Linkages Between Total Quality Management and the Outcomes-based Approach in an Education Environment

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ABSTRACT South Africa has embarked on a process of education renewal by adopting outcomes-based education (OBE). This paper focuses on the linkages between total quality management (TQM) and the outcomes-based approach in an education context. Quality assurance in academic programmes in higher education in South Africa is, in some instances, based on the TQM model because of a strong focus on the employers of graduates. The development of performance standards and the identification of outcomes are highly relevant to quality management in educational systems. This is directly applicable to OBE, therefore, the purpose of this paper is to illustrate the linkages between TQM and OBE in an educational environment. The challenge is to successfully align TQM principles with OBE principles so that quality in higher education provisioning could be assured. This comparison will illustrate that the implementation of OBE in an academic environment does contribute to quality improvement. The future of an economic system is directly tied to the ability of a nation to establish and maintain a high quality higher education system with a strong focus on quality teaching and learning.

Introduction

Concerns that the education system cannot adequately prepare learners for life and work in the 21st century have prompted people across the world to explore ways of redesigning education systems. A significant educational trend operating in the world today is that of outcomes-based education (OBE). South Africa has embarked on a process of education renewal by adopting the OBE approach. Transformation of South African education, referring to changes in the education system, programme structures and staff profiling, is essential. If South Africa is to keep up with the rapid changes in the international technological arena and with economic and organisation changes, education will have to be fundamentally different in order to contribute to a dynamic workforce.

The shift towards OBE in education is comparable with the implementation of total quality management (TQM) in business and industry. The development of performance standards and the identification of outcomes are highly relevant to quality management in both educational systems and large organisations. Most large and small companies develop
standard operating procedures that define how work needs to be done to achieve set outcomes and thus organisational goals. One of the key principles of OBE is the achievement of high standards by all learners in reaching high quality outcomes (Lemmer & Lebeloane, 1998).

This is one of the main reasons why South Africa has embarked on a process of education renewal by adopting the OBE approach. However, the major obstacle in South Africa with regard to the implementation of OBE is the perception that OBE implies the lowering of standards, a perception that is fuelled by reports of the failure of Curriculum 2005 in schools in South Africa (Pretorius, 1998). The new curriculum for South African schools is a watershed, because its outcomes-based approach represents a new paradigm in education (Pretorius, 1998). Therefore, higher education institutions will have an obligation to monitor their own progress in meeting their aims and the extent to which they have produced effective learning opportunities for the learners.

This article argues that a blend of OBE and TQM can lead to an enhancement of the quality of academic programmes.

What is Quality?

The focus of this paper in illustrating the linkages between TQM and OBE is based on a strong emphasis on the customer. Therefore, it is important to highlight the notion of quality that relates to the customer. According to Harvey (1995b), quality as fitness for purpose is defined as quality in terms of fulfilling a customer’s requirements, needs or desires. Theoretically, the customer specifies requirements. In education, fitness for purpose is usually based on the ability of an institution to fulfil its mission or a programme of study to fulfil its purpose.

McNealy (1993) supported this definition stating that quality is a dynamic state and one definition of it is meeting or exceeding customer needs and expectations and these needs and expectations are determined through communication with the customers. Oakland (1995) added to this by stating that quality is simply meeting the customer’s requirements. Furthermore, Goetsch and Davis (1994) said that quality involves meeting or exceeding customer expectations and applies to products, services, people, processes and the environment.

Murgatroyd and Morgan (1993) explained quality in the educational context with a practical example, mentioning that lecturers are assigned specific duties and tasks at the beginning of each academic year. These assignments or duties represent a contract of work between the lecturer and the institution. Educational quality is therefore assessed by whether or not and how well the duties were performed.

With the focus on this one notion of quality that directly relates to the underlying objective of this paper, the following definition of quality is proposed by the authors: quality is a dynamic state associated with products, services, people, processes and the environment that meets or exceeds customer expectations.

Further to this, quality education demands a process of continuous improvement by systematically and collectively evaluating and refining the system, practices and culture of education institutions in order to meet the needs of the customers.

Total Quality Management (TQM)

Quality is defined as fulfilling a customer’s requirements, needs or desires and, to illustrate the linkages between TQM and OBE, it is important to highlight that one of the aspects of
TQM relates to this strong focus on the customer. TQM is in part about processes but, more importantly, it is about attitudes and TQM places quality as the primary objective within the organisation (Eriksen, 1995). Fundamentally, one of the notions of TQM embraces the principle that organisations should listen to those whom they serve, continually evaluate how well they are responding to the needs of their constituencies and initiate change to meet or exceed the expectations of these groups (Yudof & Busch-Vishniac, 1996).

Walkin (1992) defined TQM as a management-led, company-wide initiative intended to improve effectiveness of a process or product related to manufacturing industries or graduates related to training providers and to build quality into the service or training and education delivered. Steyn (1995) supported this management-led, company-wide initiative and mentioned that traditionally management is seen as the apex of the triangle, with workers or lecturers in the educational environment forming the base.

However, with regard to TQM Geddes (1993), supported by Steyn (1995), described an inverted triangle that quite intentionally places management at the base of the organisational structure and emphasises the strong focus on the customers of a higher education institution (Figure 1).

TQM is different from traditional management and therefore requires internal cultural and organisational changes. TQM as defined by the authors is a management system driven
by top management acquiring the absolute commitment and involvement of everybody in
the organisation focusing on increased customer satisfaction.

**TQM in Education**

Although TQM developed within the manufacturing environment, the benefits are equally
applicable to service entities such as higher education institutions. TQM as a pragmatic
model, however, focuses on service to others (Spanbauer, 1995). The key principles of a
particular version of TQM in education are leadership, scientific methods and tools and
problem-solving through teamwork. These three specific features are linked to form an inte-
grated system that contributes to the organisational climate, education and training and
 provision of meaningful data with customer service at the centre of it all (Figure 2). Educa-
tion is a service with customers and those customers express satisfaction about the institu-
tion’s services and the instruction offered (Spanbauer, 1995). Teamwork is important,
because lasting and significant changes will not occur unless educators and the other staff
are directly and actively involved in the planning and development of desired changes.
These teams will address problems by applying the correct tools and scientific approaches
in a shared decision-making atmosphere (Spanbauer, 1995).

Furthermore, each institution, as a learning organisation focuses on the individual devel-
opment of the learner.
TQM embraces the principle that organisations should listen to their customers, continually evaluate how well they are responding to their needs and initiate change in order to meet or exceed the expectations of the customers (Yudof & Busch-Vishniac, 1996). The inputs from employers and professional bodies should, therefore, inform decision-making. Furthermore, TQM consists of continuous improvement activities, involving everyone in the organisation in a totally integrated effort towards improving performance at every level (Goetsch & Davis, 1994). Adding to this, Kanji, quoted by Dahlgaard et al. (1997), mentioned that TQM is a tool for leaders that strongly support continuous change in the organisation, as organisations working with it unceasingly strive towards their own improvement, rendering it a dynamic system.

According to Zhu and Scheuermann (1999) TQM is a totally integrated effort to gain a competitive advantage by continuously improving every facet of the organisation culture. TQM focuses externally on meeting customer requirements and internally on management commitment and employee training and education. Adding to the internal situation, Oakland (1995) said that TQM is concerned with moving the focus of control from outside the individual to within. The objective is to make everyone accountable for their own performance and to get them to commit to attaining quality in a highly motivated fashion. Because TQM is proactive in nature, its aim is to build quality into the product, service and design of the process and then to continually improve it (Short & Rahim, 1995).

Hadgraft and Holecek (1995) mentioned that Deming stressed the importance of cultural change in order to achieve a shift in focus on quality. The focus must be on doing the right things right, instead of worrying about doing things right (Youssef et al., 1996). Kolb and Green, quoted by Harvey (1995a), mentioned that it is important to realise that higher education is not about getting it right the first time, but about developing ideas and abilities through a process of reflection. Furthermore, each institution should be a learning organisation focusing on the individual development of the learner, as well as the empowerment of all staff (Spanbauer, 1995).

The Outcomes-based Approach

Outcomes based-education is a learner-centred, results-oriented approach to education premised on the expectation that all learners can learn and succeed. It implies that learning institutions have the responsibility to optimise the conditions for success (Dreyer, 2001). Kudlas (1994) mentioned that OBE is a process with a focus on what is to be learned: the outcome that is a demonstration of learning. Spady (1994) defined outcomes as high quality culminating in demonstrations of significant learning in context.

Outcomes-based learning differs from traditional content- or competency-based learning in the sense that those types of learning are mainly content or skills driven and teacher- or trainer-centred. Content-based learning is aimed at the mastering of knowledge, as the topics of a subject were unpacked into a syllabus. The sources of information are mainly textbooks and the lecturers themselves. With outcomes-based learning the learning process is learner-driven and, although not always, aims at achieving specific outcomes. The outcomes-based approach focuses on the mastering of processes linked to intended outcomes, as well as on mastering knowledge and skills needed to achieve the outcome (Olivier, 1998). Knowledge, skills and attitudes can be drawn from any source and the role of the lecturer changes accordingly to provide guidance for the learners to achieve their outcomes by guiding them through specific learning procedures (Olivier, 1998).
The following comparison between a traditional content-based education system and an OBE system makes it easier to understand what OBE is all about. This comparison is illustrated in Table 1 (National Department of Education, 1997).

According to Pretorius (1998) the South African education system is committed to implement authentic or transformational OBE, i.e. a transformational approach (in the South African sense of transformation). It moves away not only from the existing curriculum but also from the given structures of teaching and learning.

The common principles of OBE from the definitions discussed above, including the reasons why education systems are attracted to OBE, are that in OBE learners are focused on what should be learnt, by knowing the outcomes in advance. Furthermore, OBE offers the opportunity for teachers to be flexible in their teaching methods, since the emphasis does not lie in procedure, but is focused on whether the learner reaches the required standard or outcome. Learners are given multiple opportunities to demonstrate whether the outcome has been reached. Learner achievement is not measured in terms of the achievements of other learners, but solely on whether a learner has reached the required outcomes or not and advancement is based on demonstrated achievement. Learners are expected to accept greater accountability for reaching the required standard or outcome and for self-motivated learners who reach the required outcomes successfully there is the freedom and flexibility to expand their learning to engage in enriching activities.

OBE is based on the involvement of a wide range of customers in determining the required outcomes; thus, community needs tend to be addressed more directly. The accent falls on skills needed in everyday living and the requirements of the world of work. Furthermore, OBE is a long-term commitment based on the notion of continuous improvement (Pretorius, 1998).

According to Tait and Godfrey (1999) one of the things most frequently expected of graduates is the ability to work independently to solve problems, and in the past it was usually assumed that studying within a disciplinary area will naturally lead to the development of this ability. According to Davies et al. (1999) academic institutions were criticised by the employers of graduates for not providing well-qualified graduates for industry. However, the move towards an outcomes-based approach to education is an attempt to ensure that such competencies actually are developed within higher education institutions.

### Table 1. Comparison between a traditional content-based education system and an outcomes-based education system

<table>
<thead>
<tr>
<th>Content-based education</th>
<th>Outcomes-based education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passive learners</td>
<td>Active learners</td>
</tr>
<tr>
<td>Examination driven</td>
<td>Assessment on an ongoing basis</td>
</tr>
<tr>
<td>Content-based syllabus</td>
<td>An integration of knowledge</td>
</tr>
<tr>
<td>Textbook and lecturer centred</td>
<td>Learner centred</td>
</tr>
<tr>
<td>Syllabus is rigid</td>
<td>Lecturers can be innovative and creative</td>
</tr>
<tr>
<td>Lecturers responsible for learning</td>
<td>Learners responsible for their own learning</td>
</tr>
<tr>
<td>Emphasis on what lecturer hopes to achieve</td>
<td>Emphasis on outcomes</td>
</tr>
<tr>
<td>Content placed into rigid time frames</td>
<td>Flexible time frames; learner determines pace</td>
</tr>
<tr>
<td>Rote learning</td>
<td>Critical thinking, reasoning and action</td>
</tr>
</tbody>
</table>
Linkages Between TQM and OBE

The development of performance standards and the identification of outcomes are highly relevant to quality management in both educational systems and large organisations. Most large and small companies develop standard operating procedures that define how work needs to be done to achieve set outcomes and thus organisational goals. Human resource planning is part of TQM (Van der Wagen & Ridley, 1997).

Olivier (1998) mentioned that the re-engineering of the learning system towards an outcomes-based approach is a major attempt to ensure graduates have the skills to meet the needs of industry. The shift to outcomes-based learning versus mainly content-based learning in the education system and competency-based in the training system is analogous to the total quality movement in business and manufacturing (Van der Wagen & Ridley, 1997). Outcomes-based learning reflects the notion that the best way to get where you want to be is to first determine what you want to achieve (similarly to TQM). Once the end goal (product or outcome) has been determined, strategies, techniques and other ways and means will be put into place to achieve the goal, and this process must be monitored and managed (Olivier, 1998).

As mentioned in the previous sections, the core principles of TQM are based on the clear identification and meeting of customers’ needs (intended outcomes). This is achieved through establishing the necessary enabling environment and conditions to provide the means in the system to understand, plan, execute, control, communicate, assess and improve processes, activities and end products (outcomes), be it a product- or a service-oriented enterprise. In terms of OBE, this means that learners accomplish more than remembering or mastering skills and knowledge. It also means that learners accomplish more than just producing or delivering outcomes. They become involved in managing their own learning process, developing preparational steps or doing interim and final assessments on processes and outcomes (end results). As with OBE, TQM changes the organisational culture by constantly and radically changing the approach to managing, production processes and the quality of the final product/outcome.

Following from the discussion of TQM and the OBE approach, the authors identified linkages between TQM in education and the OBE approach that can be regarded as idealistic notions of TQM compared with OBE.

TQM is a means of achieving and maintaining excellence in higher education (Eriksen, 1995), just as is OBE, aimed at the achievement of high standards by all learners in reaching high quality outcomes (Lemmer & Lebeloane, 1998). Furthermore, TQM requires a change, placing quality of services/outputs as the primary objective within the organisation (Eriksen, 1995), whilst the outcomes-based approach necessitates a change in the teaching and learning process and how learning should empower the learner through the achievement of outcomes. The focus in both instances is on quality outputs (Olivier, 1998).

TQM consists of continuous improvement activities involving everyone in the organisation in a totally integrated effort to improve performance at every level. TQM requires internal cultural and organisational changes, with the focus on changing attitudes and skills in order to prevent failure and ensure continuous improvement in the quality of graduates. OBE is a long-term commitment based on the notion of continuous improvement (Pretorius, 1998). TQM is a management-led, company-wide initiative intended to improve effectiveness and to build quality into the service delivered, meaning that the system should be initiated and led by the head of department, dean and other senior staff in the institution. The same approach is needed with regard to the implementation of OBE in educational institutions.
TQM embraces the principle that organisations should listen to those whom they serve, continually evaluate how well they are responding to the needs of their constituencies and initiate change in order to meet or exceed the expectations of these groups. This could also be said of the OBE approach, as the outcomes and the processes should be continuously reviewed in conjunction with industry and other stakeholders. TQM focuses externally on meeting customer requirements. OBE focuses on outcomes that the learners should achieve in order to meet the needs of external customers that are of utmost importance in education.

Managers in a TQM environment, in this case heads of departments in higher education institutions, should always remember that people want to achieve, accomplish and influence activity and challenge their abilities. In an OBE environment lecturers should remember that learners want to achieve, accomplish and influence activity and challenge their abilities. TQM therefore places quality as the primary objective within the organisation. OBE is about success, where the heart of OBE is that it wants learners to feel successful and aims to create conditions that will enable them to be successful (Luczyn & Pretorius, 1998).

Spanbauer (1995) mentioned that a key principle of TQM in higher education is that each institution should be a learning organisation that focuses on the individual development of the learner. This is directly linked to the OBE approach, where the emphasis is on development of the learner. Linking to this is that TQM brings people together, allowing a more complete understanding of the entire work process. The implementation of OBE in higher education institutions undoubtedly brings teaching staff together and, furthermore, teaching staff and learners. This has happened in practice at a number of institutions. Harvey (1995a) identified teamwork/group work as one of the generic principles of TQM, where teamwork helps to change the culture of the organisation from one of individual competitiveness to one of mutual interdependence. On the other hand, Luczyn and Pretorius (1998) mentioned that the principle of group dynamics, the methodology of learning within a group setting and the optimum conditions under which learning occurs in groups are essentials in the OBE approach.

One of the benefits of TQM in higher education is the empowerment of people that deepens an institution’s ability to be responsible and accountable for the services it provides (Oblinger, 1999). According to Luczyn and Pretorius (1998) OBE is a flexible, empowerment-oriented approach to learning. This empowerment means equipping learners with the knowledge, competence and orientations needed for success. In the TQM approach learners are centralised in the learning process and therefore become effective partners in the process (Hadgraft & Holecek, 1995). Van Rooyen (2001) added to this by saying that TQM is client/learner-centred and market driven. The OBE approach is moving away from the textbook and lecturer-centred approach to a learner-centred approach (National Department of Education, 1997). Thus, as with TQM, learners are at the centre of the learning process.

To summarise, Figure 3 is an indication of the key principles of OBE in relation to TQM, indicating how the authors see the linkages between TQM and OBE.

Conclusion

The linkages between TQM and OBE indicate that there exist common principles related to each. It can be said that in an OBE institution teachers/learners are seen as its most important resources and these people want to achieve and challenge their abilities. The focus is on individual development of the learner, including the upgrading of knowledge, skills and performance. The challenge is to successfully align TQM principles with OBE principles so that quality in higher education provisioning can be assured. This comparison illustrates
that implementation of OBE in an academic environment, based on the principles of TQM, does contribute to quality improvement.

The future of our economic system, and thus our nation, is directly tied to our ability as a nation to establish and maintain a high quality higher education system. The focus must be on quality teaching and learning, and this can be accomplished in South Africa through the successful implementation of OBE in the higher education sector. The implementation of OBE in an academic environment through the effective management thereof and by involving all stakeholders contributes to continuous improvement so that quality becomes a built-in element of the education system.

References


