

INNOVATIVENESS AS A MANAGERIAL PROCESS IN THE CONTEXT OF
SCIENCE TEACHING: A CASE STUDY ON BAHÇEŞEHİR SCIENCE AND
TECHNOLOGY HIGH SCHOOL

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Approval of the Graduate School of Social Sciences

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I hereby declare that all the information in this document has been obtained and presented in accordance with academic rules and ethical conduct, I have fully cited and referenced all materials and results that are not original to this work.

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ABSTRACT

INNOVATIVENESS AS A MANAGERIAL PROCESS IN THE CONTEXT OF SCIENCE TEACHING: A CASE STUDY ON BAHÇEŞEHİR SCIENCE AND TECHNOLOGY HIGH SCHOOL

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This study aimed to investigate the innovation practices and the factors contributing to innovativeness in Bahçeşehir Science and Technology High School (BSTHS). The study was designed as a case study and different qualitative data collection techniques were used to collect the data. 17 participants of this study were chosen among administrators, science and mathematics teachers and 4 students.

The study documented both managerial and academic innovations at the School. Besides, the factors contributing to innovativeness at BSTHS were documented. Research findings show that the BSTHS was successful in establishing a place within the Turkish Education System as a new and original education institution. The BSTHS administration is working on, based on an effective leadership, providing most suitable conditions for education and learning, and they

are doing that with a participatory administration approach. Beyond that, they constructed an effective network with the support of the Bahçeşehir University towards the development of the school in line with its targets. According to the research findings, foremost aspects that make the BSTHS innovative and original are a new curriculum, an individual-based education system, application of new technologies in education and learning processes and the establishment of the institution as a self-learning organization.

It is argued that different factors (e.g., leadership, participative management, social interaction, knowledge share) are combined with quality inputs (e.g., students, staff, technology, physical infrastructure) have contributed to the creation of a culture of innovation. Hence, it is concluded that extensive physical or financial resources are not enough to accomplish innovativeness. Besides, a culture of innovation needs to be cultivated in order to accomplish innovation.

Keywords: Innovation, Organizational Innovation, Learning Organization, Leadership, Networking, Diffusion of Innovation

ÖZ

FEN BİLİMLERİ EĞİTİMİNDE YÖNETSEL BİR SÜREÇ OLARAK YENİLİKÇİLİK: BAHÇEŞEHİR FEN VE TEKNOLOJİ LİSESİ ÜZERİNE BİR ÖRNEK OLAY İNCELEMESİ

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Bu çalışmanın amacı, bir orta öğretim kurumu olan Bahçeşehir Fen ve Teknoloji Lisesi'ndeki yenilikçi uygulamaları ve yenilikçiliği etkileyen unsurları incelemektir. Çalışma bir örnek olay incelemesi olarak tasarlanmış ve verilerin toplanmasında yüzyüze görüşmeler, gözlem ve hazır basılı belgelerin incelemesi olmak üzere farklı nitel veri toplama tekniği kullanılmıştır. Çalışmaya katılan toplan 17 katılımcı okul yöneticileri, fen ve matematik öğretmenleri ve 4 öğrenciden oluşmaktadır.

Çalışmanın bulguları okuldaki yönetsel ve akademik yenilikleri ortaya koymuş, aynı zamanda bu yenilikleri olanaklı kılan değişik faktörlerin ortaya çıkarılmasını sağlamıştır. Araştırma bulguları Bahçeşehir Fen ve Teknoloji

Lisesi'nin, dört yıl gibi kısa bir süre içinde, Türk Eğitim Sistemi içinde yeni ve özgün bir eğitim kurumu olarak yerini almaya başladığını göstermiştir. Bahçeşehir Fen ve Teknoloji Lisesi yönetimi etkin bir liderlikle öğretmenleri ve öğrencileri için en uygun eğitim ve öğretim koşullarını sağlamaya çalışmakta ve bunu katılımcı bir yönetim anlayışıyla yapmaktadır. Bunun da ötesinde, Bahçeşehir Üniversitesi'nin desteği ile okulun gelişimi ve hedefleri doğrultusunda etkin bir ağ (network) oluşturulmuştur. Araştırma bulgularına göre, Bahçeşehir Fen ve Teknoloji Lisesi'ni yenilikçi ve özgün yapan en önemli unsurlar uyguladığı yeni müfredat, kişiye özgü öğretim sistemi, eğitim ve öğretim süreçlerin de teknolojinin etkin kullanımı ve kurumun kendini öğrenen bir örgüt olarak ortaya koymasındır.

Çalışmanın sonuçları Bahçeşehir Fen ve Teknoloji Lisesi'ndeki yenilikçiliğin büyük ölçüde yenilikçi bir kültür yaratılması ile mümkün olduğunu göstermiştir. Bahçeşehir Fen ve Teknoloji Lisesi'nde liderlik, katılımcı yönetim, sosyal etkileşim ve bilgi paylaşımı ile nitelikli öğrenci ve personel, teknolojik ve fiziksel altyapı özellikleri bir araya gelmiştir. Bu nedenle çalışmada, yenilikçilik için fiziksel ve finansal kaynakların tek başına yeterli olmadığı, bunun yanında kurumda yenilikçi bir kültürün oluşturulmasının gerekli olduğu sonucuna ulaşılmıştır.

Anahtar Kelimeler: Yenilik, Örgütsel Yenilik, Öğrenen Örgüt, Liderlik, Ağlaşma, Yeniliğin Yayınımı

To my parents

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LIST OF ABBREVIATIONS

BSTHS: Bahçeşehir Science and Technology High School

ICT: Information and Communication Technologies

PISA: Program for International Student Assessment

ROSE: The Relevance of Science Education

SIS: School Innovation in Science

TIMSS: Trends in International Mathematics and Science Study