A diamond-quality teaching modelling in higher education: an AAU perspective

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Abstract: In this manuscript, the authors designed a novel model of quality teaching called the ‘diamond-quality teaching model’ (D-QTM). The novelty of this model is that it explicitly adds the teacher’s dispositional quality modelling dimension to complement the three known pedagogic dimensions: intellectual quality; environmental quality; and significance of learning outcomes. This explicit addition of dispositional quality modelling assures that quality teaching will not only affect what students can ‘academically’ achieve, but also what they can ‘practically’ do and be; making teaching both informative and transformative. The five well-known components of emotional and social learning (SEL) were adopted as the cluster elements of the dispositional quality modelling dimension. These elements are expected to bring the affective domain to the teaching-learning process and enhance the cognitive and psychomotor domains. By this addition, each of the four D-QTM dimensions in the model comprises five key elements that further define and clarify the nature and function of the model in terms of teaching/learning dynamics. All the models presented in this manuscript are designed based on research in the concerned fields and within the spirit of the United Arab Emirates (UAE) 2021 vision and the Abu Dhabi Education Council (ADEC) mission of higher education.

Keywords: Abu Dhabi Education Council; ADEC; affective domain; quality teaching model; QTM; social and emotional learning; SEL; AAU; United Arab Emirates; UAE.

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This paper is a revised and expanded version of a paper entitled ‘A diamond-quality teaching modelling in higher education: an AAU perspective’ presented at the 30th Business & Economics Society International (B&ESI) Conference, Abu Dhabi, UAE, 8–11 January 2017.

1 Introduction

Higher education is one of the foundational needs for human, social societal and economic development and prosperity (Brennan and Teichler, 2008; Sivakumar and Sarvalingam, 2010). According to Rahman and Uddin (2009) and references therein education is a key state responsibility that should be managed by the government through national resources. Thus, governments and society have a vested interest in ensuring a constant flow of students in higher education (Akareem and Hossain, 2016). In the United Arab Emirates (UAE), a large proportion of the employees are from foreign countries, and the Job-Emiratisation approach requires local citizens to acquire high quality education and assume key future responsibilities. A large number of students from the gulf countries go abroad seeking ‘quality’ higher education. This is definitely beneficial to students so that they can be exposed to different cultures; but there is always a cost. The cost is that a huge amount of money is spent outside the border of these countries, resulting in missed economic opportunity, especially with the oil price plummet. It is believed that national students can be retained and foreign students can be attracted by identifying and confirming high quality higher education in UAE universities; thus enhancing economic activity in this sector. Needless to say is that the UAE government preciously invests in quality education, with much emphasis on K1-13 educational levels. The generous investment of the UAE government in education should be tied to four responsibilities in higher education institutes. First, the education system must be committed to fully developing the talents and capacities of all students in the pursuit of attaining the highest educational standards irrespective of their background or...
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circumstance. Second, continuous improvement of inclusive teaching strategies must be strongly bound to intended-learning objectives (ILOs). Third, since modern universities are experiencing students as customers of their higher education services (Ehrman, 2006), the critical importance of creating an attractive image to build a body of loyal customers must be understood, continuously assessed and highly acknowledged (Briukhanov et al., 2010). In this respect, some students may evaluate individual classes or individual educators to measure the quality of education (Ginns et al., 2007). Others may amend/change their perception of such image evaluating the learning environment across their entire degree and the way these perceptions are related with study and learning outcomes (Lizzio et al., 2002). It is not only important to attract students to your university, but also to keep them happily involved till their graduation; quality is certainly one means. Similarly, the school image itself is important to attract students, but this image can be ruptured if students lose confidence or faith after experiencing real teaching situations and low quality standards. The Fourth responsibility is that sustainable assessment of quality education and learning through national and international quality assurance agencies must be always welcomed and endured (Woodhouse, 2012). Quality assurance is defined as the systems, procedures, processes and actions intended to monitor, achieve, maintain and enhance the quality of outcomes-based teaching and learning (Woodhouse, 1998). If UAE higher education institutions, especially private colleges and universities, desire to remain active, prosperous and reputable in the Gulf educational market, they need to assure a recognisable quality standard of their services at every level. These institutions are now considered service centres similar to other profitable and non-profitable organisations, which can segment and target markets based on the dimensions of quality higher education (Akareem and Hossain, 2016).

2 Objectives

At this juncture, the authors focus on the dimensions that are not just only related to the theatre of teaching/learning but also focus on those considered to be key players in making the teaching learning episode a state-of-the-art. Besides, they believe that some quality models must be established to serve at least the following three interrelated purposes: first, to identify the key or buzz words of quality education with respect to the strategies needed to achieve such quality and the quality standards, indicators, or criteria upon which one can make internal (self) or external (others) evaluation. Second, to help educators and administrators connect their right-side with their left-side brains and enable them to think both critically and innovatively of the 4Ss (students-standards-syllabus and strategies) platform. Third, to bridge the conscious to the subconscious mind and allow educators and administrators to change habitual behaviours that may negatively impact the quality of outcomes-based learning.

3 Characterising and defining quality higher education

Petricas (2010) defined education in a quality language style by stating her working definition as: “A fully integrated curriculum that includes technology tools that deliver, enhance and create passionate, accountable individuals who use problem solving skills
and resources to transition from a learning environment to a working environment, seamlessly”. Recent studies identified the factors of quality higher education as:

a. quality of students
b. quality of faculty credentials
c. quality of academic features
d. quality of administrative supports (Akareem and Hossain, 2012; Ashraf et al., 2009).

Quality education can be determined by these and other factors that help the higher education institutions to design appropriate value propositions. Despite the complexity and multifaceted nature of education, it is the quality of teaching that most directly and powerfully affects the quality of students’ learning outcomes. Despite the fact that higher education faculty members work in extremely complex environments, with a host of factors impacting their work both negatively and positively, the nature and quality of teaching remains their core mission.

Due to its complex and dynamic nature, the concept of quality teaching has different meanings in different contexts (Sakarneh, 2011). In the eighties and early nineties there was much debate over the meaning of the word ‘quality’ and its alternatives, particularly when applied to higher education (Woodhouse, 2012). In Ball (1985) book, asked the question: “What the hell is quality?”. Thirty years later, the term continues to be difficult to define and to quantify [Schindler et al. (2015) and references therein] and no answer seems to hold water. This does not mean that the literature lacks plethora of definitions. The real problem is that there is no consensus on these definitions among education stakeholders and scientists (Greatbatch and Holland, 2016). At least three reasons are responsible for the difficulty of defining this highly important term especially in the field of higher education (Schindler et al., 2015).

First, quality in itself is an elusive term that depends on stakeholders’ subjective views and interpretation. Second, quality education is a multidimensional concept with infinite elements and reducing its definition to one or two sentences or phrases is problematic. Third, quality is not static but rather a dynamic process depending on the larger educational, economic, political and social landscape. Despite of the lack of consensus among the plethora of definitions of teaching excellence; yet one can easily see it in action and observe its impact on student learning. Due to its conceptual complexity, quality teaching is easily seen but hardly defined and becomes commonly accepted to boil it down and crystallise it into some standards, dimensions, elements, and indicators. For example, there are over 50 specific quality indicators in the literature (Schindler et al., 2015). Upon reviewing these indicators, four distinct categories could be identified: administration, student support, teaching instructions, and student performance. It is clear that the first three categories address the criteria of quality inputs or educational resources, while the fourth one (student performance) focuses more on indicators of quality outputs, such as student motivation and learning gains. This category also reflects the trends in assessing student outcomes to assure quality (Tam, 2014).

Although defining quality education is challenging, as previously explained, the authors will conclude this section by articulating their definition to possibly guide and unify the theme of their manuscript. Based on our understanding of the purpose of quality teaching, i.e., ‘teaching fitness for quality learning’ the authors will offer the following comprehensive definition:
“Quality teaching is a complex, multi-dimensional and multi-layered interplay of a number of strategies and practices that lead to quality learning. It is mostly determined by numerous factors such as the inspirational nature of individual instructors, the ILO-based structure of their presentations, their positive and supportive interactions with students. From the student side, quality teaching is identified in terms of students’ surface (informational) and deep (transformational) learning, their confidence in succeeding in written and behaviour-based assessments and finally their satisfaction of the significance of the taught/learnt contents to their personal, social and professional development.”

4 Outcomes-based higher education within the UAE 2021 vision, ADEC mission and AAU vision

Like many developed and developing countries around the world, the UAE envisions quality education as one of its strategic means for future development and sustainable prosperity. This can be clearly seen in the UAE 2021 vision. In this vision, many portions in different themes are explicitly dedicated to quality education. Here are some excerpts of this vision.

“We want all Emiratis to make a valuable contribution to their nation’s growth by building their knowledge and applying their talent with innovation and drive. More Emiratis will enter higher education, where they will enrich their minds with the skills that their nation needs to fuel its knowledge economy. Universities will listen closely to the needs of Emiratis and of their future employers, and will balance their teaching to the demands of the workplace ….. We want our nation’s schools to nurture well-rounded citizens, confident in their inner abilities and fully equipped for adulthood. Our educators will instill in young people the shared values of our moderate religion and our national identity. Each new generation will emerge ready to play an active and positive role in society as self-directed and responsible citizens.” (Vision, 2021)

Quality education is also emphasised in the Mission of Abu Dhabi Higher Education Strategy (Abu Dhabi Education Council, 2012). This mission reads as:

“Abu Dhabi’s strategic plan for Higher Education is designed to lay the foundation for an innovation-based, knowledge producing society by:

• Elevating the quality of Higher Education to international standards through partnerships with world class universities, high licensing and accreditation standards, requirements and incentives for continuous improvement

• Promoting and incentivizing innovation, scholarship and discovery through major research funding in areas of strategic importance to Abu Dhabi, thereby building a strong community of scientists and scholars

• Carefully aligning Higher Education with labor market and socio-economic needs, guided by the Abu Dhabi Economic Vision 2030 and Abu Dhabi’s policy agenda.” (Abu Dhabi Education Council, 2012)

Al Ain University of Science and Technology (AAU) has also foreseen this important dimension and states clearly in its vision that it “aspires to be amongst the leading learning centers in the region, by achieving international quality standards in teaching, research, and Community Engagement” (AAU, 2017).
At this stage of the manuscript, the authors will relate the official vision and mission of education in the UAE to the outcomes-based education (OBE) which directly related to the interests of the UAE social, economic, and political interests, as well as the interests of its individual citizens (Figure 1). If educational missions and visions are not translated into learning outcomes, then the educational process will be nothing but individual successes both at the student as well as at the teacher levels. However, when these missions are translated into specific, measurable, assigned, and timely-bound (SMART) objectives or intended learning outcomes (ILOs) which are then framed into outcomes-based teaching strategies, outcomes-based learning will come naturally. Outcomes-based learning will be easily evaluated for amendment and continuous improvement.

**Figure 1** Illustration shows how the UAE 2021 vision and ADEC mission lead to the strategic OBE which implies outcomes-based teaching, learning and assessment (see online version for colours)

5 The quality education pathway

Due to the confusion among several terms used in quality teaching and teaching quality, the authors are proposing a hierarchical pathway structure that ecologically relates the most important of these terms (Figure 2). This pathway takes the concept of quality teaching into quality auditing, assurance and accreditation. This figure is highly self-explanatory, and will be left to the reader’s intuition to mind-map it with or without change in its structure hierarchy and/or content.
6 Building the diamond-quality teaching model (D-QTM)

‘What makes quality teaching and what makes effective educators?’ is an ongoing question waiting for answers for and from those involved in higher education. Unfortunately, most of the frameworks seeking an answer for this question rely mainly on the pedagogical dimension of quality teaching without seriously taking the affective dimension of the teaching-learning process into serious consideration. Based on the UAE 2021 vision and ADEC’s education mission, the authors of this manuscript argue for the critical importance of taking both pedagogic and dispositional characteristics into consideration when examining the definition and means of providing quality higher education. In so doing, the authors customised, amended, bridged and integrated two theoretical frameworks: the New South Wales Quality Teaching Model or QTM (NSW Department of Education and Training, 2003) and the dispositional cluster model (DCM) (Faull, 2008, 2009). The DCM has been the subject of Faull (2008) doctoral thesis that was later summarised in an outstanding article (Faull, 2009) on the importance of dispositional characteristics for highly effective teachers.

There has been a long history of research attempting to identify quality teaching practices that improve student’s learning. However, only recently research traditions have
diversely come to a common understanding of quality pedagogy. Generating a long list of specific dimensions/elements/factors of teaching is not well supported by pedagogical research or practical performance. As a result, researchers began to seek out ways of identifying general characteristics of pedagogical quality. In particular, three pedagogical dimensions (intellectual quality, learning environment and significance of learning) have been researched and recommended by the NSW to build a triangular quality teaching model (QTM) (NSW Department of Education and Training, 2003). This model intentionally synthesised specific elements for each dimension and developed them into a more focused framework for educational institutes and educators to use. There is a voluminous research on teaching quality and educator effectiveness that mostly addresses these pedagogic quality-teaching dimensions, including curricula, technical skill acquisition, and competent educator on the subject. Before going into further details regarding our discussion on the impact of each of the aforementioned three dimensions, as well as our fourth dimension (dispositional quality modelling) on quality teaching and learning, it should be noted that it is the authors’ belief that all these dimensions are logically obvious and qualitatively proven in everyday teaching practice, while research adds an experimentally-proven support to the common-sense theory and practice of pedagogical quality. We do not need to remind the reader that quality education was the norm deep in the history of education and before researchers started to study what the word quality means for higher education.

In the next section the three pedagogical dimensions will be reported and then our fourth dimension will be justified and discussed. Research has demonstrated that pedagogy focusing on high levels of intellectual quality, benefits students, whether they are high or low achievers, from backgrounds typically identified as educationally disadvantaged, with special needs, or gifted in mainstream classes. The positive effects of high levels of intellectual quality have been found to influence individual student outcomes on both performance-based assessment measures and conventional standardised academic achievement tests. Research has also soundly demonstrated the importance of a quality learning environment. Research into effective teaching, authentic and productive pedagogy, teachers’ expectations, students’ time-on-task and student engagement has consistently demonstrated that a class, in which there is a strong, positive and supportive learning environment, produces improved student learning outcomes. While many teachers are justifiably concerned with improvements in the learning environment of their classes as an end in itself, it is also important to recognise that a high quality learning environment has its own independent effects on the quality of work students are able to do and, to a certain extent, on the personal quality they are coming to be. The third pedagogical dimension identified in the NSW model is significance which represents a synthesis of research into the means through which instructors make learning meaningful and important to their students as individuals, as members of social groups and as members of the overall society. In this context, the third dimension requires that learning is convincingly seen by students to have significance to themselves and their future. Pedagogy that promotes intellectual quality and produces quality learning environment also requires some means by which instructors link their students’ work to personal, social and cultural contexts outside the class. For the work of students to have meaning, an extended impact on them beyond the classroom must be perceived; pedagogy must make it clear that students’ learning matters to them. The three pedagogical dimensions are extremely important for academic achievement and
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somewhat important for personal, social and professional development of the students. However, the teacher as a role model is not explicitly spelled in these three dimensions.

Most of the pedagogic quality models are grounded on the wrong philosophy, i.e., ‘the quality of pedagogy is the most direct and powerful factor affecting the quality of learning’. Our proposed D-QTM challenges this philosophy which implies that learning outcomes are dependent entirely or mostly on students’ testable knowledge regardless of their personal, social and professional development. Besides, we believe that there will be no quality teaching if the affective domain or the emotional social learning (ESL) is missing. Students need emotions for focused attention of what they try to learn. To learn anything, our minds must be focused and our emotions must be balanced. Furthermore, emotional regulation is necessary so that they can remember, retrieve, transfer, and connect new information to what they already know or have in their knowledge inventory (Desautels, 2016). When a continuous stream of emotional disturbance hijacks the frontal lobes, students’ brain architecture changes, leaving them in a heightened stress-response state where fear, anger, anxiety, frustration, and sadness take over their logical thinking, problem-solving and resilient behaviour.

Most governments, higher educational institutes and quality assurance organisations have established and/or have used professional teaching standards (PTSs) to form a benchmark for quality teaching and training in these institutes. Unfortunately, these PTSs focus mainly on observable pedagogical strategies and techniques with an isolation of the emotional dimension of the teaching-learning process(es). In the context of teaching and learning in AAU and the UAE, the authors added the Dispositional Quality Modelling Dimension to the well-known trinity model, known as QTM to make it a rectangular, or a diamond model; calling it the diamond-quality teaching model (D-QTM). The dispositional dimension is added in our model for at least three reasons:

1. teachers will not be able to swiftly create quality learning environment if they lack the elements of this model
2. students’ brains will not be properly ready for receiving, perceiving and processing information if their emotions are not well-balanced and their thinking modes are hijacked
3. students will need to observe a quality role model in their class to practice and live this model in their own lives.

In looking for elements to fulfil this fourth dimension, the authors have used the five major components of the SEL model, i.e., self-awareness, self-management, social awareness, relationship skills and responsible decision-making (Education Week Research Center, 2015). Elias et al. (1997) defined SEL as: “Social and emotional learning (ESL) is the process of acquiring core competencies to recognize and manage emotions, set and achieve positive goals, appreciate the perspectives of others, establish and maintain positive relationships, make responsible decisions, and handle interpersonal situations constructively”. The CASEL’s (2016) definition is “Social and emotional learning (SEL) is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions”. Investigating these two definitions highlights the fourth dimension of the authors’ new model.
Since the fourth dimension is a new addition to the pedagogical QTMs, its elements will be much elaborated and further explained. The past decades have seen a resurgence of research undertaken in the affective domain of teaching, with particular reference to the role of social emotional learning (SEL) in effective and quality teaching (World Economic Forum, 2016). For the purpose of this manuscript, the authors adopted the five elements that have been well-researched by Collaborative for Academic, Social, and Emotional Learning (CASEL), and recently published by the Education Week Research Center (2015). These elements are:

1. **Self-awareness**: which is the ability to recognise one’s own emotions and their influence, accurately assessing weaknesses and strengths.

2. **Self-management**: which consists of regulating emotions, thoughts, and behaviours in diverse situations. This includes managing stress, controlling impulses, and setting and achieving goals.

3. **Social awareness**: which entails adopting the perspective of those with different backgrounds, understanding social and cultural norms, and recognising available resources and supports.

4. **Relationship skills**: which include establishing relationships with different kinds of people, communicating clearly, listening actively, cooperating, resisting inappropriate peer pressure, negotiating conflict, and seeking help when necessary.

5. **Responsible decision-making**: which is the capacity to make choices based on realistic evaluations of consequences, well-being, ethics, safety, and social norms.

As seen in Figure 3, this manuscript will use the DCM (Faull, 2008) to justify the fourth dimension of our D-QTM and the five elements of the SEL to serve this dimension in promoting quality teaching and learning. In so doing, we adjust the perspective of educator dispositions, values and beliefs to fit the D-QTM. In retrospect, emotions are crucial for information processing, patterning, storage and recall. In fact, some scientists consider emotion to be the ‘on-off-switch’ for learning and it can never be ignored or undermined. Therefore, negative emotions such as fear, sadness, anxiety, anger, etc., highjack reasoning, disrupt thinking; disturb memory; and obstacle learning. Creating positive class environment free of all these feelings is highly critical for learning. When a teaching-learning experience depends mainly on a cocktail of dispositions modelled by teachers, students will not only be informed but also be transformed, thereby becoming learners to do and to be. To underscore this fact, one should say that establishing a physically, mentally, emotionally, and spiritually safe environment through in-depth teaching strategies is one of the most critical keys to quality teaching and learning. This again justified the fourth dimension of our model. The emotional colour of the teacher-student encounters depends on the sincerity of the support that has been reciprocally offered by administrators, teachers and students.

Figure 3 illustrates the relationship among the four quality dimensions. The description of each of the D-QTM dimensions is briefly illustrated as follows:

1. **Intellectual quality**: refers to pedagogy focused on producing deep understanding of important, substantive concepts, skills and ideas. Such pedagogy treats knowledge as something that requires active construction and requires students to engage in...
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meta-cognition and higher-order thinking and to communicate substantively about what they are learning.

2 **Quality learning environment**: refers to pedagogy that creates classes where students and instructors work productively in an environment clearly focused on learning. This dimension creates a clear and least resistant pathway from teaching to learning outcomes. Such pedagogy sets high and explicit expectations and develops positive an outcome-centred relationships between teachers and students and among students.

3 **Significance**: refers to pedagogy that helps make learning meaningful and important to students. Such pedagogy draws clear connections with students’ prior knowledge and identities, with contexts outside the class, and with multiple ways of knowing or cultural perspectives. As to significance dimension, students will never be convinced of the importance of what is offered unless teachers walk their talk and sustainably prove their integrity. This, as well as other reasons, emphasises the importance of the next dimension.

4 **Dispositional quality modelling**: refers to the ‘internal dispositions’ that underpin effective teaching and model effective behaviour which is certainly essential in completing the puzzle of quality teaching. Dispositions are expressed in terms of certain stable characteristics and recurring perceptions of self, others, the world-in-general, the job and its purposes. These dispositions are operative in teacher and student perceptual worlds and render much of the effect of their efforts. The recipe of a teacher’s or student’s dispositions synthesises his/her tendency to do the teaching and learning tasks effectively. Furthermore, being a walking example of quality, the teacher serves as a role model that helps students in their personal, social and professional development in the class and beyond.

Each of the four dimensions can be described in terms of five cluster elements (Figure 3). Each element has been selected on the basis of:

1 its sound and reliable research base linking the practices or qualities of the element to improved student learning outcomes
2 its practical capacity to act as an indicator of the underlying dimension and the criteria of each piece in the quality puzzle.

It is important to note that quality teaching is guided by principles, values and rules from different but complementary sources. These are:

1 moderate Islam
2 UAE cultural values and heritage
3 the UAE 2021 vision of education
4 the ADEC educational mission (Figure 3).

These sources are collectively ensure that policies, practices, and processes in higher education are parallel with no contradiction so that the four dimensions of the D-QTM enforce continuous improvement and quality sustainability. Our strong belief, on one hand, is that this model conforms to the stated educational visions and missions of the UAE government agencies, AAU vision and those of other higher education institutes.
On the other hand, the four dimensions of the model, along with their specific elements, are instrumental in developing students at the cognitive, affective and psychomotor domains. The model is not only informative but also transformative. To emphasise the importance of the disposition quality modelling dimension that complement older models, we fairly say that no one is willing to invest in an education system that will develop learners to only become knowledgeable robots, with no sensibilities to the feelings of the self, others, their countries, and the overall globe. This concern is reasonably reduced by instilling or cultivating the five SEL elements in the disposition modelling dimension of the teaching-learning strategies and processes.

**Figure 3** The D-QTM within the four dimensions of teaching quality (intellectual, environmental, significance and dispositional) and their mediated elements (five elements for each dimension) (see online version for colours)

Note: Even though this model is framed within four national sources of guiding principles, it is still universal and other systems can use their own sources.

### 7 The D-QTM in action

To start with the end in mind, it is fair to say that if educators take into account each element of the four dimensions of the D-QTM, they will successfully and effectively facilitate, initiate and maintain quality learning, and demonstrate the abilities and qualities that they seek to promote in their students. The model is based on a sound research understanding of how teaching improvement can promote improved student learning outcomes. With respect to the dimension of *intellectual quality*, the educator is called on to select and organise the essential knowledge, along with his/her strategy to provide students with the understanding of the knowledge, skills and values upon which the syllabus is founded and structured. This is based on the assumption that the educator
is able to construct his/her own knowledge and meaning that demonstrate the defining characteristics of intellectual quality (NSW Department of Education and Training, 2003). According to the D-QTM, the educator’s role includes the ability to develop the students’ deep and critiqued understanding of the syllabus, to enable them to acquire the skills and adopt the values as well as seeing the connections among them. This necessitates that the educator should master the prerequisite skills and be armoured with the strategies that facilitate students’ active and purposeful involvement in the learning process. The second dimension of *environmental quality* calls upon the educator to demonstrate the ability to create, maintain and promote a quality learning environment. No one can ever ignore the importance of the learning environment, not only at the cognitive level, but even more importantly, at the social emotional level. The last level is highly assured through our proposed fourth dimension. The third quality dimension, i.e., *learning significance*, requires the educator to sincerely convince students with the connections between their individual and social being, and between the nature of the work at hand, and the contexts in which such work matters not only for the tests but also for life. Killen (2007) challenged the pedagogically-based QTMs by addressing a key question; what type of person does an educator need to be in order to implement each of the elements of these models effectively? This question is of considerable importance because it broadens the debate about what quality education means; thereby including the quality characteristics of the educator as an individual. This quality dimension can be expressed in terms of educator quality dispositions on one hand, and it serves as bringing a quality model for students to follow on the other hand. We can simply state that without taking into consideration the affective domain of the teaching/learning process, educators are hardly able to sustain high levels of productive pedagogy across the other three dimensions. In this manuscript, the authors used the two important definitions presented by Ennis (1987) and Faull (2008) to guide them create a recombinant definition of dispositions. The definition we are providing states that: “Dispositions are some inherent qualities that create the tendency of a person to think, feel, act, and respond in particular consistent and observable patterns of behaviour”.

Having enunciated this fourth definition, it was appropriate to add this dimension along with its elements in our D-QTM to wholly describe quality education. A closer examination of the nexus between the *dispositional quality modelling dimension* and the other three pedagogical dimensions (*intellectual quality, environmental quality and learning significance*) certainly enhances our understanding of teaching quality and improves the accuracy of the quality scale on which higher educational institutes can be ranked, not only in the UAE but elsewhere. Beyond, the formal and model-based evaluation of higher education, perceptions of marketable quality is determined by the students’ status, the level of their parents’ education, their age and the history of previous studies, cultural values and other factors (Akareem and Hossain, 2016). Therefore, it is important to take these factors into consideration when seeking the attraction of students from different cultures. Usher (2002) stated that teacher and teaching effectiveness necessitates that we find a way to understand the “internal dispositions.” Usher’s research led him to conclude that teacher’s dispositions (as expressed in terms of certain stable characteristics and recurring perceptions of his/her self, students, the job and its purposes, people and the world-in-general) are operative in the educators’ perceptual world and render much of the effect of their efforts. These dispositional characteristics are also required to be acquired by students not only to
enhance their learning potential, but also to better perform in their work after graduation. Therefore, we have modified and used some of Usher’s elements, and added our own to construct the fourth dispositional quality modelling dimension of our D-QTM (Figure 3). The five elements underpin the fourth dimension are:

1. self-awareness
2. self-management
3. social-awareness
4. relationship skills
5. responsible decision-making.

Like all the dispositional clusters, each primary cluster can be defined in terms of secondary dispositions that are conceptualised as being interactive and interdependent. In saying so, the authors encourage researchers and instructors to add more elements to these clusters. The model illustrated in Figure 3 is basically a theoretical framework that helps administrators and faculty members to critically reflect and evaluate what they actually do in the light of quality teaching and quality learning as explained in the anatomy of this model. Building on the growing documentation of best practice in the UAE and the most reliable national and international research; the elements of this model can be applied in AAU and across all educational systems. The model has also been designed to assist higher education institutes in reaching the National Goals for Education defined in the UAE 2021 vision. In particular, the model supports higher education institutes to the principles of social justice and equity, including the commitment to delivering equitable student outcomes. However, the model is not intended to be the final word on quality education in UAE. While it builds on the most reliable current research and best practice, we expect that D-QTM will be tested out and changed as necessary over time as faculty members engage themselves with the dimensions and elements in their classes.

8 Conclusions

According to the science and art of education, quality teaching is evident in the activity that takes place in a teaching setting, as well as in the nature and quality of the tasks set by the teacher to guide student’s learning. Crucially how one teaches is inseparable from what one teaches, from what and how one assesses and from how one learns. Defining quality teaching in the context of higher education continues to face many challenges. Even though the literature is full of great definitions, as expected no consensus on one definition among educational experts and stakeholders is reached. However, there are themes, frameworks, models, paradigms, etc., on how quality is conceptualised. Because one must be able to define quality teaching in order to assess its outcomes, and manage it strategies and activities; the authors of this manuscript articulate a new definition that complements their D-QTM. The building blocks of this model (four dimensions and five elements each, i.e., a total of twenty elements) are based on investigating and integrating a bulk of extensive studies which indicate repeatedly and/or consistently their link to improved student learning outcomes. The four dimensions of the D-QTM are: intellectual quality, quality learning environment, learning significance and dispositional quality
modelling. The authors metaphorically consider quality teaching as a puzzle and the twenty elements as its defining pieces. Even though these pieces are determinant of the overall shape of the quality puzzle, they cannot draw the minor dots and details of this puzzle. Therefore, teachers may use their judgments and add new elements whenever the time allows and the teaching setting requires.

The model proposed in this paper can be used by higher education administrations and executives to lead and endorse the improvement of teaching practice and hence student learning outcomes. D-QTM can also be used by top officials and government agencies to decide on the nature of support they can provide higher education institutes. Administration and faculty members in AAU as well as other institutes can share the model in discussions with parents and community leaders about the quality of teaching and learning in their institutes. Importantly, the model can be used by faculty members for self-reflection to help them focus on their own teaching strategies and practices to reach curricular ILOs from the least resistant and feasible route. It is the intention of the authors in future studies to use the D-QTM and provide faculty members with a guide to their planning and teaching strategies.

Acknowledgements

We are grateful to the anonymous reviewers, to the Editor of this issue, Dr. Abdelhafid Belarabi, and the conference participants of the 30th Business & Economics Society International Conference for the critical and constructive comments. We remain solely responsible for all errors.

References


Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AAU</td>
<td>Al Ain University for Science and Technology</td>
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<tr>
<td>ADEC</td>
<td>Abu Dhabi Education Council</td>
</tr>
<tr>
<td>D-QTM</td>
<td>Diamond quality teaching model</td>
</tr>
<tr>
<td>ILO’s</td>
<td>Intended learning outcomes</td>
</tr>
<tr>
<td>QTM</td>
<td>Quality teaching model</td>
</tr>
<tr>
<td>OBE</td>
<td>Outcomes-based education</td>
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<tr>
<td>UAE</td>
<td>United Arab Emirates</td>
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