

# MEHMET AKIF ERSOY ÜNIVERSITESI İKTİSADİ VE İDARİ BİLİMLER FAKÜLTESİ DERGİSİ

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## A RESEARCH ON THE ESTABLISHMENT OF TOTAL QUALITY MANAGEMENT IN MUNICIPALITIES

## BELEDİYELERDE TOPLAM KALİTE YÖNETİMİNİN KURULMASI İÇİN YAPILMASI GEREKENLER ÜZERİNE BİR ARAŞTIRMA

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#### Abstract

Municipalities are the most authorized local government administrations in almost every country. Therefore, they have a responsibility to serve the citizens at the highest level. Total Quality Management is one of the approaches that will help this. The aim of this study is to present concretely what needs to be done to establish Total Quality Management in municipalities. For this, the Analytic Hierarchy Process method was used. According to this method, alternatives are given to experts and they are asked to rank them to achieve the goal. As a result, the ranking was made by the experts who participated in the research as follows; training of municipal top executives, public demand, establishment of Total Quality Management Directorate in municipalities, development of municipal legislation, supervision of municipalities by the General Directorate of local administrations.

Keywords: Municipality, Local Governments, Total Quality Management, Analytical Hierarchy Process, New Public Management, Public Administration.

#### Öz

Belediyeler hemen hemen her ülkede en yetkili yerel yönetimlerdir. Bu nedenle vatandaşlara en üst düzeyde yerel hizmetleri vermekle yükümlüdürler. Toplam Kalite Yönetimi de buna yardımcı olacak yaklaşımlardan biridir. Bu çalışmanın amacı belediyelerde Toplam Kalite Yönetiminin kurulması için yapılması gerekenleri somut olarak ortaya koymaktır. Bunun için Analitik Hiyerarşi Süreci yöntemi kullanılmıştır. Bu yönteme göre uzmanlara alternatifler sunulmakta ve hedefe ulaşmak için onları sıralamaları istenmektedir. Bu çalışmada yapılan araştırma neticesinde sonuç olarak sıralama, araştırmaya katılan uzmanlar tarafından şu şekilde yapılmıştır; belediye üst kademe yöneticilerine eğitim verilmesi, halkın (TKY) talep etmesinin sağlanması, belediyelerde Toplam Kalite Yönetimi Müdürlüğü kurulması, belediye mevzuatının düzenlenmesi, belediyelerin yerel yönetimler Genel Müdürlüğü tarafından denetlenmesi.

Anahtar Kelimeler: Belediye, Yerel Yönetimler, Toplam Kalite Yönetimi, Analitik Hiyerarşi Süreci, Yeni Kamu Yönetimi, Kamu Yönetimi.

# GENİŞLETİLMİŞ ÖZET

## Çalışmanın Amacı

Bu çalışmanın iki temel amacı bulunmaktadır. İlki; belediyelerde Toplam Kalite Yönetiminin kurulması için yapılması gerekenleri somut olarak ortaya koymaktır. İkincisi ise; daha çok işletme biliminde kullanımı olan Analitik Hiyerarşi Yönteminin (Analytic Hierarchy Process – AHP), kamu yönetimi alanında kullanımına katkı yapmaktır.

## Araştırma Soruları

Çalışmanın temel sorusu şu şekildedir; belediyelerde Toplam Kalite Yönteminin kurulması için somut olarak hangi uygulamalar hayata geçirilmelidir?

## Literatür Araştırması

İşletme sektöründe tecrübe edilmiş başarılı uygulamaların kamu yönetiminde kullanımı her geçen gün artmaktadır. Özellikle 1980 yıllarla birlikte ortaya çıkan Yeni Kamu Yönetimi yaklaşımı bu sürecin somut halde yaşanmasını sağlamıştır. Günümüzde bu uygulamalardan birisi Toplam Kalite Yönetimi (TKY) yaklasımıdır. Performans iyilestirme, kamu sektörü reformlarının merkezinde yer almaktadır (Vogel ve Hattke, 2018) ve Yeni Kamu Yönetimi yaklaşımı, kamu sektörünü tepeden tırnağa etkilemektedir. Kamu yönetim sisteminin temel bileşenleri olan yerel yönetimler de bu süreçten doğrudan etkilenmektedirler. Belediyelerde TKY ile ilgili literatürde akademik çalışmaların yapıldığı görülmektedir. Mabele ve Singh (2018) yaptıkları çalışmada Gauteng Belediyesinde, TKY ile ilgili bir çalışma yapmışlardır. Bu çalışmaya göre yöneticilerinin kültürel değişimi benimseyerek TKY'yi benimseyebilecekleri sonucuna varmışlardır (Mabele ve Singh, 2018). Arıkboğa (2016) çalışmasında, İstanbul Büyükşehir Belediyesi Gelir İdare Müdürlüğü bünyesinde uygulanan TKY uygulamasını EFQM Mükemmellik Modeli ile incelemiştir. Bu modele göre kuruma iş ve diğer kurumsal süreçler için gelenlerin memnuniyet oranının arttığı gözlemlenmiştir. Dur ve Akyüz (2019), Gerede Belediyesi'nde TKY'nin uygulanabilirliği üzerine bir araştırma yapmışlardır. Belediyelerde mevcut kurum kültürü, merkezi yönetim anlayışı, görev ve yetki paylaşımı sorunu, denetim sorunu, mali sorunlar ve koordinasyon sorunları gibi faktörlerin TKY'nin kurulması konusunda olumsuzluklar yarattıklarını vurgulamışlardır. Karatepe vd. (2018) çalışmalarında TKY'yi "en iyi değer" yaklaşımıyla incelemişlerdir. En iyi değer yaklaşımı ile yerel yönetimlerin vatandaş odaklı ve çalışmalarında sürekli iyileştirmeyi benimseyen bir anlayışa sahip olacaklarını ifade etmişlerdir. Konuyla ilgili olarak bu alanda farklı belediyelerin incelendiği görülmektedir. Ancak yapılan literatür taramasında TKY'nin belediyelerde nasıl uygulanacağı konusunda yeterli araştırma yapılmaması dikkat çekicidir. Ayrıca Analitik Hiyerarşi Süreci yöntemi ile TKY yaklaşımına ilişkin yeterli çalışmanın olmadığı tespit edilmiştir. Konuyla ilgili olarak bu çalışmanın amacı, belediyelerde TKY'nin kurulması için yapılması gerekenler konusunda bir araştırma yapmaktır.

#### Yöntem

Bu çalışmanın amacı, belediyelerde Toplam Kalite Yönetimi yaklaşımının yerleşmesi için yapılması gerekenleri belirlemektir. Bu çalışma, TKY'nin nasıl uygulanacağına dair bir öngörü sağladığı için teori ve sonuçlar açısından yenilikçidir. Çalışmanın bir diğer amacı, Analitik Hiyerarşi Süreci (AHP) yönteminin kamu yönetiminde tanınmasına ve kullanılmasına katkıda bulunmaktır. Bu nedenle öncelikle Analitik Hiyerarşi Sürecini açıklamak faydalı olacaktır. Analitik Hiyerarşi Süreci yöntemi, karar vermek için alternatifleri sıralamak için kullanılır. 1970'lerde Thomas L. Saaty tarafından geliştirilmiştir. Temel amacı çok kriterli karar vermede alternatifleri sıralayarak karar vermektir (Saaty, 1990). Hedefler, kriterler ve alternatifler hiyerarşisine sahiptir. Burada hedefe ulaşmak için kullanılacak kriterlerin gerçekleştirilmesini mümkün kılacak alternatiflerin listelenmesi amaçlanmaktadır (Bkz. Şekil 1). AHP yönteminde alternatifleri sıralamak için sayısal veriler kullanılır. Bunun için alternatiflere denekler tarafından puan verilerek matrisler oluşturulmaktadır (Bkz. Tablo 2). Bu sayılar ve konumları Saaty (1990) tarafından Tablo 1'de gösterilmektedir. Bu yöntemin Türkçe anlatımlı uygulanmasında Karakaya'nın (2019) doktora tezinden istifade edilmiştir. Söz konusu çalışmada, yöntemin uygulama aşamaları ve güvenilirlik analizleri detaylı açıklanmaktadır. Bu çalışma kapsamında gerçekleştirilen araştırmaya belediye üst kademe yöneticileri ve işletme alanında doktora yapmış üniversite öğretim üyeleri katılım sağlamışlardır. Araştırma kurgusunda hedef; belediyelerde Toplam Kalite Yönteminin kurulmasıdır. Bunun için kriter uygulamalar Dahlgaard ve arkadasları (2007) tarafından belirlenmiştir. Bu çalışmada, bu kriterleri hayata geçirecek alternatif uygulamalar literatürden belirlenmiş ve konunun uzmanlarından bu alternatif uygulamaları puanlamaları istenmiştir. Böylece Dahlgaard ve arkadaşları tarafından belirlenmiş kriterler hayata geçirilebilecek ve belediyelerde Toplam Kalite Yönetimi yaklaşımı tesis edilebilecektir. Çalışmanın genel kurgusu bu şekildedir. Çalışma için etik kurul onayı Bandırma Onyedi Eylül Üniversitesi'nden alınmıştır. Toplantı No ve Karar Tarihi: 2022-8 30/09/2022 şeklindedir.

#### Sonuç ve Değerlendirme

Kamu yönetim sistemlerinin temel amacı, halkın refahını sağlamaktır. Bu refahın içeriği güvenlik, sağlık, ekonomik gelir, eğitim, sosyal gelişme ve diğer fırsatları içerir. Günümüzün modern kamu yönetimi sistemlerinde, belediyeler önemli bir bileşendir ve ana kamu hizmeti yüklenicisi olarak işlev görmektedir. İncelendiğinde, dünya çapında belediyelerin temel bir yerel kamu otoritesi olduğu söylenebilir. Bu yönüyle kendi yerel coğrafyalarında rakipsiz hizmet yüklenicisidirler. Altyapı ve üstyapı gibi temel kentsel hizmetlerin yanı sıra belediyelerin temel görevi kenti ekonomik, sosyal ve fiziki yönden kalkındırmaktır. Az sayıda yüksek bütçeli proje ortaya koyan belediyeler olduğu gibi, düşük bütçeyle önemli projeleri hayata geçiren belediyeler de bulunmaktadır. Bu durum akıllara şu soruyu getirmelidir; "Bütün bu yetki ve bütçelere rağmen belediyeler yeterince etkin çalışıyor mu?" TKY, işletmelerde ve kamu sektöründe kullanılabilecek etkili bir yönetim yaklaşımıdır. Kurumsal kapasitenin en üst düzeyde kullanılmasını hedefleyen bu yaklaşım ile uygulamanın amacı, sorunların

hızlı bir şekilde tespit edilmesi ve etkin çözümler sunulmasıdır. Literatürde özellikle belediyeler alanında olmak üzere kamu sektöründe TKY ile ilgili çalışmaların olduğu görülmektedir. Bu çalışmada, TKY yaklasımının diğer çalışmaları tamamlayacak sekilde belediyelerde hâkim hale gelmesi için yapılması gerekenlerin ortaya konulması amaçlanmıştır. Yapılan araştırma sonucunda, Tablo 4'e göre "belediye üst kademe yöneticilere eğitim verilmesi" ve onların bu konuda bilinçli olmalarının sağlanması 0,29 puan ile ilk sırada gelmektedir. Fakat arastırmaya dâhil olan konunun uzmanı kişilere göre hizmet alan konumda bulunan, müşteri olarak da tanımlanabilecek halkın bu konuda talepkâr olması da gerekmektedir (0,25). Bunlara ilave olarak, belediyelerde Toplam Kalite Yönetimi Müdürlüğü kurulması, 0.20 puan ile önemli bir ağırlığa sahiptir. Böylece kurum içinde, doğrudan konuya odaklanmış ve belediyenin kurumsal kapasitesine yardımcı olacak bir müdürlüğün kurulmasının faydalı olacağı öngörülmektedir. Belediyelere dışarıdan, merkezi yönetim tarafından zorlayıcı bir yöntem ile müdahaleyi ön gören "belediye mevzuatının düzenlenmesi" ve "Yerel Yönetimler Genel Müdürlüğü'nün belediyeleri denetlemesi" alternatifleri ise araştırmada son iki sırada yer almıştır. Bu durumda şunu söylemek mümkündür; konunun uzmanı katılımcılara göre belediyelerde Toplam Kalite Yönetimi yaklaşımını hâkim kılmak için öncelik belediye üst kademe yöneticileri ve müşteri konumunda bulunan halktadır. Bunun yanında belediye içinde konuyla doğrudan ilgili bir müdürlüğün kurulması destekleyici bir yaklaşımdır. Dışarıdan bir denetimin bu konuda en son alternatif olacağı ön görülmektedir. Tablo 3'de ise her bir alternatif uygulamanın, her bir kriter için önemi gösterilmektedir. Bu sonuçları da söz konusu tabloda ayrı ayrı incelemek mümkündür.

# 1. INTRODUCTION: NEW PUBLIC MANAGEMENT AND TOTAL QUALITY MANAGEMENT

Civil servants at public sector face several challenges when they engaged with the public (Blijleven and Hulst, 2020) and they introduce new methods to overcome these challenges. In this context, practices that have been successfully experienced in the field of business sector can also be used in the public sector. The diffusion of innovations to other organizations is particularly important for the public sector (Hartley, 2005). Especially with the 1980s, this situation has become more evident as a result of the New Public Management approach (Voorn at al., 2017) with the paradigm change throughout the world. Therefore, business principles and techniques have gained importance in public administration (Sezer and Buyukpinar, 2021). However, the New Public Management approach cannot be based solely on the logic of business administration. The reason for this is that the public administration does not act with a profit priority like the business sector. The public administration structure is an organization built on the basis of social benefit.

Innovation in the public administration sector involves two different interpretations. The first is to use innovation practices from the private sector, and the second is to improve public policies adopted by governments (Tonelli, at al., 2019). It is normal for the applications that are considered successful in the business sector to be used by the public administration. One of the successful management approaches put forward in the business sector is a philosophy called "Total Quality Management (TQM)". At its most basic, it can be said that the understanding of "quality management" has developed in four stages. Before the Industrial Revolution, after the Industrial Revolution, after the Second World War and after the 1980s. Before the Industrial Revolution, studies were carried out on the relations of the companies, where a few people worked with their customers. After the Industrial Revolution, studies were carried out on production standards with the establishment of factories and the transition to mass production. After the Second World War, the quality, production system and customer satisfaction studies based on statistical techniques by U.S. and Japanese scientists came to the fore. After 1980, it has become a basic philosophy that guides businesses depending on the developing technological level and increasing globalization (Cinel and Karaman, 2021).

Performance improvement is at the core of public sector reforms (Vogel and Hattke, 2018) and the New Public Management approach affects the public sector from top to bottom. Local governments, which are the basic components of the public administration system, are also directly affected by this process. Local governments are public institutions that provide basic services in their geographies. But decentralized service provision has its own disadvantages (Allers and Greef, 2018). Each country gives varying degrees of authority, budget and autonomy to its local governments according to its economic, cultural, social and historical structure. At the same time, public administration organizations like municipalities, have political and administrative leaders who is in charge of implement modern management techniques (Toleikiene, at al., 2022; Ozden, at al., 2021).

It is seen that academic studies are carried out in the literature on TQM and municipalities. In their study, Mabele and Singh (2018) conducted a study on TQM in Gauteng Municipality. According to this study, they concluded that managers can adopt TQM to municipality by adopting cultural change (Mabele and Singh, 2018).

In his study, Arikboga (2016) examined the TQM practice implemented within the Istanbul Metropolitan Municipality Revenue Directorate with the EFQM Perfection Model. According to this model, it has been observed that the satisfaction rate of those who come to the institution for business and other corporate processes has increased. In addition, the Municipality has started to follow many indicators with this approach that it did not follow before.

Dur and Akyuz (2019) conducted research on the applicability of TQM in Gerede Municipality. They emphasized that factors such as corporate culture, centralized management approach, task and authority sharing problem, auditing problem, financial problems and coordination problems create negativities in the implementation of TQM in municipalities.

In his study, Nohutcu (2005) emphasized the necessity of considering the citizen as a customer in the implementation of the TQM approach in municipalities. In addition, he stated that factors such as bureaucracy, paperwork, cumbersome bureaucratic structure, closure, confidentiality, tendency to avoid responsibility, excessive employment of unqualified personnel, lack of communication and participation structures that affect local governments, make TQM difficult in municipalities.

Karatepe et al. (2018) examined TQM through "the best value" approach in their study. They stated that with the best value approach, local governments will have an understanding that focuses on the citizen and adopts continuous improvement in their work.

These academic studies were also carried out as thesis. It is observed that different municipalities are examined in these areas. However, in the literature survey, it is noteworthy that there is not enough research on how to implement TQM in municipalities. In addition, it has been determined that there is not enough study on the TQM approach with the Analytical Hierarchy Process method. Regarding the subject, the aim of this study is to conduct research on what needs to be done for the establishment of TQM in municipalities. The Analytic Hierarchy Process (AHP) method was used to conduct this research. Therefore, two main objectives / questions were presented in this study:

•To list what needs to be done for the establishment of TQM in municipalities; and

•To contribute to the recognition and use of the Analytical Hierarchy Process method in the field of public administration which is being used in the business sector widely.

## 2. TOTAL QUALITY MANAGEMENT APPROACH

Need for innovation at public level is highlighted on the basis of that society changes (Meijer and Thaens, 2021). To embed innovation in a public sector it is necessary to create awareness of key innovative practices (Bason, 2010). One of these practices is TQM. The concept of quality has many different meanings. Therefore, the quality in use for goods and services can vary from both an individual perspective and a collective perspective (Marin at al., 2020). Over the years, "Quality Management" (QM) has shown an impressive update and evolved in response to the needs of organizations. Today, QM has evolved into new values such as change, creativity and discovery (Fundin at al., 2021). QM is defined as a management philosophy and its three principles are continuous improvement, customer focus and teamwork (Gremyr at al., 2021).

TQM approach is based on the concepts of "quality" and "total quality". However, it is not easy to make a clear definition on these concepts. Different approaches in management science bring different perspectives to the concepts. As Aktan (1999) points out in his study, the final "product" considered as quality is actually a result. It is the other quality components that make this product stand out and these are: management quality, leadership quality, system quality, process quality, human quality and equipment quality. Aktan (1999) also states that, "quality" in a narrow sense is "product quality" while quality in a broad sense is a broad structure which includes work, service, communication, workers, engineers and managers. In order to establish total quality, quality must be committed to human capital. The organization, which can process quality for its employees, makes progress in quality production.

The TQM approach has emerged to make quality management dominant in all organizational processes. Therefore, it is aimed to achieve quality in all elements of the organization (from the first step to the final product). Quality is a goal here that must be maintained.

The concept of TQM has become popular especially in the 1980s. According to Omachonu and Ross (2005), TQM is the integration of all processes within an organization to ensure the quality of goods, services and continuous improvement. The main target here is the customer satisfaction.

Kanji and Asher (1996) define TQM as a continuous improvement process for individuals, groups of people and entire organizations. They state what makes TQM different from other management processes is that it focuses on continuous improvement. In this context, TQM is not about a quick management fix, but about changing the way things are done throughout the life of the organization. This is possible with the understanding of continuous improvement.

Noronha (2002) drew attention to the "culture" factor in the TQM approach in his study. He states that the corporate culture shapes the TQM approach or, on the contrary, the TQM approach shapes the corporate culture. However, the culture which affects the TQM approach here can be corporate

culture or national culture. As seen in this approach, it would not be wrong to say that achieving quality is a matter of culture.

Oakland and Marosszeky (2006) stated in their study that a good quality management system will ensure that two important requirements are met. The first and expected one is the requirements of the customer. Thus, it will be ensured that the organization consistently offers the desired product or service. The second benefit is the organizational requirements. Efficient use of both internal and external resources (materials, people, technology and information) with optimum cost will be ensured. As can be observed, an organization which has adopted TQM, actually organizes its own internal structure and increases its institutional capacity in order to ensure customer satisfaction.

Different components have been put forward by different authors for the TQM approach. It can be concluded that there are almost as many different total quality component schemes as the number of studies. The reason of this is that there are different cultural and managerial approaches in different countries to ensure a total quality approach. Nevertheless, from a technical point of view, it is possible to compile the principles of TQM from the ISO (International Organization for Standardization) Report. Accordingly, the TQM principles/components determined by ISO are as follows (ISO.org, 2021); leadership, process approach, customer focus, improvement, engagement of people, relationship management, evidence-based decision making.

It is normal that there are factors which prevent the implementation of TQM. In their study titled "Total Quality Management in the Public Sector", Morgan and Murgatrody (1994) drew attention to the negative aspects of the implementation of the TQM approach in public administration and compiled them as follows:

- The nature of the TQM approach hinders its application to public administration;
- The public sector itself is hostile to the TQM approach;
- The professional managers of the public sector approach the TQM concept negatively;
- The concept of customer in the public sector is a problematic concept; and
- The precautionary approach of the public sector is much more complex than the production sector.

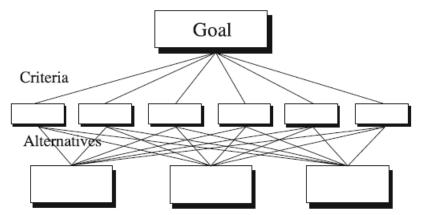
Also, reorganizations can lead to employee resistance (Machteld and Michiel, 2021). It can be stated that these negativities mentioned above are the results of the traditional public management approach. It is certain that especially the New Public Management approach has been put forward to eliminate such negativities. Therefore, bringing effective studies such as TQM to the public administration is a necessity for social benefit. This is the purpose of this study: to make the TQM approach dominant in municipalities.

# **3. PURPOSE AND METHOD OF RESEARCH**

Regarding the subject, the aim of this study is to determine what needs to be done in order to establish a TQM approach in municipalities. This study is innovative in terms of theory and results as it provides insight into how to implement TQM. Another aim of the study is to contribute to the recognition and use of the Analytic Hierarchy Process (AHP) method in the public administration. Therefore, firstly, it would be useful to explain the Analytical Hierarchy Process.

The Analytical Hierarchy Process method is used to rank the alternatives to give a decision. It was developed by Thomas L. Saaty in the 1970s. Its main goal is to decide by listing the alternatives in multi-criteria decision making (Saaty, 1990). It has a hierarchy of goals, criteria and alternatives. Here, it is aimed to list the alternatives that will make it possible to realize the criterias that will be used to reach the goal. In other words, it is aimed to list the alternatives will enable the fulfilment of the criterion from top to bottom. Thus, the most effective alternatives will be put into practice and the target will be reached with the criterias that have been implemented. This is the working principle of the AHP method:





Source: Saaty and Vargas, 2012

In the AHP method, numerical data is used to rank the alternatives. For this, the alternatives are given points by the subjects and thus matrices can be formed. These numbers and their positions are shown in Table 2 by Saaty (1990).

Importance Degree	Definition	Explanation
1	Equal importance	Two activities contribute equally to the objective
3	Moderate importance of one over another	Experience and judgment strongly favor one activity over another
5	Essential or strong importance	Experience and judgement strongly favor one activity over another

Table 1. AHP Scoring Chart

7	Very strong importance	An activity is strongly favored and its dominance demons t rated in practice
9	Extreme importance	The evidence favoring one activity over another is of tile highest possible order of affirmation
2,4,6,8	Intermediate values between the two adjacent judgments	When compromise is needed

Source: Saaty, 1990.

The AHP method seeks to answer this question: "Can I compare lower-level items in terms of some or all of the items in a higher level?". Saaty recommends paying attention to the following diagnoses when establishing the hierarchy for the AHP model. However, he also states that in the AHP approach, a particular decision is not considered wrong simply since it does not follow a predetermined set of procedures. The purpose of AHP is to help people organize their thoughts and judgments so that they can make more effective decisions. In its simplest form, AHP begins with the traditional concept of ordinal ordering to stratify a hierarchy and progresses to numerical pairwise comparisons from which an ordering of items at each level is derived.

According to Unal, there are also criticisms of the AHP method. These are mostly grouped under the headings that mathematical calculations do not have sufficient prerequisites and the rankings are arbitrary. However, despite these, it is observed that the model is used by many decision makers. It should be taken into account that thousands of applications in this field use it in academic studies in the literature. This shows that AHP is still considered consistent among other alternative sorting methods. Unal (2012) compiled the advantages of using the AHP method as follows in his study:

- Thanks to AHP, people can organize their different approaches;
- The process provides the opportunity to predict the strength and possible results of relations from general to specific within a hierarchical framework;
- People can evaluate their approach before verbal expression;
- Since the degrees of strength of the judgments are determined numerically, there is no need for long discussions;
- Compilation of results by different experts in different places makes it possible to get more excellent results;
- It facilitates the assimilation of facts for managers;
- It provides ease of use in group decisions;
- It may be easier to deal with difficult problems thanks to ranking and scoring methods;
- It becomes possible to determine the importance of each element in the hierarchy; and
- It provides decision makers with the opportunity to determine alternatives proportional to their experience.

According to Karakaya (2020) regarding the sample, the AHP model does not have sample concerns. The main goal is to get the opinions of experts on the subject on which the AHP model will be applied, and the numbers should be processed into the matrices. In the literature review, it was also seen that there are AHP applications in which only one person was taken as a subject (Baskurt, 2021). The reason for this is that it is sufficient for the subject to be an expert in the AHP application. In this study, 10 participants were included as a sample. While 5 of the participants are top managers in different municipalities like Balıkesir Metropolitan Municipality, Edremit Distrcit Municipality, Erdek District Municipality; the other 5 participants have doctorate degree in business administration and work in a university like Istanbul Commerce University, Bandırma Onyedi Eylul University, Sakarya University. Thus, experts were consulted in the study for the implementation of TQM in the municipality. Not all of the participants work in the same municipality or higher education institutions. Therefore, it is aimed to deal with different value judgments in joint research. In the past, universities used to keep a certain distance from local and national governments. But this situation changed especially after the 1990s (Profiroiu and Briscariu, 2021). Therefore, the importance of universities for the development of public administration has increased. This study also pursues this aim. Ethics Committee approval of the study was obtained from Bandırma Onyedi Eylül University. Meeting No and Decision date: 2022-8 30/09/2022. Here are the details of the research:

- The subject that constitutes the aim of this study:
  - To list what needs to be done in order to establish a TQM approach in municipalities.
- The criterias determined for this purpose are the 5 main items that Dahlgaard et al. (2007) collected the components of TQM and these are as follows (p. 17):
  - Leadership of the Managers
  - Focus on Customer and Employee
  - Fact-Based Decision Making
  - Continuous Improvement (KAIZEN)
  - Everybody's Participation (Internal and External Stakeholders)
- Alternative applications to be carried out for the realization of these criterias have been determined as follows in the literature review. These alternatives are included in the study as both internal and external applications, both optional and compelling applications (Conti, 1993; Sallis, 1993; Pekar, 1995; George and Weimerskirch, 1998; Eryılmaz, 2013; Aykac and Ozer, 2006; Deniz, 2021):
  - Training of Municipal Top Executives
  - o Development of Municipal Legislation
  - o Establishment of Total Quality Management Directorate in Municipalities
  - Public Demand

#### o Supervision of Municipalities by the General Directorate of Local Administrations

The ranking of these alternatives for each criterion constitutes the method of the application. While the criteria are written in the big square in the created tables, the alternatives are written in the rows and columns (see Table 2). Thus, the alternatives are ranked by comparing themselves, so that all alternatives for each criterion are compared with each other. In filling the tables, the degree of importance of the row to the column is scored. This scoring is performed with numbers 1-9 as indicated in Table 1. If the column is thought to be more important than the row in the table, the number 1/ is written before the number.

The right side is filled in by the participants in the table. Symmetrical values are written by the researcher in the left side of the table (See Table 2). All tables brought to this level are then transformed into a normalization matrix. The normalization table is formed by determining the value of each cell in the matrix in the total of the column it belongs to. Other main stages were also used to carry out the next process steps (Karakaya, 2019, Saaty, 1990, Saaty and Vargas, 2012):

Leadership of the Managers	Training of Municipal Top Executives	Development of Municipal Legislation	Establishment of Total Quality Management Directorate in Municipalities	Ensuring the Public is Demanding	Supervision of Municipalities by the General Directorate of Local Administrations
Training of Municipal Top Executives	1	9	5	1	3
Development of Municipal Legislation	1/9	1	3	7	1/3
Establishment of Total Quality Management Directorate in Municipalities	1/5	1/3	1	5	1/3
Public Demand	1	1/7	1/5	1	1
Supervision of Municipalities by the General Directorate of Local Administrations	1/3	3	3	1	1
TOTAL					

 Table 2. Scored Example Table

In the next step, the row average (geometric mean / weight / w) is taken to obtain the weights. The Geometric Mean is simply obtained by multiplying all the data and taking the data number to the root power.

## $G.M. = n\sqrt{X1.X2.X3...Xn}$

After the weights are obtained, it is checked whether the matrices are consistent. If the comparison matrix is not consistent, the resulting weights cannot be used. For this, the consistency matrix is formed as a result of multiplying the basic matrix in which the data is processed with the

relative weight matrix. The raw ratio column is then calculated by dividing the consistency matrix with the relative weight matrix.

The " $\lambda$  max" value is found by taking the arithmetic average of the obtained raw ratio column. This value is the main input of the equation that will reveal the final consistency ratio to be obtained in the next step. The obtained " $\lambda$  max" value is used to create the Consistency Indicator (CI). Consistency Indicator (CI) = ( $\lambda$ max-n) / (n-1) is calculated with the formula. The "n" value in this formula represents the alternatives in the research model. Thus, the value of "n" represents 5 different alternatives presented in the study. Therefore, n=5.

In the next step, the Random Consistency Index (RI) is determined. The value represents a fixed value determined according to the matrix dimensions. AHP model designer Saaty and Vargas (2012) described the RI indicator as:

•RI: 1=0, 2=0, 3=0.52, 4=0.89, 5=1.11, 6=1.25, 7=1.35, 8=1.4, 9=1.45, 10=1.49

Since the criteria matrices determined in the study are n=5, the RI value to be put into the equation is determined as 1.11. In the last step, in which the consistency of the tables filled by the participants is determined, the CI and RI values are proportioned. Thus, the consistency ratio (CR) is obtained. According to Saaty, this ratio (CR) is expected to be less than 0.10 (Saaty and Vargas, 2012). Therefore, matrices exceeding this value were not included in the analysis.

All the steps put forward up to this part explain the process of whether the relevant matrices are consistent or not. Only consistent matrices were included in the study. Thus, it is aimed to create a systematic and consistent AHP model. Inconsistent matrices were not included in the analysis. In the matrix analysis conducted within the scope of this study, 50 matrix tables emerged since 10 participants were asked to rank for 5 criterias. In the consistency analysis, 4 of them were excluded from the evaluation, and 46 of them were evaluated to create the result tables. In the next section, the results obtained are explained.

The overall scores of the alternatives are obtained to obtain the results. For this, the relative importance weights of the criterias and the relative importance weights of the alternatives according to each criterion are obtained.

#### **4. RESULTS**

The New Public Management offered a 'product-dominant' approach to the public sector (Stephen at al., 2021). Is only "product dominant" approach enough for quality of services? Within the scope of the study, it has been researched which alternative applications needs to be implemented in order to establish TQM approach in municipalities. For this, tables were obtained as a result of the Analytical Hierarchy Process (AHP) method applied with experts in the subject. When the data obtained

with this method, which is also applied with reliability analysis are examined and the findings are as in Table 3. According to this table, the weight values of the alternatives that should be applied in the implementation of the criteria above the table in order to make the TQM approach dominant in the municipalities are shown. Thus, it is observed which alternative should be applied first for each criterion. Therefore, with the implementation of alternatives, the criteria will be implemented and a TQM approach can be established in the municipality.

Final Table	Leadership of the Managers	Focus on Customer and Employee	Fact-Based Decision Making	Continuous Improvement (Kaizen)	Everybody's Participation
Training of Municipal Top Executives	0.24	0.18	0.14	0.15	0.14
Development of Municipal Legislation	0.10	0.09	0.12	0.09	0.09
Establishment of Total Quality Management Directorate in Municipalities	0.11	0.12	0.08	0.15	0.13
Public Demand	0.13	0.15	0.13	0.12	0.19
Supervision of Municipalities by the General Directorate of Local Administrations	0.05	0.05	0.08	0.07	0.04

Table 3. Final Results Table

Table 3 presents the two most prominent alternative practices for the implementation of the criterias are "training of municipal top executives" and "public demand". Other alternatives fall further down on the basis of criterias. According to these results, the listing of the alternatives proposed to be put into practice in order to implement the criterias is as in Table 4.

Listed Alternatives	Percentage	Ranking
Training of Municipal Top Executives	0.29	1
Public Demand	0.25	2
Establishment of Total Quality Management Directorate in Municipalities	0.20	3
Development of Municipal Legislation	0.16	4
Supervision of Municipalities by the General Directorate of Local Administrations	0.10	5

**Table 4.** Alternatives Listed Within Themselves

The graphical representation of the alternatives are as in figure 2.

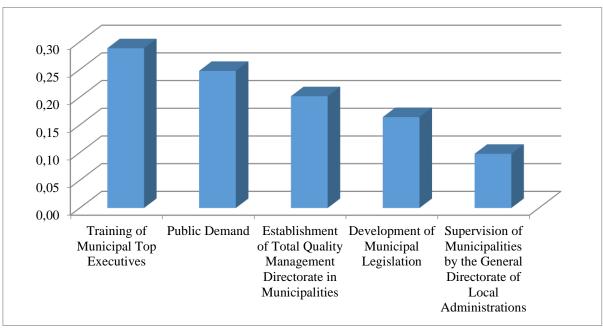


Figure 2. Alternatives Listed Within Themselves

## **5. CONCLUSION AND FUTURE STUDIES**

The main purpose of public administration systems is to ensure the welfare of the public. This welfare includes security, health, economic income, education, social development and other opportunities. In today's modern public administration systems, municipalities are an important component and function as the main public service contractor. When examined, it can be said that municipalities around the world are a basic local public authority. In this respect, they are unrivalled service contractors in their local geographies. In addition to basic urban services such as infrastructure and superstructure, the basic duty of municipalities is to develop the city economically, socially and physically. While there are municipalities that put forward few projects with a high budget, there are also municipalities that implement important projects with a low budget. This situation should bring the following question to mind; "Do municipalities work effectively enough despite all these powers and budgets?"

The answer to this question is given by the public in the elections. However, this approach is only a demonstration of democratic rights. The citizens should hold the government to account to deliver their rights to services (Mdee and Mushi, 2021). In particular, the election of candidates nominated by political parties does not guarantee the appointment of the most qualified administrators. Although the elections are held for the fulfilment of local services, it is a fact that people look at the candidate from which party rather than the skills of the candidate. Under these circumstances, it is necessary to carry out studies with an academic approach so that the public receives the best local services. Today, it is observed that the successful applications in the business sector are used by public administrations within the scope of the New Public Management approach. One of these approaches is the TQ approach.

Traditionally, public administration is not associated with entrepreneurial spirit since it is characterized as a rigid, immovable and inert system (Kotnik and Stanimirovic, 2021). So, moving from an organization orientation to a process orientation is a difficult culture change (Harrington, 1991).

TQM is an effective management approach that can be used in businesses and the public sector. With this approach, which aims to use the institutional capacity at the highest level, the purpose of the application is to identify the problems quickly and to present effective solutions. In the literature, it is observed that there are studies on TQM in the public sector, especially in the field of municipalities. In this study, it is aimed to reveal what needs to be done in order to make the TQM approach dominant in municipalities in a way that will complement other studies. For this, according to the research conducted by including the experts of the subject, it is observed that both in-house works and interventions from outside the institution should be made in order to realize TQM in municipalities. However, the research demonstrates that priority studies should be carried out within the municipality for the establishment of TQM. The components of TQM are presented in the literature review. TQM is possible in the institutions have been proposed in this study.

Accordingly, as can be seen in Table 3 within the scope of the research, among the alternative practices to be put into practice for the "Leadership of the Managers" criterion, "Training of Municipal Top Executives" received the highest vote. Other alternative applications were also listed in this direction. For the criterion of "Focus on Customers and Employees", "Training of Municipal Top Executives" was deemed necessary. In order to meet the criterion of "Everybody's Participation", "Public Demand" was the priority. Regarding the subject, all alternative methods that should be applied in order to implement the TQM approach in municipalities are shown in Table 4.

Among these alternatives, coercive and supervisory methods (development of municipal legislation and supervision of municipalities by the General Directorate of Local Administrations) are at the bottom. Considering the results obtained by listing the alternatives within themselves in general;

- According to the research, training for municipal top executives and making them aware of this issue comes first with 0.29 points. Thus, those who administer the institution are expected to be aware of the subject and develop an institutional system. However, according to the experts of the subject included in the research, the public, which can be defined as the customer who is in the position of receiving service, should also be demanding in this regard (0,25). Since the decision maker (council) and executive (mayor) bodies of the municipality are elected by the public, it is necessary for the people to show them that they expect the highest level of services.
- In addition to these, establishment of Total Quality Management Directorate in municipalities has a significant weight with 0.20 points. Thus, it is foreseen that the

establishment of a directorate within the institution which will directly focus on the subject and assist the institutional capacity of the municipality will be beneficial. Therefore, a directorate can be established that will make TQM dominant in the municipality, apart from the vision and preference of the mayor.

• The alternatives of "development of municipal legislation" and "supervision of municipalities by the General Directorate of Local Administrations", which foresee a coercive intervention to municipalities from outside by the central government, took place in the last two places in the research. In this case, it is possible to state that, according to the experts on the subject, in order to make the TQM approach dominant in the municipalities, the priority is the top level managers of the municipalities and the people who are in the position of customers. In addition, the establishment of a directorate directly related to the subject within the municipality is a supportive approach. It is foreseen that an external audit will be the last alternative in this regard.

It may be useful to compare the results of this research with the studies in question. According to a survey conducted by Dur and Akyuz (2019), it is observed that the managers in the municipality, which is the subject of the research, do not give enough support to the TQM practices. In this study, it is noteworthy that the top executives are determined to be responsible in the first place. Therefore, it is observed that the problem and the search for a solution overlap in different studies. In their study, Mabele and Singh (2018) concluded that managers can adopt TQM by adopting cultural change. In this study, training of the top executives of the municipality was scored in the first place, as well. Ozeroglu (2015) states in his study that the beginning of the TQM process in municipalities will be with the change of mindset of politicians and council members. In this study, training of the top executives of the municipality was evaluated by the experts in the first place, as well. Therefore, the subject expressed by Ozeroglu in his study is also expressed by the experts of the subject. Nohutcu (2005) states in his study that the public should be considered as customers by the municipalities and that the municipality should work for the satisfaction of its customers. In this study, according to the experts of the subject, it was highly stated that the public should be demanding for the establishment of TQM in municipalities. Thus, the public will become a customer. Arıkboğa (2016) stated in his study that the Revenues Directorate within the Istanbul Metropolitan Municipality has applied a total quality approach and as a result, the service capacity of the directorate has increased. In this study, the experts of the subject considered it important to establish a Total Quality Management Directorate in municipalities, as well. Thus, it can be deduced that even a unit within the institution will contribute to the institutional capacity of the municipality.

In this study, what can be done to establish a TQM approach in municipalities is listed by the experts. Much more studies in this area will undoubtedly contribute to the effective local service of the

public. In future studies, it is recommended to introduce different alternative applications and to determine the most effective application methods for the establishment of TQM in municipalities.

This paper is explorative. In order to strengthen the validity of the findings and the presented competence framework, further empirical research is required.

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