Quality Culture and Innovation in Higher Education

Fabio Togni

Abstract:

The Quality Assurance history and, in general, the building of quality concept have accompanied the humanity history. With the advent of the production systems of the second and third Industrialisations Movement, this meant strengthening the control of products and services. With the end of the last century, more and more quality has affected processes and organisations as a whole. Today, Total Quality Management models cover all sectors of goods and services. Thus, also education systems can have great benefits from the spread of a Quality Culture. The essay aims to trace the history of TQM and shows how it also concerns formal and informal training. It also wants to show how the introduction of Quality Assurance Systems helps to create positive effects at both the micro, meso, macro and mega levels.

Keywords: Higher Education; Quality Assurance; Quality Culture; Stakeholders

1. The Long History of Quality

«*Substance* in the precise sense, in the first place and to the greatest extent, is that which is not said of some substratum, nor is it in any substratum, for example, a certain man, or a certain horse. On the other hand, *second substances* are called the species, to which are immanent the substances that are called first, and in addition to the species, the genera of these. For example, a particular man is immanent to a species, that is, to the notion of man, and on the other hand the genus of that species is the notion of animal» (Aristotle, *Categories*, 2a 11-18; 2b 15-17; 2b 30-3a 7).

For Aristotle, quality could be the principle (*substance*) that made it possible to determine specificity within the same class or gender. Having the opposable thumb or being bipedal was, therefore, the first *substance* of the human animal. Quality, then, in this first sense is a *descriptive characteristic of diversity*.

Diversity and quality are strongly interrelated.

In the second meaning – perhaps the most famous – *quality described the accidental and non-essential forms of the substance* and was therefore inferior to it.

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Thanks to it, continuity and discontinuity could be defined according to four groups: habitus and dispositions, forms, capacities and sensitive affections or qualities.

Medieval Scholasticism limited itself to noting, because of a more magical, alchemical and popular idea of nature, that, in addition to the sensitive qualities, experienced by one or more senses, there could also be occult and 'insensitive' ones.

On the contrary, modern philosophers could not admit the existence of elements that were not measurable and mathematizable.

For this reason, the quality of realities and objects came more and more to coincide with their material and quantitative element. This meant that the 'Quality' idea was increasingly connected to the idea of measurement and, by extension, to the idea of conformation and standardization of products and processes.

Quality as an 'element of differences enhancement' gave the stage to quality understood as 'maintenance of identity and replicability without errors or variations'.

This transition shifted the overall focus on quality and helped change the idea of value.

Before modernity and, in general, industrialisation, value/quality was connected to the ability to produce 'exemplum', unique pieces built 'in a workmanlike manner' within family and proximity production contexts, governed by a hierarchy similar to the domestic one (the father of the family was the teacher, the older children of the family were the workers and the younger children the apprentices). The quality was guaranteed by the direct and sensitive experience of the customer who had as his only intermediary figure that of the master of the workshop. Control actions were dominated by a qualitative approach.

With the affirmation of the industrial economy, value/quality has increasingly refined its technological tools of production (linked to the Market transformation) and, above all, of control. The links between the different circles of the productive organisation has become increasingly distant, progressively defamiliarising itself. The figure of the worker, that in the 'workshops model' was characterised by a high level of specialisation and complete responsibility for the production process, will progressively reduce his systemic vision and, in compliance with the rule of the scientific division of labor (Adam Smith), will be less and less specialised.

The emperors, categorised by Taylor, will be: one best way and de-responsibility.

In this context, the Control Strategies will be technologized by providing a quantitative approach, functional to mass production, obliged by the new consumerist logic of the market.

In the current post-industrial context, value/quality is increasingly considered as a useful element of competition in the supply of goods and services. Since the Seventies of the last century, models have been established (Japanese Industrial Standard and Company Wide Quality Control) in which the principles of control are increasingly touching the production relationships of the various

actors of the organisation, that become the main object of control and management strategies, thus guaranteeing the quality of the product.

That is, the natural and proportional relationship between 'internal quality' and 'production quality' is expressed in the belief that quality 'is produced and not controlled' through an internal government action of the organisation, oriented to the project quality, connected to the suitability of use of the product and its conformity.

Increasingly, therefore, the focus shifts from products (which are good as they are the result of a good production path) to production processes. The transition of attention from products to processes has characterised the movements of the so-called Quality Assurance.

2. The Total Quality Management

The latest evolution of quality/value has been realised since the mid-Eighties with the inclusion of the Total Quality Management (TQM) models that, in addition to the product (suitability for use, compliance with the project, satisfactory for the customer) and the process (set of practices, responsibilities, policies and procedures), have included the customer as a quality 'place'.

In a systemic and global way, in fact, the TQM tries to find an agreement in terms of efficiency and effectiveness between product quality, guaranteed by the Quality Assurance of the processes and the implicit and explicit expectations of customers and other stakeholders related to the organisation. The customer, in fact, is, like the other stakeholders, committed to building the value that represents the heart of the quality process.

In general, the TQM is based on four principles:

1. *Compliance*: consistency between the project specifications of goods and services and their actual 'grounding'.
2. *Control*: introduction of elements for measuring the expected and/or perceived quality with respect to the goods and services offered.
3. *Partnership*: involve all members of the organisation in the identification and organisation of quality improvement actions.
4. *Co-design*: involving customers in providing indications of customer satisfaction not in terms of response, but of redesign (second-level CRM).

Precisely, this last element shows how CRM systems are not simply functional to know their customers, in their expectations, in their perceptions and in their needs (first level CRM or Customer Satisfaction - CSM). These systems must have at their heart the relationship (the relationship of the acronym CRM), offering the customers spaces that allow them to redesign goods and services, enhancing an increasingly customised approach to quality.

In the same way, the involvement of all the components and all the actors of the organisation in the improvement process, with a view to sharing, is strategic to generate clear repercussions in the continuous Quality Assurance Process, both internally and at the level of goods and services.

Finally, the technical components, related to the principles of *Compliance* and *Control* help to improve the overall quality, structuring the supply paths of goods and services in which each phase has the same dignity (avoiding 'double-time theories' that enhance only the design aspects or, vice versa, the product ones) and has an organic role with respect to goods and services supply.

On this common basis, over time, according to the different organisational cultures and 'Quality Culture' different approaches to TQM have developed.

While keeping faith with the general dictates, each of these models attributes different weights to improvement actions, useful in different contexts.

The first variant consists of the so-called Edwards Deming Model (1993) based on the process called Plan-Do-Check-Act (PDCA) or about a cycle that includes: planning; experimental application of what has been planned; control of the results and verification of compatibility with what has been planned and, finally, implementation of the solutions that have passed the checks.

The model is inspired by the evidence-based approach, but above all focuses on a psycho-economic key, understanding and containing the so-called *change resistance*, interpreted as the main obstacle to quality processes that are, instead, by definition, transformative, dynamic and innovative.

A second variant, is the model inspired by Philip Crosby (1980, 1995, 1996) which, in a more financial key, underlines the opportunity of investments in terms of quality to reduce the financial dispersions of errors and discrepancies, elements that must be brought to zero, if the company is to be understood as a Quality Organization. The model seeks to highlight how preventive actions (and not only improvements) are an integral part of quality models.

A third variant, is proposed by Joseph Juran (Juran and Gryna 1988). The theme of training on quality benefits as constant and continuous improvement, that was already present in the previous model, here becomes a central and defining element of the organisation actions. A greater sensitivity and aptitude for quality represents a real added value of the organisation that must engage in a precise and timely definition of the improvement actions, the related monitoring strategies that must be implemented by tracking tools of these actions. This perspective makes quality almost perfectly coincide with improvement, shifting the focus from compliance to innovation.

On the front of greater control and feedback of the improvement through evidence, the version of the TQM proposed by Kaoru Ishikawa (QBP2 2001, 30-33) arises. With a strongly engineering approach, Ishikawa makes operational the so-called Pareto Analysis (20/80 Model) which, in terms of negative quality, shows how 80% of the problems that can be found in all productive areas, are attributable to 20% of causes and, in terms of work and proactivity, that 20% of the work is able to obtain 80% of the results. Ishikawa is the first to correlate Risk Management with Quality Management, showing that there is some form of relationship between risk appetite and Quality Assurance. Quality, in fact, is in his opinion, closely connected with the ability to predict errors based on specific 'control charts and algorithms' and to act in preventive rather than reparative terms.

In Europe, the European Foundation for Quality Management (EFQM 2003) has intervened by creating a taxonomy useful for Quality Management that provides for a continuous and constant relationship with the customer. In the same way, constancy is required towards the logic of improvement. To achieve these objectives, the Foundation stresses the constant training needs of the actors involved in the various roles of the organisation.

In a synthetic key with respect to the different perspectives of the TQM, the so-called Six Sigma Methodology is placed, which focuses on the relationship between quality and value creation that has its origin and its purpose in the customer. It is in fact the customer who directs and activates the building-value process that must flow smoothly along each of the processes involved. In particular, the Six Sigma Methodology focuses on the constant reduction of waste and unnecessary energy investments; that are the subject of continuous improvement actions in the form of real projects and reorientation. This is possible through the systematic application of the so-called DIMAC cycle (Define, Measure, Analyze, Improve, Control) which allows to continuously restructure and re-discuss the mission and vision of the organisation.

These models have had wide application in the productive sectors, but in the last two decades they have also had a wide application in the organisations of the first and third sectors, activating a process of continuous rethinking of training, educational and social activity, progressively transforming 'quality' into a content and a peculiar form of transformative Educational Policy.

Education and training systems have been progressively involved in a process of standardisation of Quality Assurance that has tried to put the 'customer', his needs and his overall well-being, at the center. However, as we will see below, the Quality Assurance processes in Higher Education systems and services have necessarily had to deal with the overall rigidity that characterises these organisations and, at the same time, have had to take into account the need to ensure a certain 'asymmetry' with the 'student-clients' and their training demands.

3. Quality Assurance in Non-formal Training Courses

The Quality Assurance process has also involved the so-called non-formal (indirect) training, that is, the training carried out by people within non-institutionalised paths that do not issue certificates with legal value. It is offered by Learning Services Providers (LSP). In general terms, it concerns professional training courses within companies, but, above all, it covers all areas of training related to leisure, including the so-called development of human capital.

Within the agencies and bodies that deal with non-formal training, based on the ISO 9001 standard, specific standards have been developed that have led to the introduction of the ISO 29990 Quality Standard, specific for this sector.

The standard, whose adherence is voluntary, is specifically aimed at public or private training institutions that have as their mission vocational, corporate and intra-company training (both direct and outsourced), as well as continuous learning (life-long). It is also useful to companies and organisations that offer

training as a support service to the main business in the form of specific training, related to goods and services of their own or others' production.

Moreover, it is aimed at organisations in the second sector which, through the HR divisions, offer training services exclusively to their own staff or to the staff of their subsidiaries (typical of large companies that have Internal Training Centers).

Finally, it is useful for training agencies set up within second- and third-level educational institutions.

ISO 29990 is an international standard dedicated to training and education services from a TQM perspective. In fact, in the two parts that constitute it – where the first one, is dedicated to defining the standards of the services construction process from design to verification and, the second, to the minimum requirements of the organisation –, we find most of the principles of quality of the models listed above, with particular attention to: the creation of value; the compliance of the service offered; the attention to the customer and his active role as a stakeholder. In particular, the LSPs are called, according to this standard, to build their offer starting from the training demand of their customers and, from an organisational point of view, they are intended in a continuous improvement structure. The overall benefits of adherence to this standard help to catalyze and broaden the idea that the training process coincides with a process of continuous value creation and, at the same time, of continuous quality creation.

Always indirectly, we can also include the Quality Assurance process that is guaranteed by national norms and international standards that recognise the social value of companies. We refer to the so-called Benefit Corporations and the movement that the American non-profit company B-Corp has activated thanks to the famous B-Assessment, a standard of certification and self-certification, which gave rise to the 'fourth sector'. The latter is populated by a very wide variety of companies, belonging to the most varied production sectors, which choose to undertake a process of value creation, rediscovering the social profile of their productive action. Quality, in these companies, is configured not only towards products and customers, but is combined with: social values of inclusion; promotion of territories, peculiarities and local traditions; financial, environmental and social sustainability. These standards are created to underline value and to support values and recognise the social profile of Quality Assurance processes, that have positive and sensitive effects both internally and externally within the organisation, rediscovering the political profile of Quality Assurance.

4. Quality Assurance in the European Education Area

A greater culture of quality and the need to create tools that would allow its further dissemination are the basis of the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG 2015).

This has meant that the principles of quality have changed their role from tools to monitor improvement actions within formal education systems to principles that inform and shape training policies, that are increasingly student-centered.

Thanks to Quality Assurance systems, there have been beneficial effects in the construction and redesign of national education systems in the name of: transparency; tracking and Quality Assurance; greater perception of overall trust between institution and stakeholders. This widespread culture, which takes the form of common and shared processes, has also had the effect of improving bilateral and transactional relations, by allowing greater dialogue and a better transition between education systems within the framework of the European Higher Education Area (EHEA).

The fundamental axes that govern ESG are:

1. *Accountability*: the provision logic of goods and services to the citizen with a view to responsibility and fairness.
2. *Enhancement*: the improvement logic as an intrinsic and transformative device of the education process.

The application of standards therefore allows not only a uniformity between the goods and services of education in European contexts, but, above all, contributes to a cultural revolution that identifies quality as the catalyst for the construction of Higher Education Policies. In other words, the path that has characterised Quality Assurance has been a significant example of Policy Making, in a non-conservative but transformative perspective.

It has also helped to facilitate the transition from a product-centered quality to a true culture of quality (Mackenzie 2011) that has effects not only on the service, but above all on the organisation. In fact, a true culture of organisation is realised when those who work in it not only follow quality guidelines, but also consistently see others taking quality-focused actions, hear others talking about quality, and feel quality all around them. In this way, quality dimension and ethical dimension are recomposed and efforts for Quality Assurance also lead to significant effects of well-being and cultural and social inclusion inside and outside the organisation (Flevy and Norhayati 2019).

5. Innovation of Higher Education and Quality

The inclusion of Quality Culture in the paths and processes of Higher Education has had very tangible effects. Above all, this introduction has helped to make the fundamental and strategic idea of HE's paths as places of organisational learning and not only as places of cultural products and services delivery truer and more equipped with content.

Taking up the four pillars of the TQM we can identify some operational aspects that can make the process of innovation and transformation of European education pathways stronger.

About *compliance*, we can say that the HE paths must maintain constant attention to the aspects declared (e.g. in the Teaching Syllabi) in terms of Learning outcomes, connected with the Dublin Descriptors and what is actually acted in the individual teachings and in the activities of the Study Programs. One of the fundamental assets of quality is, in fact, the compliance between what is declared during the design and the goods and service offered. Continuous monitoring re-

quires the development of tools to measure the 'learning incomes', the cultural and educational offer provided and the 'learning outcomes'. Any deviation or discontinuity in this line of process must be the subject of improvement interventions in order to consolidate the trust pact and the training contract between students (who are a peculiar type of customers) and institution.

This work of conformity must start, in line with the professionalizing dimension of the EQF, from the pedagogical principle of Employability. Learning outcomes, as well as the cultural and educational offer and the measurement of incoming knowledge, cannot be separated from professionalization. The objective of HE's paths is, in fact, to promote smooth transition processes that accompany 'customers' in the labor market. Therefore, quality understood as conformity cannot be separated from a dimension of employability (Boffo and Fedeli 2018; Boffo 2019).

As a consequence and corollary of compliance, the tools and actions of *Control* must be placed and addressed not so much to the products, but to the procedures/processes. It is, in fact, essential to equip oneself with control tools that measure objective aspects. For this reason, in the context of the control, we can include all the indicators that measure, for example, the students' regularity in the course of study. In Italy, ANVUR (the central agency that presides over the evaluation and control of training processes in HE) measures: the acquisition of 33% or 66% of ECTs in the first year; the conclusion of the course of study on schedule; the drop-outing in training courses, etc. These indicators show the quality interventions effectiveness and contribute to making the compliance of training courses increasingly effective.

In the field of compliance and control, it seems that the comparison methods (cf. Egetenmeyer) can be effective and can help to build a convergence based on the enhancement of the common aspects and, at the same time, of the peculiar and specific elements of each national HE system.

With regard to *partnership*, the innovation introduced by quality systems has revealed that this principle does not follow specific professional figures. Once upon a time, in the organisational contexts there were, in fact, figures in charge of control and quality. In TQM systems that also concern HE contexts, quality is an 'organisation posture' and concerns all members. That is, everyone is involved in making and offering quality *goods and services* and the latter is the result of the quality action of all members of the organisation. This means that in organisations, especially those engaged in the construction of intangible goods and services, it is important to invest in terms of a culture of shared quality. Technical, administrative and academic staff are, in fact, called to operate with quality and, above all, to understand their work with a view to continuous improvement. This involves investing in HE policies to overcome the *resist changing* by investing in continuing education for working adults.

Finally, with regard to *co-design*, innovation must concern the strengthening of co-design tools that enhance all stakeholders. Above all, among the stakeholders, students are bearers of value and can, in an innovative and quality climate, become more and more valueable creators. This involves not only using classic

CSM (Customer Satisfaction Management) tools, based on the collection of students' opinion and their perceptions, but advanced CRM (Customer Relationship Management) tools, that are able to provide *guidance* on the general experience of student-customers (Togni and Boffo 2021). In other words, it is necessary to make a transition from monitoring systems centered on customer perception to experience-centered systems that, in addition to collecting opinion and perception data, can combine them profitably with data on the final realization and on obtaining results, in the expected time (see the *Control* description).

Precisely in these two areas – those of *co-design* and *partnership* – narrative and qualitative approaches could easily be used (cf. Di Rienzo), because they can build real tracking systems for training experiences, intended as a result of Quality Assurance.

It therefore seems to us that the TQM has had and will have a fundamental role with interesting follow-up at the micro-level of the individual teachings both at the meso-level of the local HE systems and at the macro-level of the national education systems.

At the same time the TQM has led to a revolution at the mega-level, of the complex of the HE system in Europe, helping more and more to place the education and training *goods and services* at the level of people's daily lives. HE is able to train *Life Skills* and, in addition, it can understand itself as a continuous education system (not only a training actor for young people), transforming itself into a continuing social value creator.

Only in this transversal and continuing perspective, in fact, we can call HE a total quality system.

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