Facility Management Education: Personal Journeys of Facility Management Educators and Researchers

Joint Contribution By

Eunhwa Yang, PhD.
Assistant professor, School of Building Construction, College of Design, Georgia Institute of Technology
Atlanta, GA USA

Jun Ha Kim, Ph.D., FMP, KCFM,
Professor, Department of Housing & Interior Design, Kyung Hee University
Seoul, South Korea

Matthew Tucker, Ph.D.
Professor of Workplace and Facilities Management, Liverpool Business School, Liverpool John Moores University
Liverpool, United Kingdom

1. Introduction

Over the last 40 years of Facility Management (FM), the definition of FM has evolved. According to the International Facility Management Association (IFMA), the latest definition of FM is a profession that "encompasses multiple disciplines to ensure functionality, comfort, safety, and efficiency of the built environment by integrating people, place, process, and technology" (IFMA, 2017). Regardless of the evolving definitions of FM in these previous years, global standardization of the definition and scope of FM is a relatively recent achievement. In 2018, the International Organization for Standards (ISO) defined FM as an "organizational function which integrates people, place, and process within the built environment to improve the quality of life of people and the productivity of the core business" (ISO, 2018). The IFMA's latest definition and ISO's definition of FM highlight the human aspects of managing the built environment. As such, the ultimate goal of FM activities and functions is to contribute to the quality of human lives. With the global standardization of the definition and scope of FM, we, as educators, expect a general understanding of FM and awareness of FM functions to become more prominent, yet we are expected to provide the next workforce in FM with localized FM practices as we have seen regional differences of FM functions and practices, such as North America, Asia/Pacific, and Europe. All of us are in higher education with the duties of research, teaching, and service in different regions, such as the United States, South Korea, and the U.K. In this chapter, we will share our own stories about why and how we chose to do a doctoral study in Facility Management (FM), why we chose FM education as a career in higher education, and what our research and teaching experiences have been.

2. Personal Journey for Dr. Eunhwa Yang

My interest in the built environment has evolved, starting from design and construction. My undergraduate study was architectural engineering, with exposure to architecture design studios. I worked as a site superintendent for a general contracting firm right after college in South Korea; then, I quickly realized that I wanted to study more. When I was searching and looking for what subject to study within the realm of the built environment for my master's degree, I learned about facility management, more specifically, the Masters of Science in Building Construction and Facility Management (MSBCFM) at the Georgia Institute of Technology in Atlanta, GA USA. During the MSBCFM at Georgia Tech, I realized that my academic focus has been on the building itself, including engineering and construction management; yet the FM is a broader business function that integrates people and three other components (place, process, and technology). I found the study of human-environment relations and human-centered design fascinating, so I pursued a doctoral study in the Department of Design and Environmental Analysis (now called the Department of Human Centered Design) at the College of Human Ecology at Cornell University in Ithaca, NY USA. A doctoral study typically requires a long timeframe and much higher dedication and determination for degree completion. I was not an exception. It took me a while, but looking back, it was a wonderful time that I studied without much concern – although I had self-doubts and worries about uncertainty around getting a job – I took classes in various fields and absorbed a lot of different information and knowledge, from environmental psychology, organizational behavior, sociology, city and regional planning, to statistics.

During this time at Cornell, I developed my academic worldview, in which I understand the built environment from the humanities' perspectives. More specifically, I believe in understanding the relationship between humans and environments through the lens of Bronfenbrenner's ecological systems theory to fully reflect the interwoven layers of environments. In human development, Uri Bronfenbrenner (1979) developed the ecological systems theory, which states that human development is affected by different layers of environmental systems, including the microsystem, the mesosystem, the exosystem, the macro system, and the chronosystem (from self, home, school, workplace/job, neighborhoods/communities, to society which change over time). His ecological systems theory adds an emphasis on environmental influences and moderating effects of human attributes on corresponding consequences. The ecological systems theory inspired many social scientists to expand and test the theory not only for children but also for adults who evolve throughout one's lifespan. Five ecological systems highly emphasize the impact of physical environmental factors, including various types of facilities in one's everyday life. Therefore, within the ecological systems theory, findings from multi-disciplines, such as architecture and design, environmental psychology, business and management, human resources, construction management, and project management, can be applied in workplace and FM research and practices.

From here and there, anecdotally, I heard there might be an "aha" moment in the doctoral study. For me, it was a gradual process rather than one distinctive moment when

reading other studies with the joy of finding and learning more about the subject with much more critical thinking in research design and methods in mind. And more recently, writing and creating knowledge – contributing to the body of knowledge – has become a genuinely enjoyable daily activity for me. So, I wanted to conduct more research (as I thought my doctoral study was large pilot research for my research career), spread the joy of learning that I realized, and help the next generations find joyful learning experiences. I believe that the joy of learning really translates one's external motivation to intrinsic motivation for learning, and that is the way in which people can be life-long learners in ever-changing professional trends for not only FM but also other broader professional paths in the built environment sector.

At the point of writing this chapter, I have been teaching FM courses for over seven years at Georgia Tech. Within this teaching period, I have witnessed many different cases of students' career paths with diverse backgrounds, such as business administration, real estate, architecture and design, construction management, facility management, and civil engineering. More importantly, I would like to emphasize the importance of having the mindset of being willing to learn topics around the building's life cycle, from the inception of the ideas to the operation and maintenance phase for students. When people start their careers in the building sector, they (often only) focus on the scope or phase of a building project in which they are involved, whether it is development, design, engineering, construction, or operation and maintenance. Yet, the complete picture of those activities in each phase cannot be possible without thinking about the ultimate goal of the project – supporting businesses, people (both immediate users and next generations who might be affected by buildings' carbon footprint), and society. In this sense, I lay the foundations of my courses and teaching on the idea of building life cycle management and human-centered design/practices.

With the general expectations that the future of work, workers, workplace, and technology will evolve and can be drastically different from the current practices, everyone in the field, of course including educators like myself, should not stop exploring and testing new ideas and continue learning the subjects and learning from each other. Furthermore, with the emphasis on environmental, social, and economic sustainability and quality of human life, the role of FM and workplace management/strategies will become more and more important; at the same time, the boundary of different FM functions from human resources-related work to building science-related work may become blurry where they are required to closely work together. This will enhance the quality of strategic facility planning with the human-centered, data-driven FM approach.

3. Personal Journey for Dr. Jun Ha Kim

Growing up in a family of architects since childhood, I majored in architectural design at the University of Minnesota, Twin Cities, MN USA with a minor in management. I minored in management, while many other architecture students minored in landscape architecture because I was fascinated by specific and measurable management techniques. After graduation, I started working for a construction company without any hesitation. However, I came to know about the existence of FM one day, having been

looking for something that can combine architecture and management to some extent, and went to Georgia Tech to start a master's in FM. While working for the Georgia Tech FM department, I could learn practical skills. After I obtained my master's in FM, my academic advisor stimulated my intellectual curiosity which was still not resolved. Eventually, I started a Ph.D. in FM which was a bit of an adventure for me at that time. After I got my Ph.D. in the U.S., after having a hard time abroad for a long time, I wanted to do FM education in Asia. Between the National University of Singapore (NUS) and Kyung Hee University (KHU) in Seoul, Korea. Kyung Hee was my first choice. KHU was one of the most prestigious private universities in South Korea.

In Seoul area, 17 out of 37 universities have FM-related majors, such as architecture, real estate, architectural engineering, etc.; of these, relatively few FM-related courses are being offered. The College of Human Ecology at KHU offers B.A., M.S., and Ph.D. in Housing and Interior Design with a concentration in property and facility management track (PM & FM track). This is the only FM program in Korea, with six years of full accreditation from the IFMA Foundation in 2016. The mission of our department was to cultivate competent students with specialized knowledge and practical skills in the fields of the built environment, and the PM & FM track aims to support excellence in education and make leaders in the area of PM & FM. I have been teaching students here at KYU for about 13 years to prepare students for the current and future trends in the AEC-FM industry. My classes, such as "Introduction to FM," "Housing Studies," "Construction Management," "Housing Environment System," and "FM Practice," deal with the interrelationships between people and housing in multiple dimensions and provides students with such learning opportunities as extensive curricular activities, internships for acquiring professional experiences in the AEC-FM industry, and international programs for obtaining a variety of advanced experiences in a global era. My courses are designed to train students as property and facility managers who will become leaders in the area of PM & FM. Specifically, the specific objectives of my courses are to build up firm foundations leading to progressive solutions to issues in the FM industry. Additionally, my lecture puts its goal to raise specialists needed in today's business environment by carrying out systematic curriculums based on the basic theory and the current practice. Students will learn the necessary knowledge and skills through lectures ranging from PM & FM theory to individual tasks, group tasks, and solving problems through various hands-on experiences to become a PM & FM industry leader.

All professors have control of having guest lecturers from the AEC-FM industry. At least once per course per semester, special guest lectures are provided in our program. Additionally, field trips are also provided as needed. Students are encouraged to participate in Summer Abroad programs. An internship is required for all students as it provides opportunities to apply knowledge to industry problems. After 160 hours or more internship, students must be confirmed by submitting working diaries, performance evaluations, reports, practice journals for submission, and credit approval slip in order to complete the internship course.

Additionally, as a part of the requirements of the course 'Facility Management Practice' taught by myself, the other type of internship program is being held within the FM department of Kyung Hee University through the agreement with the school office. The internship program runs for about four weeks and gives students opportunities to apply theory and knowledge in practice. Students are not only practicing but also becoming part of the research team to provide solutions to real-world problems based on actual cases and data, and these solutions are applied to the campus through consultations with the FM department. Furthermore, students can meet invited alumni at the "Homecoming Day" event held by our department. Through this event, students can consult with alums, which helps them start thinking about their future careers after graduation.

My research laboratory (Facility Management Lab.) combines various disciplines such as architectural engineering, business administration, and industrial engineering for strategic FM facility condition assessment (FCA), remote workplaces, benchmarking, outsourcing strategy development, key performance indicators and decision support system, Korean-style social housing development, and facility management. Recently, BIM-based smart university campus FM system development and smart troop barrack research have been conducted.

4. Personal Journey for Professor Matthew Tucker

The one constant in my professional career is that I have always been a researcher; however, I have not always worked within the FM field. Prior to my life in academia, I worked in the affordable housing sector in Liverpool, UK as a research analyst. I was responsible for coordinating various research projects across a parent group company. However, without knowing it at the time, I was increasingly getting involved in FM, for example, through the production of planned and scheduled maintenance surveys and customer surveys on various aspects of housing services.

After working in the affordable housing sector for a few years, I stumbled across a vacancy as a Research Associate at Liverpool John Moores University (LJMU), to work on a fixed-term project in FM. As such, you could say that at this point, I fell into FM – a common phrase that many people I am sure can relate to. My introduction to FM is familiar with many in the industry who fell into it from different walks of life, from office administration, property management, engineering, construction, and beyond.

During this early part of my academic life, I was given the opportunity to study a PhD. I was then faced with the daunting prospect of "what will my PhD be about?". I commenced my PhD journey in 2007, at a time when FM was rapidly growing and becoming increasingly more prevalent to businesses who were faced with understanding their entire cost structure in a time of global recession in 2008. This presented an opportunity to explore the added value of FM through a lens that I was familiar with from my housing days: customer satisfaction and performance measurement. At the time, it was fair to argue that FM's increasing importance in the workplace, coupled with its rapid growth, meant that there was a need for FM organizations to prove the added value of

FM service delivery, meaning that performance measurement had become a vital and increasingly reliant element in the effective management of facilities.

I argued that the delivery of FM services is naturally centered on people and the customers receiving FM services. Measuring customer satisfaction should therefore be a vital component within an FM organization's performance measurement framework. In 2004, the British Institute of Facilities Management (BIFM) – now Institute of Workplace and Facilities Management (a landmark moment that I will come on to later) – issued a report (now unavailable) titled “Rethinking Facilities Management: Accelerating change through best practice.” The report highlighted the importance of customer performance measurement in FM, illustrating the importance now and in the future across various FM functions. The report provided an opportunity to explore how customer performance measurement is strategically used to improve core service delivery, and moreover, how the use of customer satisfaction benchmarks can be incorporated into this process.

My PhD created a significant contribution to knowledge of the subject by understanding how to strategically use a theoretical framework, termed the customer performance measurement system (CPMS), in order to provide FM organizations in the industry the opportunity to enhance their existing customer performance measurement processes, to assist in innovating and improving the provision of FM services. During my PhD study, I also started delivering lectures on FM and research methods. It was the first time in my professional career I felt that I had found my calling. I loved my subject area, and I loved teaching others about it. I thrived on the interconnection between academia and industry. I felt that I could slide to either side and create a bridge between them, with the goal of progressing the knowledge and maturity of the FM discipline. This passion was rewarded by being promoted to a Senior Lecturer in Facilities Management in 2008.

The next defining moment in my research career would come in 2012 when I was proud to win a Fulbright award, providing an invaluable opportunity to expand my PhD research in the United States. The research applied concepts of the balanced scorecard in order to analyze how to maximize customer feedback in facilities management. This was a crucial moment in my academic career, being able to expand FM research internationally, by sharing and exchanging knowledge across continents.

For the next few years, I worked in the School of Built Environment at LJMU, teaching students primarily studying construction-related degree courses. The more I grew in confidence and experience, the more I realized that I was an outlier here, consuming a lot of time convincing students that buildings only exist to serve the organizations who use them, for the sole purpose to work. Moreover, the extent organizations would be able to do that work, would rely on a holistic definition of the workplace, that encompasses cultural, digital, social, and physical spaces.

This frustration would drive my research agenda, to gradually take a more targeted focus on exploring the concept of workplace, that had outreached from contemporary views of FM. For myself, and others in my inner circle, it was argued that FM had moved away from a heritage in what early pioneers outlined as ‘expert workplace management’

(Price, 2003) which recognizes workplaces as the *social* and *distributed* rather than purely *physical* spaces where people use the tools available to them to get their work done. This is further evidenced in isolated past articles charting either FM's history or proposed futures at the time, with FM being described during the 1990s as 'a belief in potential to improve processes by which workplaces can be managed to inspire people to give their best, to support their effectiveness and ultimately to make a positive contribution to economic growth and organizational success' (Alexander, 1994).

This eventually led to the next seminal moment in my career, moving to Liverpool Business School in 2018 and becoming a Reader (Associate Professor) in Workplace and Facilities Management. A similar transition was also occurring in the professional sphere, with the BIFM repositioning as the Institute of Workplace and Facilities Management (IWFM). This landmark change allowed my research to be emancipated from the transactional culture of FM, driven by procurement, delivery, and contracts to embrace the discipline as the one outlined by Price (2003) and Alexander (1994). But not only that, in 2020 my research would find a meaning and pertinence beyond anything I had ever anticipated: to understand the significance of workplace during and beyond COVID-19.

At the time of writing this chapter in 2022, I am a Professor of Workplace and Facilities Management, and despite the immense challenges and life-changing experiences we have all faced since 2020, I am truly excited about the future of workplace and FM research: that embraces expert workplace management, beyond a physical space, and into a socially connected and distributed one. I would like to conclude with a personal remark to anyone reading this who is interested in a research career in workplace and facilities management: embrace the experiences handed to you, and always keep searching for what you believe in.

5. Looking ahead: 40 years and beyond

All three of us have a career as researchers and educators after acquiring doctoral degrees. However, at the same time, we also witnessed students pursuing their careers in the industry upon doctoral degree completion in more recent years. We do not believe this is a coincidence; rather, this shows that the industry values highly skilled researchers more and more as there is higher demand and potential to improve the built environments and FM functions with advanced technologies and data analytics. We think this trend will persist in the future.

Second, we expect that the importance of FM functions will increase as the work itself is changing with the economy, automation, multi-generations in the workforce (from newly entering generation to never retire population), and the lasting effects of COVID-19, such as a desire for higher workplace flexibility (i.e., where and when to work for how long). In fact, workplace flexibility, environmental conditions of home offices, and organizational supports were found to be positively associated with individuals' productivity, satisfaction with working from home, and work-life balance during the COVID-19 pandemic; yet, certain work-related activities, such as getting trained and

training others, could be better performed in corporate offices (Yang et al., 2021). As organizations cautiously explore what a new 'normal' may look like, a socio-technically aware profession, like workplace management and strategies, can contribute to shaping the future world of work (Moriarty et al., 2021).

Third, the old view that considers FM as a cost center that merely operates and maintains the physical facility in a reactive manner will be drastically shifted. Instead, multidisciplinary approaches truly combining the practices of management/human resources, design (physical and digital workplaces), psychology (psychological health and wellbeing), and engineering (highly efficient, sophisticated building systems and fixtures) will be essential for organizations' success. As a result, the FM functions will evolve with immersive technologies, high importance on employee health and wellbeing, and the revolution of work, collaboration work, and work modes.

Last, we advocate for a strong, synergetic relationship between academia and industry to reduce the gap between the two and for strong support from professional organizations for FM higher education programs (Lai et al., 2017). Academic institutions are there to produce the next generation of employment/workforce as well as bring innovative collaboration through novel approaches to solve perplexing problems/questions to advance the field of FM. As the nature of applied sciences, research in workplace and facility management can be best performed in real settings, which is only possible when these academic research endeavors are supported by the industry and vice versa.

References

Alexander K. (1994). A strategy for facilities management. Facilities. 12(11), 6-10.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design.* Harvard University Press, Cambridge, Massachusetts.

IFMA. (2017). What is facility management? Retrieved October 25, 2022, from https://www.ifma.org/about/what-is-facility-management/

ISO (2018). ISO 41001:2018(en) Facility management — Management systems — Requirements with guidance for use. Retrieved October 25, 2022, from https://www.iso.org/obp/ui/#iso:std:iso:41001:ed-1:v1:en

Lai, J., Tu, K., Lian, J. and Kim, J. (2019). Facilities Management education in the Four Asian Dragons: a review, *Facilities*, 37(11), 723-742. https://doi.org/10.1108/F-06-2018-0066

Moriarty C, Tucker M, Ellison I, Pinder J, Wilson H. (2020). Recognising the socio-technical opportunity of workplace: an analysis of early responses to COVID-19, *Corporate Real Estate Journal, 10*(1), 51-62.

Price I. (2003). Facility management as an emerging discipline. In Best R, Langston C, De Valence G, editors. *Workplace strategies and facilities management.* (pp. 30-48). Oxford: Butterworth-Heinemann.

Yang, E., Kim, Y. and Hong, S. (2021). Does working from home work? Experience of working from home and the value of hybrid workplace post-COVID-19, *Journal of Corporate Real Estate,* Vol. ahead-of-print No. ahead-of-print. https://doi.org/10.1108/JCRE-04-2021-0015