



Job design and crafting for quality education in Italian secondary schools

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Achieving Quality Education: The Importance of Design and Crafting of Jobs in Secondary Schools

Total quality management (TQM) is a management philosophy to achieve business excellence using various core values, such as process orientation, continuous improvement, motivation, job commitment, learning, and results orientation. In this study, an exploratory study concerning job design and job crafting was conducted to achieve TQM for leaders and followers in Italian secondary schools. In the study, in-depth interviews were conducted to collect data from 70 participants, i.e., 14 managers, 28 teachers, and 28 secretaries, and qualitative techniques were used to analyze the data. The results showed that the organization of work, whether top down or bottom up, is vitally important in pursuing total quality. Human resource management practices, such as the design of jobs by managers or by employees, modify the behavioral approach and determine an orientation towards TQM by different types of workers. The results of the study offer practical implications to policy makers, school managers, educators, and leaders regarding the importance of the design and crafting of jobs in achieving TQM in the educational sector.

Keywords: total quality management; job design; job crafting; secondary school; human resource management

Introduction

Scholars from different disciplines have been asking a question that has been asked for many years, i.e., “How can quality be managed to gain a competitive advantage and superior performances” (Aquilani et al., 2017)? Some have hypothesized a response in Total Quality Management (TQM), a modern management approach (Bajaj et al., 2018) and a critical tool that is used extensively by private and public organizations.

Although there is no univocal definition (Bouranta et al., 2017), TQM generally is described as a “management philosophy” based on different core values, such as continuous improvement, process orientation, job commitment and motivation, fast response, results orientation, and learning from others (Hellsten & Klefsjö, 2000). TQM

is considered to be one of the most important management tools for organizations to deal with challenges and achieve high rates of performance through a holistic approach and continuous improvement in all work operations (Al-Dhaafri et al., 2016).

TQM is an organization-wide, process-oriented approach that requires changes that are not limited to production; rather, changes also are required that are related to employees' participation, involvement, and development (Arulrajah, 2017). Perdomo-Ortiz and colleagues (2009) found that activities related to human resource management (HRM), such as training, teamwork, and motivation, are connected directly with TQM principles. Indeed, HRM and TQM practices have a significant effect on organizational quality performance, positively affecting employees' quality awareness, customer satisfaction, and company image (Abu-Doleh, 2012). Therefore, quality management philosophy is based on a culture and a set of values that are related closely to job design (Escribá-Moreno et al., 2008), but also, consequently and in an opposite view, to job crafting (Demerouti & Peeters, 2018).

TQM has been used by manufacturing companies to gain competitive advantages. Also, in the last few decades, TQM has been applied in various sectors, including healthcare, insurance, banking, and others. This research is focused on the school sector since there are many areas in education that can be a source of quality, such as excellent examination results, outstanding teachers, application of the latest technology, and strong and purposeful leadership (Nawelwa et al., 2015). According to Soheli-Uz-Zaman (2016), educational institutions throughout the world actively are implementing quality education as increasing numbers of people seek to enhance their knowledge. Jamaa (2010) showed the effectiveness of applying TQM tools in high school, resulting in an effort to meet the global quality education standard. Despite the success of TQM in other sectors, its success in education is still debatable. Soheli-Uz-

Zaman (2016) indicated that critical challenges have been identified when implementing TQM in education, and it is important to deepen TQM further in the educational sector (Nawelwa et al., 2015).

In this study, we present findings from a qualitative study that are useful in understanding “how” an organization that emphasizes quality should be organized (e.g., Traboulsi et al., 2018) from two different perspectives, that is, according to job design and job crafting principles (Hackman & Oldham, 1980; Wrzesniewski & Dutton, 2001). Responding to calls in the literature (e.g., Wickramasinghe & Gamage, 2011), this study aims at investigating the ways in which management is involved in formulating internal policies, generating quality awareness among employees, and redesigning work processes by motivating individuals to achieve total quality. In addition, from the reverse perspective, it also will be possible to identify the proactive quality-oriented behaviors implemented by workers in view of TQM (Bruning & Campion, 2018). Indeed, although the importance of workers in achieving quality, i.e., employee first, customer second (Ramaswamy & Ozcan, 2014), is being recognized increasingly, it is necessary to examine these issues in depth (Aquilani et al., 2017) and to focus on the “internal” part of the organization (Bajaj et al., 2018). Also, this study contributes to the literature on TQM by responding to calls for studies with qualitative methodologies, such as interviews (Garza-Reyes et al., 2018), allowing for more detailed accounts of the processes and nuances that are being investigated (Traboulsi et al., 2018).

The paper is structured as follows. The second paragraph presents a review of the literature on job design and job crafting as antecedent variables of the shift towards total quality. The third paragraph reports the methodology of this exploratory, in-depth, interview-based research. This is followed by the results and discussion, with theoretical and practical implications of the study, and a paragraph of conclusions.

The two faces of work organization

A common element that emerges from the literature of the 1990s on job dynamics is the “passive” behavior of employees (Spector & Fox, 2002). According to this assumption, people do their jobs on the basis of external stimuli, e.g., the influence of their employers or the social context. A line of study that has been appreciated greatly is job design (Hackman & Oldham, 1980), a theory that relates to the modifications of a job implemented by managers and mechanically accepted by employees. Job design helps in the evaluation of the entire job and in matching employees’ attributes to the requirements of the jobs. The purpose of job design in HRM is to identify the roles, functions, workflows, and characteristics of the personnel who occupy specific positions in the company.

Hackman and Oldham (1980) proposed several implementing principles for job design which are relevant to TQM (Waldman, 1994). Indeed, TQM is related closely to the functions of HRM, especially with reference to job design (Methuku & Ramadan, 2016). Various job-related activities must be conducted periodically, such as job enlargement, job rotation, and job enrichment, because they reduce the monotony in the workplace, thereby allowing companies to develop an approach to total quality (Kaur et al., 2012). Since organizational design plays an important role in pursuing total quality (Escribá-Moreno et al., 2008), productivity and quality can be improved in organizations through the appropriate design and analysis of jobs (Arulrajah, 2017).

Today, the basis of the job design concept is the need to make the cognitive capital of the company effective and efficient, taking care of the factors that affect job satisfaction directly (Grant et al., 2011). The task of the person who is designing a job is to encourage simple and flexible communication between employees by designing work organization strategies that stimulate creativity and knowledge within the company.

Relative to this, the literature suggests that TQM should include counting a number of small and focused initiatives, such as job design (Hackman & Wageman, 1995).

Aroosiya and Ali (2014) posited that job design can improve companies' HRM because the achievements of organizations depend on the efficiency of their employees. Thus, since teachers are key employees in the education sector, their performances enhance educational competitiveness.

Thus, the first objective of this exploratory study is to investigate this critical HRM function – which is linked to the specification of contents, methods, and relationships at work – namely job design, as an antecedent variable of TQM.

Therefore, the first research question is “*Does, and possibly how, job design – that is, the organization of work in a top-down approach – affect the achievement of TQM?*”.

Furthermore, although one of the key concepts related to TQM is the role of top management, the possibility of making full use of the skills of workers and having involved employees through lean practices, such as job crafting – a process oriented to the proactive change of tasks, relationships, and cognitive perceptions at work (Wrzesniewski & Dutton, 2001) – also becomes of increasing importance (Smith, 2017).

Job crafting captures “the physical and cognitive changes individuals make in the task or relational boundaries of their work” (Wrzesniewski & Dutton, 2001, p. 179). It consists of three proactive individual behaviours enabling employees to shape their jobs to get a better fit with their natural skills, preferences, and inclinations at work. These three behaviours are (1) physically altering the boundaries of tasks to increase, reduce, or simply modify the required activities, (2) changing the relationship style by investing in or avoiding high-quality relationships with co-workers, supervisors, and

customers, and (3) rethinking the cognitive nature by mentally reframing one's job in more positive terms (de Gennaro, 2019).

These actions should be undertaken from a bottom-up approach, which generates greater work engagement and higher performance (Tims et al., 2013). Job crafting is an activity that employees spontaneously undertake to meet their needs and preferences in the workplace (Kira et al, 2010). It is a behaviour that requires an adaptation to the challenges and to the constraints imposed by an employer (Berg et al., 2010), and it represents a strategic advantage for individuals and for the organization as a whole, although these changes are not always in line with the organization's goals and needs (van den Heuvel et al., 2010).

Job crafting behaviors are self-HRM activities that are oriented towards a new approach to quality (Reinmoeller et al., 2019); indeed, TQM advises the adoption of the idea of "work smarter, not harder", which also aims at improving the efficiency of work processes due to the proactive and bottom-up contribution of individuals (Demerouti & Peeters, 2018).

Despite these insights, to date, very little empirical research has been conducted concerning how to deepen the relationship between job crafting and TQM (Cullinane et al., 2017), and understanding how people shape their jobs remains a critical issue, especially when we refer to managerial practices, such as TQM (Vough et al., 2017). Job crafting represents a behavioral mechanism based on individual innovation, and it has an important function with reference to TQM (Bruning & Campion, 2018). TQM is concerned with a shift away from traditional forms of "hard" quality management to an emphasis on maximizing the contribution of employees to work and their autonomy and control over their work.

Thus, the second objective of this study is to investigate whether job crafting, as a self-HRM activity, can be an antecedent variable of TQM. Therefore, the second research question is: “*Does, and possibly how, job crafting – that is, the organization of work in a bottom-up approach – affect the achievement of TQM?*”.

Method

Study's context

This study was conducted in Italian secondary schools. In Italy, secondary schools are the second grade of the education cycle, and they have a duration of five years. Each course of study includes a final exam to obtain the diploma and gain admission to a university. Italian secondary schools are divided into three macro groups of institutes, i.e., lyceums, technical institutes, and professional institutes.

All of the sample schools were in southern Italy, i.e., in the Campania region. The choice fell on this sample since this is an area where teachers generally are not satisfied with their jobs, which leads to poor performance (Ingusci *et al.*, 2016). Every year in Italy, national standardized tests for the detection of learning are administered in all high schools in order to assess the level of preparation of Italian students, and not infrequently the region under study is ranked last (INVALSI Report, 2019). These data suggested that we focus on this sample in order to investigate any actions put in place in order to pursue greater quality in the service offered.

The exploratory study was conducted in June 2020, which was the historic moment of reorganization and consolidation of new working practices for the educational sector due to the coronavirus epidemic. For the first time, distance learning initiatives have been promoted and the use of smart working has been encouraged, although there has been resistance, skepticism, and some difficulties (Nadotti, 2020;

Riva et al., 2020). This sudden and substantial reorganization was done to guarantee high-quality education despite the difficulties.

The effectiveness of applying TQM in secondary schools results in an effort to address the quality challenge (Jamaa, 2010) and in an improvement in the quality of teaching and learning (Pourrajab *et al.*, 2011). For example, Cotton (1994) suggested that applying TQM principles to secondary schools in Alaska meant that teachers would have to attend conferences to improve the quality of education. Magwaza (2007), in a study of secondary schools in South Africa, showed that educators with a positive view of TQM principles were more likely to apply them in their teaching activities because they realized that students are their customers, and they need to acquire satisfactory knowledge from the learning process.

The application of TQM in secondary schools is intended to enhance organizational performance, achieve a competitive advantage, and encourage innovation and continuous improvement (Porter, 1985). Nawelwa and colleagues (2015) documented the existence of the key principles of TQM in secondary schools and the extent to which they were practiced to seek quality, including (1) the adoption of the new philosophy by management and workers, (2) the realization that there is continuous training on the job, (3) management sets goals rather than supervising employees' work, (4) it is not the people who make mistakes; rather, it is the process in which they work that is wrong, (5) it is important to encourage self-improvement, and (6) it is important to make everyone responsible for the improvement in quality and productivity. In this study, as in others in the literature, the leader-follower dichotomy takes the form of school manager-teacher.

Data collection

To answer our research question, we used an inductive qualitative approach based on different sources to gain a broader view of the phenomenon under investigation.

Qualitative research requires the adoption of multiple sources of information in order to reduce the impact of potential biases that may exist when consulting a single source (Bowen 2009). In line with this approach, formal documents, as well as schools' websites and open source documents, gave the research team an overview of the organizational and work situation of the sample schools. Furthermore, the research team also retrospectively analyzed the changes in the structure of the schools since 2000 (e.g., organization chart, division of offices, and areas of competence) to develop an in-depth understanding of the functioning and organizational configuration adopted in recent years.

The primary data for the study consisted of qualitative interviews in 14 secondary schools, some of which were conducted in person and the others remotely. Data saturation (i.e., recurrently repeating the same themes) was used to assess the size of the final sample. For each institution, the interviews involved the school manager, two volunteer teachers, and two secretarial employees. After completing the interview with the manager, through a snowball sampling technique, s/he was asked to suggest the other candidates who should be interviewed, and it also was specified that it would have been useful to meet those who took care of the IT platforms within the secretariat. Therefore, the sample was composed of 70 people (14 managers, 28 teachers, and 28 secretarial employees).

Following the Gioia method for qualitative analysis (Gioia et al., 2013), the study's approach depended on a generic research statement: "We wish to explore individuals' work behaviors to achieve TQM at school". Accordingly, during the interviews, we explained TQM to the interviewees in order to direct the flow of the

discussion in that direction, but we did so without mentioning the concepts of job design and job crafting to avoid influencing the sample. Thus, interviews were administered as if they were informal conversations within which it was possible to cover all of the topics that were related to the working behaviors of the managers and employees of schools. Interviews were conducted by two independent researchers, lasted about 45 minutes and were recorded and transcribed so the data could be analyzed.

Coding and analyzing

In analyzing the interviews, the Gioia method (Gioia et al. 2013) was adopted. This analysis process involved three phases.

In the first stage, the focus was on finding recurring themes in the interviews based on the respondents' answers. The notes from the interviews were uploaded into online software for qualitative analysis of the data (Dedoose); then, the data were analyzed independently by two researchers, which allowed exploratory data analysis (Saldaña, 2021). We used Cohen's (1960) κ coefficient to estimate the level of agreement between the coders. We followed an iterative approach and continuously iterated between the data and the emerging conceptualizations. By comparing codes and by engaging in a discussion when disagreements occurred, the final consensus reached the value of $\kappa = 0.88$, which indicated that there was excellent agreement among the raters.

Subsequently, we discerned patterns in the data with the aim of identifying concepts and relationships and formulating them in theoretically relevant terms, giving particular attention to nascent concepts that seemed to have no adequate references in the literature.

After we identified all the relevant first-order codes/terms and the second-order concepts/themes, we assembled them into a data structure (Figure 1).

[Figure 1 near here]

Results

Job design adds meaning to a work experience that would otherwise be merely functional. The manager can act in the company to make people perform a mere function, or s/he can become a designer of contexts, in which people add meaning to their work beyond the reductionist operational functionality.

The results of this study show that top management within secondary schools use practices that refer to job design in order to reach total quality, in particular for the quality of the educational service that is provided. In different ways, school managers claim to shape the work activities of teachers and secretarial employees in order to obtain a higher performance rating. Below are some sample extracts:

“I believe that my work is comparable to that of a film director [...] when I arrived I introduced the electronic register in order to re-engineer and digitize the processes and allow a more immediate exchange of information. Everyone, both workers and students’ parents, appreciated it.” [e.g., job design; school manager]

“I introduced a new job rotation mode among the secretarial staff in order to make the job more motivating and in this way aiming at a better performance [...]. At the moment, the results seem to prove me right.” [e.g., job design; school manager]

Interview insights reveal the possibility that job design is an antecedent of TQM.

Indeed, some talked about job enrichment (*“I made the activities less routine, with more autonomy and responsibility on the part of the teachers who actually now work better”*.), others of job enlargement (*“I expanded the employees’ tasks horizontally, reduced psycho-physical stress, moderated absenteeism, and made the service that was*

provided more flexible”) and almost all recognized the benefits in terms of total quality (“*The quality of the service offered has certainly increased*”). Other school managers talked about moral support:

“Because of the Coronavirus we suddenly had to rethink the way we were teaching [...]. To solve the problem, I organized online courses for teachers to understand the benefits of distance learning and the most used techniques, and we are having good results.” [e.g., job design; school manager]

as well as material support:

“In order to ensure the correct provision of services by the school, I used all the financial funds available to equip teachers and employees with tablets or laptops so they could perform their functions remotely.” [e.g., job design; school manager]

Also, in order to gain total quality, job crafting emerges from interviews with teachers and employees of the secretariat of secondary schools.

First, with reference to the task boundaries, both teachers and secretarial employees said they increase and decrease activities at work in order to channel the available energy into interesting and challenging tasks. Many interviewees reported that “*The teacher/administrative work is sometimes very repetitive*”, so they decide to change the ways they teach and conduct administrative activities to reduce the heavy burden and make the days less stressful.

Many times, the teachers and employees who perceive that they have some independence and are committed to making changes achieve positive results, not only for themselves, but also for the other employees of the school as well. Then, if the top management recognizes all of these benefits, the motivation grows and consequently the

perception of autonomy is strengthened, giving life to a virtuous circle of innovations that is beneficial for all involved. Below are some examples:

“During the quarantine due to Coronavirus, we have been forced to move our learning activity online [...]. I created an online photo contest in which students could share a beautiful moment of the day at home. Everyone loved the initiative and participated more actively in distance learning.” [e.g., “task” job crafting; teacher]

“I have always been looking for innovative solutions in conducting my work activities. For example, I proposed to the other teachers that we use an online communication platform in order to facilitate the exchange of information between us [...]. Although it was not easy at first, everyone appreciated the ease of exchanging communications.”

[e.g., “task” job crafting; secretarial employees]

In addition, from a relational perspective, the interviewees reported some behaviors by referring to job crafting; they continually change the nature and extent of relationships in the workplace, and they prefer relationships with pleasant or helpful people. Below are some samples:

“I have always preferred to relate to some colleagues and avoid others; for example, over the years I promoted work and study groups with some teachers with whom I share hobbies and passions and together we designed some really nice activities [...]; these activities also were conducted outside of working hours, but they were very pleasant for us and for the students, and there was good participation.” [e.g., “relational” job crafting; teacher]

“The moment we implemented an online teaching platform, we organized a series of meetings with the students’ families [...] It has been nice to build new relationships to face such a complex problem together.” [e.g., “relational” job crafting; secretarial employees]

Finally, the way of looking at and interpreting the daily tasks from a cognitive perspective also represents an important aspect for improving the quality of the service offered. Although the “concreteness” of the job remains the same, the ability to rethink one’s work is an important tool in increasing motivation, as outlined below:

“It is not easy to work with such a low salary [...]. When I consider my job boring, I think about the social utility it has and consequently I do my best.” [e.g., “cognitive” job crafting; teacher]

“Sometimes my work is not appreciated, I just look like a bureaucratic executor [...] When I get discouraged, I think about how important my contribution is for students’ growth, so I find motivation and I work better.” [e.g., “cognitive” job crafting; secretarial employees]

Discussion

This study does not offer absolute knowledge; rather, it offers a way forward. From the perspective of the theoretical implications, the time has come to ask: “How important is HRM and self-HRM to pursue total quality?”. We try to answer this question.

This study contributes to the literature on HRM and TQM in at least two ways. First, school managers have a pivotal role in enhancing TQM, and, through proactive initiatives of work organization, they motivate their subordinates and achieve better results through job design and job crafting. Like the coaches of sports teams – to quote the expression of an interviewee – it is possible to pursue quality and achieve the best

results from subordinates. The literature never focused on the role of job design for TQM, but, on the contrary, this study suggests that it represents a critical variable in this relationship. Similarly, although some authors refer to the possibility of linking job crafting with TQM (e.g., Vough et al., 2017), this is the first study to address this relationship where workers (or players), from a bottom-up perspective, contribute to the achievement of total quality through modifications of the tasks as well as the relational and cognitive job boundaries. Studies on HRM and TQM are scarce in the literature and this research, although exploratory, may open up interesting scenarios. Also, this study represents an attempt to understand how an organization that aims at quality should be organized, since this is still an unanswered question (Traboulsi et al., 2018).

The results of this qualitative study show that school managers design the work of their employees and collaborators to enhance the quality of the service offered. Using various techniques related to HRM, such as job enrichment or job enlargement, the interviews show that it is an objective of management to direct workers to desired levels of quality output. And the results, which are the result of both a personal perception of the quality of service and a quantitative measurement of user satisfaction in this sense, confirm the original assumptions. On the flip side, employees' interviews identified an important role in job crafting, as a self-HRM behavior, to improve the quality of the educational service. Through crafting tasks, individuals make changes to the activities to be performed in order to make the educational experience more stimulating and endowed with a higher quality. Through relational crafting, the changes concern the relational sphere in order to increase quality starting from relationships with users and colleagues, and, through cognitive crafting, the changes provide a boost in the motivation to promote the process of change.

Also, the managerial implications of this study are particularly relevant.

Ejionueme and Oyoyo (2015) indicated that improving the quality of education is one of policymakers' major challenges. As stated by Nielsen (2013), managers' supportive behaviors related to the appraisal of the benefits of TQM stimulates employees to perform as job crafters. This means that managers have an important role, both as designers of other people's work and as facilitators, with the aim of establishing organizational and contextual conditions that would allow maximum benefit from the workers efforts in synergy with the objectives of the organization. Therefore, modern TQM approaches should recognize the role of individuals as proactive agents who model and design their own work and its characteristics.

Managers have a critical role in motivating individuals to undertake proactive behaviors by assisting them in pursuing their unanswered callings (Berg et al., 2010). However, at the same time, the potential negative results of the job crafting practices should not be underestimated (de Gennaro, 2019), i.e., to direct these proactive behaviors in the right way, and several intervention studies have described how to help in crafting a job accordingly. For example, Van Wingerden and colleagues (2017) showed that job crafting interventions have been effective in improving organizational performance. In a study on school teachers, the authors suggested an increase in performance for those who behaved accordingly. In this specific case of job crafting intervention, the teachers were able to review their current tasks, plan how to increase their job resources, manage the challenging demands of the job, and how to diminish the demands that hinder their doing their jobs.

This paper has some limitations, such as the choice to focus on a single geographical area. These findings need to be explored in a wide range of production or service sectors and countries. In addition, although the request for qualitative studies and despite the methodological rigor with which this study was conducted, a limit is

represented by the inevitable subjectivity of data also due to respondents' perceptions. Future research could use these results to test similar and other hypotheses in a broader sample through longitudinal quantitative studies. Another limit is the historical period in which this study was conducted. It is possible that the emergency caused by the Coronavirus slightly altered the perceptions and behaviors of people, but, at the same time, although this was not the main focus of the study, it also has been useful to investigate individuals' behaviors in such a critical period, and it may have represented an added value for this study.

Conclusions

The goal of TQM is to achieve business excellence, motivation, learning, and a results orientation. In this study, we conducted an exploratory study of job design and crafting to achieve TQM for leaders and followers in Italian secondary schools. We used in-depth interviews to collect data from 70 participants, and we analyzed the data using qualitative techniques. The results showed that school managers and employees use HRM and self-HRM practices to achieve total quality in providing educational services. The study offers practical implications to school managers, educators, and leaders regarding the importance of job design and job crafting for achieving the TQM goals in secondary schools.

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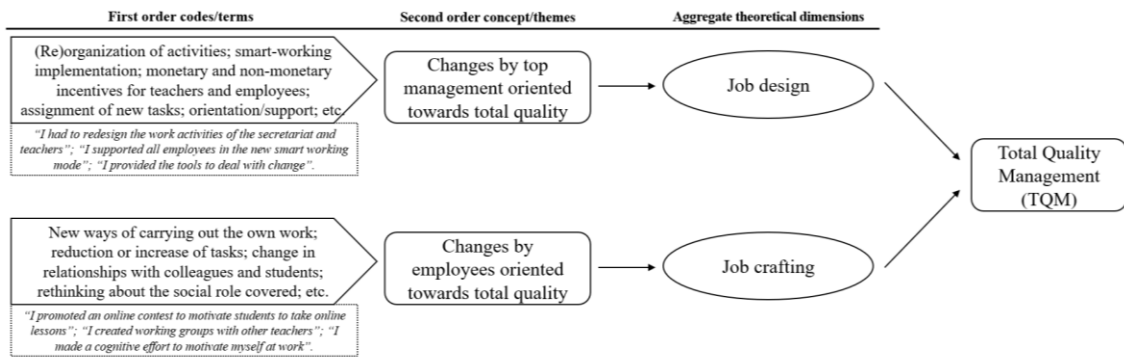


Figure 1. Data structure