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## **Postgraduate (Master's) Dissertation**



**Administrative Employees' Training Preferences and Their  
Perception of Soft Skills' Importance and Self-Assessment, in  
the Context of a Public Distance Learning Higher Education  
Institution**

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## Summary

The importance of soft skills training and development in improving employees' performance is highlighted and argued in several studies, in various disciplines, by both employers and employees. However, developing employees' soft skills can be quite challenging as these skills are intangible skills that are usually domain-independent and can apply to different disciplines and job sectors. For this reason, thorough investigation of employees' training needs regarding soft skills is required by Human Resources Management (HRM), before designing and developing a related training program. This dissertation aims to shed some light to this field by identifying the training preferences and soft skills perceived importance and self-assessment of a public distance Higher Education Institution's, the Open University of Cyprus (OUC), administrative employees, in order to detect their training needs in soft skills training and development.

Following a postpositivist worldview philosophy and a quantitative research approach, the research design of this dissertation follows a nonexperimental design that uses survey as the method of data collection. The overall population of this study were all OUC administrative employees (n=71, excluding executives/managers) and the respondents (n=41) included employees from all departments and job positions, both male and female. The results of this study argue that OUC administrative employees perceive soft skills as important for their job and that there are needs for soft skills' training and development for all of them. In addition, it is supported that: i. blended learning methodologies should be employed for their training (both face-to-face and online delivery), ii. the higher OUC employees perceive the importance of most soft skills for their job, the higher their self-assessment rate of development and vice versa, iii. there are different soft skills' training needs for each employee and iv. considerations should be made in terms of which skills OUC management should prioritise and for which departments and for which employees should training programs be offered, as there were discrepancies observed amongst employees in respect to some skills.

## Περίληψη

Η σημασία της κατάρτισης και της ανάπτυξης οριζόντιων δεξιοτήτων για τη βελτίωση της απόδοσης των εργαζομένων, τονίζεται και υποστηρίζεται σε διάφορες μελέτες, σε διάφορους κλάδους, τόσο από εργοδότες όσο και από εργαζόμενους. Ωστόσο, η ανάπτυξη των οριζόντιων δεξιοτήτων των εργαζομένων μπορεί να είναι αρκετά προκλητική, καθώς αυτές οι δεξιότητες δεν είναι εύκολα μετρήσιμες, συνήθως δεν εξαρτώνται από τον εργασιακό τομέα και μπορούν να εφαρμοστούν σε διαφορετικούς κλάδους εργασίας. Για το λόγο αυτό, απαιτείται διερεύνηση των αναγκών κατάρτισης των εργαζομένων σχετικά με τις οριζόντιες δεξιότητες, πριν από το σχεδιασμό και την ανάπτυξη ενός προγράμματος κατάρτισης. Αυτή η διατριβή στοχεύει στον εντοπισμό των προτιμήσεων επιμόρφωσης των διοικητικών υπαλλήλων ενός δημόσιου εξ αποστάσεως Ιδρύματος Ανώτατης Εκπαίδευσης, του Ανοικτού Πανεπιστημίου Κύπρου (ΑΠΚΥ), προσδιορίζοντας παράλληλα τις οριζόντιες δεξιότητες που θεωρούν σημαντικές για την εργασία τους καθώς και τον βαθμό που θεωρούν ότι τις έχουν αναπτύξει, προκειμένου να εντοπιστούν οι ανάγκες επιμόρφωσής τους σε θέματα ανάπτυξης οριζόντιων δεξιοτήτων.

Ακολουθώντας μεταθετιστική φιλοσοφία και ποσοτική ερευνητική προσέγγιση, ο ερευνητικός σχεδιασμός αυτής της διατριβής ακολουθεί έναν μη πειραματικό σχεδιασμό, που χρησιμοποιεί το ερωτηματολόγιο ως τη μέθοδο συλλογής δεδομένων. Ο συνολικός πληθυσμός αυτής της μελέτης ήταν όλοι οι διοικητικοί υπάλληλοι του ΑΠΚΥ ( $n = 71$ , εξαιρουμένων των στελεχών / διευθυντών) και οι ερωτηθέντες ( $n = 41$ ) περιλάμβαναν υπαλλήλους από όλα τα τμήματα και θέσεις εργασίας, τόσο άνδρες όσο και γυναίκες. Τα αποτελέσματα αυτής της μελέτης υποστηρίζουν ότι οι διοικητικοί υπάλληλοι του ΑΠΚΥ θεωρούν τις οριζόντιες δεξιότητες ως σημαντικές για τη δουλειά τους και ότι υπάρχουν ανάγκες για κατάρτιση και ανάπτυξη οριζόντιων δεξιοτήτων για όλους τους. Επιπλέον, η διατριβή υποστηρίζει ότι: i. για την κατάρτισή τους θα πρέπει να χρησιμοποιούνται μικτές μεθοδολογίες (δια ζώσης και διαδικτυακά), ii. όσο πιο σημαντικές για την εργασία τους θεωρούν τις οριζόντιες δεξιότητες, τόσο πιο πολύ θεωρούν ότι τις έχουν αναπτύξει και αντιστρόφως, iii. υπάρχουν διαφορετικές ανάγκες κατάρτισης οριζόντιων δεξιοτήτων για κάθε εργαζόμενο και iv. πρέπει να ληφθούν υπόψη παράγοντες όπως η Μονάδα και τα Χρόνια Υπηρεσίας, προτού σχεδιαστεί μια κατάρτιση, καθώς παρατηρήθηκαν διαφορές μεταξύ των εργαζομένων σε σχέση με ορισμένες δεξιότητες.

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# Chapter 1

## Introduction

Organizations are continuously faced with the challenge of adapting in rapidly changing industries, integrating new technologies and succeeding in highly competitive markets. Investing in Training and Development (T&D) activities is vital for any organization, as it involves the improvement of knowledge and skills of an organization's most valuable asset: its employees (Noe, 2017). However, this can be challenging for public organizations and public Higher Education Institutions in particular, as they are faced with challenges such as limited governmental budgets for T&D, increased levels of bureaucracy, lack of rewards and incentives and limited opportunities of employee empowerment that can lead to decreased motivation and productivity (Hanaysha & Hussain, 2018; Burgess, et al., 2017). Nonetheless, employees are required to constantly improve knowledge and develop skills in order to help the organization meet its goals and research has shown that providing training and development opportunities can increase public Higher Education academic and administrative employee motivation and productivity (Hanaysha & Hussain, 2018).

For the past two decades, training and development activities have been focusing on a certain type of skills, soft skills, which are considered as intangible and not easily measured skills (Matteson, et al., 2016). Indeed, research has highlighted the importance of developing such skills for any organization, small or large, public or private and in any job sector (Ibrahim, et al., 2017; Viviers, et al., 2016; Abujbara & Worley, 2018). However, developing employees' soft skills, can be quite challenging, especially when it comes to identifying employee skill gaps and monitoring and assessing such skills, during and once training is finished (Gibb, 2014). Nonetheless, research focusing on investigating the needs for developing administrative employees' skills in a public Higher Education Institution (HEI), is limited and there is, to my knowledge, no research investigating the needs of administrative personnel in a public distance HEI. Thus, how can a public distance HEI address matters of administrative employees' soft skills training and development?

The purpose of this Master dissertation is to investigate the needs for administrative employees' soft skills training and development, in a public distance HEI, in this case, the Open University of Cyprus (OUC), focusing on developing soft skills that are considered intangible and transferrable. In particular, this dissertation aims to identify OUC administrative employees' training preferences and to examine their perceptions regarding soft skills that are important for their job as well as the extent to which they self-assess that they have developed such skills. Specifically, this dissertation addresses the following research questions:

1. What are Open University of Cyprus (OUC) administrative employees' preferences regarding training and development duration and delivery?
2. Which soft skills do OUC administrative employees perceive as important for their job performance?
3. Which soft skills do OUC administrative employees self-assess as having/not having developed yet?
4. To what extent is OUC administrative personnel's perception of soft skills importance and self-assessment being affected by gender, department, job position or working years at OUC?

Following quantitative research methodology and nonexperimental survey as the data collection method, an online questionnaire was distributed to all administrative employees of OUC, except for executives and managers. Data analysis was conducted using statistical package software, where responses were coded in variables and then descriptive statistics were produced and certain nonparametric tests were conducted in order to yield this dissertation's results.

The rationale behind this dissertation was to help OUC address issues related to employees' soft skills, by providing OUC Human Resource Management (HRM) with valuable information that ought to be taken into consideration when designing a training program for soft skills development. Specifically, this Master dissertation identifies OUC employees' training needs in respect to soft skills and, to my knowledge, this is the first time such needs assessment is conducted at OUC, for this particular topic. Additionally, given that this study was carried out in the context of a public distance HEI, these results are also important for any other public

and/or distance Higher Education institution that wishes to investigate and improve employees' soft skills, to increase employee productivity and motivation in similar settings.

This dissertation is organized in six chapters. *Chapter 2 – Theoretical Background – Literature Review* (p.10) that follows, provides the theoretical background and key concepts involved in this dissertation and *Chapter 3 – Research Design* (p.20) illustrates the research questions and describes and justifies the research design of this study. The results and findings that derived from analysing the data are presented in *Chapter 4 – Results and Findings* (p.34) and these findings are discussed in *Chapter 5 – Discussion* (p.51) where this dissertation research questions are addressed. Lastly *Chapter 6 – Conclusions* (p.57) provides an overview of the key findings, main contributions and implications, limitations and recommendations for further research.

# Chapter 2

## Theoretical Background – Literature Review

### 2.1 Employee training and development (T&D)

Employee training and development (T&D) is an important activity of Human Resources Management (HRM). As economical, societal, cultural, industrial and environmental needs and challenges changed over the years, HRM practices also transformed and evolved, in order to help organizations to adapt and survive, in such continuously changing environments (Noe, 2017; Tubey, et al., 2015). HRM practices are now focusing their activities towards people as human resources, who are broadly considered as an organization's most valuable asset (Noe, 2017) and many successful organizations appear to put their people, their employees first, engaging in activities that help their employees' develop and grow (Pfeffer, 2010; Torrington, Hall, Taylor, & Atkinson, 2017).

T&D activities are designed and developed in order to help employees and organizations to close an identified gap in knowledge and/or skills related to their job, to improve job performance. Several studies have highlighted the effectiveness of T&D activities, when these are designed, developed and implemented appropriately (Saridakis, et al., 2017). Nonetheless, designing and developing in-house T&D activities can be costly both in human and money resources and, for many years, organizations did not invest much on such activities (Noe, 2017). However, it appears that, currently, many organizations turn to T&D as a recent report conducted by LinkedIn (LinkedIn, 2020) indicates that, today, Learning and Development professionals face less budget constraints in their effort to train talents and, as the majority of those professionals stated, their executives actively support these training efforts as well.

Providing T&D opportunities for employees is a practice that appears to benefit both the organization and the employees. Results from recent research suggest that organizations

which invest in employees' training and development are more likely to perform better, gain more profit and, thus, achieve their organization's goals successfully (Sheehan, 2014; Saridakis, Lai, & Cooper, 2017; Urban, 2020). Similarly, research suggest that employees, who get training and development opportunities in their job, appear to be more satisfied with their job, be more loyal, more motivated and more likely to stay in the job (Costen & Salazar, 2011; Ruvimbo Terera & Ngirande, 2014; Fletcher, et al., 2016; Chen, et al., 2019).

Selecting or designing T&D activities is not an easy task and it requires a thorough needs assessment analysis on behalf of the HRM personnel in order to identify the needs for T&D and employee gaps that should be addressed via T&D (Brown, 2002; Torrington, et al., 2017). Gathering data through needs assessment analysis is important as it assists organizations focusing on what is needed, making the right decisions and determining the costs and benefits of training interventions (Brown, 2002; Iqbal & Khan, 2011; Noe, 2017). However, poor or inadequate needs assessment analysis which only focuses on organizational matters often neglects other factors that are very important, such as employees' skill gaps and characteristics as learners and this can affect the effectiveness of a T&D program (Roberson, et al., 2003; Iqbal & Khan, 2011).

There are various ways in which T&D programs are delivered. Traditional T&D techniques typically involve an instructor or facilitator who leads training sessions within or outside the workplace and, in some work environments, such as heavy industries with machinery and other equipment involved, hands-on methods are used such as on-the-job demonstrations and simulations (Noe, 2017). With the rapid development of technology and internet, new ways of delivering T&D appear. Recent reports suggest that there appears to be a trend towards taking advantage of the opportunities provided by technology and e-learning methodologies and several organizations shift towards in-house or externally provided training via e-learning (Guiney, 2015). Furthermore, as Noe (2017, p. 343) supports, "e-learning allows faster and more efficient delivery of training and reduces geographic and time constraints for employees' learning", highlighting the importance of allowing employees learn at their own pace. Indeed, as Ho and Dzung (2010) argue in their research, investigating the effectiveness of a construction safety training via e-learning, that e-learning appeared to improve learning effectiveness and trainees' satisfaction as they could go through the training material at their own time and pace. In addition, research supports that e-learning integration

via virtual learning environments and other integration of educational technology in T&D activities in the workplace appears impact positively Return on Investment (ROI) (Khan, et al., 2018), especially when it comes to training employees that are located in various geographical locations and have different needs (Holton, et al., 2006).

Nonetheless, despite the promising benefits of e-learning in T&D, reports indicate that e-learning training integration can be quite challenging for medium- or small-sized organizations as these lack the infrastructure, staff-readiness, resources and systems that can facilitate such a complex training, whereas large organizations are more ready to adopt e-learning training programs (Guiney, 2015). The findings of Becker et al. (2012) study, revealed the technological gap between younger and older rail workers in Australia, where e-learning integration was taking place. They found that when designing T&D programs, employees should be viewed as groups and not as a whole workforce as their findings revealed that not all workers' preferences and needs were met with the use of e-learning; technology-savvy younger workers shared different expectations, whereas many older workers lacked digital skills and preferred a more traditional way of training (Becker, et al., 2012). Therefore, apart from organizational matters, employees' preferences and needs are highly important in T&D and needs assessment before designing and developing a training program.

Even though online training and e-learning is expected to penetrate even more in the corporate T&D industry with an expected market grow at a CAGR of 11.41% by the end of 2020 (DOCEBO, 2016), currently, many organizations that cannot fully integrate e-learning training programs, turn to blended learning approaches, where both traditional and e-learning design and delivery are utilized (Guiney, 2015). Indeed, research found that blended training programs can be more effective than fully online and e-learning ones, especially for service providers, since practical activities and practical application is important in order to help employees enrich their knowledge and skills (Brennan, et al., 2019). The importance of combining both classroom-based and online learning activities was also highlighted by Politt (2008, p.19) as such a blended approach *“enables the students to learn in both a practical and theoretical manner”*. Similar findings were reported by a recent study that highlights the importance of human interaction in blended training programs in establishing a more active behavioral, a higher cognitive and a more positive emotional trainees' engagement, in comparison to training programs where human interaction is absent (Hewett, et al., 2019).

An important aspect of designing and developing training programs is the subject-matter of the training. For many years, the main focus of T&D activities involved job-specific and/or technical knowledge, depending on employees' job specification and position (Noe, 2017; Deming, 2017). However, with the evolution of HRM practices and the growing demand of a dynamic and flexible labor market, T&D activities are currently required to not only focus on such "hard skills" but also to provide T&D opportunities for the development of other skills that are considerably important for employability and complex projects, such as employees' interpersonal skills and social skills, which are called 'soft skills' (Deming, 2017; Nilsson, 2010; Azim, et al., 2010). These skills are presented in more detail in the section that follows.

## **2.2 Employees' soft skills**

Employers, managers and executives wish to work with competent employees in order for their organization to grow and be profitable (Torrington, et al., 2017). Indeed, for the past decade, European Commission policies and guidelines focus on helping individuals develop competencies in several areas, from school students to employees (European Commission, 2017; European Commission, 2020). In order for an employee to be competent in a field, s/he should possess related knowledge, skills and attitudes (KSA), that is knowing what (facts, procedures, protocols etc.) to perform, being able to do it and also have an appropriate attitude (i.e. have a positive attitude, motivation etc.) towards the task in order to be able to perform the task successfully (Baartman & de Bruijn, 2011). Although all three components are important for designing any T&D program, this dissertation focuses on skills and specifically, 'soft skills'. Considering the context of this dissertation, which involves the administrative staff of a public distance Higher Education Institution, the sections that follow give particular attention to literature related to 'skills' and 'soft-skills' in service-based occupational structures, Higher Education Institutions and public sector services.

### **2.2.1 'Skills' and 'Soft skills': definitions**

According to Merriam-Webster dictionary (Merriam-Webster, 2020), a skill is "*the ability to use one's knowledge effectively and readily in execution or performance*". This ability can involve both motor and cognitive skills (Baartman & de Bruijn, 2011). Focusing on managerial skills, Peterson & Van Fleet (2004, p.1298) define a skill as "*the ability either to perform some*

*specific behavioral task or the ability to perform some specific cognitive process that is functionally related to some particular task*". Furthermore, Peterson & Van Fleet (2004) refer to two components which are prerequisites to what is considered as a skill: i. having a domain-specific knowledge base and ii. Having a method or means to access that knowledge base. This is also reported in several other definitions of skills, such as Hurrell et al. (2012) and Matteson et al. (2016) which indicates that skills are not separated from knowledge and T&D programs should offer both knowledge and skills' development opportunities.

Depending on the kind of knowledge base, skills can be classified as 'hard skills' and 'soft skills'. 'Hard skills' are tangible and quantifiable skills that are highly linked to job-specific knowledge, such as technical skills and IT skills and are usually acquired via education, job experience and/or training (Wikle & Fagin, 2015). 'Soft skills' are intangible skills that are usually domain-independent and can apply to different disciplines and job sectors, such as effective communication and teamwork (Wikle & Fagin, 2015; Matteson, et al., 2016). For many years, apart from educational qualifications, 'hard skills' were the main focus of employers when seeking to recruit employees. However, the increasing number of job positions involving customer interaction and the fact that many organizations shifted towards service-oriented work structures required for the emergence of 'Soft skills' as a term (Hurrell, et al., 2012). Currently, several studies argue that both 'hard' and 'soft' skills are important in any organization as there appears to be a complimentary nature of each other and in some case the possession of one can enhance the other (Balcar, 2016; WorldEconomicForum, 2018).

### 2.2.2 Skills considered as Soft Skills: A review of literature and taxonomies

There appears to be a lack of shared understanding and common terminology when it comes to defining, classifying and clustering soft skills (Cinque, 2016). Reviewing relevant literature, it appears that there are several terms that are often used by scholars in order to refer to soft skills, such as interpersonal, social, transferrable, intangible, non-technical, domain-independent, and people skills (Matteson, et al., 2016). In addition, in some studies, soft skills include employee personal traits and attributes, such as courtesy, integrity and positive attitude (Robles, 2012) whilst in others, soft skills are linked to 21<sup>st</sup> century skills (van Laar, et al., 2018), transversal/pervasive skills and employability skills (Viviers, et al., 2016; The Gallup Organization, 2010). But what kind of skills are considered as 'soft skills', really?



Skills that are frequently referred to as 'Soft Skills' in literature and were selected to be investigated in this dissertation are:

- **Communication** which is often defined as the ability to effectively communicate with others by conveying information, ideas and opinions, both orally and in writing, while listening and being receptive to the views of others (see Grugulis & Vincent, 2009; Parente, et al., 2012; Matteson, et al., 2016; Promis, 2008; Robles, 2012; Chamorro-Premuzic, et al., 2010; Dall'Amico, et al., 2015; Gruzdev, et al., 2018; Wesley, et al., 2017; Khaouja, et al., 2019).
- **Collaboration – teamworking** which is often defined as the ability to work effectively in a group with other people, as a team, in order to achieve a common and shared goal, for the organization's prosperity, by exchanging resources and knowledge. (see Grugulis & Vincent, 2009; Matteson, et al., 2016; Promis, 2008; Robles, 2012; Chamorro-Premuzic, et al., 2010; Dall'Amico, et al., 2015; Gruzdev, et al., 2018; Wesley, et al., 2017; Khaouja, et al., 2019)
- **Problem-solving / Analytical Thinking / Critical Thinking** which is often defined as the ability to collect and analyze information and understand the connections between ideas and events, in order to solve simple or complex problems and make decisions for the organization's success (see Grugulis & Vincent, 2009; Matteson, et al., 2016; Chamorro-Premuzic, et al., 2010; Dall'Amico, et al., 2015; Gruzdev, et al., 2018; Wesley, et al., 2017; WorldEconomicForum, 2018; Khaouja, et al., 2019).
- **Leadership / Social Influence** which is often defined as the ability to encourage and guide other people in order to motivate them to contribute effectively and adequately to achieving the goals of the organization (see Grugulis & Vincent, 2009; Promis, 2008; Matteson, et al., 2016; Dall'Amico, et al., 2015; Gruzdev, et al., 2018; Wesley, et al., 2017; WorldEconomicForum, 2018).
- **Innovation / Creativity** which is often defined as the ability to contribute new, original and creative ideas in order to improve the work, products and services of the organization (see Promis, 2008; Chamorro-Premuzic, et al., 2010; Dall'Amico, et al., 2015; WorldEconomicForum, 2018).
- **Self-management / Autonomy** which is often defined as the ability to set goals, priorities and tasks on my own, to manage my time and stress adequately and to take

responsibility for my actions (see Matteson, et al., 2016; Chamorro-Premuzic, et al., 2010; Wesley, et al., 2017; Khaouja, et al., 2019)

- **Emotional Intelligence** which is often defined as the ability to empathize well with others, by understanding, utilizing, and managing one's own emotions positively in a way that allows for conflict avoidance and effective communication (see Matteson, et al., 2016; Promis, 2008; Chamorro-Premuzic, et al., 2010; WorldEconomicForum, 2018)
- **Self-Improvement** which is often defined as the ability to recognize my shortcomings in knowledge and skills and then take action to acquire them, maintaining a positive attitude towards my continuous development and lifelong learning (see Grugulis & Vincent, 2009; Chamorro-Premuzic, et al., 2010; Dall'Amico, et al., 2015; WorldEconomicForum, 2018)
- **Adaptability / Flexibility** which is often defined as the ability to adapt and change one's course of action when new situations and conditions arise that requires for such changes (see Robles, 2012; Matteson, et al., 2016; Dall'Amico, et al., 2015)
- **Project management / Task coordination** which is often defined as the ability to set goals and priorities, to select and distribute tasks and resources, to monitor and implement those goals, responding effectively to any deviations (see Ibrahim, et al., 2017; Gruzdev, et al., 2018; Low, et al., 2019). It is worth mentioning that this particular skill is a more complex one that frequently involves other skills, such as time-management, leadership, communication and so on.

In addition to the above soft skills, other skills that were referred to as 'soft skills' in literature, included: *integrity, ethics, diversity sensitivity, customer service orientation, professionalism, positive attitude, attention to detail, taking initiatives* and others. Nonetheless, such skills fall mostly in the personal traits and attributes and cannot be easily identified. For the purposes of this dissertation, the 10 'soft skills' described above were selected because those were the ones that were frequently mentioned in several studies, were more related to administrative positions and were more clearly defined as skills and not as personal traits and attributes of an employee. Nonetheless, it is important to state that, even though, soft skills that are perceived important change over time, as organizations' and employees' work change and skills such as communication and collaboration/teamwork that are frequently mentioned in relevant literature as most demanded, were not reported to be in demand in 2018 nor are

expected to be in demand by 2022, as the recent World Economic Forum (2018) Future of Jobs Report stated and skills such as emotional intelligence and creativity/innovation are expected to be higher in demand by 2022. Therefore, 'soft skills' demand is not static as it appears to change over time.

## **2.3 Soft skills importance and challenges for T&D**

The importance of soft skills training and development in improving employees' performance is highlighted and argued in several studies, in various disciplines, by both employers and employees (Azim, et al., 2010; The Gallup Organization, 2010; Robles, 2012; Ibrahim, et al., 2017; Viviers, et al., 2016; Abujbara & Worley, 2018). For example, in their study, Ibrahim et al. (2017) found that soft skill acquisition and training methodology were two factors that could predict trainees' performance, especially when their training had intervals of "time-space" in between sessions. Furthermore, Parente et al. (2012) highlighted the importance of mastering soft skills, as their research concluded that people who master soft skills may enhance their capacity for mastering more traditional skills, such as hard skills. Similarly, Azim et al. (2010) argued that soft skills are important in managing complex projects, as their research revealed that participants' soft skills, such as communication and collaboration, helped them overcome "people" issues as they could understand the dynamic and social context of the complex project management process more effectively. Indeed, several studies and report view both soft skills and hard skills as essential skills for any employee to possess and argue that training and development should focus on providing training opportunities for both (Balcar, 2016; WorldEconomicForum, 2018; Directorate-General for Employment, Social Affairs and Inclusion (European Commission), 2012). However, designing a T&D focusing on developing soft skills is not an easy task, as these are not easily identified, measured or assessed and this makes soft skills training and development practices challenging (Abujbara & Worley, 2018).

Furthermore, even though research argues that both employers and employees value the overall importance of soft skills for employee performance, it appears that there are differences and variations between them, in respect to the appreciation of certain soft skills' importance. In their research, Grugulis & Vincent (2009) investigated and compared the effect of soft skills marketization in two public sector employees workforces, IT professionals and

caseworkers in the UK. They found a workforce polarization, because IT professionals were eventually more advantaged in comparison to the caseworkers, as soft skills were presented by managers as complimentary skills to IT professionals hard skills, whereas soft skills were presented as an alternative to caseworkers technical skills, diminishing, this way, their existing skills, especially for women. The authors conclude that soft skills emphasis which is merely suggested by managers and employers is not enough. Differences were also reported in Wesley et al. (2017) study, where they found that even though communication was a skill that was identified by retailing and tourism management students, faculty and business leaders as the most important soft skill, there were many differences in the level of importance of all other soft skills investigated. Similarly, Matsouka & Mihail (2016) reported differences between university graduates and HR managers, where students tended to overestimate their soft skills, whereas managers argued that graduates lacked essential skills. This 'skill gap' between employers' expectations and skills possessed by employees/graduates echoes findings from Malik & Venkatraman (2017) as well. Therefore, T&D professionals should take into consideration employees' perceptions and preferences before designing a T&D program.

## **2.4 Chapter 2 Summary**

This chapter presented literature related to employee Training and Development, soft skills and their importance in improving employee performance. Employees are required to constantly improve their performance as their work environment constantly changes too. For this reason, training and development activities aim in helping employees gain new knowledge and develop skills. Skills require employees to have access to related knowledge base in order to have the ability to use it to perform successfully. Nonetheless, soft skills, which are intangible, cross-sectoral and domain-independent skills, such as communication, collaboration and problem-solving are as important to master as hard skills which are more traditional, more tangible, more technical/domain-specific skills, such as IT and job-specific skills. Indeed, literature argues that soft skills are important and have positive effect on employees' performance in several settings. Yet, literature reveals differences in employers' expectations and employees' possession of such soft skills and differences when it comes to level of importance for each soft skill. Therefore, employees' perceptions and preferences should be taken into consideration during needs assessment procedures.

As discussed in this chapter, even though literature review reveals that there are many studies investigating administrative employees' T&D and soft skills' T&D there is limited research conducted in the context of a public HEI. In fact, there is, to my knowledge, no research investigating the needs of administrative employees' soft skills in a public *and* distance HEI. Considering that soft skills are defined as transferrable and cross-sectoral skills that are independent of the job position, is this the case in the context of a public distance HEI, where the majority of services the administrative personnel provides is carried out in distance and rarely in person? Do employees in such a context share similar appreciation of the importance of certain soft skills for their job performance as employees in prior studies in other settings? Do they have different training needs in this area? Are there any factors affecting their perception of soft skills importance? This dissertation aims to shed some light in this uncharted territory of soft skills' development in the context of a public distance HEI, in the chapters that follow.

# Chapter 3

## Research Design

### 3.1 Philosophical worldview

There are various philosophical worldviews or epistemologies that affect the research design of a study. Widely used worldviews include: Postpositivist, Constructivist, Transformative and Pragmatic (Creswell & Creswell, 2018). The research design of this dissertation follows a Postpositivist worldview philosophy, as this study does not aim to understand, interpret and explain participants' actions like Constructivist worldview does, nor aims to shed light on the way politics or issues of social justice affect the lives of participants like Transformative worldview does, nor aims to focus on a specific research problem like Pragmatic worldview does (Creswell & Creswell, 2018). This research follows a Postpositivist worldview because it aims in developing knowledge by setting a theory, collecting data in order to support or reject the theory, by making numeric "measurement of the objective reality that exists "out there" in the world" (Creswell & Creswell, 2018, p.44).

### 3.2 Research questions

Following a Postpositivist philosophical worldview, the nature of the Research Questions of this study follows the quantitative research design (Little, 2013). In order to gather information regarding participants' training preferences and study participants' perceptions towards the importance of soft skills for their job and their appreciation of the development of such skills by themselves, the following research questions were set and are addressed in this dissertation:

1. What are Open University of Cyprus (OUC) administrative employees' preferences regarding training and development duration and delivery?
2. Which soft skills do OUC administrative employees perceive as important for their job performance?

3. Which soft skills do OUC administrative employees self-assess as having/not having developed yet?
4. To what extent is OUC administrative personnel's perception of soft skills importance and self-assessment being affected by gender, department, job position or working years at OUC?

### **3.3 Methodology and Methods of Data Collection**

This study investigates people's preferences and perceptions. Therefore, the research design of this study takes on a Quantitative research approach and a nonexperimental design that uses survey as the method for collecting data (Creswell & Creswell, 2018; Little, 2013). In addition, the study focuses on preferences and perceptions of administrative employees of a public distance Higher Education Institution and therefore, this study is contextualized within the boundaries of that Institution, in this case the Open University of Cyprus. In the subsections that follow, the context of the Open University of Cyprus, the sampling process of participants and methods of data collection for this study will be presented.

#### **3.3.1 Study context: The Open University of Cyprus context**

The Open University of Cyprus (OUC) is a public distance Higher Education Institution, established in 2002 and is the country's only university offering exclusively open and distance education. OUC has a flexible distance learning methodology that enables students of various backgrounds and characteristics enrol in high quality accredited Bachelor, Master and Ph.D. programmes of study across three faculties: Humanities & Social Sciences, Pure & Applied Sciences, Economics & Management (OUCwebsite, 2020). Currently, OUC has approximately 6.000 students who graduated and approximately 3.500 students enrolled in the 2019-2020 academic year. For its operation, OUC employs 25 academic faculty members located at OUC premises in Cyprus and approximately 350 adjunct tutors, located in and out of Cyprus (OUC, 2019). In addition, students and academic staff are currently supported by 75 members of administrative personnel, who work in OUC premises in Nicosia, Cyprus (OUC, 2020).

The administrative services of OUC are under the Director of Administration & Finance and are organised in the following eight functions (OUC, 2019):

- **International Relations, Development & Communication (IRDC)** that supports OUC's administrative and operational matters regarding international and national cooperations, as well as OUC's communicational and developmental strategies and quality assurance. Currently, IRDC unit is comprised of 3 departments/units and has 3 employees.
- **Research, Industry Liaison & Innovation (RILI)**: that administratively supports research activity of academic staff members of OUC. Currently, RILI unit has 2 employees.
- **Administration and Finance (AF)**: that supports OUC's financial operation and resources as well as human resources and project management. Currently, AF unit is comprised of 3 departments/units and has 12 employees and 1 Head of the Accounting Department.
- **Information Communication Technologies & Library (ICTL)**: that supports the entire OUC's distance education processes, ensuring the function of all technological networked services, infrastructure and library services of the University. Currently, ICTL is comprised of 2 departments/units and has 18 employees and 1 Head of the Department.
- **Students & Study Programmes' Support (SSPS)**: that supports students and academic staff regarding study and career matters during and after their studies at OUC. Currently, SSPS is comprised of 12 employees and 1 Head of the Department.
- **Operational Support (OS)**: that supports the promotion of OUC programs of study, the conclusion and management of procurement services, the management of mail and correspondence within and outside OUC as well as the assurance of health and safety matters and building infrastructure functions. Currently, OS is comprised of 4 departments/units and has 10 employees.
- **Laboratory of Educational Material & Methodology (LEMM)**: that monitors, evaluates and updates the educational material and educational methodology that is adapted by OUC in programs of study, in order to enhance students' learning experience. Currently, LEMM has 3 employees.
- **Events Office (EO)**: that supports events organised centrally by OUC and by Programs of Study and Administrative departments. Currently, EO has 1 employee.



In addition to the above eight functions, OUC administrative services include the following units: **Office of the Director of Administration and Finance** (2 employees), **Office of the Rector** (1 employee), **Faculty Secretariat** (5 employees) and **Central Records and Secretariat** unit (2 employees). Administrative staff working in these units support the Council, the Director of Administration and Finance, the Rector and the three Faculties of OUC.

The department responsible for Training and Development at OUC is the Human Resources (HR) unit which is part of the Administration and Finance function. Employees at OUC can participate in T&D seminars and programs that are either organised centrally by HR unit or Head of departments, in collaboration with the Director of Administration and Finance or by individually suggesting a specific T&D program that is relevant to their job and is usually delivered outside OUC premises. Participation in T&D programs follow a process of request approval depending on the relevance of the T&D activity for the employee's job, its cost and its duration and there is a limit on the number of T&D programs an employee can participate within a year, so as to be able to accommodate the needs of employees within the allocated budget.

### 3.3.2 Sampling and participants

Participants for this study were OUC administrative personnel, which as mentioned earlier, are currently 75 members, including the 4 Executives/Managers who are the Director of Administration and Finance, the Head of the Information Communication Technologies & Library, the Head of the Students & Study Programmes' Support and the Head of the Accounting Department. For the purposes of this study, Executives/Managers were excluded from the sampling process, because for T&D, different processes are followed for Executives/Managers and the focus was on employees other than Executives/Managers.

Therefore, the overall sample of this study were all OUC administrative personnel (n=71), both male (n=19) and female (n=52) working at officer (n=29) and deputy officer (n=42) positions in all departments. Overall, as shown in Table 1 below, 40 OUC administrative employees responded to the questionnaire (n=40, 56% of all), of which 15 males (n=15, 79% of all males) and 23 females (n=23, 44% of all females), whilst 2 preferred not to state their gender. Of those who responded to the survey, 19 were officers (n=19, 66% of all officers) and 21 were deputy officers (n=21, 50% of all deputy officers).

Department/Unit	All (Total)	All Officers	All Deputy Officers	All Male	All Female	Responded (Total)	Resp. Officers	Resp. Deputy Officers	Resp. Male	Resp. Female	Did not state gender
Administration and Finance	12	6	6	2	10	5 (42%)	3 (50%)	2 (33%)	2 (100%)	3 (30%)	
Operational Support	10	4	6	3	7	5 (50%)	4 (100%)	1 (17%)	2 (67%)	3 (43%)	
Students and Programmes of Study Support	12	2	10	2	10	6 (50%)	0 (0%)	6 (60%)	1 (50%)	4 (40%)	1
-Research, Industry, Liaison and Innovation -International Cooperation, Development and Communication -Central Records and Secretariat -Laboratory of Educational Material and Methodology	10	7	3	2	8	6 (55%)	4 (57%)	2 (67%)	1 (50%)	5 (63%)	
Information Communication Technologies and Library	18	9	9	9	9	13 (72%)	7 (78%)	6 (67%)	8 (89%)	4 (44%)	1
-Office of the Director of Administration and Finance -Office of the Rector -Faculty Secretariat -Events office	9	1	8	1	8	5 (63%)	1 (100%)	4 (50%)	1 (100%)	4 (50%)	
<b>Total</b>	<b>71</b>	<b>29</b>	<b>42</b>	<b>19</b>	<b>52</b>	<b>40 (56%)</b>	<b>19 (66%)</b>	<b>21 (50%)</b>	<b>15 (79%)</b>	<b>23 (44%)</b>	<b>2</b>

Table 1: OUC administrative personnel total number and number of respondents per gender, position and department

Furthermore, it appears that employees from all departments responded to the survey with more than 50% response rate for most departments whilst Information Communication Technologies and Library department being the one with the most participation (n=13, 72% of all employees in this department) and Administration and Finance department being the one with the least participation (n=5, 42% of all employees in this department). Nonetheless, it appears that overall, more males (n=15, 79% of all males) responded to the survey than females (n=23, 44% of all females) when compared to the overall number of the sample. In addition, reviewing respondents' gender and position per department, it appears that there is a fairer representation of males' respondents in every department, whereas, for example, females are represented at 30% and 40% at Administration and Finance and Students and Programs of Study Support departments respectively.

Moreover, in respect to the position of respondents, it appears that there is a fairer representation of officers when compared to the deputy officers. For example, even though none of the officers of Students and Programs of Study Support department responded to the survey (n=0, 0% of all officers in this department), in all other departments, the majority – and in some departments all – of officers responded to the survey, as for example Operational Support department (n=4, 100% of all officers in this department) and Information Communications Technologies and Library unit (n=7, 78% of all officers in this department). However, deputy officers are less represented in Administration and Finance and Operational Support departments' responses.

OUC administrative employees who have answered the survey and are considered the participants in this study, are illustrated in Figures 1, 2, 3 and 4 below, per gender, position, department and number of working years at OUC, respectively:

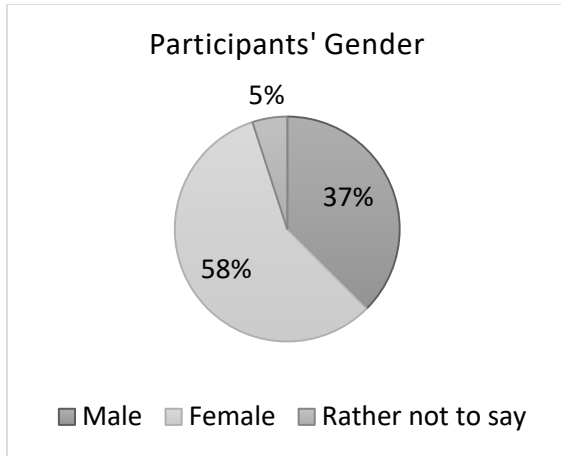


Figure 1: Participant's gender

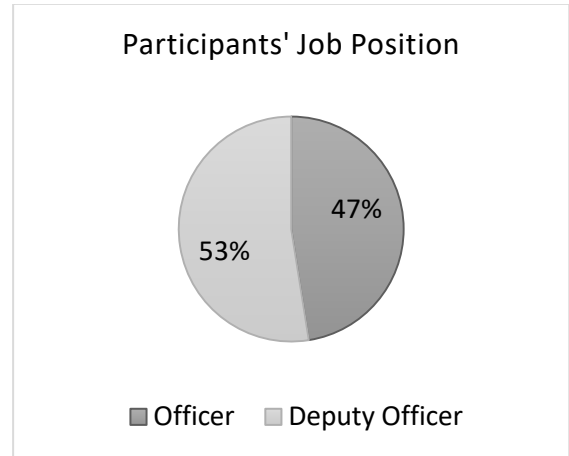


Figure 2: Participant's job position

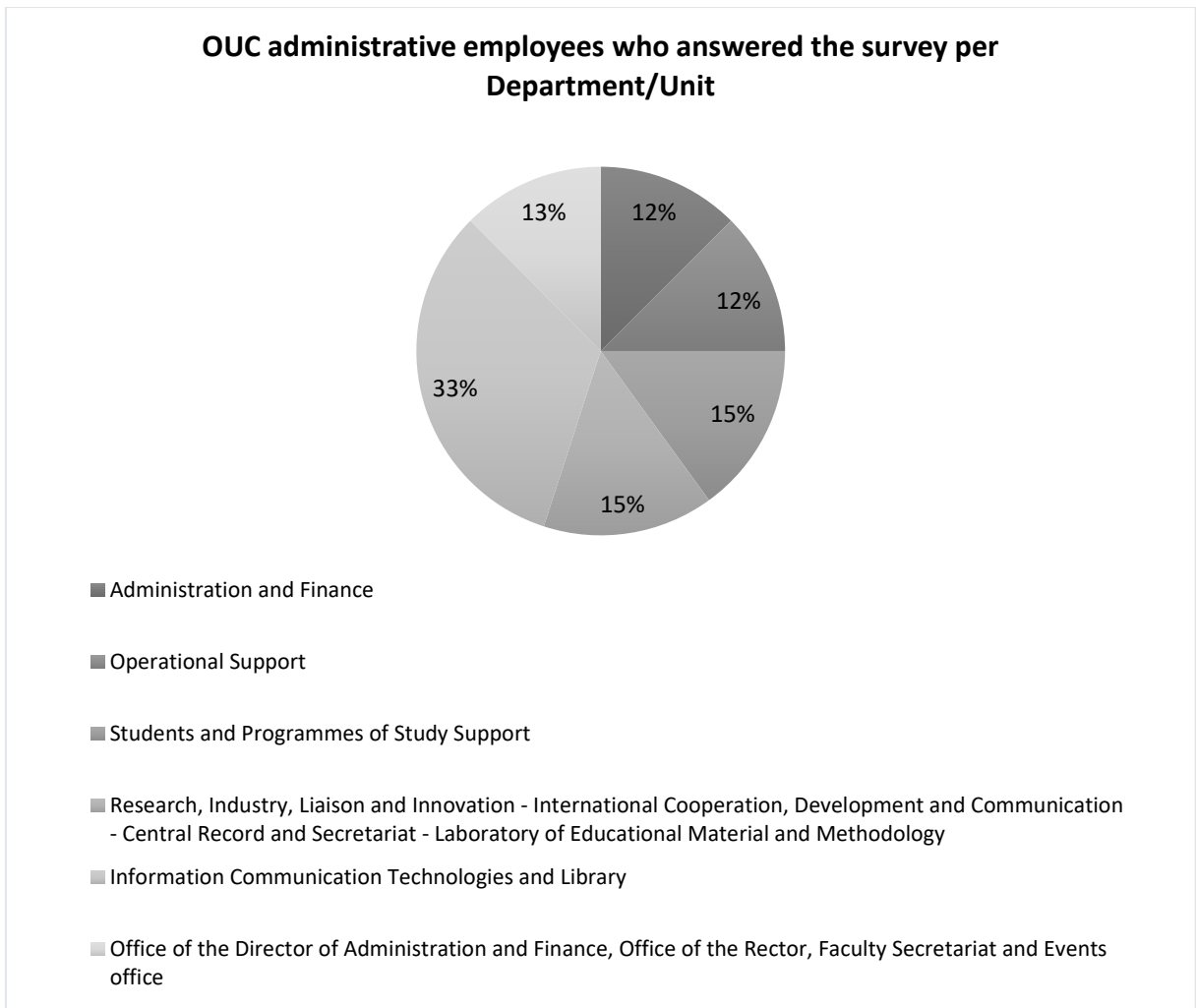


Figure 3: Participants' per Department/Unit

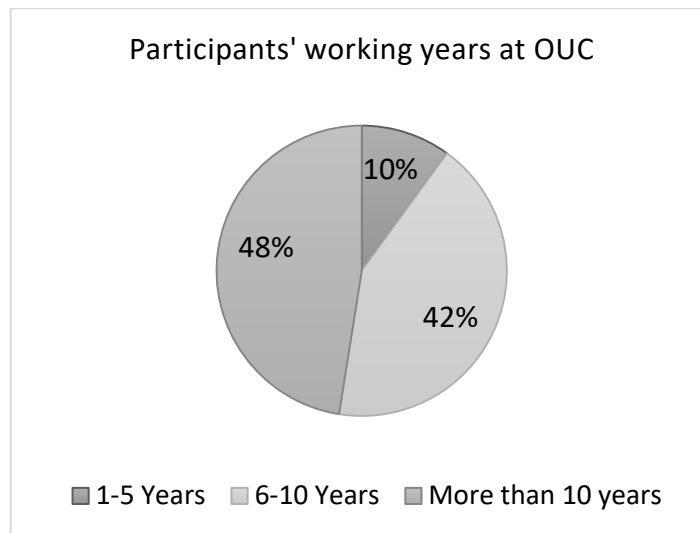


Figure 4: Participants' working years at OUC

### 3.3.3 Methods of data collection

As stated earlier, the research design of this dissertation follows the postpositivist philosophical worldview and a quantitative nonexperimental design (Little, 2013; Creswell & Creswell, 2018). Therefore, the method selected for data collection is survey.

The data collection was conducted through a questionnaire that was designed in Greek which is participants' native language and was administered to participants online via OUC's e-mail accounts, through Microsoft Forms tool<sup>1</sup>. The questionnaire was comprised of three parts (see Appendix A for the Microsoft Word format of the survey) and a cover letter at the beginning, explaining the purpose of the survey. Part A asked questions related to participants' training and training preferences. Part B asked questions related to 10 soft skills and it asked participants to rate them in terms of level of importance for their job, as well as, rating the extent to which they considered they had developed those skills. Part C asked participants' demographics and, specifically, their department, position, gender and working years at OUC.

The training preferences in Part A, were phrases that described combinations of delivery, duration, timing and place for training and participants were asked to choose one or more of those combinations that were their preferences. Following the literature review in Chapter 2 (see Section 2.1), combinations of face to face or online delivery (synchronously, asynchronously or both) training delivery, within or outside OUC premises, within or outside

<sup>1</sup> The online questionnaire can be found here: <https://bit.ly/3bHcSUX>

work hours and overall duration of training were the preferences that participants were asked to choose from (see Appendix A).

Furthermore, the 10 soft skills that were surveyed in Part B were: 1. Communication, 2. Collaboration – teamworking, 3. Problem-solving / Analytical Thinking / Critical Thinking, 4. Leadership, 5. Innovation / Creativity, 6. Self-management / Autonomy, 7. Emotional Intelligence, 8. Self-Improvement, 9. Adaptability / Flexibility and 10. Project management / Task coordination. These were the 10 soft skills that were identified via the literature review presented in Chapter 2 and were highly linked to service-oriented work environments, such as OUC. In addition, in an effort to establish a shared understanding, brief definitions were provided to participants, for each of the 10 soft skills (see Appendix A for the definitions in Greek or see Section 2.2.2 of Chapter 2 of this dissertation for the definitions in English).

It is important to state that, in Part C, due to the small number of the sample and in order to ensure anonymity, participants were asked to select their department from a list of departments, some of which were grouped with others, as the combination of Gender and Job Position would lead to an identification of a participant. Therefore, for that question, participants could select one of 6 group of departments: i. Administration and Finance (AF), ii. Operational Support (OS), iii. Students and Study Programs' Support (SSPS), iv. International Relations, Development & Communication (IRDC), Research, Industry Liaison & Innovation (RILI), Central Records and Secretariat (CRS) and Laboratory of Educational Material & Methodology (LEMM), v. Information Communication Technologies & Library (ICTL) and vi. Office of the Director of Administration and Finance (ODAF), Office of the Rector (OR), Faculty Secretariat (FS).

The three parts of the questionnaire included items that were merely closed-type questions but there was also one open-ended question in Part B, where participants could type additional soft skills that they considered as important. It is worth mentioning that this questionnaire was administered to two former employees of OUC and adjustments were made according to their feedback. Table 2 illustrates the questions/items that were asked in each part of the questionnaire, the measurement and type of variables and their connection to the research questions of this dissertation.

Q/naire Part	Questions/Items	Measurement (Variables)	Type of Variable	Research Questions
<b>Part A</b>	A.1. How many times have you participated in training, related to your work, the past 2 years?	<i>A.1. Training participation frequency</i> (Never, 1-2 times, 3-4 times, 5-6 times, more than 6 times)	Ordinal (frequency)	RQ1
	A.2. Thinking about the ideal, for you, training, please select your preferences, in respect to the way you would like to be trained for matters related to your work.	<i>A.2. Training preferences</i> (combinations of: face to face, online synchronously / asynchronously, at work premises, outside work premises, during working hours, outside of working hours, 2-3 hours, 4-8 hours, 2-3 days, 4-5 days, more than 5 days)	Categorical Nominal (selection of one or more)	RQ1
<b>Part B</b>	B.1. Thinking about your job, how important do you consider the following soft skills for your own everyday work?	<i>B.1. Soft skills perceived importance</i> (not at all important, very unimportant, neither important nor unimportant, very important, extremely important)	Ordinal (Likert rating scale)	RQ2
	B.2. Are there any other skills that you consider important for your job? Please share.	<i>B.2. Additional Soft skills participants consider important</i> (Open-ended question)	Open-ended question	RQ2
	B.3. To what extent do you consider you have developed the following soft skills?	<i>B.3. Soft skills self-assessment</i> (not at all, to a small extent, to a moderate extent, to a great extent, to a very great extent)	Ordinal (Likert rating scale)	RQ3
<b>Part C</b>	C.1. What administrative OUC department do you work for?	<i>C.1. Department/Unit</i> (AF, OS, SSPS, IRDC/RILI/CRS/LEMM, ICTL, ODAF/OR/FS)	Categorical Nominal	RQ4
	C.2. What is your job position at OUC?	<i>C.2. Job position</i> (officer, deputy officer)	Categorical Nominal	RQ4
	C.3. Please select your gender.	<i>C.3. Gender</i> (Male, Female, Prefer not to say)	Categorical Nominal	RQ4
	C.4. How many years have you been working for OUC?	<i>C.4. Working years at OUC</i> (1-5 years, 6-10 years, more than 10 years)	Ordinal (years)	RQ4

Table 2: Questionnaire administered to OUC employees – Items, variables, type and research questions

### 3.4 Methods of data analysis

Given the quantitative nature of the research question and this nonexperimental survey research design, the data analysis was conducted in three stages, using both Microsoft Excel and IBM SPSS (subscription version 2020).

#### 3.4.1 First stage of analysis – Variable coding data preparation

The first stage of analysis aimed in preparing data collected via Microsoft Forms in order to be able to perform analysis using Excel and SPSS (Little, 2013). This was done by exporting data in an Excel format, renaming each column as a variable and then transforming every text data into numerical data, using numerical codes. An example-extract of how data was transformed is shown in Figure 5 below.

ID	Gender	Serviceunit	Position	YearsExp	TrainingFrequency	SelfImprIMP	SelfMangMP	ProjMangMP	SelfImprASS	SelfMangASS	
1	2	3	2	2	2	3	5	4	5	3	5
2	2	1	1	1	1	2	4	4	5	2	4
3	1	1	2	3	3	5	5	5	5	4	4
4	3	3	2	2	2	4	3	3	3	3	2
5	2	2	1	3	3	1	5	5	5	4	3
6	1	5	1	3	1	4	5	4	4	3	5
7	2	2	2	3	1	4	4	4	3	4	4
8	1	2	1	3	2	5	5	2	5	5	5
9	2	3	2	3	2	5	5	5	5	5	5
10	3	5	2	2	1	5	5	5	5	4	3
11	1	5	1	3	4	5	4	4	4	4	4
12	2	6	2	2	2	5	5	3	3	3	3
13	2	1	1	1	3	5	4	5	4	4	4
14	2	2	1	2	5	5	5	5	5	5	5
15	1	3	2	3	2	5	4	5	5	5	4
16	2	4	2	2	4	5	5	4	4	4	4
17	1	4	1	2	3	5	4	5	3	3	4
18	2	4	1	1	4	5	5	4	3	3	4
19	2	6	2	2	4	5	5	4	4	5	3
20	2	4	1	1	3	5	4	5	4	4	3
21	1	2	1	3	2	5	5	3	5	5	5
22	1	5	1	3	2	4	4	4	3	3	3
23	2	4	1	2	3	5	5	5	5	5	5

Figure 5: Transformed numerical data in SPSS

For example, Gender (Question C3) was coded as 1=Male, 2=Female and 3=Prefer not to say, Position (Question C2) was coded as 1=Officer, 2=Deputy Officer, Training Frequency (Question A1) was coded as 1=never, 2=1-2 times, 3=3-4 times, 4=5-6 times, 5=more than 6 times. In addition, participants’ responses in Part B rating questions were coded using 1 to 5 numerical codes. For example, for each soft skill, there was a separate variable i.e. SelfImprIMP (Self-Improvement Importance, Question B1.a) that was coded as 1=not at all important, 2=very unimportant, 3=neither important nor unimportant, 4=very important, 5=extremely important and so on. A similar coding was used for Soft skills’ self-assessment, for example, SelfImprASS variable (Self-Improvement Self-Assessment, Question B2.a) that was coded as: 1=not at all, 2=to a small extent, 3=to a moderate extent, 4=to a great extent, 5=to a very great extent and so on.



### 3.4.2 Second stage of analysis – Descriptive statistics for all questions

Having the data in numerical format and variables, during the second stage of analysis, descriptive statistics of frequencies and means were produced for Part A (training frequency, training preferences) and Part C (department, job position, gender, working years at OUC) responses using Excel and for Part B (Soft skills Importance and Soft skills Self-Assessment) rating responses using SPSS. Part C charts were presented earlier in Section 3.3.2 (Figures 1-4), whereas charts, frequencies and ranking for Part A and Part B responses are presented in Chapter 4 of this dissertation. Data analysis conducted in this second stage of analysis provided results for addressing research questions RQ1, RQ2 and RQ3 of this dissertation.

### 3.4.3 Third stage of analysis – Non-parametric statistical tests and correlations

In order to address RQ4 of this dissertation and identify differences between groups, statistical tests were carried out. Shapiro-Wilk test of normality (sample sizes was under 50) was carried out for the study's ordinal variables (Soft Skills Importance and Soft Skills Self-Assessment) and it reported that for all variables, significance was below 0.002 (sig. <0.05, see Appendix B – Shapiro-Wilk test for normality). Therefore, data did not follow a normal distribution and non-parametric tests were selected to be carried out.

Next, participants' responses in Soft Skills Importance and Soft Skills Self-Assessment questions were analysed in order to identify any differences in groups of the variables: Gender, Department, Position and Working years at OUC. Kruskal-Wallis tests were carried out for identifying statistically significant differences ( $p < 0.05$ ) across categories of Department and Working years at OUC variables respectively (see Appendix C – Kruskal-Wallis tests, for the full reports). Pairwise comparison reports were also conducted in order to identify the exact pairs where differences were observed at a statistically significant degree ( $p < 0.05$ ). Furthermore, Mann Whitney U tests were carried out for identifying statistically significant differences ( $p < 0.05$ ) across categories of Gender and Position variables respectively (see Appendix D – Mann-Whitney U test, for the full reports).

Lastly, non-parametric correlations using Spearman's rho (2-tailed) tests were carried out in order to examine whether there is a correlation between respondents' perceived importance

and perceived self-assessment, for each of the 10 soft skills (see Appendix E – Spearman’s rho Correlations test, for full report).

### 3.5 Reliability and Validity

In a research design, rigour is important, and reliability and validity measurements are often considered as indicators for the quality of a study (Creswell & Creswell, 2018). Reliability concerns the accuracy of the instrument used to measure a concept and consistency of the measurement, whereas validity concerns the accuracy of the measurement of that concept (Little, 2013).

The reliability of the questionnaire instrument that was used in this research, was tested using Cronbach’s Alpha test that was carried out using SPSS software, to test internal consistency for Part B of the questionnaire, that involved rating questions related to the Soft Skills perceived importance (n=10, 0.746) and self-assessment (n=10, 0.916). Table 3 below illustrates the Cronbach’s Alpha value for both item-sets, which were both over 0.70 which is considered as an acceptable value for reliability. Part A and Part C were not tested as these parts involved questions that were either preferences or factual knowledge, such as their demographics and frequency of training participation.

Question set	Cronbach’s Alpha	N of items
Soft skills Importance	0.746	10
Soft skills Self-Assessment	0.916	10

Table 3: Cronbach’s Alpha statistics for Soft Skills Importance and Soft skills Self-Assessment questions (SPSS)

The validity of any instrument is something difficult to be measured (Little, 2013). For this research, soft skills that were surveyed were selected as a result of a thorough review of related literature and theory evidence (see Section 2.2.2 of Chapter 2). In addition, the overall instrument measures related to soft skills (importance and self-assessment) were similar to measurements made by other instruments of other researchers, such as for example, Stracenski Kalauz et al. (2015) study where they measured students’ perception of 21 soft skills, by asking them to rate those skills in terms of level of general importance, as well as,

self-assessing their own abilities by rating the extent to which they considered they had developed those skills.

### **3.6 Ethical Issues**

This study involved employees of the Open University of Cyprus and before collecting data, the approval of the Director of Administration and Finance was requested and received. The purposes of the data collection and overall aim of the study was explained via the cover letter of the questionnaire and it was clearly stated that the results of this study could inform the management regarding participants' training needs so as to be considered when designing training programs in the future (see Appendix A). In addition, assurance for anonymity and confidentiality regarding the data of participants' responses was clearly stated in the cover letter of the questionnaire, before participants proceeded with answering the questionnaire (see Appendix A). Furthermore, due to the small number of the sample (n=71), there was a risk that some participants could be identified, based on their responses in Part C of the questionnaire. For this reason, Part C was designed carefully in order to ensure that none employee was to be identified, by grouping certain departments and by offering the option of "Prefer not to say" under the Gender question. Lastly, it is important to state that participants' responses and raw data were overall accessed by the researcher and to a small extent, by her thesis supervisor.

# Chapter 4

## Results and Findings

### 4.1 Results from descriptive statistics

In the sections that follow, results from descriptive statistics analysis (frequencies, means and ranking) for Part A and Part B of the questionnaire are presented. Part C demographics were presented earlier in Chapter 3 (See Section 3.3.2).

#### 4.1.1 OUC administrative personnel training participation and preferences

OUC administrative employees' responses regarding the frequency of their participation in training activities over the past two years is illustrated in Figure 6 below.

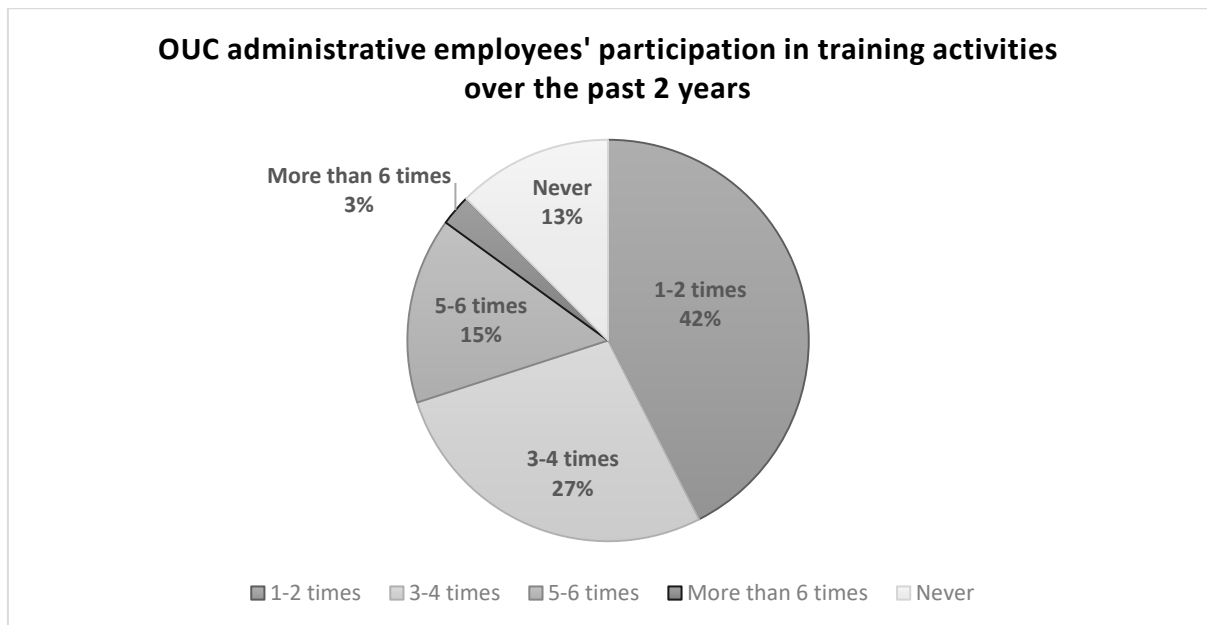


Figure 6: OUC administrative employees' participation in training activities over the past 2 years

Most of the respondents participated in training activities at least once (n=35, 87%) whereas 5 employees (13%) indicated that they have never participated in training activities during the past 2 years. There was also 1 employee who participated in training activities more than 6 times.

Furthermore, OUC administrative employees' overall training preferences are presented in Figure 8 below. Overall, it appears that the majority of the respondents prefer training to take place during workhours (n=27, 68%), has a duration of 4-8 hours (n=23, 58%) and be delivered face to face either at workplace (n=19, 48%) or outside workplace settings (n=20, 50%). Online training delivery was less preferred by respondents, in comparison to the face to face preferences, but almost half of the respondents (n=17, 43%) selected online training to be delivered both synchronously and asynchronously through a Virtual Learning Environment (VLE), whereas only synchronous delivery (i.e. online webinars) was more preferred (n=15, 38%) than only asynchronous (n=11, 28%) by respondents. Moreover, short ("1-3 hours", n=11, 28%) or longer ("4-5 days", n=5, 13% and "more than 5 days", n=1 = 3%) duration of training sessions were least preferred by respondents and only 3 employees (n=3, 8%) preferred that training would take place outside workhours.

Examining more closely the data, it appears that more than half of the respondents selected at least one face to face option and one online option (n=22, 55%), whereas there were 15 employees (n=15, 37%) who selected at least one face to face option but none of the online options and 3 employees (n=3, 8%) who selected at least one online option but none of the face to face options, as shown in Figure 7 below. In addition, as shown in Figure 9, for those who selected at least one face to face and at least one online option, the majority also selected 4-8 hours (n=15, 68%) and 2-3 days (n=13, 59%) as most preferable duration lengths. Thus, a combination of both face to face and online training delivery appears to be mostly preferred by respondents.

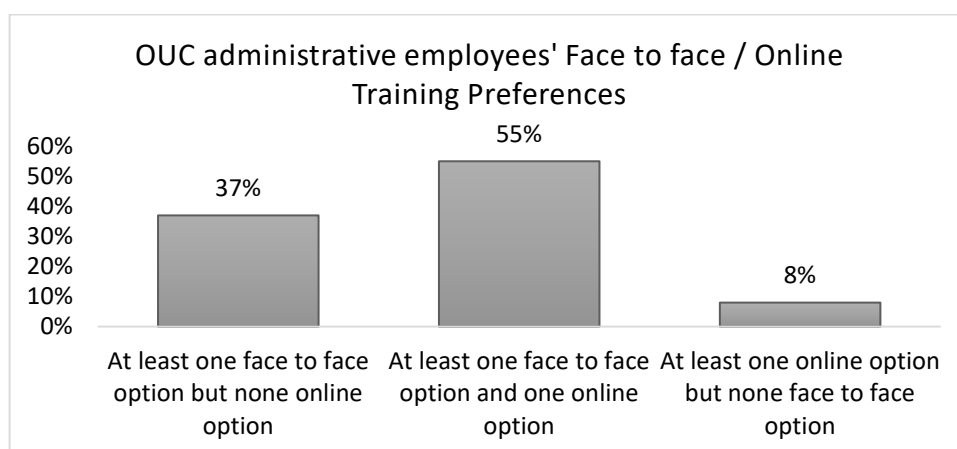


Figure 7: OUC administrative employees' Face to face / Online Training Preferences

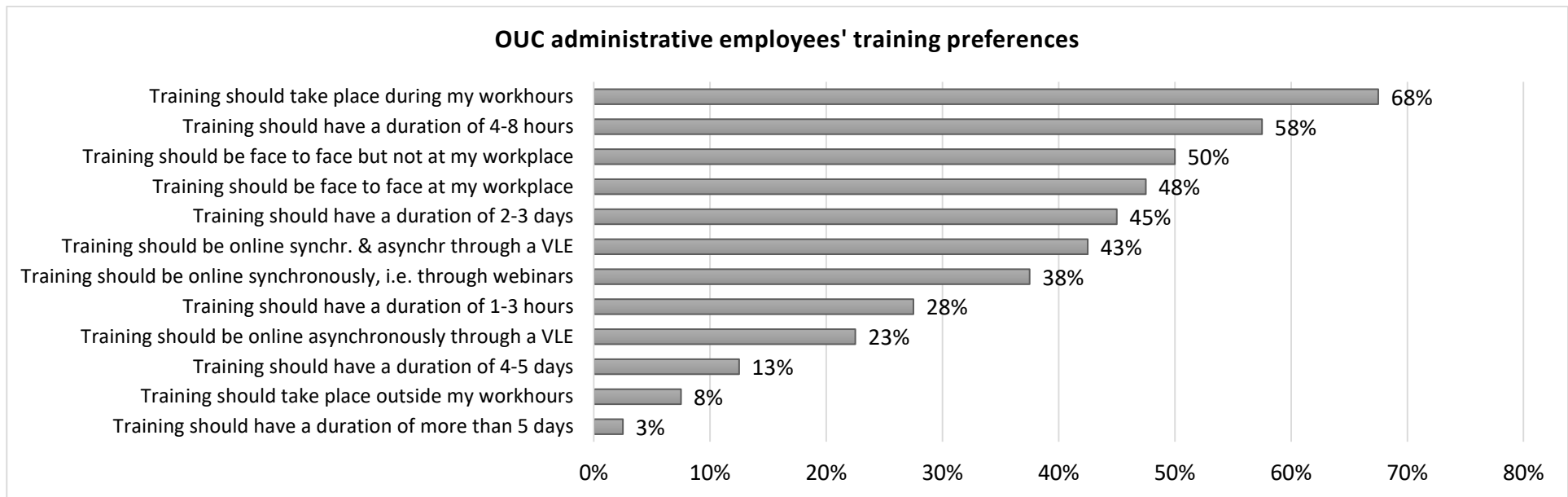


Figure 8: OUC administrative employees' training preferences

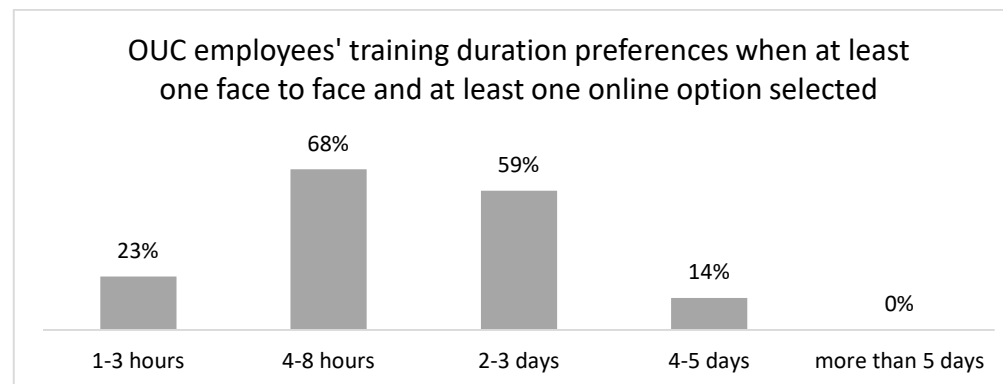


Figure 9: OUC administrative employees' training duration preferences when at least one face to face and at least one online option was selected

#### 4.1.2 Soft skills importance as perceived by OUC administrative personnel

OUC administrative employees' responses to the question "How important do you perceive the following soft skills to be for your job?" are presented in Table 4, Figure 10 and Figure 11. Table 4 illustrates the descriptive statistics report produced by SPSS, where the 10 soft skills appear in the same order as the questionnaire (alphabetical, Greek). Figure 10 presents a chart with a ranking of the 10 soft skills perceived importance (means and standard deviation). Figure 11 presents an overview of participants' responses in the form of stacked bar chart, where a distribution of their responses from "not at all important" to "extremely important" is illustrated per Soft Skill.

Overall, it appears that respondents perceive all 10 soft skills to be very important for their job with mean values of larger than 4.28 and a mode of 5 (extremely important) for all soft skills, except for Leadership, the mode of which was 4 (very important). Respondents ranked higher the Communication (4.9), Collaboration (4.83) and Self-Improvement soft skills (4.7), whereas they ranked lower the Emotional Intelligence (4.3), Project Management (4.28) and Leadership (3.95). Problem Solving/Analytical Thinking/Critical Thinking soft skill was ranked as 4<sup>th</sup> (4.53), followed by Self-Management (4.50), Adaptability/Flexibility (4.48) and Innovation/Creativity (4.40) soft skills.

Furthermore, it appears that the highest dispersions of responses were observed in Emotional Intelligence (SD=0.911), Leadership (SD=0.904), Project Management (SD=0.784) and Innovation/Creativity (SD=0.744) soft skills. Investigating even further participants' responses, as shown in Figure 11, it appears that participants' responses were not concentrated in high percentages in one or two answers, demonstrating disagreements amongst participants. For example, Leadership soft skill was perceived as extremely important (33%), very important (35%), neither important nor unimportant (28%) and very unimportant (5%). Similarly, Project Management soft skill was perceived as extremely important (45%) and very important (40%) by the majority of respondents but was also perceived as neither important nor unimportant (13%) and very unimportant (3%) by some.

In addition, four respondents added soft skills they consider important in the open-ended question (B2) which were: strategic thinking, human resources management and empathy (twice).

**Descriptive Statistics (SPSS) report regarding Soft Skills perceived Importance**

		Self-Improvement (I)	Self-Management / Autonomy (I)	Project Management (I)	Communication (I)	Problem Solving / Analytical Thinking / Critical Thinking (I)	Leadership (I)	Innovation / Creativity (I)	Adaptability / Flexibility (I)	Emotional Intelligence (I)	Collaboration (I)
<b>N</b>	<b>Valid</b>	40	40	40	40	40	40	40	40	40	40
	<b>Missing</b>	0	0	0	0	0	0	0	0	0	0
<b>Mean</b>		4.70	4.50	4.28	4.90	4.53	3.95	4.40	4.47	4.30	4.83
<b>Std. Error of Mean</b>		.073	.095	.124	.048	.101	.143	.118	.095	.144	.071
<b>Median</b>		5.00	5.00	4.00	5.00	5.00	4.00	5.00	5.00	4.50	5.00
<b>Mode</b>		5	5	5	5	5	4	5	5	5	5
<b>Std. Deviation</b>		.464	.599	.784	.304	.640	.904	.744	.599	.911	.446
<b>Variance</b>		.215	.359	.615	.092	.410	.818	.554	.358	.831	.199
<b>Skewness</b>		-.907	-.753	-.874	-2.772	-1.024	-.336	-.817	-.654	-1.719	-2.639
<b>Std. Error of Skewness</b>		.374	.374	.374	.374	.374	.374	.374	.374	.374	.374
<b>Kurtosis</b>		-1.242	-.344	.321	5.979	.041	-.846	-.690	-.467	3.691	6.869
<b>Std. Error of Kurtosis</b>		.733	.733	.733	.733	.733	.733	.733	.733	.733	.733
<b>Range</b>		1	2	3	1	2	3	2	2	4	2
<b>Minimum</b>		4	3	2	4	3	2	3	3	1	3
<b>Maximum</b>		5	5	5	5	5	5	5	5	5	5
<b>Sum</b>		188	180	171	196	181	158	176	179	172	193

Table 4: OUC administrative employees' Soft Skills perceived importance (Descriptive Statistics report from SPSS)



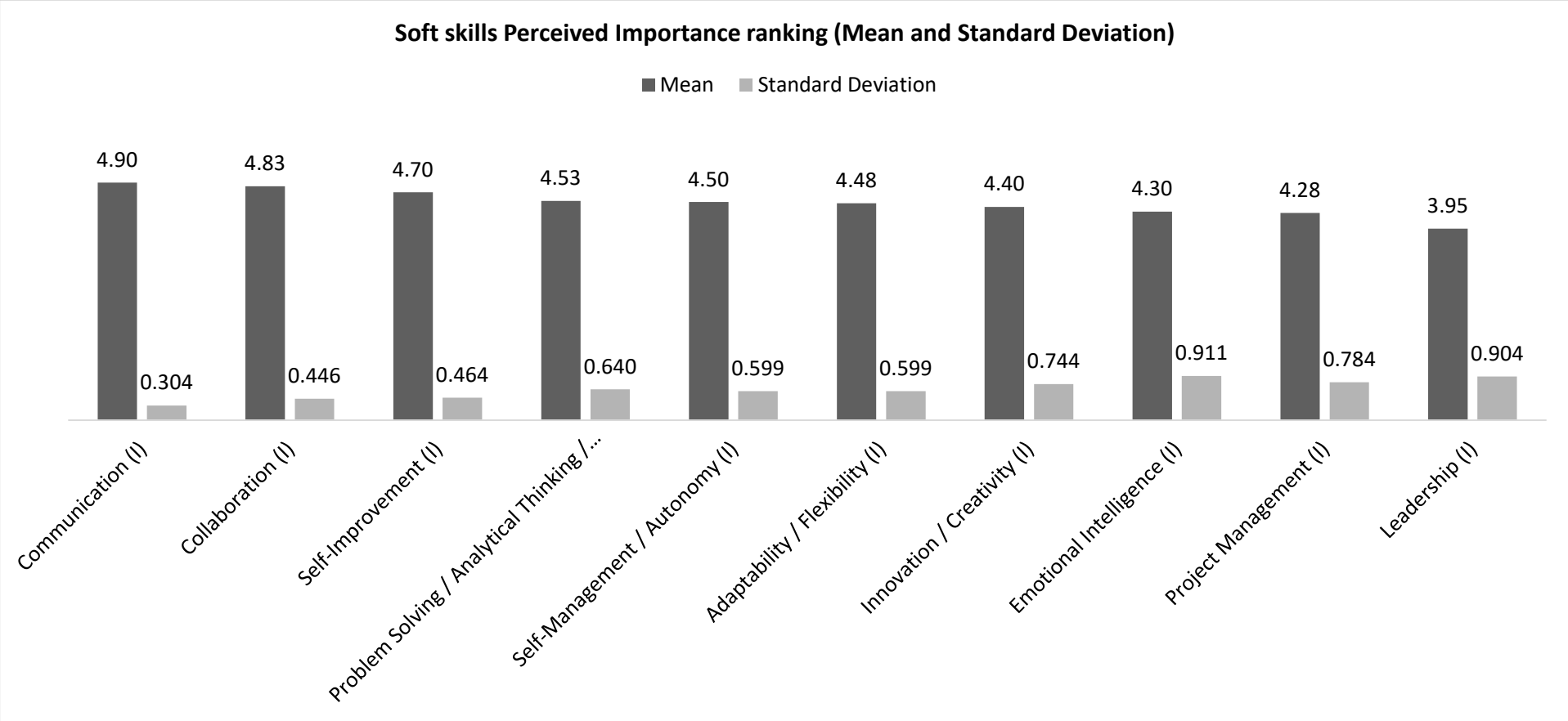


Figure 10: OUC administrative employees' Soft Skills perceived importance (mean and standard deviation graph)

### OUC employees' Soft Skills perceived Importance (overview of responses)

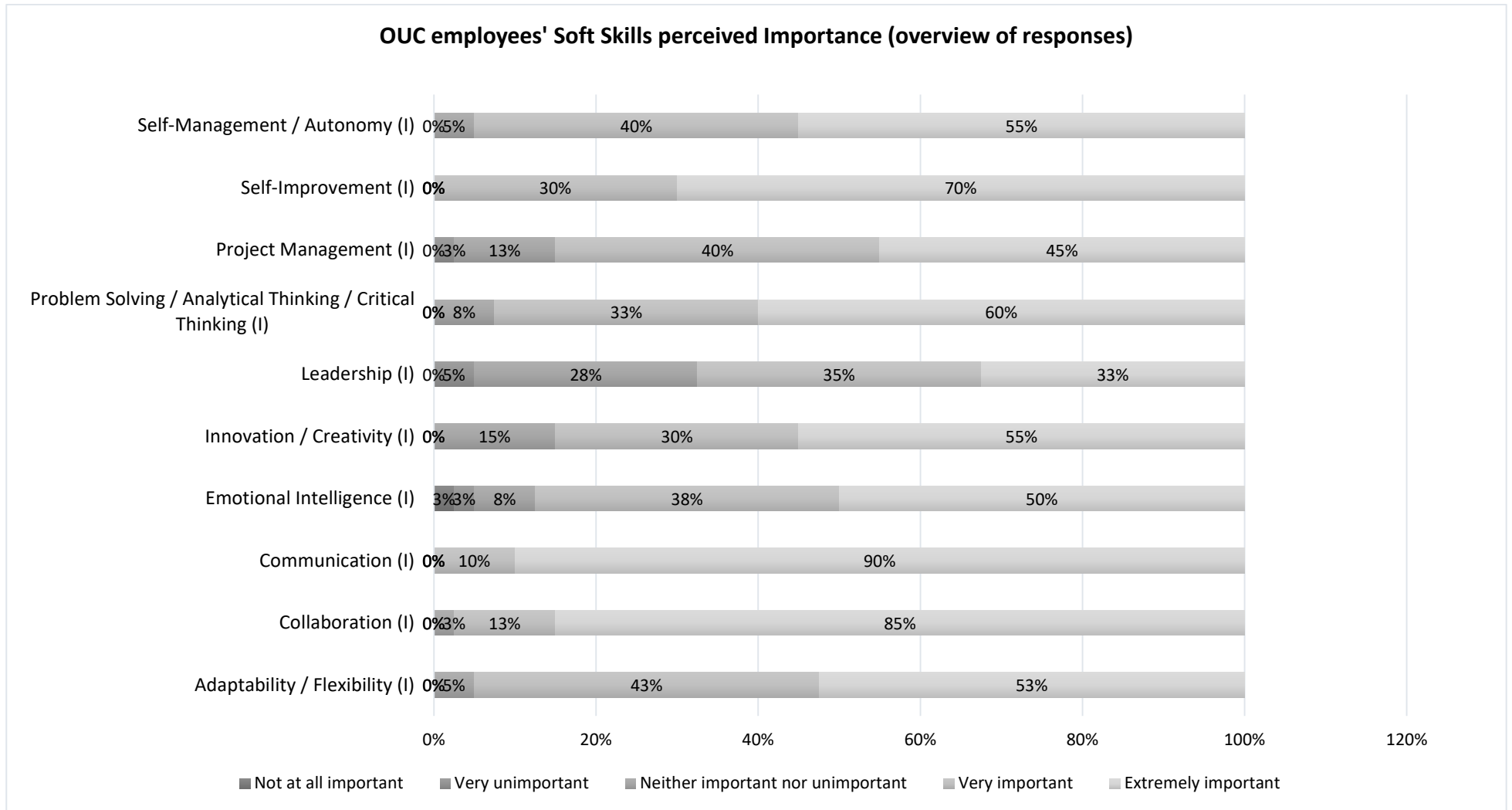


Figure 11: OUC employees' Soft Skills perceived Importance (overview of responses)

#### 4.1.3 OUC administrative personnel Soft skills self-assessment

OUC administrative employees' responses to the question "To what extent do you consider you have developed the following soft skills?" are presented in Table 5, Figure 12 and **Error! Reference source not found.** Table 5 presents the descriptive statistics report produced by SPSS, where the 10 soft skills appear in the same order as the questionnaire (alphabetical, Greek). Figure 12 illustrates a chart with a ranking of the 10 soft skills self-assessment responses (means and standard deviation). **Error! Reference source not found.** shows an overview of participants' responses in the form of stacked bar chart, where a distribution of their responses from "not at all" to "to a very great extent" is illustrated per Soft Skill.

Overall, respondents' self-assessment regarding the 10 soft skills illustrates that not all soft skills are considered as been developed to a great and a very great extent, as there are mean values start from 3.125 and modes vary from 3 to 5. Soft skills that were considered as most developed by respondents were Communication (4.35), Collaboration (4.175) and Self-Management/Autonomy soft skills (3.975), whereas Project Management (3.7), Innovation/Creativity (3.575) and Leadership (3.125) were considered as the least developed soft skills. Problem Solving/Analytical Thinking/Critical Thinking soft skill was ranked as 4<sup>th</sup> (3.95), followed by Adaptability/Flexibility (3.925), Emotional Intelligence (3.825) and Self-Improvement (3.775).

Furthermore, it appears that the highest dispersions of responses were observed in Leadership (SD=1.343), Innovation/Creativity (SD=1.174), Emotional Intelligence (SD=1.083), and Project Management (1.043) soft skills. Investigating even further participants' responses, as shown in **Error! Reference source not found.**, it appears that participants' responses were not concentrated in high percentages in one or two answers, demonstrating disagreements amongst participants for almost all soft skills. For example, participants' responses to self-assessment regarding Leadership soft skill varied from being developed "to a very great extent" (18%), "to a great extent" (28%), "to a moderate extent" (20%), "to a small extent" (20%) and "not at all" (15%). Similarly, Innovation/Creativity self-assessment responses varied from developed "to a very great extent" (28%), "to a great extent" (28%), "to a moderate extent" (23%), "to a small extent" (20%) and "not at all" (3%). In addition, it is worth mentioning that at least one respondent responded with "not at all" for all soft skills except Adaptability/Flexibility, Collaboration, Communication and Self-Management/Autonomy.

**Descriptive Statistics (SPSS) report regarding Soft Skills self-assessment**

		Self-Improvement (SA)	Self-Management / Autonomy (SA)	Project Management (SA)	Communication (SA)	Problem Solving / Analytical Thinking / Critical Thinking (SA)	Leadership (SA)	Innovation / Creativity (SA)	Adaptability / Flexibility (SA)	Emotional Intelligence (SA)	Collaboration (SA)
<b>N</b>	<b>Valid</b>	40	40	40	40	40	40	40	40	40	40
	<b>Missing</b>	0	0	0	0	0	0	0	0	0	0
<b>Mean</b>		3.75	3.98	3.70	4.35	3.95	3.13	3.58	3.93	3.83	4.18
<b>Std. Error of Mean</b>		.155	.131	.165	.111	.164	.212	.186	.158	.171	.133
<b>Median</b>		4.00	4.00	4.00	4.00	4.00	3.00	4.00	4.00	4.00	4.00
<b>Mode</b>		4	4	3	5	4	4	4 <sup>a</sup>	5	4	5
<b>Std. Deviation</b>		.981	.832	1.043	.700	1.037	1.343	1.174	.997	1.083	.844
<b>Variance</b>		.962	.692	1.087	.490	1.074	1.804	1.379	.994	1.174	.712
<b>Skewness</b>		-.494	-.233	-.351	-.612	-.914	-.172	-.289	-.497	-.780	-.620
<b>Std. Error of Skewness</b>		.374	.374	.374	.374	.374	.374	.374	.374	.374	.374
<b>Kurtosis</b>		.136	-.845	-.384	-.722	.430	-1.150	-1.045	-.818	-.101	-.561
<b>Std. Error of Kurtosis</b>		.733	.733	.733	.733	.733	.733	.733	.733	.733	.733
<b>Range</b>		4	3	4	2	4	4	4	3	4	3
<b>Minimum</b>		1	2	1	3	1	1	1	2	1	2
<b>Maximum</b>		5	5	5	5	5	5	5	5	5	5
<b>Sum</b>		150	159	148	174	158	125	143	157	153	167

a. Multiple modes exist. The smallest value is shown

Table 5: OUC administrative employees' Soft Skills self-assessment (Descriptive Statistics report from SPSS)



Figure 12: OUC administrative employees' Soft Skills self-assessment (mean and standard deviation graph)

### OUC employees' Soft Skills Self-Assessment (overview of responses)

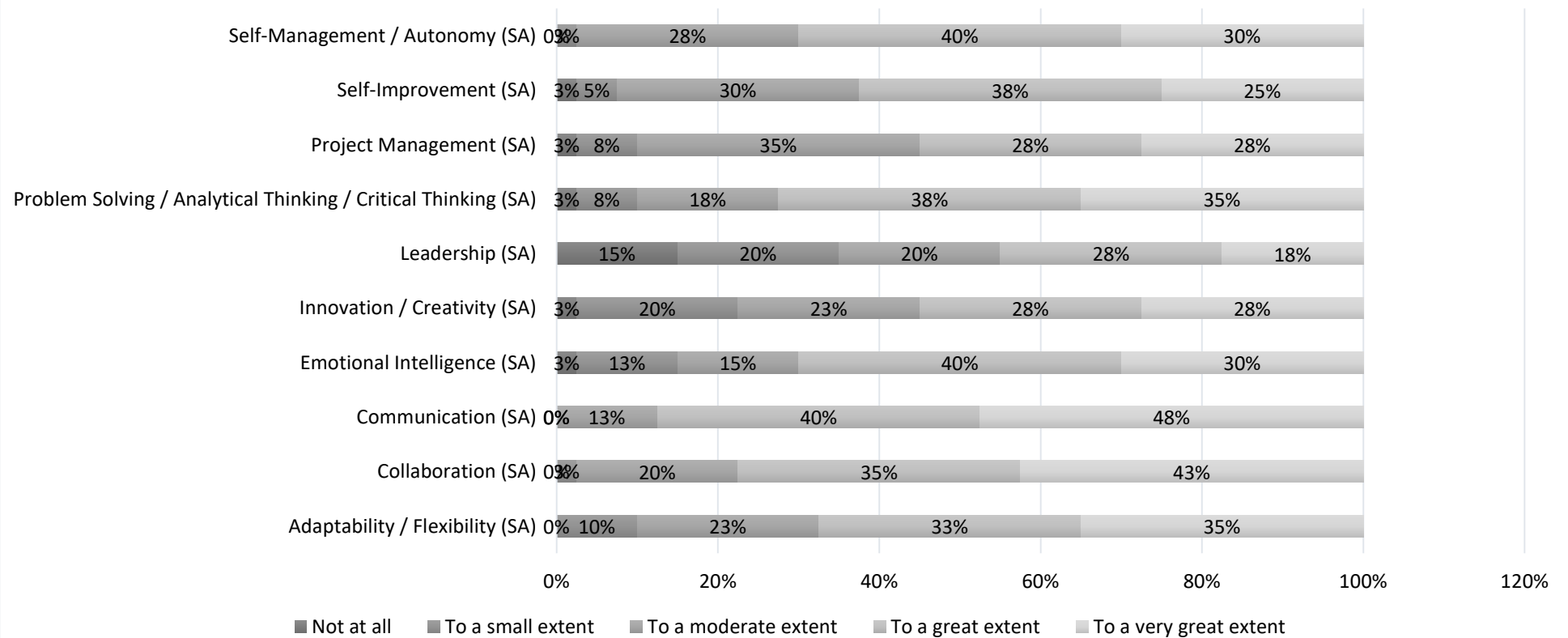


Figure 13: OUC employees' Soft Skills Self-Assessment (overview of responses)

#### 4.1.4 Soft skills importance and self-assessment: A comparison of means

Figure 14 below presents a comparable chart of the means of respondents' answers for the Soft Skills perceived importance and Soft Skills self-assessment questions. It appears that, overall, for all 10 soft skills, respondents' perceived importance was higher than what they self-assessed as been developed. In particular, it appears that Self-Improvement (difference=0.93), Leadership (difference=0.83) and Innovation/Creativity (difference=0.83) were the soft skills that had the greater difference of Importance and Self-Assessment means. On the other hand, Emotional Intelligence (difference=0.48), Self-Management/Autonomy (difference=0.53) and Adaptability/Flexibility (difference=0.55) were the soft skills with the smaller difference of Importance and Self-Assessment means, of participants' responses.

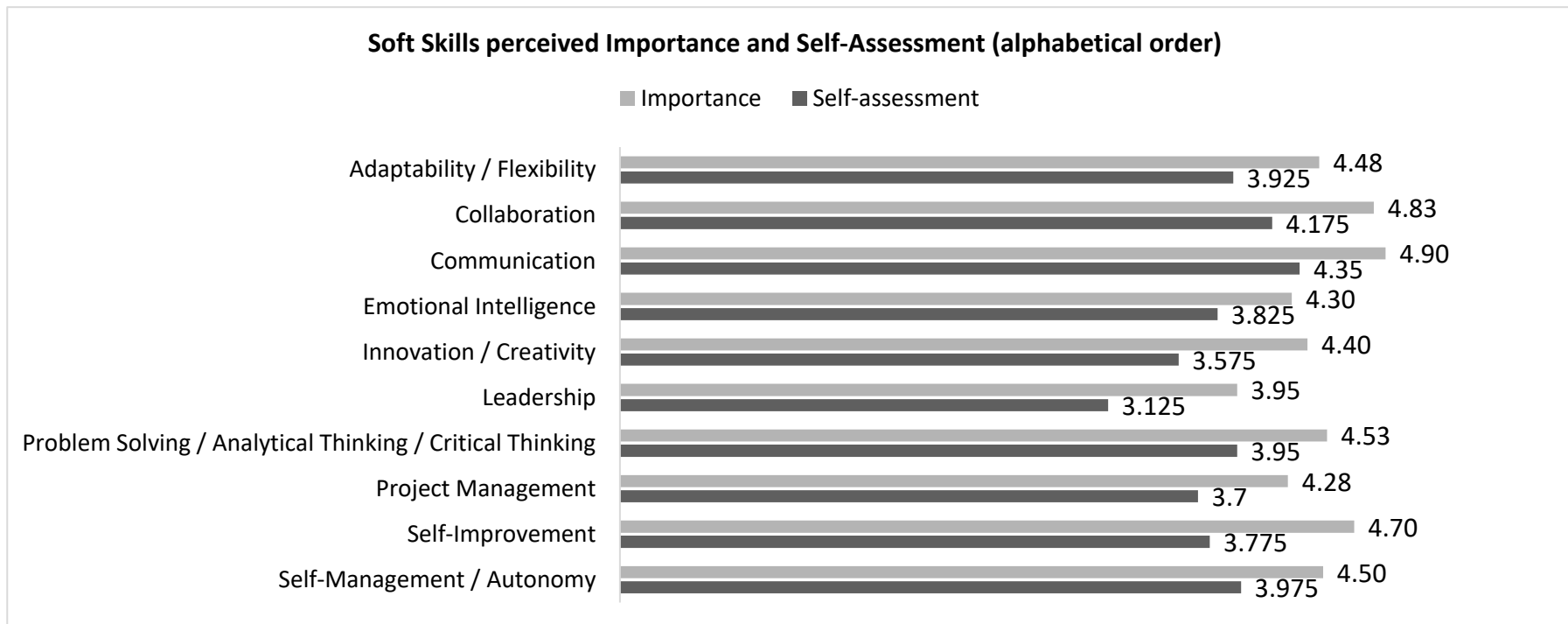


Figure 14: OUC administrative employees' Soft Skills perceived Importance and Self-Assessment (Means comparison, alphabetical order)

## 4.2 Results from non-parametric statistical tests and correlations

### 4.2.1 OUC administrative personnel perception of soft skills importance and self-assessment – Differences across Gender, Department, Position and Working years at OUC

The subsections that follow illustrate the results of the Kruskal-Wallis tests that were carried out in order to identify differences on soft skills perceived importance and self-assessment, across Department and Working years at OUC and the results of the Mann-Whitney U tests that were employed in order to identify differences on soft skills perceived importance and self-assessment, across Gender and job Position.

#### 4.2.1.1 Differences across Departments

Kruskal-Wallis test revealed that, for only for the Innovation/Creativity perceived Importance statistically significant differences (Chi square = 12.262,  $p = 0.031$ ,  $df = 5$ ) were found across at least a pair of the six departments of OUC as shown in Table 6 below. There was not enough evidence to support any statistically significant differences in any other Soft Skill perceived Importance nor Self-Assessment (see Appendix C1. Kruskal-Wallis for differences across Departments, for the full report).

**Independent-Samples Kruskal-Wallis Test Summary –  
Innovation/Creativity perceived importance**

Total N	40
Test Statistic (H)	12.262 <sup>a</sup>
Degree Of Freedom	5
Asymptotic Sig.(2-sided test)	.031

a. The test statistic is adjusted for ties.

Table 6: Kruskal-Wallis Test Summary (Departments) – Innovation/Creativity perceived Importance

Examining more closely the post-hoc results of the pairwise comparison of the Departments, as produced by SPSS, it appears that there is enough evidence to support a statistically significant difference between the group of “Administration and Finance” and the group of “Research, Industry Liaison & Innovation - International Relations, Development &



Communication – Central Records and Secretariat - Laboratory of Educational Material and Methodology” ( $p=0.041$ , adjusted by the Bonferroni correction) as shown in Table 7 below (see Appendix C1. Kruskal-Wallis for differences across Departments, for full report). There was not enough evidence to support a statistically significant difference between the other pairs of Departments.

**Pairwise Comparisons of Departments for Innovation/Creativity perceived Importance**

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig. <sup>a</sup>
“Administration and Finance” and “Research, Industry Liaison & Innovation - International Relations, Development & Communication - Central Records and Secretariat - Laboratory of Educational Material and Methodology”	-19.000	6.346	-2.994	.003	.041

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Table 7: Pairwise Comparisons of Departments for Innovation/Creativity perceived Importance

4.2.1.2 Differences across Gender

The Mann-Whitney U test that was carried out did not provide any evidence of statistically significant differences ( $p>0.05$  for all) between gender at OUC (only male and female cases were selected for the test analysis in SPSS. As the two cases the gender of whom was marked as “Prefer not to say” were excluded from this analysis), for neither Soft Skills perceived Importance nor Soft Skills perceived Self-Assessment (see Appendix D1. Mann-Whitney U test for differences across Gender, for the full report).

4.2.1.3 Differences across Position at OUC

The Mann-Whitney test U that was carried out did not provide any evidence of statistically significant differences ( $p>0.05$  for all) between job positions at OUC, for neither Soft Skills perceived Importance nor Soft Skills perceived Self-Assessment (see Appendix D2. Mann-Whitney U test for differences across Position, for the full report).

#### 4.2.1.4 Differences across Working years at OUC

Kruskal-Wallis test revealed that, there were no statistically significant differences in Soft Skill perceived Importance across Working years at OUC. However, there was enough evidence to support statistically significant differences in at least one pair of working years' group at OUC, for Problem Solving/Analytical Thinking/Critical Thinking perceived Self-Assessment (Chi square = 7.326,  $p = 0.026$ ,  $df = 2$ ) as shown in Table 8 below. There was not enough evidence to support any statistically significant differences in any other Soft Skill perceived Self-Assessment (see Appendix C2. Kruskal-Wallis test for differences across Working years at OUC, for the full report).

<b>Soft Skill perceived SA</b>	<b>Total N</b>	<b>Test Statistic (H)</b>	<b>Deg. Of Freedom</b>	<b>Asymptotic Sig. (2-sided test)</b>
Problem Solving/Analytical Thinking/Critical Thinking SA	40	7.326 <sup>a</sup>	2	.026

a. The test statistic is adjusted for ties.

Table 8: Kruskal-Wallis test summary for Working Years at OUC

Furthermore, examining more closely the post-hoc results of the pairwise comparison of the Working years at OUC categories, as produced by SPSS, it appears for the Problem Solving/Analytical Thinking / Critical Thinking perceived self-assessment statistically significant differences are found between the group of “6-10 years” and the group of “More than 10 years” ( $p=0.038$ , adjusted by the Bonferroni correction) as shown in Table 7 below (see Appendix C1. Kruskal-Wallis for differences across Departments, for full report), where employees working “more than 10 years” (mean = 4.42) assessed themselves higher than employees working “6-10 years” (mean = 3.53). There was not enough evidence to support a statistically significant difference between the other pairs of Departments (see Appendix C2. Kruskal-Wallis test for differences across Working years at OUC, for full report).

#### **Pairwise Comparisons of OUC work years – Problem Solving / Analytical Thinking / Critical Thinking SA**

<b>Sample 1-Sample 2</b>	<b>Test Statistic</b>	<b>Std. Error</b>	<b>Std. Test Statistic</b>	<b>Sig.</b>	<b>Adj. Sig.<sup>a</sup></b>
6-10 Years-More than 10 years	-9.238	3.701	-2.496	.013	.038

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

#### 4.2.2 Correlation of Soft Skills perceived Importance and perceived self-assessment

For each of the 10 soft skills studied in this dissertation, Spearman’s rho correlation tests were carried out in order to identify any correlations between respondents’ perceived importance and perceived self-assessment of each soft skill. The report of the tests provided evidence that there were correlations between perceived Importance and perceived Self-Assessment of X overall soft skills that are illustrated in the Table 9 below (see Appendix E – Spearman’s rho Correlations test, for full report).

**Correlation of Soft Skills perceived Importance (I) and Self-Assessment (SA)**

<b>Soft skill (I) – (SA)</b>	<b>Total N</b>	<b>Correlation Coefficient</b>	<b>Sig. (2-tailed)</b>
Self-Improvement (I) – (SA)	40	<b>.610</b>	<b>.000</b>
Self-Management/Autonomy (I) – (SA)	40	<b>.322</b>	<b>.043</b>
Project Management (I) – (SA)	40	<b>.512</b>	<b>.001</b>
Communication (I) – (SA)	40	.167	.304
Problem Solving / Analytical Thinking / Critical Thinking (I) – (SA)	40	<b>.476</b>	<b>.002</b>
Leadership (I) – (SA)	40	<b>.608</b>	<b>.000</b>
Innovation/Creativity (I) – (SA)	40	<b>.486</b>	<b>.001</b>
Adaptability/Flexibility (I) – (SA)	40	<b>.359</b>	<b>.023</b>
Emotional Intelligence (I) – (SA)	40	.200	.217
Collaboration (I) – (SA)	40	.236	.143

The significance level is .05.

*Table 9: Correlation of Soft Skills perceived Importance (I) and Self-Assessment (SA)*

It appears that there is a statistically significant positive correlation between respondents’ perceived Importance and perceived Self-Assessment, for most of the soft skills in this study (except from Communication, Emotional Intelligence and Collaboration). Specifically, there is very strong evidence ( $p < 0.001$ ) that there is a strong positive relationship between the ranks respondents marked in perceived Soft Skill perceived Importance and perceived Self-Assessment for Self-Improvement ( $r_s = 0.610$ ,  $p = 0.000$ ) and Leadership soft skills ( $r_s = 0.608$ ,  $p = 0.000$ ). There is also very strong evidence ( $p < 0.003$ ) to support that there is a moderate positive relationship between the ranks respondents marked in perceived Soft Skill Importance (I) and perceived Self-Assessment (SA) for Project Management ( $r_s = 0.512$ ,  $p = 0.001$ ), Innovation/Creativity ( $r_s = 0.486$ ,  $p = 0.001$ ) and Problem Solving / Analytical Thinking

/ Critical Thinking soft skills ( $r_s=0.476$ ,  $p=0.002$ ). Lastly, there is evidence ( $p<0.05$ ) to support that there is a weak positive relationship between the ranks respondents marked in perceived Soft Skill Importance (I) and perceived Self-Assessment (SA) for Adaptability/Flexibility ( $r_s=0.359$ ,  $p=0.023$ ) and Self-Management/Autonomy ( $r_s=0.322$ ,  $p=0.043$ ).

Therefore, it appears that, for these soft skills (except from Communication, Emotional Intelligence and Collaboration, where  $p>0.05$ ), the higher respondents considered they have developed these soft skills the higher they perceived their importance for their job and vice versa.

# Chapter 5

## Discussion

Drawing on elements of Chapter 2 literature review and based on the results derived from the analysis of OUC administrative employees' responses as presented in Chapter 4, the following subsections attempt to address the dissertation's four research questions. I first discuss the training preferences of OUC administrative employees in Section 5.1 (RQ1). Next, in Section 5.2, I discuss the soft skills that OUC administrative employees perceive as important for their jobs (RQ2) and in Section 5.3 the soft skills that were perceived as have or have not been developed by them and correlations between Importance and Self-Assessment are discussed in Section 5.4 (RQ3). Lastly, in Section 5.5, I describe the way factors studied in this dissertation affect their perception of soft skills importance and self-assessment (RQ4).

### **5.1 OUC administrative employees' training preferences (RQ1)**

Considering trainees' needs and preferences is very important for the design and selection of any training and development program (Brown, 2002; Iqbal & Khan, 2011; Noe, 2017; Torrington, et al., 2017). The results of this study indicate that the majority of OUC administrative employees does not have a strong preference whether training takes place at workplace settings or elsewhere. However, they do prefer training to take place during workhours and to have a relatively moderate duration (4-8 hours or 2-3 days). Even though there were employees who solely preferred training to be delivered face to face or online, most of them selected both methods of delivery as preferences. This echoes findings from Becker et al. (2012) study where differences were identified between workers as some preferred face to face and others online, as well as Guiney's (2015), Brennan et al. (2019), Politt's (2008) and Hewett et al. (2019) studies, where blended approaches are highlighted as

more suitable for many mid-sized organizations, the employees of which provide services and appreciate e-learning approaches but also benefit from human interaction and practical activities to apply knowledge and skills.

## **5.2 OUC administrative employees' perceived importance of soft skills**

Research suggests that employees are more likely to be actively engaged in training and development programs the content of which is perceived as important and relevant to their job (Fletcher, et al., 2016; Torrington, et al., 2017; Noe, 2017). Therefore, it is important to be able to identify what employees consider important for their own job. The results of this study suggest that, overall, OUC administrative employees perceive all 10 soft skills that were surveyed as important: Communication, Collaboration, Self-Improvement, Problem Solving / Analytical Thinking / Critical Thinking, Self-Management/Autonomy, Innovation/Creativity, Emotional Intelligence, Project Management and Leadership (in OUC employees' ranking order of importance).

Nonetheless, OUC employees perceive Communication and Collaboration skills as the most important ones and with, relatively, a high agreement between them. These two skills are also most frequently found in several studies regarding soft skills (i.e. Grugulis & Vincent, 2009; Matteson, et al., 2016; Promis, 2008; Robles, 2012). However, according to the 2018 Future of Jobs Report of the World Economic Forum (2018), these two skills were not in demand for 2018 and are not expected to be in demand in 2022. On the other hand, according to the same report (ibid), Leadership and Emotional Intelligence that were ranked by OUC employees in the three least important soft skills' group for their job, are two skills that were in demand in 2018 and are both expected to be in demand in 2022 as well. Although Leadership skill is mostly linked to managerial positions in literature (Braun, et al., 2013; Wilderom, et al., 2012), Project Management skill that was ranked as the 3<sup>rd</sup> least important skill by OUC employees, is a skill that is evident in the job description and requirements for both Officer and Deputy Officer positions at OUC (Cyprus Government Gazette, 2019a; CyprusGovernmentGazette, 2019b). In addition, the results of this dissertation illustrated OUC employees' disagreement in terms of the level of importance for Leadership, Project Management and Emotional

Intelligence skills, indicating that there are discrepancies amongst employees in respect to these three skills.

Therefore, it appears that OUC employees place interpersonal skills, such as Communication and Collaboration higher in comparison to other skills that are highly linked to their job, such as Project Management. These discrepancies in what employees perceive as important and what managers and the labour market in general perceive as important, in terms of soft skills are not a surprise, since these are reported in several other studies (i.e. Grugulis & Vincent, 2009; Malik & Venkatraman, 2017; Dolce, et al., 2019). Thus, it is important that OUC HR management considers administrative employees' opinion regarding the soft skills they perceive as important for their job, before planning for new training programs regarding soft skills' training and development.

### **5.3 OUC administrative employees' self-assessment of soft skills**

An employees' self-assessment of his/her skills' development is an important indicator of his/her overall performance in respect to those skills (Stracenski Kalauz, et al., 2015; Fletcher, et al., 2016). The results of this study showed that there were soft skills, such as Leadership, Innovation/Creativity and Project Management which OUC employees assessed that they had not developed to the extent as they had developed other soft skills, such as Communication and Collaboration. Nonetheless, as discussed in Section 5.2, Project Management, in particular, was ranked in the last three soft skills that were perceived as important, even though it is a skill requested in OUC's job position requirements and job description (Cyprus Government Gazette, 2019a; Cyprus Government Gazette, 2019b). Studies which identified differences between executives' expectations and employees' soft skills performance highlighted the importance of finding ways to diminish such differences, in order to improve employees' overall job performance (i.e Ibrahim, et al., 2017; Malik & Venkatraman, 2017). Therefore, OUC management and HRM officers should consider the fact that OUC employees appear to perceive certain skills such as Project Management to be less important for their job and also assess themselves to develop those particular skills in a moderate or small extent.

Furthermore, for many of the surveyed soft skills, OUC employees' self-assessment was dispersed in various levels of development, indicating that there were differences amongst the employees, in respect to the extent to which they perceived that they had developed those skills or not. This suggests that the levels of soft-skills' development, as perceived by OUC employees themselves, vary and therefore not all employees have the same training needs. This echoes findings from other studies which identified differentiations in employees' training needs for soft skills (i.e. Becker, et al., 2012; Grugulis & Vincent, 2009). It appears that, even though soft skills are considered as transferrable skills that can apply in various sectors (Directorate-General for Employment, Social Affairs and Inclusion (European Commission), 2012), not all employees share the same starting point level. Thus, it is important that OUC HR management considers administrative employees' self-assessment of soft skills that they consider as they have or have not developed, as well as their individual differences and needs before planning for relevant training programs.

## **5.4 Soft skills Importance and Self-Assessment correlations**

Several studies revealed a correlation between one's interest in what perceives as important and training effectiveness, as his/her motivation towards becoming better in that area increases or decreases accordingly (i.e. Chen, et al., 2019; Costen & Salazar, 2011). The results of this study illustrate that OUC employees' perceived importance for the surveyed soft skills was overall higher than their self-assessment rating for each skill. Thus, there is evidence to support that, for many OUC employees, there is area for improvement in all ten soft skills that were surveyed. Nonetheless, the results of the correlation analysis indicate that, for all soft skills, except from Communication, Emotional Intelligence and Collaboration, there is a statistically significant positive relationship between what employees perceive as important and their self-assessment ratings. This indicates that the higher OUC employees perceive the importance of those seven soft skills for their job, the higher their self-assessment rate of development and vice versa.

Although it is not clear from the evidence of this study as to which causes the other, perhaps OUC employees are not keen to receive or participate in training of soft skills that they do not find important. Several studies have concluded that it is important to ensure that employees are interested and motivated enough for a training program to be successful (Chen, et al.,



2019), especially in the context of public Higher Education sector, where motivation can be a challenging issue, as indicated by the study of Hanaysha & Hussain (2018). In the OUC context, for example, there is very strong evidence to support that is a strong relationship of perceived importance and self-assessment for Leadership soft skill. Perhaps this might explain why this soft skill was ranked by OUC employees as the least important soft skill and the least developed in their self-assessment responses. However, for Communication and Collaboration, which were the two top ranked important skills and also the two skills that were marked as mostly developed by OUC employees' self-assessment, and for Emotional Intelligence skill, there was not statistically significant positive relationship between their perceived level of importance and self-assessment. Perhaps this might be linked to the fact that these three skills are interpersonal and social skills. However, this is a matter that needs further investigation, as there is not enough evidence from the results of this study to conclude.

## **5.5 Factors affecting OUC administrative employees' perception of soft skills importance and self-assessment**

As discussed earlier, employees are individuals who have different training needs and demonstrate various levels of skill acquisition. The results of this study have not yielded enough evidence to suggest that OUC employees' gender or job position (Officer or Deputy Officer) affect their perception of soft skills importance and self-assessment. This was somewhat expected, considering that other studies have not reported such differences (i.e. Grugulis & Vincent, 2009; Ibrahim, et al., 2017) and one study, in particular, identified gender differences in technical, not soft skills and for certain jobs, such as IT male workforce and caseworkers female workforce (see Grugulis & Vincent, 2009).

However, there was enough evidence to support that there are differences between departments and years the employees have been working for OUC. Specifically, statistically significant differences between of "Administration and Finance" and the group of "Research, Industry Liaison & Innovation - International Relations, Development & Communication – Central Records and Secretariat - Laboratory of Educational Material and Methodology" departments were reported for the perceived importance of Innovation/Creativity soft skill. These differences might have occurred because the administrative services at OUC, even

though are administrative, share different work cycles and activities and the nature of their daily work as well as the overall organization culture might affect their perception of Innovation/Creativity skill (McLean, 2005). For example, for the Administration and Finance departments, perhaps Innovation/Creativity soft skill might not be considered as important as it is considered for the employees of the group of departments, the work of which involves creating and producing innovative solutions to support both administrative and academic staff.

In addition, statistically significant differences were reported between employees who had been working for more than 10 years and employees who had been working for 6-10 years at OUC, for their self-assessment of the Problem Solving / Analytical Thinking / Critical Thinking soft skill, as more experienced employees rated their self-assessment higher in comparison to less experienced employees. This is not a surprise, as other studies have reported similar findings. For example, Rausch, et al. (2015) research reported differences between experts and novices in solving problems in everyday office work in the context of an automotive supplier industry, as experts were able to use knowledge bases that were more enhanced than those of novices. Similarly, other studies also report that problem solving is a skill that is being developed by employees through their work experience and the kind of challenges they encounter in their work that increase their knowledge base and epistemic activities that they can use in order to solve complex problems in the workplace (i.e. Smith & Comyn, 2004; Ghanem, et al., 2018).

# Chapter 6

## Conclusions

### 6.1 Key findings of this research

The aim of this research was to identify OUC administrative employees' training preferences and their perceptions for and self-assessment of soft skills for their jobs. Although the dissertations' findings are discussed in more detail in Chapter 5, this section provides a brief overview of the key findings:

- Similar to prior research conducted in other settings, the results of this dissertation indicate that OUC administrative employees prefer training that follows blended learning methodologies, where both face-to-face and online delivery is provided, either at workplace or outside workplace settings. In addition, they prefer short to moderate length training durations (4 hours to 3 days). As a distance HEI, OUC can take advantage of its technological infrastructure and its online educational methodology in order to host and offer training programs for OUC employees.
- OUC administrative employees perceive all ten soft skills that were surveyed in this dissertation as important for their jobs. This confirms findings in other studies which explored employees' perception regarding soft skills. In addition, similar to other studies, Communication and Collaboration were ranked as the two most important soft skills for OUC employees as well, reinforcing the argument that employees perceive interpersonal soft skills as more important for their job, in comparison to other soft skills, such as Project Management and Leadership.
- Even though OUC administrative employees share similar perceptions of certain soft skills' importance as employees in other settings, there are differences between the soft skills that they perceive as important, in comparison to the soft skills that are reported in other studies, as soft skills that managers and executives demand and perceive as important. This was somewhat anticipated, considering that prior studies have highlighted such differences between employees and employers, in respect to soft skills' importance. However, considering that the majority of OUC administrative

employees are engaged in projects, skills such as Project Management which is a skill required by job listings of OUC, was anticipated to be ranked higher in terms of its importance for their job, but was ranked as the second least important skill by OUC employees. This is something worth investigating even further by OUC HRM.

- In line with findings from prior research in other settings, the results from OUC administrative employees' self-assessment ratings, revealed that there are needs for soft skills' training and development for all OUC administrative employees. Nonetheless, the extent to which they consider as they have developed the soft skills surveyed in this research varies and this indicates the different training needs in this context. This highlights the importance of conducting a needs assessment before designing and developing a training program, similarly to what many T&D handbooks suggest. Therefore, the findings of this dissertation can be used as the starting point of a thorough and targeted needs assessment that OUC HRM should carry out in the future, in order to offer training programs and close the gaps of OUC employees' training needs.
- There were discrepancies observed amongst OUC employees' responses in respect to some skills and these differences appear to be statistically significant for employees working in certain departments and also between employees who have been working longer for OUC. Such discrepancies were not anticipated, given that soft skills are perceived as cross-sectoral, domain-independent and transversal and therefore should not be affected by departments nor working years. Considering the issues in providing a clear definition and classification of certain skills as soft skills in literature, perhaps scholars should reconceptualize the kind of skills that can be classified as soft skills in order for the latter to be indeed cross-sectoral and domain-independent.
- It appears that the higher OUC employees perceive the importance of most soft skills for their job, the higher their self-assessment rate of development and vice versa. This is something found in other studies as well. However, further investigation is needed in order to clarify the nature of causal relationship of soft skills' self-assessment and importance.

The findings of this dissertation provide an insight of OUC administrative employees' needs, regarding training and soft skills, which can be taken into consideration by OUC HRM in order

to design and develop a training program for soft skills' development, in alignment with employees' needs.

## **6.2 Contributions and Implications**

The results of this research contribute and add to existing knowledge in three main research areas, related to: i. Administrative employee training and development practices, ii. Employees' soft skills training and development and iii. Soft skills' importance in job performance, all in a public distance HEI context. This research confirms findings of other studies in respect to blended learning administrative employees' training preferences and adds to existing knowledge regarding soft skills importance and employees' self-assessment, as the results of this dissertation show differences in employees' perceptions between departments and working years at the organization. In addition, it adds to knowledge regarding positive relationship of the soft skills that employees perceive as important and the level in which they assess themselves as having developed those skills. This research has implications for HRM and T&D designers as it illustrates training preferences and needs of administrative employees in respect to soft skill training and development. Lastly, the findings of this dissertation yielded controversial results in respect to the cross-sectoral and domain-independent nature of soft skills, as there were statistically significant differences observed between certain job departments and also between employees with longer and shorter years of employment in the context of OUC. The latter, has implications for employee soft skills classification and T&D, indicating the need for further research in other settings.

## **6.3 Limitations**

Due to the small sample and population size and the fact that the research focused on employees of a specific organization, the results of this research are limited in the OUC context and were not aimed to be generalized. Although more than half of the administrative employees responded (n=40) to the survey, it is acknowledged that not all employees' preferences and perceptions were gathered and analysed. It is worth stressing that the data collection process was conducted during the COVID-19 work disruption and as a result some employees did not have access to their e-mail as they were not working for the duration of the data collection. In addition, the small number of this research population (n=71) and the

not normal distribution of the sample's responses, required the utilization of nonparametric tests, which might have affected the identification of significant relationships from the data.

Lastly, as far as the data collection methods that were selected for this research, perhaps interviews or focus groups could have taken place after the questionnaire distribution, so as to gather some additional qualitative input from employees. In addition, after analysing the data, it appears that the training preferences surveyed via the questionnaire, should have been listed individually i.e. face to face, online (synchronously), online (asynchronously) and so on, instead of having combinations for employees to choose from. This way, conclusions regarding their training preferences would have been clearer.

## **6.4 Suggestions for further research**

Considering this dissertation's findings, conclusions and limitations, there are ways that this research could be taken further. In the context of OUC, HRM can investigate even further employees' needs in order to conduct a consummated needs assessment and designing appropriate blended training activities for OUC employees. In addition, OUC administration's (managers and executives) opinion and perceptions can also be investigated in order to identify discrepancies and coherence with employees, in order to confirm/reject findings of studies in other job settings. In addition, similar research can be conducted in other contexts, such as other public Higher Education institutions or other public sector administrative services in order to broaden the population of employees' training preferences and soft skills perceived importance and self-assessment. Further investigation of the relationship between employees' soft skills perceived importance and their own self-assessment is recommended as the results of this dissertation did not yield enough evidence to clarify such relationships to the full extent. Lastly, further research should be conducted in order to investigate more skills that are currently classified as soft skills and explore any differences in various settings and domains. Factors such as job sector/department and years of working experience should also be investigated, as the findings of this dissertation indicate that, for certain skills, such factors can affect employees' perceived levels of importance.

# Chapter 7

## References

- Abujbara, N. K. & Worley, J. A., 2018. Leading toward new horizons with soft skills. *On the Horizon*, 26(3), pp. 247-259.
- Azim, S. et al., 2010. The importance of soft skills in complex projects. *International Journal of Managing Projects in Business*, 3(3), pp. 387-401.
- Baartman, L. K. & de Bruijn, E., 2011. Integrating knowledge, skills and attitudes: Conceptualising learning processes towards vocational competence. *Educational Research Review*, 6(2), pp. 125-134.
- Balcar, J., 2016. Is it better to invest in hard or soft skills?. *The Economic and Labour Relations Review*, 27(4), pp. 453-470.
- Becker, K., Fleming, J. & Keijsers, W., 2012. E-learning: ageing workforce versus technology-savvy generation. *Education + Training*, 54(5), pp. 385-400.
- Braun, S., Peus, C., Weisweiler, S. & Frey, D., 2013. Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust. *The Leadership Quarterly*, Volume 24, pp. 270-283.
- Brennan, E. M., Sellmaier, C., Jivanjee, P. & Grover, L., 2019. Is Online Training an Effective Workforce Development Strategy for Transition Service Providers? Results of a comparative study. *Journal of Emotional and Behavioral Disorders*, 27(4), pp. 235-245.
- Brown, J., 2002. Training Needs Assessment: A Must for Developing an Effective Training Program. *Public Personnel Management*, 31(4), pp. 569-578.
- Burgess, S., Propper, C., Ratto, M. & Tominey, E., 2017. Incentives in the Public Sector: Evidence from a Government Agency. *The Economic Journal*, 127(605 (Feature issue)), pp. F117-F141.
- Chamorro-Premuzic, T. et al., 2010. Soft skills in higher education: importance and improvement ratings as a function of individual differences and academic performance. *Educational Psychology*, 30(2), pp. 221-241.

- Chen, C.-A., Hsieh, C.-W. & Chen, D.-Y., 2019. Can Training Enhance Public Employees' Public Service Motivation? A Pretest–Posttest Design. *Review of Public Personnel Administration*, Volume [First Published Online], pp. 1-22.
- Cinque, M., 2016. "Lost in translation". Soft skills development in European countries. *Tuning Journal for Higher Education*, 3(2), pp. 389-427.
- Costen, W. M. & Salazar, J., 2011. The Impact of Training and Development on Employee Job Satisfaction, Loyalty, and Intent to Stay in the Lodging Industry. *Journal of Human Resources in Hospitality & Tourism*, 10(3), pp. 273-284.
- Creswell, J. W. & Creswell, J. D., 2018. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. 5th ed. Los Angeles: Sage.
- CyprusGovernmentGazette, 2019a. *Επίσημη Εφημερίδα της Κυπριακής Δημοκρατίας Κύριο Μέρος Τμήμα Α - Παρασκευή 6 Σεπτεμβρίου 2019*. [Online] Available at: [https://www.mof.gov.cy/mof/gpo/gpo.nsf/All/E8A12C94EC921E7BC225846D0024BD49/\\$file/5223%206%209%202019%20KYRIO%20MEROS%20TMHMA%20A.pdf](https://www.mof.gov.cy/mof/gpo/gpo.nsf/All/E8A12C94EC921E7BC225846D0024BD49/$file/5223%206%209%202019%20KYRIO%20MEROS%20TMHMA%20A.pdf) [Accessed 2 April 2020].
- CyprusGovernmentGazette, 2019b. *Επίσημη Εφημερίδα της Κυπριακής Δημοκρατίας Κύριο Μέρος Τμήμα Α - Παρασκευή 27 Σεπτεμβρίου 2019*. [Online] Available at: [https://www.mof.gov.cy/mof/gpo/gpo.nsf/All/5D385B6216B6576EC22584820066C7E4/\\$file/5229%2027%209%202019%20KYRIO%20MEROS%20TMHMA%20A.pdf](https://www.mof.gov.cy/mof/gpo/gpo.nsf/All/5D385B6216B6576EC22584820066C7E4/$file/5229%2027%209%202019%20KYRIO%20MEROS%20TMHMA%20A.pdf) [Accessed 2 April 2020].
- Dall'Amico, E., Verona & Simonetta, 2015. *Cross-country survey on Soft Skills mostly required by companies to medium/high skilled migrants*, Torino: Ceipiemonte S.c.p.a..
- Deming, D. J., 2017. The growing importance of social skills in the labor market. *The Quarterly Journal of Economics*, 132(4), pp. 1593-1640.
- Directorate-General for Employment, Social Affairs and Inclusion (European Commission), 2012. *Transferability of skills across economic sectors*, EU: EU Publications.
- DOCEBO, 2016. *Elearning Market Trends and Forecast 2017-2021*. [Online] Available at: <https://www.docebo.com/resource/elearning-market-trends-and-forecast-2017-2021/> [Accessed 6 January 2020].



- Dolce, V., Emanuel, F., Cisi, M. & Ghislieri, C., 2019. The soft skills of accounting graduates: perceptions versus expectations. *Accounting Education*, 29(1), pp. 57-76.
- European Commission, 2017. *Competency Framework*. [Online] Available at: [https://ec.europa.eu/regional\\_policy/en/policy/how/improving-investment/competency/](https://ec.europa.eu/regional_policy/en/policy/how/improving-investment/competency/) [Accessed 19 January 2020].
- European Commission, 2020. *Key competences and basic skills*. [Online] Available at: [https://ec.europa.eu/education/policies/school/key-competences-and-basic-skills\\_en](https://ec.europa.eu/education/policies/school/key-competences-and-basic-skills_en) [Accessed 17 January 2020].
- Fletcher, L., Alfes, K. & Robinson, D., 2016. The relationship between perceived training and development and employee retention: the mediating role of work attitudes. *The International Journal of Human Resource Management*, 29(18), pp. 2701-2728.
- Ghanem, C. et al., 2018. How do social work novices and experts solve professional problems? A micro-analysis of epistemic activities and the use of evidence. *European Journal of Social Work*, 21(1), pp. 3-19.
- Gibb, S., 2014. Soft skills assessment: theory development and the research agenda. *International Journal of Lifelong Education*, 33(4), pp. 455-471.
- Grugulis, I. & Vincent, S., 2009. Whose skill is it anyway? 'Soft' skills and polarization. *Work, Employment and Society*, 23(4), pp. 597-615.
- Gruzdev, et al., 2018. University Graduates' Soft Skills: the Employers' Opinion. *European Journal of Contemporary Education*, 7(4), pp. 690-698.
- Guiney, P., 2015. *E-learning in the workplace: An annotated bibliography*, New Zealand: Tertiary Sector Performance Analysis, New Zealand Ministry of Education.
- Hanaysha, J. R. & Hussain, S., 2018. An examination of the factors affecting employee motivation in the Higher Education sector. *Asia-Pacific Journal of Management Research and Innovation*, 14(1-2), pp. 22-31.
- Hewett, S., Becker, K. & Bish, A., 2019. Blended workplace learning: the value of human interaction. *Education + Training*, 61(1), pp. 2-16.
- Ho, C.-L. & Dzung, R.-J., 2010. Construction safety training via e-Learning: Learning effectiveness and user satisfaction. *Computers & Education*, 55(2), pp. 858-867.

- Holton, E. F. I., Coco, M. L., Lowe, J. L. & Dutsch, J. V., 2006. Blended Delivery Strategies for Competency-Based Training. *Advances in Developing Human Resources*, 8(2), pp. 210-228.
- Hurrell, S. A., Scholarios, D. & Thompson, P., 2012. More than a 'humpty dumpty' term: Strengthening the conceptualization of soft skills. *Economic and Industrial Democracy*, 34(1), pp. 161-182.
- Ibrahim, R., Boerhannoeddin, A. & Bakare, K. K., 2017. The effect of soft skills and training methodology on employee performance. *European Journal of Training and Development*, 41(4), pp. 388-406.
- Iqbal, M. Z. & Khan, R. A., 2011. The growing concept and uses of training needs assessment: A review with proposed model. *Journal of European Industrial Training*, 35(5), pp. 439-466.
- Khan, R., Pramjeeth, S. & Kader, A., 2018. The Impact of Educational Technology on Training and Development in the Banking Sector. *Africa Education Review*, 15(1), pp. 85-107.
- Khaouja, I., Mezzour, G., Carley, K. M. & Kasso, I., 2019. Building a soft skill taxonomy from job openings. *Social network Analysis and Mining*, 9(1), p. Article 43.
- LinkedIn, 2020. *4th Annual 2020 Workplace Learning Report*. [Online] Available at: <https://learning.linkedin.com/resources/workplace-learning-report> [Accessed 28 March 2020].
- Little, T. D., 2013. *The Oxford Handbook of Quantitative Methods Volum 1 Foundations*. New York: Oxford University Press, Inc.
- Low, S. P., Gao, S. & Ng, E. W. L., 2019. Future-ready project and facility management graduates in Singapore for industry 4.0: Transforming mindsets and competencies. *Engineering Construction and Architectural Management*, Volume ahead of print.
- Malik, G. & Venkatraman, A., 2017. "The great divide": skill gap between the employer's expectations and skills possessed by employees. *Industrial and Commercial Training*, 49(4), pp. 175-182.
- Matsouka, K. & Mihail, D. M., 2016. Graduates' employability: What do graduates and employers think?. *Industry and Higher Education*, 30(5), pp. 321-326.
- Matteson, M. L., Anderson, L. & Boyden, C., 2016. "Soft Skills": A Phrase in Search of Meaning. *Portal: Libraries and the Academy*, 16(1), pp. 71-88.

- McLean, L. D., 2005. Organizational Culture's Influence on Creativity and Innovation: A Review of the Literature and Implications for Human Resource Development. *Advances in Developing Human Resources*, 7(2), pp. 226-246.
- Merriam-Webster, 2020. *Definition of Skill*. [Online] Available at: <https://www.merriam-webster.com/dictionary/skill> [Accessed 2 March 2020].
- Nilsson, S., 2010. Enhancing individual employability: the perspective of engineering graduates. *Education + Training*, 52(6/7), pp. 540-551.
- Noe, R. A., 2017. *Employee training and development*. New York: McGraw Hill Education.
- OUC, 2019. *About Open University of Cyprus 2019 Edition*, Nicosia: International Relations, Development and Communication Unit, Open University of Cyprus.
- OUC, 2020. *Διοικητικό Προσωπικό - Ανοικτό Πανεπιστήμιο Κύπρου*. [Online] Available at: <https://www.ouc.ac.cy/index.php/el/the-university-4/personnel/personnel-administrative> [Accessed 2 March 2020].
- OUCwebsite, 2020. *Open University of Cyprus - Ανοικτό Πανεπιστήμιο Κύπρου*. [Online] Available at: <https://www.ouc.ac.cy/index.php/en/> [Accessed 2 March 2020].
- Parente, D. H., Stephan, J. D. & Brown, R. C., 2012. Facilitating the Acquisition of Strategic Skills: The Role of Traditional and Soft Managerial Skills. *Management Research Review*, 35(11), pp. 1004-1028.
- Peterson, T. O. & Van Fleet, D. D., 2004. The ongoing legacy of R.L. Katz. An updated typology of management skills. *Management Decision*, 42(10), pp. 1297-1308.
- Pfeffer, J., 2010. *Building Sustainable Organizations: The Human Factor*. [Online] Available at: <https://www.gsb.stanford.edu/faculty-research/working-papers/building-sustainable-organizations-human-factor> [Accessed 26 December 2019].
- Politt, D., 2008. Whitbread gets the right blend for training: E-learning combined with classroom teaching benefits company and employees. *Human Resource Management International Digest*, 16(7), pp. 18-20.
- Promis, P., 2008. Are Employers Asking for the Right Competencies? A Case for Emotional Intelligence". *Library Administration & Management*, 22(1), pp. 24-30.

- Rausch, A., Schley, T. & Warwas, J., 2015. Problem solving in everyday office work - a diary study on differences between experts and novices. *International Journal of Lifelong Education*, 34(4), pp. 448-467.
- Roberson, L., Kulik, C. T. & Pepper, M. B., 2003. Using Needs Assessment to Resolve Controversies in Diversity Training Design. *Group & Organization Management*, 28(1), pp. 148-174.
- Robles, M. M., 2012. Executive Perceptions of the Top 10 Soft Skills Needed in Today's Workplace. *Business Communication Quarterly*, 75(4), pp. 453-465.
- Ruvimbo Terera, S. & Ngirande, H., 2014. The Impact of Training on Employee Job Satisfaction and Retention among Administrative Staff Members: A Case of a Selected Tertiary Institution. *Journal of Social Sciences*, 39(1), pp. 43-50.
- Saridakis, G., Lai, Y. & Cooper, C. L., 2017. Exploring the relationship between HRM and firm performance: a meta-analysis of longitudinal studies. *Human Resource Management Review*, 27(1), pp. 87-96.
- Sheehan, M., 2014. Human resource management and performance: Evidence from small and medium-sized firms. *International Small Business Journal*, 32(5), pp. 545-570.
- Smith, E. & Comyn, P., 2004. The development of employability skills in novice workers through employment. In: J. Gibb, ed. *Generic skills in vocational education and training*. Adelaide, Australia: National Centre for Vocational Education Research Ltd, pp. 95-108.
- Stracenski Kalauz, M., Hudec, G. & Kirinić, V., 2015. *Soft skills perception among students: importance and performance*. Varaždin, Croatia, Central European Conference on Information and Intelligent Systems.
- TheGallupOrganization, 2010. *Employers' perception of graduate employability. Analytical Report*, s.l.: European Commission, The Gallup Organization.
- Torrington, D., Hall, L., Taylor, S. & Atkinson, C., 2017. *Human Resource Management*. 10th ed. Harlow: Pearson.
- Tubey, R., Rotich, K. J. & Kurgat, A., 2015. History, Evolution and Development of Human Resource Management: A Contemporary Perspective. *European Journal of Business and Management*, 7(9), pp. 139-148.
- Urban, P., 2020. Training professionalisation and SME performance. *Human Resource Development International*, 23(2), pp. 168-187.

- van Laar, E., van Deursen, A. J., van Dijk, J. A. & de Haan, J., 2018. 21st-century digital skills instrument aimed at working professionals: Conceptual development and empirical validation. *Telematics and Informatics*, 35(8), pp. 2184-2200.
- Viviers, H. A., Fouché, J. P. & Reitsma, G. M., 2016. Developing soft skills (also known as pervasive skills). Usefulness of an educational game. *Meditari Accountancy Research*, 24(3), pp. 368-389.
- Wesley, S. C., Prier Jackson, V. & Lee, M., 2017. The perceived importance of core soft skills between retailing and tourism management students, faculty and business. *Employee Relations*, 39(1), pp. 79-99.
- Wikle, T. A. & Fagin, T. D., 2015. Hard and Soft Skills in Preparing GIS Professionals: Comparing Perceptions of Employers and Educators. *Transactions in GIS*, 19(5), pp. 641-652.
- Wilderom, C. P., van den Berg, P. & Wiersma, U. J., 2012. A longitudinal study of the effects of charismatic leadership and organizational culture on objective and perceived corporate performance. *The Leadership Quarterly*, Volume 23, pp. 835-848.
- WorldEconomicForum, 2018. *The Future of Jobs Report*, Switzerland: World Economic Forum.

# Chapter 8

## Appendices

### Appendix A

The questionnaire that was administered to OUC administrative employees can be found online at: <https://bit.ly/3bHcSUX>. The Microsoft Word format of the survey is presented next:

#### Ερωτηματολόγιο για οριζόντιες δεξιότητες

##### Εισαγωγικό Κείμενο

Αγαπητοί/ές συνάδελφοι.

Το παρόν ερωτηματολόγιο αναπτύχθηκε για τις ανάγκες της διατριβής μου στο μεταπτυχιακό πρόγραμμα MBA του Ανοικτού Πανεπιστημίου Κύπρου (ΑΠΚΥ) κι αφορά σε θέματα επιμόρφωσης οριζόντιων δεξιοτήτων (soft skills' training and development).

Οι οριζόντιες δεξιότητες που κατέχει ένας/μια εργαζόμενος/η, αποκτούν ολοένα και μεγαλύτερη σημασία στην αγορά εργασίας και φαίνεται να επηρεάζουν την εργασιακή του/της απόδοση. Είναι εκείνες οι δεξιότητες που είναι γνωστές και ως διαπροσωπικές και σχετίζονται με τον τρόπο με τον οποίο συνδέεται και αλληλεπιδρά κανείς με άλλους ανθρώπους αλλά και με τον εαυτό του, όπως είναι οι δεξιότητες επικοινωνίας, συνεργασίας, ηγεσίας, αυτοδιαχείριση κ.τ.λ.. Δεν είναι εύκολα μετρήσιμες, όμως, σύμφωνα με έρευνες, φαίνεται ότι μπορεί κανείς, μέσα από στοχευμένες επιμορφωτικές δράσεις να τις αναπτύξει, στο βαθμό του δυνατού.

Ευελπιστώ ότι, μέσα από τη δική σας συνεισφορά απαντώντας με ειλικρίνεια στο σύντομο αυτό ερωτηματολόγιο, θα μπορέσω να συγκεντρώσω τις δικές μας ανάγκες, ως εργαζομένων του ΑΠΚΥ, για θέματα επιμόρφωσης οριζόντιων δεξιοτήτων, με σκοπό την προώθησή τους στη Διοίκηση για περαιτέρω ενέργειες. Το ερωτηματολόγιο αυτό είναι ανώνυμο και η συμπλήρωσή του αναμένεται να διαρκέσει γύρω στα 5 λεπτά.

Παραμένω στη διάθεσή σας για οποιοσδήποτε διευκρινίσεις ([antri.avraamidou@ouc.ac.cy](mailto:antri.avraamidou@ouc.ac.cy) / 22411784)

Ευχαριστώ εκ των προτέρων για τη συνεργασία.

## Μέρος Α: Επιμόρφωση

1. Πόσες φορές έχετε συμμετάσχει σε επιμόρφωση για θέματα σχετικά με την εργασία σας τα τελευταία 2 χρόνια;

- Καμία φορά
- 1-2 φορές
- 3-4 φορές
- 5-6 φορές
- Περισσότερες από 6 φορές

2. Σκεπτόμενος/η τον ιδανικό τρόπο επιμόρφωσης για εσάς, παρακαλώ επιλέξτε τις προτιμήσεις σας, σχετικά με τον τρόπο επιμόρφωσής σας για θέματα σχετικά με την εργασία σας. *(Μπορείτε να επιλέξετε περισσότερες από μια επιλογές)*

- Η επιμόρφωση να γίνεται δια ζώσης στον χώρο της εργασίας μου
- Η επιμόρφωση να γίνεται δια ζώσης αλλά όχι στον χώρο εργασίας μου
- Η επιμόρφωση να γίνεται κατά τη διάρκεια της εργασίας μου
- Η επιμόρφωση να γίνεται εκτός του ωραρίου εργασίας μου
- Η επιμόρφωση να γίνεται διαδικτυακά, σε ασύγχρονη βάση μέσω πλατφόρμας τηλεκπαίδευσης
- Η επιμόρφωση να γίνεται διαδικτυακά σε σύγχρονη βάση, π.χ. μέσω webinars
- Η επιμόρφωση να προσφέρεται διαδικτυακά τόσο σύγχρονα όσο κι ασύγχρονα, μέσω πλατφόρμας τηλεκπαίδευσης
- Η επιμόρφωση να έχει διάρκεια 1-3 ώρες
- Η επιμόρφωση να έχει διάρκεια 4-8 ώρες
- Η επιμόρφωση να έχει διάρκεια 2-3 ημερών
- Η επιμόρφωση να έχει διάρκεια 4-5 ημερών
- Η επιμόρφωση να έχει διάρκεια μεγαλύτερη των 5 ημερών

## Μέρος Β: Οριζόντιες Δεξιότητες

Πιο κάτω ακολουθούν τρεις ερωτήσεις που σχετίζονται με 10 οριζόντιες δεξιότητες. Για κάθε μια από αυτές, δίνεται ένας σύντομος ορισμός:

**Αυτοβελτίωση:** Η ικανότητα να αναγνωρίζω τις ελλείψεις μου σε γνώσεις και δεξιότητες και ακολούθως να προχωρώ σε δράσεις ώστε να τις αποκτήσω, διατηρώντας θετική στάση προς τη συνεχή εξέλιξή μου και δια βίου μάθηση.

**Αυτοδιαχείριση / Αυτονομία:** Η ικανότητα να καθορίζω στόχους, προτεραιότητες κι εργασίες από μόνος/η μου, να διαχειρίζομαι το χρόνο και το στρες μου επαρκώς και να αναλαμβάνω την ευθύνη των πράξεών μου.

**Διαχείριση έργων:** Η ικανότητα να καθορίζω στόχους και προτεραιότητες, να επιλέγω και να διανέμω καθήκοντα και πόρους, να παρακολουθώ και να υλοποιώ τους στόχους αυτούς, ανταποκρινόμενος/η αποτελεσματικά σε τυχόν παρεκκλίσεις.

**Επικοινωνία:** Η ικανότητα να μεταφέρω αποτελεσματικά πληροφορίες, ιδέες και απόψεις τόσο προφορικά όσο και γραπτώς, ενώ παράλληλα ακούω και είμαι δεκτικός/η στις απόψεις των άλλων.

**Επίλυση προβλημάτων / Αναλυτική και κριτική σκέψη:** Η ικανότητα να συλλέγω και να αναλύω πληροφορίες, να κατανοώ τις συνδέσεις ανάμεσα σε ιδέες και γεγονότα, με σκοπό την επίλυση απλών ή σύνθετων προβλημάτων και τη λήψη αποφάσεων για το καλό του οργανισμού.

**Ηγεσία:** Η ικανότητα να παρακινώ και να καθοδηγώ άλλους ανθρώπους με σκοπό να τους ωθήσω να συμβάλουν αποτελεσματικά κι επαρκώς στην επίτευξη των στόχων του οργανισμού.

**Καινοτομία – Δημιουργικότητα:** Η ικανότητα να συνεισφέρω νέες, πρωτότυπες και δημιουργικές ιδέες με σκοπό τη βελτίωση των εργασιών, προϊόντων και υπηρεσιών του οργανισμού.

**Προσαρμοστικότητα / Ευελιξία:** Η ικανότητα να προσαρμόζομαι και να αλλάζω την πορεία δράσης μου όταν βρίσκομαι σε νέες καταστάσεις και συνθήκες.

**Συναισθηματική νοημοσύνη:** Η ικανότητα να κατανοώ, να χρησιμοποιώ και να διαχειρίζομαι τα συναισθήματά μου με θετικό τρόπο ώστε να να συμπάσχω, να αποφεύγω τις συγκρούσεις και να επικοινωνώ αποτελεσματικά με άλλους.

**Συνεργασία:** Η ικανότητα να εργάζομαι αποτελεσματικά σε ομάδα με άλλους ανθρώπους, να ανταλλάζω πόρους και γνώσεις για την επίτευξη ενός κοινού στόχου για το καλό του οργανισμού.



**1. Σκεπτόμενος/η τη δική σας εργασία, πόσο σημαντικές θεωρείτε τις πιο κάτω οριζόντιες δεξιότητες για τη δική σας καθημερινή εργασία;**

	Καθόλου σημαντική	Πολύ ασήμαντη	Ούτε σημαντική ούτε ασήμαντη	Πολύ σημαντική	Εξαιρετικά σημαντική
Αυτοβελτίωση	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Αυτοδιαχείριση / Αυτονομία	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Διαχείριση έργων	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Επικοινωνία	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Επίλυση προβλημάτων / Αναλυτική και κριτική σκέψη	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ηγεσία	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Καινοτομία / Δημιουργικότητα	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Προσαρμοστικότητα / Ευελιξία	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Συναισθηματική νοημοσύνη	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Συνεργασία	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**2. Υπάρχουν άλλες δεξιότητες που θεωρείτε σημαντικές για την εργασία σας; (προαιρετικό)**

**3. Σε ποιο βαθμό θεωρείτε ότι έχετε αναπτύξει τις πιο κάτω οριζόντιες δεξιότητες;**

	Καθόλου	Λίγο	Αρκετά	Πολύ	Πάρα πολύ
Αυτοβελτίωση	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Αυτοδιαχείριση / Αυτονομία	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Διαχείριση έργων	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Επικοινωνία	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Επίλυση προβλημάτων / Αναλυτική σκέψη	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ευελιξία	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ηγεσία	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Καινοτομία / Δημιουργικότητα	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Κριτική σκέψη	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Προσαρμοστικότητα	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Συναισθηματική νοημοσύνη	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Συνεργασία	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Μέρος Γ: Δημογραφικά στοιχεία**

**1. Σε ποια διοικητική υπηρεσία του ΑΠΚΥ εργάζεστε;**

- Μονάδα Οικονομικών και Διοίκησης
- Μονάδα Επιχειρησιακής Υποστήριξης
- Μονάδα Υποστήριξης Φοιτητών και Προγραμμάτων Σπουδών
- Μονάδα Διεθνούς Συνεργασίας, Ανάπτυξης και Επικοινωνίας / Μονάδα Έρευνας, Καινοτομίας και Διασύνδεσης / Γραφείο Εκδηλώσεων / Κεντρική Γραμματεία και Κεντρικό Αρχείο / Εργαστήριο Εκπαιδευτικού Υλικού και Εκπαιδευτικής Μεθοδολογίας
- Μονάδα Πληροφορικής, Τεχνολογιών και Βιβλιοθηκής
- Διεύθυνση Διοίκησης και Οικονομικών / Γραφείο Πρύτανη / Γραμματείες Σχολών

**2. Ποια είναι η θέση σας στο ΑΠΚΥ;**

- Λειτουργός / Γραμματειακός Λειτουργός  
 Βοηθός Γραμματειακός Λειτουργός / Βοηθός Γραφείου / Βοηθός Μηχανογράφησης /  
Βοηθός Λογιστηρίου / Τηλεφωνητής/τρια / Βοηθός Βιβλιοθηκονόμος  
 Άλλο ( \_\_\_\_\_ )

**3. Παρακαλώ επιλέξτε το φύλο σας**

- Άνδρας     Γυναίκα     Άλλο                       Προτιμώ να μην αναφέρω

**4. Πόσα χρόνια εργάζεστε στο ΑΠΚΥ;**

- 1-5 χρόνια             6-10 χρόνια             περισσότερα από 10 χρόνια

## Appendix B – Shapiro-Wilk test for normality

Shapiro-Wilk test for normality was carried out via SPSS, for the Soft Skill Importance and Soft-Skill Self-Assessment ordinal variables of this study. The report of this test is presented in Table below.

	Tests of Normality					
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Self-Improvement (I)	.441	40	.000	.576	40	.000
Self-Improvement (SA)	.201	40	.000	.877	40	.000
Self-Management / Autonomy (I)	.348	40	.000	.715	40	.000
Project Management (I)	.272	40	.000	.793	40	.000
Communication (I)	.529	40	.000	.345	40	.000
Problem Solving / Analytical Thinking / Critical Thinking (I)	.371	40	.000	.701	40	.000
Leadership (I)	.202	40	.000	.853	40	.000
Innovation / Creativity (I)	.340	40	.000	.734	40	.000
Adaptability / Flexibility (I)	.335	40	.000	.723	40	.000
Emotional Intelligence (I)	.279	40	.000	.732	40	.000
Collaboration (I)	.502	40	.000	.443	40	.000
Self-Management / Autonomy (SA)	.212	40	.000	.847	40	.000
Project Management (SA)	.199	40	.000	.880	40	.001
Communication (SA)	.299	40	.000	.766	40	.000
Problem Solving / Analytical Thinking / Critical Thinking (SA)	.244	40	.000	.844	40	.000
Leadership (SA)	.193	40	.001	.900	40	.002
Innovation / Creativity (SA)	.191	40	.001	.884	40	.001
Adaptability / Flexibility (SA)	.210	40	.000	.848	40	.000
Emotional Intelligence (SA)	.264	40	.000	.855	40	.000
Collaboration (SA)	.261	40	.000	.815	40	.000

a. Lilliefors Significance Correction

## Appendix C – Kruskal-Wallis tests

### Appendix C1. Kruskal-Wallis for differences across Departments

Kruskal-Wallis test summary for differences in groups of Departments (n=40) in respect to rating each Soft Skills importance and Self-Assessment is presented in Table below.

Hypothesis Test Summary					
	Null Hypothesis	Test	H	Sig.	Decision
1	The distribution of Self-Improvement (I) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	4.810	.440	Retain the null hypothesis.
2	The distribution of Self-Management / Autonomy (I) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	2.742	.740	Retain the null hypothesis.
3	The distribution of Project Management (I) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	8.165	.147	Retain the null hypothesis.
4	The distribution of Communication (I) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	5.889	.317	Retain the null hypothesis.
5	The distribution of Problem Solving / Analytical Thinking / Critical Thinking (I) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	4.296	.508	Retain the null hypothesis.
6	The distribution of Leadership (I) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	6.163	.291	Retain the null hypothesis.
7	<b>The distribution of Innovation / Creativity (I) is the same across categories of Department.</b>	<b>Independent-Samples Kruskal-Wallis Test</b>	<b>12.262</b>	<b>.031</b>	<b>Reject the null hypothesis.</b>
8	The distribution of Adaptability / Flexibility (I) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	3.667	.598	Retain the null hypothesis.
9	The distribution of Emotional Intelligence (I) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	5.447	.364	Retain the null hypothesis.
10	The distribution of Collaboration (I) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	2.547	.769	Retain the null hypothesis.
11	The distribution of Self-Improvement (SA) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	8.457	.133	Retain the null hypothesis.

12	The distribution of Self-Management / Autonomy (SA) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	7.857	.164	Retain the null hypothesis.
13	The distribution of Project Management (SA) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	3.903	.563	Retain the null hypothesis.
14	The distribution of Communication (SA) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	4.662	.458	Retain the null hypothesis.
15	The distribution of Problem Solving / Analytical Thinking / Critical Thinking (SA) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	4.082	.538	Retain the null hypothesis.
16	The distribution of Leadership (SA) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	6.884	.229	Retain the null hypothesis.
17	The distribution of Innovation / Creativity (SA) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	6.731	.241	Retain the null hypothesis.
18	The distribution of Adaptability / Flexibility (SA) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	4.094	.536	Retain the null hypothesis.
19	The distribution of Emotional Intelligence (SA) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	8.772	.118	Retain the null hypothesis.
20	The distribution of Collaboration (SA) is the same across categories of Department.	Independent-Samples Kruskal-Wallis Test	6.667	.247	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

For the statistically significant difference found for Innovation/Creativity Soft Skill Importance rating across categories of Departments, Tables below present the test summary and the respective pairwise comparisons of the post-hoc analysis, per Department.

#### Independent-Samples Kruskal-Wallis Test

##### Summary

Total N	40
Test Statistic (H)	12.262 <sup>a</sup>
Degree Of Freedom	5
Asymptotic Sig.(2-sided test)	.031

a. The test statistic is adjusted for ties.

### Pairwise Comparisons of Departments

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig. <sup>a</sup>
“Administration and Finance” and “Students and Programmes of Study Support”	-4.667	6.346	-.735	.462	1.000
“Administration and Finance” and “Information Communication Technologies and Library”	-9.154	5.515	-1.660	.097	1.000
“Administration and Finance” and “Office of the Director of Administration and Finance, Office of the Rector, Faculty Secretariat and Events office”	-12.200	6.629	-1.841	.066	.985
“Administration and Finance” and “Operational Support”	-15.600	6.629	-2.353	.019	.279
“Administration and Finance” and “Research, Industry Liaison & Innovation - International Relations, Development & Communication - Central Records and Secretariat - Laboratory of Educational Material and Methodology”	-19.000	6.346	-2.994	.003	.041
“Students and Programmes of Study Support” and “Information Communication Technologies and Library”	-4.487	5.173	-.867	.386	1.000
“Students and Programmes of Study Support” and “Office of the Director of Administration and Finance, Office of the Rector, Faculty Secretariat and Events office”	-7.533	6.346	-1.187	.235	1.000

"Students and Programmes of Study Support" and "Operational Support"	10.933	6.346	1.723	.085	1.000
"Students and Programmes of Study Support" and "Research, Industry Liaison & Innovation - International Relations, Development & Communication - Central Records and Secretariat - Laboratory of Educational Material and Methodology"	-14.333	6.051	-2.369	.018	.268
"Information Communication Technologies and Library" and "Office of the Director of Administration and Finance, Office of the Rector, Faculty Secretariat and Events office"	-3.046	5.515	-.552	.581	1.000
"Information Communication Technologies and Library" and "Operational Support"	6.446	5.515	1.169	.242	1.000
"Information Communication Technologies and Library" and "Research, Industry Liaison & Innovation - International Relations, Development & Communication - Central Records and Secretariat - Laboratory of Educational Material and Methodology"	9.846	5.173	1.903	.057	.855
"Office of the Director of Administration and Finance, Office of the Rector, Faculty Secretariat and Events office" and "Operational Support"	3.400	6.629	.513	.608	1.000



“Office of the Director of Administration and Finance, Office of the Rector, Faculty Secretariat and Events office” and “Research, Industry Liaison & Innovation - International Relations, Development & Communication - Central Records and Secretariat - Laboratory of Educational Material and Methodology”	6.800	6.346	1.071	.284	1.000
“Operational Support” – “Research, Industry Liaison & Innovation - International Relations, Development & Communication - Central Records and Secretariat - Laboratory of Educational Material and Methodology”	-3.400	6.346	-.536	.592	1.000

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.

Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

## Appendix C2. Kruskal-Wallis test for differences across Working years at OUC

Kruskal-Wallis test summary for differences in groups of Working years at OUC (n=40) in respect to rating each Soft Skills importance and Self-Assessment is presented in Table below.

	<b>Null Hypothesis</b>	<b>Test</b>	<b>H</b>	<b>Sig.</b>	<b>Decision</b>
1	The distribution of Self-Improvement (I) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	0.071	.965	Retain the null hypothesis.
2	The distribution of Self-Management / Autonomy (I) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	1.165	.558	Retain the null hypothesis.
3	The distribution of Project Management (I) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	1.823	.402	Retain the null hypothesis.
4	The distribution of Communication (I) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	0.496	.780	Retain the null hypothesis.
5	The distribution of Problem Solving / Analytical Thinking / Critical Thinking (I) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	1.449	.485	Retain the null hypothesis.
6	The distribution of Leadership (I) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	1.568	.457	Retain the null hypothesis.
7	The distribution of Innovation / Creativity (I) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	1.363	.506	Retain the null hypothesis.
8	The distribution of Adaptability / Flexibility (I) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	0.257	.880	Retain the null hypothesis.
9	The distribution of Emotional Intelligence (I) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	5.942	.051	Retain the null hypothesis.
10	The distribution of Collaboration (I) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	0.769	.681	Retain the null hypothesis.
11	The distribution of Self-Improvement (SA) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	2.120	.347	Retain the null hypothesis.
12	The distribution of Self-Management / Autonomy (SA) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	2.792	.248	Retain the null hypothesis.

13	The distribution of Project Management (SA) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	1.560	.458	Retain the null hypothesis.
14	The distribution of Communication (SA) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	6.324	.042	Reject the null hypothesis.
15	The distribution of Problem Solving / Analytical Thinking / Critical Thinking (SA) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	7.326	.026	Reject the null hypothesis.
16	The distribution of Leadership (SA) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	6.458	.040	Reject the null hypothesis.
17	The distribution of Innovation / Creativity (SA) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	3.564	.168	Retain the null hypothesis.
18	The distribution of Adaptability / Flexibility (SA) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	2.283	.319	Retain the null hypothesis.
19	The distribution of Emotional Intelligence (SA) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	6.504	.039	Reject the null hypothesis.
20	The distribution of Collaboration (SA) is the same across categories of OUC work years.	Independent-Samples Kruskal-Wallis Test	3.991	.136	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

For the categories of OUC that statistically significant differences that were observed (Communication SA, Problem solving/Analytical Thinking/Critical Thinking SA, Leadership SA and Emotional Intelligence SA) Tables below present the test summary and the respective pairwise comparisons of the post-hoc analysis, per Working years at OUC group.

In particular:

**Independent-Samples Kruskal-Wallis Test Summary – Communication SA**

Total N	40
Test Statistic	6.324 <sup>a</sup>
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.042

a. The test statistic is adjusted for ties.

**Pairwise Comparisons of OUC work years – Communication SA**

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig. <sup>a</sup>
1-5 Years-6-10 Years	-1.544	5.909	-.261	.794	1.000
1-5 Years-More than 10 years	-9.671	5.850	-1.653	.098	.295
6-10 Years-More than 10 years	-8.127	3.550	-2.289	.022	.066

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

**Independent-Samples Kruskal-Wallis Test Summary – Problem Solving / Analytical Thinking / Critical Thinking SA**

Total N	40
Test Statistic	7.326 <sup>a</sup>
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.026

a. The test statistic is adjusted for ties.

**Pairwise Comparisons of OUC work years – Problem Solving / Analytical Thinking / Critical Thinking SA**

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig. <sup>a</sup>
1-5 Years-6-10 Years	-1.235	6.160	-.201	.841	1.000
1-5 Years-More than 10 years	-10.474	6.098	-1.717	.086	.258
6-10 Years-More than 10 years	-9.238	3.701	-2.496	.013	.038

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

**Report of means comparison**

Problem Solving / Analytical Thinking / Critical Thinking (SA)

OUC work years	Mean	N	Std. Deviation
1-5 Years	3.50	4	1.000
6-10 Years	3.53	17	1.179
More than 10 years	4.42	19	.692
Total	3.95	40	1.037

**Independent-Samples Kruskal-Wallis Test Summary – Leadership SA**

Total N	40
Test Statistic	6.458 <sup>a</sup>
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.040

a. The test statistic is adjusted for ties.

**Pairwise Comparisons of OUC work years – Leadership SA**

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig. <sup>a</sup>
1-5 Years-6-10 Years	-7.221	6.349	-1.137	.255	.766
1-5 Years-More than 10 years	-14.066	6.285	-2.238	.025	.076
6-10 Years-More than 10 years	-6.845	3.814	-1.795	.073	.218

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

**Independent-Samples Kruskal-Wallis Test Summary – Emotional Intelligence SA**

Total N	40
Test Statistic	6.504 <sup>a</sup>
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.039

a. The test statistic is adjusted for ties.

**Pairwise Comparisons of OUC work years**

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig. <sup>a</sup>
1-5 Years-6-10 Years	-3.346	6.178	-.542	.588	1.000
1-5 Years-More than 10 years	-11.480	6.115	-1.877	.060	.181
6-10 Years-More than 10 years	-8.135	3.711	-2.192	.028	.085

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same. Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

## Appendix D – Mann-Whitney U test

Appendix D1. Mann-Whitney U test for differences across Gender

Mann-Whitney U test summary for differences in groups of Gender (Male/Female, the 2 responses who did not specify gender were excluded, n=38) in respect to rating each Soft Skills importance and Self-Assessment is presented in Table below.

<b>Hypothesis Test Summary</b>				
	<b>Null Hypothesis</b>	<b>Test</b>	<b>Sig.</b>	<b>Decision</b>
1	The distribution of Self-Improvement (I) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.460 <sup>a</sup>	Retain the null hypothesis.
2	The distribution of Self-Management / Autonomy (I) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.391 <sup>a</sup>	Retain the null hypothesis.
3	The distribution of Project Management (I) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.930 <sup>a</sup>	Retain the null hypothesis.
4	The distribution of Communication (I) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.813 <sup>a</sup>	Retain the null hypothesis.
5	The distribution of Problem Solving / Analytical Thinking / Critical Thinking (I) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.701 <sup>a</sup>	Retain the null hypothesis.
6	The distribution of Leadership (I) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.391 <sup>a</sup>	Retain the null hypothesis.
7	The distribution of Innovation / Creativity (I) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.408 <sup>a</sup>	Retain the null hypothesis.
8	The distribution of Adaptability / Flexibility (I) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.359 <sup>a</sup>	Retain the null hypothesis.
9	The distribution of Emotional Intelligence (I) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.497 <sup>a</sup>	Retain the null hypothesis.
10	The distribution of Collaboration (I) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.813 <sup>a</sup>	Retain the null hypothesis.

11	The distribution of Self-Improvement (SA) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.723 <sup>a</sup>	Retain the null hypothesis.
12	The distribution of Self-Management / Autonomy (SA) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.202 <sup>a</sup>	Retain the null hypothesis.
13	The distribution of Project Management (SA) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.224 <sup>a</sup>	Retain the null hypothesis.
14	The distribution of Communication (SA) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.260 <sup>a</sup>	Retain the null hypothesis.
15	The distribution of Problem Solving / Analytical Thinking / Critical Thinking (SA) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.202 <sup>a</sup>	Retain the null hypothesis.
16	The distribution of Leadership (SA) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.059 <sup>a</sup>	Retain the null hypothesis.
17	The distribution of Innovation / Creativity (SA) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.051 <sup>a</sup>	Retain the null hypothesis.
18	The distribution of Adaptability / Flexibility (SA) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.172 <sup>a</sup>	Retain the null hypothesis.
19	The distribution of Emotional Intelligence (SA) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.114 <sup>a</sup>	Retain the null hypothesis.
20	The distribution of Collaboration (SA) is the same across categories of Gender.	Independent-Samples Mann-Whitney U Test	.478 <sup>a</sup>	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

a. Exact significance is displayed for this test.

Appendix D2. Mann-Whitney U test for differences across Position

Mann-Whitney U test summary for differences in groups of Position (n=40) in respect to rating each Soft Skills importance and Self-Assessment is presented in Table below.

<b>Hypothesis Test Summary</b>				
	<b>Null Hypothesis</b>	<b>Test</b>	<b>Sig.</b>	<b>Decision</b>
1	The distribution of Self-Improvement (I) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.361 <sup>a</sup>	Retain the null hypothesis.
2	The distribution of Self-Management / Autonomy (I) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.810 <sup>a</sup>	Retain the null hypothesis.
3	The distribution of Project Management (I) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.187 <sup>a</sup>	Retain the null hypothesis.
4	The distribution of Communication (I) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.957 <sup>a</sup>	Retain the null hypothesis.
5	The distribution of Problem Solving / Analytical Thinking / Critical Thinking (I) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.555 <sup>a</sup>	Retain the null hypothesis.
6	The distribution of Leadership (I) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.117 <sup>a</sup>	Retain the null hypothesis.
7	The distribution of Innovation / Creativity (I) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.065 <sup>a</sup>	Retain the null hypothesis.
8	The distribution of Adaptability / Flexibility (I) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.611 <sup>a</sup>	Retain the null hypothesis.
9	The distribution of Emotional Intelligence (I) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.537 <sup>a</sup>	Retain the null hypothesis.
10	The distribution of Collaboration (I) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.630 <sup>a</sup>	Retain the null hypothesis.
11	The distribution of Self-Improvement (SA) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.872 <sup>a</sup>	Retain the null hypothesis.



12	The distribution of Self-Management / Autonomy (SA) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.117 <sup>a</sup>	Retain the null hypothesis.
13	The distribution of Project Management (SA) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.405 <sup>a</sup>	Retain the null hypothesis.
14	The distribution of Communication (SA) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.307 <sup>a</sup>	Retain the null hypothesis.
15	The distribution of Problem Solving / Analytical Thinking / Critical Thinking (SA) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.187 <sup>a</sup>	Retain the null hypothesis.
16	The distribution of Leadership (SA) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.215 <sup>a</sup>	Retain the null hypothesis.
17	The distribution of Innovation / Creativity (SA) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.138 <sup>a</sup>	Retain the null hypothesis.
18	The distribution of Adaptability / Flexibility (SA) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.376 <sup>a</sup>	Retain the null hypothesis.
19	The distribution of Emotional Intelligence (SA) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.282 <sup>a</sup>	Retain the null hypothesis.
20	The distribution of Collaboration (SA) is the same across categories of Position.	Independent-Samples Mann-Whitney U Test	.688 <sup>a</sup>	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

a. Exact significance is displayed for this test.

## Appendix E – Spearman’s rho Correlations test

For each of the 10 soft skills, a Spearman’s rho correlation test was carried out in order to identify any correlations between respondents’ perceived importance and perceived self-assessment of each soft skill. The results are illustrated in the Tables that follow.

**Correlations – Self-Improvement soft skill**

			Self-Improvement (I)	Self-Improvement (SA)
Spearman's rho	Self-Improvement (I)	Correlation Coefficient	1.000	.610**
		Sig. (2-tailed)	.	.000
		N	40	40
	Self-Improvement (SA)	Correlation Coefficient	.610**	1.000
		Sig. (2-tailed)	.000	.
		N	40	40

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlations – Self-Management/Autonomy soft skill**

			Self-Management / Autonomy (I)	Self-Management / Autonomy (SA)
Spearman's rho	Self-Management / Autonomy (I)	Correlation Coefficient	1.000	.322*
		Sig. (2-tailed)	.	.043
		N	40	40
	Self-Management / Autonomy (SA)	Correlation Coefficient	.322*	1.000
		Sig. (2-tailed)	.043	.
		N	40	40

\*. Correlation is significant at the 0.05 level (2-tailed).

**Correlations – Project Management soft skill**

			Project Management (I)	Project Management (SA)
Spearman's rho	Project Management (I)	Correlation Coefficient	1.000	.512**
		Sig. (2-tailed)	.	.001
		N	40	40
	Project Management (SA)	Correlation Coefficient	.512**	1.000
		Sig. (2-tailed)	.001	.
		N	40	40

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlations - Problem Solving / Analytical Thinking / Critical Thinking soft skill**

			Problem Solving / Analytical Thinking / Critical Thinking (I)	Problem Solving / Analytical Thinking / Critical Thinking (SA)
Spearman's rho	Problem Solving / Analytical Thinking / Critical Thinking (I)	Correlation Coefficient	1.000	.476**
		Sig. (2-tailed)	.	.002
		N	40	40
	Problem Solving / Analytical Thinking / Critical Thinking (SA)	Correlation Coefficient	.476**	1.000
		Sig. (2-tailed)	.002	.
		N	40	40

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlations – Communication soft skill**

			Communication (I)	Communication (SA)
Spearman's rho	Communication (I)	Correlation Coefficient	1.000	.167
		Sig. (2-tailed)	.	.304
		N	40	40
	Communication (SA)	Correlation Coefficient	.167	1.000
		Sig. (2-tailed)	.304	.
		N	40	40

**Correlations – Leadership soft skill**

			Leadership (I)	Leadership (SA)
Spearman's rho	Leadership (I)	Correlation Coefficient	1.000	.608**
		Sig. (2-tailed)	.	.000
		N	40	40
	Leadership (SA)	Correlation Coefficient	.608**	1.000
		Sig. (2-tailed)	.000	.
		N	40	40

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlations – Innovation/Creativity soft skill**

			Innovation / Creativity (I)	Innovation / Creativity (SA)
Spearman's rho	Innovation / Creativity (I)	Correlation Coefficient	1.000	.486**
		Sig. (2-tailed)	.	.001
		N	40	40
	Innovation / Creativity (SA)	Correlation Coefficient	.486**	1.000
		Sig. (2-tailed)	.001	.
		N	40	40

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Correlations – Adaptability/Flexibility soft skill**

			Adaptability / Flexibility (I)	Adaptability / Flexibility (SA)
Spearman's rho	Adaptability / Flexibility (I)	Correlation Coefficient	1.000	.359*
		Sig. (2-tailed)	.	.023
		N	40	40
	Adaptability / Flexibility (SA)	Correlation Coefficient	.359*	1.000
		Sig. (2-tailed)	.023	.
		N	40	40

\*. Correlation is significant at the 0.05 level (2-tailed).

**Correlations – Emotional Intelligence soft skill**

			Emotional Intelligence (I)	Emotional Intelligence (SA)
Spearman's rho	Emotional Intelligence (I)	Correlation Coefficient	1.000	.200
		Sig. (2-tailed)	.	.217
		N	40	40
	Emotional Intelligence (SA)	Correlation Coefficient	.200	1.000
		Sig. (2-tailed)	.217	.
		N	40	40

**Correlations – Collaboration soft skill**

			Collaboration (I)	Collaboration (SA)
Spearman's rho	Collaboration (I)	Correlation Coefficient	1.000	.236
		Sig. (2-tailed)	.	.143
		N	40	40
	Collaboration (SA)	Correlation Coefficient	.236	1.000
		Sig. (2-tailed)	.143	.
		N	40	40