liked and disliked, as well as projections. No connection made between individual and collaborative learning and future activities.</td>
</tr>
</tbody>
</table>

\(^2\) The points for the ILO are 20% of the total grade for this course, since there are five assessments throughout the semester. The grades are awarded from A-D at the University of Guyana. Students are made aware of the grading criteria, when assessing each other’s work.