The Job Family Model applied to Teixeira Duarte compared to the U.K. – a Comparative Study.

Florentine Harmening

The dissertation is written under the supervision of professor Rute Xavier.

The dissertation submitted in partial fulfillment of requirements for the MSc in Management with a Specialization in Strategic Marketing at the Universidade Católica Portuguesa, 01.01.2023.

Abstract

Title: The Job Family Model applied to Teixeira Duarte compared to the U.K. – a Comparative Study.

Author: Florentine Harmening

Keywords: Job Family model, competency-based Framework, internal communication, performance management

This thesis examines the framework "Job Family Model" and its application to the Portuguese company Teixeira Duarte (T.D.). The company started structuring its employees accordingly. The framework is used to **manage competencies**. T.D. is currently trying to compare their level of competency against competing countries such as the U.K. Furthermore, the company is trying to investigate a communication strategy to announce the findings to its employees.

Examining results from a comparative analysis that was constructed from data given by T.D. and data from the platform *www.GoConstruct.org,* demonstrates the superiority of T.D. The research suggests that T.D. employs workers with a more advanced background. Most of the employee's skill set is more elaborate, although not more advanced. This entails that although the worker must fulfil a longer list of skill requirements, they don't necessarily need to be more difficult. However, there are two jobs in which Teixeira Duarte lacks employee qualifications compared to GoConstruct: Electrician and Contract Director.

Announcing those findings should flow in two ways. As for communicating the performance of T.D., a posting on their intranet is enough. However, communicating the job roles that need further skill improvement should be dealt with in a delicate and conscious way. Throughout the analysis, there are a few recommendations the company should follow. T.D. could for one individualize each job, T.D. should expand certain requirements on the job roles, also especially the educational and experience requirements are exceptional. Those should not change. Finally, the findings from the analysis should be appropriately communicated.

Abstract in Portuguese

Title: O Modelo de Família de Emprego aplicado a Teixeira Duarte em comparação com o Reino Unido - um Estudo Comparativo.

Author: Florentine Harmening

Keywords: Modelo de família de trabalho, estrutura baseada em competências, comunicação interna, gestão do desempenho

Esta tese examina o quadro "Job Family Model" e a sua aplicação à empresa portuguesa Teixeira Duarte (T.D.). A empresa começou a estruturar os seus empregados em conformidade. O quadro é utilizado para gerir competências. T.D. está actualmente a tentar comparar o seu nível de competência com os países concorrentes, como o Reino Unido.

O exame dos resultados de uma análise comparativa que foi construída a partir de dados fornecidos pela T.D. e dados da plataforma www.GoConstruct.org, demonstra a superioridade da T.D. Investigação sugere que T.D. emprega trabalhadores com um passado mais avançado. A maior parte do conjunto de competências do trabalhador é mais elaborada, embora não mais avançada. Isto implica que, embora o trabalhador deva preencher uma lista mais longa de requisitos de competências, estas não precisam necessariamente de ser mais difíceis. Contudo, há dois empregos em que Teixeira Duarte não possui qualificações de empregado em comparação com a GoConstruct: Electricista e Director de Contrato.

Anunciar essas conclusões deve fluir de duas maneiras. Quanto à comunicação do desempenho da T.D., basta um anúncio na sua intranet. No entanto, a comunicação das funções que precisam de ser melhoradas deve ser tratada de uma forma delicada e consciente. Ao longo da análise, há algumas recomendações que a empresa deve seguir. A T.D. poderia para uma individualização de cada trabalho, a T.D. deveria expandir certos requisitos sobre as funções, também especialmente os requisitos educacionais e de experiência são excepcionais. Estes não devem mudar. Finalmente, os resultados da análise devem ser devidamente comunicados.

Table of Contents

Table of Figures

1. Introduction

As a construction company acting worldwide, Teixeira Duarte (T.D.) has employees around the world. T.D., a Portuguese Group that was first established as an engineering company, is a business group that advertises itself through its brand image.

Construction is the fundamental activity of the T.D. Group, as well as that of its largest and most recognizable subsidiary, "Teixeira Duarte - Engenharia and Construçes, S.A.," represents the group's beginnings as a construction company (Teixeira Duarte, 2021).

To benchmark and better understand their employee's work, they have implemented an operational structure based on the Job Family Model (JFM). This framework lets them apply guidelines and requirements on all their employees more efficiently and allows them to assign skill requirements independently on their locations.

However, since T.D. is performing worldwide, they also need to ensure that its employees are working to a certain quality level compared to global standards.

By doing so, they can ensure that they keep up with the global requirements and expectations of the construction industry. To accomplish these global standards, they first need to define explicit working structures, requirements, and definitions of each working field and position the company employees. They can verify that they meet the standards in other countries by applying those industry standards. As already mentioned, they have begun implementing the JFM to do so. However, as the framework is not yet fully implemented, the question of their performance level is still to be answered. The company has finished defining the working scope of all its employees based on the framework but still needs to confirm that those benchmarks can be applied globally and are meeting standards abroad. As the first part of this master thesis revolves precisely around this question, it is of utmost importance to better understand and analyze the companies' guidelines compared to the requirements in the U.K. To fully understand the requirements of the U.K. market, a digital platform will be used as a guideline. This website was a given from T.D. and is additionally approved by the U.K. government. The platform is called GoConstruct STEM (GCS).

This analysis could potentially conclude that T.D. makes lower requirement demands on its workers compared to other countries. However, the analysis could also conclude that T.D. has much higher requirements. This will be investigated throughout this thesis.

Hence, T.D.'s employees must acquire new skills and working habits. This insight would go hand in hand with communicating this appropriately to T.D.s' employees. Communicating new ways of working after following the same approach for several years could lead to confusion and anger on the part of the employees. Therefore, T.D. proposed the challenge of understanding and developing a suitable communication strategy to promote possible changes in the working structure.

This master thesis will first analyze and comprehend current working structures and habits in the working fields of **Production**. The study will perform a comparative analysis to further understand their performance compared to the U.K. As previously said, input from GCS will be used as a benchmark for U.K. standards. After analyzing T.D.s' performance; the thesis will provide a recommendation as to which tool to use so they can internally communicate the findings and possible emerging internal changes.

In concern to the scope of this thesis, it is composed of two research questions that need to be analyzed:

RQ1: Based on the Benchmark of the "Job Family Model, "- how big is the gap between Teixeira Duarte employees' profiles compared to the profile of construction workers in the U.K.?

RQ2: What is the most effective internal communication strategy for Teixeira Duarte to properly announce changes and challenges?

2. Literature Review

2.1 Competency Modeling

An organizational framework known as a competency model lists the competency traits necessary for successful performance in a particular position, job family (a collection of related jobs), organization, function, or process (Shen, 2019). A competency model is necessary to collect knowledge, skills, abilities, and other characteristics (KSAOs) to perform a job (CAMPION, et al., 2011). Therefore, represents a credible, observable, and quantifiable list of knowledge, abilities, and characteristics proven via behavior that leads to exceptional performance in a particular work context while simultaneously being highly tailored to

specific company needs (Chouhan & Srivastava, 2014). The Competency Modeling theory dates to the 1970s. Harvard University professor David C. McClelland presented "Testing for Competence Rather Than for Intelligence" in the Journal of American Psychologists in 1973 [18–20]. He drew attention to the misuse of intelligence tests, sexual tests, academic tests, and grade point averages to assess the irrationality of individual competence. He suggested substituting competence for the conventional intelligence measurement by looking for the most substantial differences between the best and average performers (Cao & Zhang, 2022). It can be distinguished between several different competency models, such as "Knowledge, Skills, and Abilities (KSA) or INCOSE UK Systems Engineering Competencies Framework (SECF) (Kasser, Hitchins, Frank, & Zhao, 2012). However, this thesis aims to present one of the most significant ones: The job family model.

2.1.1 Introduction to the Job Family Model

The Job Family model builds the foundation of an integrated Human Resource Management (Gibson, 2018). The framework helps the responsible human resource manager with six different areas: **Performance Management** (helps to align specific metrics), **Career Paths** (helps to define career path opportunities and criteria), **Training and Development** (helps to link development needs and resources), **Succession Planning** (helps define criteria for advancement and to asses employees), **Recruitment** (supports defining criteria for selection) and finally **Rewards** (supports consistent approaches to levels and grades) (Baker, 2020). The JMF groups jobs into functional families – where the set activities or type of work performed are similar – enabling a differentiation by complexity levels, thus providing greater clarity regarding the career development (Teixeira Duarte, 2021). They may also relate to having a similar purpose or process. Thus, job families often represent distinct occupational or functional groups (Reilly, 2004), within which the roles are grouped according to the nature of the functions and their contribution to the organization's value chain. This grouping of roles with similar characteristics will allow agility in the definition and application of HR policies across the organization. Lastly, the JFM structures within one family are also based on the hierarchical level. Those levels capture the seniority of a role, either descriptive or numerical (Gibson, 2018). In the case of T.D., this is being done numerically.

FAMILY	SUBFAMILY	ROLE	LEVEL
Set of functions with common traits in terms of skills, knowledge requirements and/or functional content.	A part of the family that shares a domain of knowledge and specific responsibilities.	Job level covering a set of functions that create value for the organization in the same way and have the same requirements in terms of skills and competencies.	Criteria defined to differentiate between the various levels of roles in a family or sub-family.
Example: Finance	Example: Accounting and Taxation	Example: Accountant	Example: Junior Accountant

Figure 1 "Job family concept" by Korn Ferry "Job Family Kick Off Teixeira Duarte" (2022)

Each role in a company has its form, which is filled out by HR (or another responsibility external entity) and used as a benchmark to employ and assess the company's workers:

Organizational Group	
Level	
Job Grade	
Main Responsibilities	
Academic qualifications (reference, not mandatory)	
Specialty Area (reference, not mandatory)	
Experience (reference, not mandatory)	
Management Experience (reference, not mandatory)	
Skills	
Criteria for Differentiation	Know-How
	Complexity
	Autonomy

Figure 2 "Job Family Model Job Role Structure" by Korn Ferry "Job Family Kick Off Teixeira Duarte" (2022)

The first three layers provide only the necessary information about the function without further explanation. Given the range of tasks that may be included in a single role, the primary responsibilities are typically outlined in a generalized, thorough manner with reduced detail. The obligations are more concerned with the activities themselves than with the specific task or object that is the focus of the job. Academic qualifications are the educational prerequisites for carrying out a role and serve as recommendations rather than requirements. According to the distinction criteria, the qualifications are standardized. Specialty Areas are the areas of academic study or professional experience that seem pertinent to performing the function. Experience and management experience presuppose a particular number of prior years of employment in that position. Once more, references rather than demands. Skill-specific capabilities are referred to as skills. The final layer, broken into three subcategories, establishes criteria for separating seniority levels within the same function (Teixeira Duarte, 2021). Based on these benchmarked criteria, employees are filtered into different roles. The JFM makes the employment path for the employee clearer and helps the company better scale and understand the scope of the employee's work. Additionally, it

standardizes and simplifies the functions. The framework also helps a company develop a further and deeper understanding of their staff. Meaning a company can compare e.g. women and men in a job family and analyze potential pay gaps. Besides simplifying the scope of work and the hiring process of new employees, the JFM also supports several other HR-related tasks. The framework helps to differentiate between high and average performers and helps showcase how workers' competencies change or progress with different levels (CAMPION, et al., 2011).

2.1.2 Development of a competency-based human resource strategy using the example of the Job family model

The development of the Job Family Model is highly tailored to the company's needs and requirements, thus, difficult to be studied. Therefore, this literature review section will also consider the general development and implementation of competency-based employee assessment with a focus on the JFM. The JFM is part of the competency-based human resource strategies (Dubois, 1993).

Firstly, it seems necessary to define specific terms to avoid uncertainties. According to Korn Ferrys' Four-Dimensional Executive Assessment, **competencies** are observable abilities and necessary for professional success. They give a brief glimpse of a person's level of competence in job-related abilities and demonstrate what they are now capable of. In comparison, **experiences** refer to a numerical number of working years. Experiences set leaders apart. CEOs are more likely to have completed developmental experiences in financial management, strategy creation, and external interactions than leaders at other levels (The Korn Ferry Institute, 2016).

To successfully develop and implement a competency-based human resource strategy, the company, more specifically the human resource department, must be clear about the reasoning behind implementing the approach. Usually, the intention is to address the growing need within a company to translate business imperatives into new learning and performance requirements and to help the company face rising market competition and challenges. Hence, those models help to facilitate organizational change. The frameworks are also used to improve individuals, teams, and operational effectiveness, achieve cultural integration and organizational alignment as well as strengthen the overall HR process (Gangani, McLean, & Braden, 2006).

As previously stated, the JFM is a huge part of competency-based frameworks. To properly implement the model, each company must pay close attention to its unique resources and working structures. A universal guide to implementing the framework cannot be applied. However, there are some general guidelines and procedures a company can follow to successfully restructure the company's workstream (Bosse, 2015).

According to a paper written by the consultancy Baumgartner & Partner, it usually can be structured into six steps. The first four steps are the approach of **developing the job families.** Followed by the last two steps, which are considered the **assignment of the job families.** As a first step, the company must define an <u>internal</u> understanding of the job families. Thus, the human resource team must develop a clustering for all *Job Families, Subfamilies, roles,* and *levels*. The scope of each layer is previously explained in Figure 2.

Followed by the internal understanding, the company must develop specific definitions of the criteria for differentiating job families. In total, there can be six criteria that need a further definition (Baumgartner & Partner, 2014):

1. **Goals and Prioritization:**
   a. Optimization of knowledge communities and competence management
   b. The basis for personnel development, workforce planning
   c. Creation of a new organizational understanding, overcoming hierarchical barriers

2. **Criteria**
   a. Indications for a close relationship in terms of content
   b. Indications for a close relationship in terms of competencies
   c. Consideration of the business processes involved in the value chain

3. **Approach**
   a. Composition of project team and definition of relevant stakeholder
   b. Information gathering/securing commitment: use existing job descriptions and/or executive interviews.
   c. Piloting

4. **Scope**
   a. Selected core areas/ organizations unit vs. entire organization
   b. The focus of a possible Pilot

5. **Degree of differentiation**
   a. Horizontal, i.e., agreement on the number and further clustering

      b.   Vertical, i.e., identification of the need for substructures

6. **Interfaces**

      a.   Depending on the objectives with a focus on HR instruments (Grading, career management…) or even beyond (knowledge management…)

      b.   *Questions to be asked*: do these instruments already exist, or are they parallel to be developed?

Steps three to five entail the definition of the job families and their amount, the decision of substructures within those families, and lastly, the assignment of the individual functions according to job families (the ground of which are preferably workshops with the management) are all made in one step. Accordingly, the cross-organizational assignment can be done as soon as the job families are defined with their roles and functions. If the organization doesn't already exist in uniform (group-wide job titles) it is now the right time to formulate those precisely and consistently.

Lastly, the final step consists of simply allocating those functions that could previously not be identified (Fischer, Heusser, & Kleb, 2014).

2.1.3 Advantages of the Job Family Model

Applying the JFM seems to bring multiple advantages to the company and can be a driver for desirable changes. According to Yu Cheng Shen in the International Journal of Learning and Teaching, if implemented correctly, the JFM can support the business strategy to create a successful set of integrated people procedures that will assist you in attracting, retaining, and growing a high-performing workforce. The framework enables effective performance improvement, letting the company recognize and resolve skill gaps and areas for development by implementing professional development plans based on the developed curriculum (Shen, 2019). Employing the model can also help to manage career expectations, meaning that based on the structure of ladders and levels within the JFM, it outlines and manages expectations in the current role and possible routes for future progression. Furthermore, it helps to provide governance in career development activities, thus ensuring equity and fairness, which co-aligns with identifying business needs, which in most cases leads to eventual career development opportunities. Second to last, the implementation of the model helps to maintain employee engagement, motivation, and commitment. This comes from the assumption that employee perceptions of chances for professional growth and career advancement lead to higher discretionary effort and improved productivity. Lastly, the JFM

helps retain staff by retaining talent while reducing spending on hiring, choosing, orienting, and training (Lawrence, N/A).

In conclusion, it can be distinguished between two major advantages of the JFM.

- **Competence management**: The JFM forms the basis for process-oriented competence management. The definition of the professional and interdisciplinary competencies critical to success in the JFM should form the basis for updating core competencies at the company level. Also for competency-oriented qualifications oriented to the business processes at the employee level. The existence of these competence profiles in the Job Family Clusters is to be empirically proven (Campion, Fink, Ruggeberg, Carr, & Phillips, 2011).
- **Career planning**: With the help of the JFM, careers can be planned and implemented across departmental boundaries. The Job Family organization promotes cross-divisional careers oriented to business processes. From the company's perspective, the JFM opens up new dimensions in the search for personnel by expanding the search options to adjacent "scenes" related to the business process (Bosse, 2015).

2.2 Internal communication strategy

Internal communication is a multidisciplinary field between public relations, human resource management, and marketing. It serves several organizational purposes while also serving no particular aim that benefits the company's clients (Verčič T. , 2019). Internal communication is a topic of study in organizational psychology, managerial and executive studies, and public relations, among other fields (Men & Bowen, 2017).

Nonetheless, the public relations and corporate communication functions have the best understanding of internal audiences in practice, even though many functions claim to be responsible for a well-functioning corporate communication (Verčič & Špoljarić, 2020). The next chapter of this thesis aims to shed light on developing and introducing an appropriate **internal communication strategy.**

2.2.1 Introduction to internal communication strategies

Many recent studies on businesses and/or organizations have concentrated on the impact of extraneous communication, like advertising and public relations. The strategic significance of internal communication and training has received little attention. The relevance of creating an internal communication strategy is examined in this study. It demonstrates why internal

communication should be viewed as the "first front" in the struggle for customers. When internal communication is based on solid corporate principles, it can help turn important personnel into people who contribute value to the organization and deliver on its promises. Organizations that emphasize promoting employee engagement are undoubtedly benefiting more from personnel dedicated to the institution's culture and willing to go above and beyond the fundamental responsibilities of their position. Employee engagement fosters cooperation, enhancing organizational efficiency and ultimately leading to higher profitability. According to Towers Watson, there is a clear correlation between excellent communication and financial performance: businesses with extremely successful communication are 1.7 times more likely to outperform their competitors. Not integrating internal communication strategy into the institution's overall strategy brings a significant danger of losing talent to rivals that aggressively promote their employee value propositions to recruit new employees. They risk having personnel who lack accurate information, resulting in poor decision-making and a poisonous and failing business culture due to unsatisfied employees (Stegãroiu & Talal, 2014).

2.2.2 Internal communication methods

Technological advancements change the underlying terrain of communication and how businesses internally communicate. Organizations now have easy access to various new communication platforms, such as Facebook business sites, Twitter, instant messaging, and YouTube, which have completely changed how businesses interact with their workforces and which channels are most efficient for doing so (Men L. R., 2014).

The commitment of top management is the cornerstone of successful communication. Effective and fruitful communication is planned, built, and managed like any other activity, thus encouraging innovative action in pursuing strategic objectives (Wood, 2006).

Internal corporate communication channels mostly depend on the structure of the company (Wood, 2006). However, there are several common ways in which news within an organization can be communicated down the line.

Corporate T.V., wall posters, and corporate magazines are all examples of one-way broadcasting (one-to-many) technologies that businesses have historically utilized for internal communication. Today, there is a huge possibility for encouraging employee participation in practice through computer-mediated dialogue and shared electronic resources (Beirne &

Cromack, 2009). Digital internal communication can be broken down into three major aspects (Wood, 2006).

- **Social Media:** Although more frequently used for external corporate communication, the use of social media for internal communication keeps emerging (Wood, 2006). It seems that internal social media enables knowledge exchange, cooperation, and communication between employees and management and improves interactions across business divisions, geographies, and hierarchical levels (Ewing, Men, & O'Neil, 2019).

- **Intranet:** The term "intranet" will refer to all web-based ICT applications and services that support business operations and are accessible to organizational personnel. Put another way, the intranet is a technique for arranging people, work, and communication (Martini, Corso, & Pellegrini, 2009). Generally speaking, the intranet is a private, secure online network where employees can create content, communicate, collaborate, manage tasks and events, and develop the company culture (Techslang, 2022). Numerous beneficial developments at your business can be sparked by intranets (for example, according to research from Deloitte, when organizations implement social technologies like intranets, they see a 20% increase in employee satisfaction). And what is a key advantage of intranets? Internal communication has improved (Deloitte, 2014).

- **Internal instant messaging:** Internal instant messaging alternatives are also available for quick and effective internal communication. Perhaps because of this, there is a risk that employees will spend too much time chatting with coworkers on Instant messaging or downloading viruses or spyware (Lipiainen, Karjaluoto, & Nevalainen, 2013). It has been proven that live chats have become the leading digital contact method: 54% state that they are much happier and more productive when chatting with colleagues. This ranks as their *top reason* for job satisfaction – ranking higher than the job itself (42%) and even salary (40%) (Binyamin, 2021).

As stated above, it has historically been fruitful to communicate one-to-many. Nonetheless, due to the rise of technology within the last couple of decades and the emergence of new communication trends, employees value two-way communication much more. Two-way communication is the practice of businesses encouraging their staff to participate in company discussions and freely express their ideas, opinions, and concerns. A study shows that employees who feel their voice is heard are 4.6x more likely to feel empowered to perform their best work (Beheshti, 2019). Two-way communication can be best performed using digital broadcasting methods, as displayed above (Jouany, n.d.).

2.2.3 Advantages of internal communication strategies

Today's business environment is undergoing changes that redefine employees' expectations. Organizations quickly realize that they require from their employees more than just mere compliance: they require - now more than ever - their minds, creativity, energy, and devotion. When everyone's efforts are directed in the same direction, a company can only succeed to its full potential (Hopkins, 2015). This shows how important it is for a company to pursue a successful internal communication strategy, independent of its size.

Numerous benefits arise from a great internal communication strategy, which will be displayed in the following section of the thesis.

For once and probably the most important benefit: successful internal communication almost always leads to higher employee engagement (Karanges, Johnston, Beatson, & Lings, 2015). By providing a certain degree of transparency into the daily processes and tasks within the company's management, senior leaders and supervisors can increase employee engagement by communicating in a way that makes them feel like a part of the company's internal community. Corporate communication that encourages staff to communicate their thoughts and opinions with the company and their supervisor can help to accomplish this. Employees are more routinely included in talks about their responsibilities and corporate goals by organizations and managers. Internal communication should also make it easier for staff members to connect their beliefs and objectives to those of the company (Sluss, Klimchak, & Holmes, 2008). With higher employee engagement, a higher level of performance comes naturally (Verčič & Vokić, 2017).

Internal communication has also been recognized to play a big role in increasing organizational effectiveness. It means that employees feel more connected to each other and those who hold decision-making connections. A study done by McKinsey Global Institute states that employee productivity and effectiveness increase by 20 – 25% in institutions where workers feel and are connected (McKinsey Global Institute, 2012).

Additionally, it's been proven that an effective strategy reduces overall costs, absenteeism, and a higher quality of services and products (Clampitt & Downs, 1993).

3. Research Methodology

3.1 Design

As a first part, this report aims to analyze the current performance level of the company T.D. in comparison to U.K. standards. Secondly, a recommendation for a communication tool will be developed to help the company communicate those findings appropriately to their employees. For the second part, educated recommendations will be made.

To effectively compare the current performance level of T.D. to the standards of the U.K., the current performance benchmark[1] of the company (based on an analysis done by the consulting company Korn Ferry) is analyzed using the qualitative research methodology *Comparative Analysis*. To continue with the performance analysis, it is of utmost importance to note that T.D. currently aims to structure its work using the Framework Job Family Model. The literature indicates that the Job Family Model increases the ability to properly manage company competencies and develop career plans and opportunities for future and existing employees (Bosse, 2015).

As a working ground for the data analysis serves an overview of the different Job families, Sub Families as well as their roles and levels tailored to the company structure of T.D. This study's main objective is to analyze how T.D. employees' working conditions, demands, and requirements differ from the U.K. A comparative Analysis was performed on the data input given by T.D. and governmental inputs from the U.K. (see below).

As mentioned above, T.D. hired a consulting company to analyze their company structure using the JFM. The output of this analysis is a diagnosis of the As-is situation, as the following criteria by which T.D. organizes its employees: *Main Responsibilities, Educational qualifications, Specialty Area, Work Experience, Critical technical skills, Cross-cutting technical skills, Behavioral skills,* and lastly *Criteria for differentiation* which is divided into *Know-How, Complexity,* and *Autonomy.* In this thesis, those criteria are being compared to the equal output of the U.K. To effectively match T.D. to the U.K., the same criteria were synthesized from the governmental websites of the competing countries (Goldbach, 2015). The output was sourced from the digital platform www.goconstruct.org (U.K.). To ensure the validity of the data, only governmentally approved data was used (Brydges, 2013).

Due to certain time constraints and the project's magnitude, the analysis only focuses on the Job Family "Production" and only on the U.K. Originally, it was planned to also analyze the

---

[1] It is noted that the performance requirements seen in the excel table attached are industrial benchmarks developed by the consulting firm . They are not explicitly tailored to Teixeira Duartes' internal structures.

United States and Canada. However, certain circumstances made it impossible to take the two additional countries under consideration.

The second part of the thesis concentrates on promoting those findings to T.D. by using a simple yet effective internal corporate communication strategy. For this, the researched literature was examined and tailored to the needs of T.D.

This paper will take an analyzing approach to the research with exclusively qualitative data to provide educated conclusions.

3.2 Comparative Analysis Method

Comparative analysis is used when examining the similarities and differences between two or more sources to come to new insights or conclusions about those sources (Ragin, 1987). Subsequently, judgments can be made, and deductions are drawn. Comparative analysis is usually included in the broader research methodology commonly known as "qualitative research" as it answers questions such as "why" and "how" rather than focusing on "how many" or "how often", which would include numerical data, hence quantitative research (Bryman & Bell, 2012). A common approach to a comparative analysis is to first look at the broader picture and then narrow it down layer by layer as you determine similarities and/or differences more precisely. Traditionally, comparative analysis strongly emphasized "explaining differences and explaining similarities". This aids in establishing connections between two or more phenomena and offers solid justifications. Today, based on a particular subject or area of interest, comparisons are made on various levels, including regional, national, or more significant geographical boundaries, as seen in this research (Azarian, 2011). Several methods can be used when doing a comparative study, although Tilly points out there are four main types, namely: individualizing, variation-finding, universalizing, and lastly, encompassing (Tilly, 1984, p. 82). This thesis aims towards the approach of the *Individualizing comparison*, as this method contrasts selected few cases to better understand the unique characteristics of each situation (Tilly, 1984, p. 82). This entails thoroughly defining the attributes or traits of each case being researched. This increases our expertise and allows us to analyze cases in depth (Fredrickson, 2000).

3.3 Data Preparation

For the data to be correctly compared, the input provided by T.D. had, in the first place, be translated from Portuguese to English, consisting of 40 job roles. Each job function has about 50 cells, summing up to 1724 cells that had to be translated. However, the job roles were already structured in the layout of the JFM, which simplified the analysis process. Those said job roles had to be compared to those from the Go Construct STEM Ambassador data. Per contra, this data had to be researched on the digital platform of GCS and then modeled into the structure of the JFM, providing us with several job roles to be compared to each other.

4. Data Analysis

The research of this thesis is exclusively based on secondary data, as someone else collected the input in the past and solemnly analyzed it in this project (Benedictine University, 2022). To be looked at and compared are two sources: on the one hand, data collected by the consulting firm Korn Ferry, as previously mentioned on behalf of T.D., and on the other hand, data compiled by GCS Ambassadors. A group of construction professionals in the U.K. The data provided by GCS is vetted and approved by the government of the U.K. (Go Construct STEM Ambassador, 2022), as proposed by T.D. as input for the project development. The data provided by GCS found in this thesis is directly taken from the website.

For the analysis, the content of GCS is used as a benchmark for job requirements and elements in the U.K. It is assumed that every construction company in the U.K. works with those standards.

This research aims to find differences and similarities between those two sources that can later be formulated into educated recommendations for T.D.

4.1 Analysis

In this analysis, a total of 21 jobs were compared to each other, which are the following:
(1) Contract Director, (2) Construction Director, (3) Geo-Technician, (4) Civil Engineer, (5) Team Leader, (6) Document Controller, (7) Production Administrative Technician, (8) Carpenter, (9) Formworker, (10) Scaffolder, (11) Bricklayer, (12) Stonemason, (13) Plant Mechanic, (14) Plumber, (15) Welder, (16) Land drilling operative, (17) Cementmaker, (18) Electrician, (19) Crane Driver, (20) Painter (21) Assistant.

As previously stated, specific criteria throughout both sources were compared, that is:

- Main Responsibilities
- Educational Qualifications
- Specialty Area (if mentioned)
- Experience
- Management Experience
- Critical technical Skills
- Cross-cutting Technical Skills
- Behavioral Skills
- Criteria of differentiation
  - Know-How
  - Complexity
  - Autonomy

Usually, the Job Family Model also distinguishes between different Levels and Job Grades within each function. However, those were not represented in the GCS source, making it impossible to compare. Each job takes approximately 50 characteristics which sum up to 1724 "characteristics x job" in total to analyze.

The analysis of this thesis is based on an approach that was built before to better structure, understand, and follow this study. As previously mentioned, several times, the goal is to find **similarities** and **differences** between the two sources. Hence both sources must be looked at attentively. However, the objective is not to see those in the detailed description of each job but rather formulate an overall judgment. Nonetheless, it is crucial to look at every position and evaluate possible factors.

The overall structure of the analysis is as follows: the first step for each job is to look at every job and read as well as compare both sources in depth to build an overall knowledge of the data. This already gives a general impression of possible outcomes, and general assumptions can be made. Secondly, the structure of the job family model is taken under inspection, which is how both sources were structured. Also, considering the input given for all inspected sections of the job family model. By this, detailed knowledge of the information was transferred as well as the requirements and standards each source holds against their employees. As the third and last step, the job roles with the most considerable discrepancies will be further analyzed. With this approach, it is possible to go from the big picture to a very detailed impression step by step while continually giving the reader a red thread to guide him,

which is a common approach with a comparative analysis. It is essential to mention that this approach was established by the researcher and is not commonly used in a comparative study.

Generally, T.D.s' employee profile is much more extensive and detailed than the profiles given by GCS. This may be explained as T.D. hired an external company to specifically do that task while the GCS is merely educational for the general public and those who are interested in the construction profession.

4.1.1 First Step Findings

Firstly, GCS doesn't provide information on every job role T.D. employs. Overall, 21 out of the 40 functions are found in this source. When looking at the two data sources, it gets evident that the input provided by T.D. is structured according to the JFM, giving each Job role multiple levels as well as grades. As previously mentioned in the literature research, this shows the hierarchy level and has an impact on the responsibility, managerial background (if required), and so on. From the GCS, it was not possible to extrapolate the different levels and grades, making the input more generalized and less extensive. For this analysis, it's assumed that the feedback provided by GCS is equivalent to the first level of the JFM. However, whilst reading the content, it becomes clear that primarily the Main Responsibilities are described more in detail by the GCS than by T.D. This is especially noticeable in the Job Function "Electrician" or "Contract Director". While GCS gives the reader detailed descriptions and multiple bullet points, the content of T.D. only provides the reader with a few sentences that don't go deeper into a description of the tasks they are responsible for (please see figures three and four). Neither are they describing them as job role-specific, instead giving generalized statements that can be applied to other jobs as well. Nonetheless,

T.D. provides more information in general, such as the complexity and autonomy each job role brings with them.

Function	Contract Director	
Organizational Group	**Management**	
Level	I	II
Job Grade	20	21
Main Responsibilities	- Supervise and ensure cooperation between the parties involved in the realization of the consortium object - Monitor the implementation of the measures required for the conclusion and realization of contracts - Negotiate contracts to be signed with third parties within the scope of the consortium agreement, or its amendments - Address to third parties statements concerning acts provided for in the respective contracts, except when they involve modifications or termination of the same contracts - Establish links with external entities such as economic, legal, accounting or other consultants appropriate to the needs - Sign, modify or develop contracts with third parties within the scope of the consortium contract, as well as powers of representation in court, including the receipt of the first summons, and for transactions aimed at either preventing or terminating litigation - Ensure the representation of the Company's interests in consortium councils	
Educational Qualifications (reference, not required)	Bachelor's Degree / Master	Bachelor's Degree / Master
Specialty Area (reference, not required)		
Experience (reference, not required)	>12 years	>12 years
Management Experience	5 - 7 years	7 - 10 years
Critical technical skills	Negotiation	Negotiation
Cross-Cutting Technical Skills	People Management Budget Management Project Management	People Management Budget Management Project Management
Behavioral Skills	Strategic Vision, Business Knowledge	Strategic Vision, Business Knowledge
Criteria for Differentiation — Know-How	Possesses in-depth, highly specialized knowledge with deep understanding of sophisticated principles, concepts and practices gained through extensive development in a specific field. Solid understanding of a complex discipline and/or awareness of multiple disciplines as well as broad business knowledge, enabling activity development and problem solving and leadership of heterogeneous organizational areas.	Possesses solid knowledge of a complex discipline and/or awareness of multiple disciplines with different levels of complexity. Applies concepts comprehensively, consciously and intuitively, and influences and develops others in the direction of their learning and application. Is involved in strategic management decisions, issuing and defending technical advice in a functional domain, and can transfer knowledge and influence others to follow.
Complexity	Deals with new, unreferenced situations that require the development of new concepts and/or solutions. Demonstrates the ability to solve complex problems with little or no precedent. Ensures the design and implementation of organizational policies within organizational areas of high heterogeneity, size and/or impact.	Deals with complex situations with multiple sources of information, requiring specific judgment about diverse situations that may go beyond his/her functional domain. Coordinates activities within a functional plan or with relative heterogeneity, acting within a tactical/strategic plan.
Autonomy	Acts with high autonomy within a defined area and makes supportive decisions specific to his area. Responsible for the achievement of annual results, presenting high latitude in determining objectives and approaches to critical activities, as well as direct control over the resources used.	Acts independently within a clearly defined area, being responsible for implementing strategy, developing policies and determining methods and procedures. Makes autonomous decisions within his/her functional area, with direct responsibility for resources and results achieved, as well as providing diagnostic and/or advisory information.

Figure 3 "Job Role Contract Director" data provided by Teixeira Duarte

Function	Contracts Director	
Organizational Group	Management	
Level	I	II
Job Grade	20	21
Main Responsibilities	- Preparing tenders for clients and commercial bids to help bring in new business Developing and presenting project proposals Meeting with clients to find out their requirements Producing plans and estimating budgets and timescales Discussing, drafting, reviewing and negotiating the terms of business contracts Agreeing budgets and timescales with the clients Managing construction schedules and budgets Dealing with any unexpected costs Attending site meetings to monitor progress Acting as the main point of contact for clients, site and project managers Working with third parties to ensure that everyone understands their roles and responsibilities Making sure construction projects meet agreed technical standards Liaising with technical and financial staff, sub-contractors, legal teams	
Educational Qualifications (reference, not required)	Bachelors degree or apprenticeship	
Specialty Area (reference, not required)		
Experience (reference, not required)	Multiple Years are necessary	
Management Experience	Management skills are required (no specific number of years)	
Critical technical skills	Discussing, drafting, reviewing and negotiating	
Cross-Cutting Technical Skills	Budget Skills People Skills	
Behavioral Skills	Business Management Skills, verbal communication	
Criteria for Differentiation — Know-How	As a contracts manager, you'll be responsible for overseeing important legal documents relating to construction projects and ensuring that any issues which arise are resolved as quickly and effectively as possible.	
Criteria for Differentiation — Complexity	?	
Criteria for Differentiation — Autonomy	?	

Figure 4 "Job Role Contract Director" data Provided by Go Construct STEM

4.1.2 Second-Step Findings

Looking at both sources framed into the JFM, it becomes clear that T.D. holds higher standards against their employees than GCS. This becomes especially noticeable in the sections on educational requirements, previous work- as well as managerial experience. As in the case of the Main Responsibilities, the role of the Construction Director is again an excellent example of this finding. T.D. expects from their employees either a bachelor's or master's degree, a minimum of 12 years of working experience, as well as 5 – 7 years of management experience. The second level must present up to 10 years of management

experience, although this level is not covered by GCS. In contrast, GCS only requires a bachelor's degree or apprenticeship as well as and not a specific amount of working or management experience. It is merely stated that working experience is necessary but can be gathered in the course of employment, and management experience is beneficial but not a must. The table below was built for a more straightforward and more clarified overview of the educational and managerial expectations. The shaded rows of the table are the jobs with the most prominent differences regarding Education and experience.

	Educational Requirements		Job Experience		Management Experience	
	T.D.	GCS	T.D.	CGS	T.D.	CGS
Contract Director	Bachelor's degree / master's degree	Bachelor's degree or Apprenticeship	> 12 Years	Multiple years necessary	5 -7 Years	Management skills are required
Construction Director	Bachelor's degree / master's degree	Bachelor's degree / Foundation Degree	2- 4 Years	Multiple years necessary	2 Years	Management skills are required
Geo-Technician	Bachelor's degree / master's degree	A Level or bachelor's degree	0 – 2 years	Multiple years necessary	Not required	Not required
Civil Engineer	Secondary Education (Grade 12) / Post-secondary non-higher-level qualification	Secondary Education (Grade 12) or University Degree	1 -3 Years	Not necessarily needed	Not Required	Not required
Team Leader	Secondary Education (Grade 12) / Post-secondary non-higher level qualification	Secondary Education (Grade 12) or Apprenticeship	3 – 6 years	Some years are required	Not required	Not required
Document Controller	Secondary Education (Grade 12) / Post-secondary non-higher level qualification	Secondary Education (Grade 12) or Apprenticeship	0 – 3 years	Some years are required	Not required	Not required
Production Administrative Technician	Secondary Education (Grade 12) /	Secondary Education (Grade 12) or Apprenticeship	0 – 3 years	Not required	Not required	Not Required

	Post-secondary non-higher level qualification					
Carpenter	Secondary Education (Grade 12)	Secondary Education (Grade 12) or Apprenticeship	0 – 2 years	Some years are required	Not required	Not required
Formworker	Secondary Education (Grade 12)	Secondary Education (Grade 12) or Apprenticeship	0 – 2 Years	Some years are required	Not required	Not required
Scaffolder	Secondary Education (Grade 12)	No educational requirements	0 – Years	Some years are required	Not required	Not required
Bricklayer	Secondary Education (Grade 12)	Secondary Education (Grade 12)	0 – 2 years	Not required	Not required	Not required
Stonemason	Secondary Education (Grade 12)	Secondary Education (Grade 12)	0 – 2 years	Not required	Not required	Not required
Plant Mechanic	Secondary Education (Grade 12)	Secondary Education (Grade 12)	0 – 2 years	Not required	Not required	Not required
Plumber	Secondary Education (Grade 12)	Secondary Education (Grade 12)	0 – 2 years	Some years are required	Not required	Not required
Welder	Secondary Education (Grade 12)	Secondary Education (Grade 12)	0 – 2 years	Some years are required	Not required	Not required
Land drilling operative	Secondary Education (Grade 12)	Secondary Education (Grade 12)	0 – 2 Years	Some years are required	Not required	Not required
Cementmaker	Secondary Education (Grade 12)	Secondary Education (Grade 12)	0 – 2 Years	Some years are required	Not required	Not required
Electrician	Secondary Education (Grade 12)	Secondary Education with a specific training	0 – 2 Years	Some years and comprehensive training are required	Not required	Not required
Crane Driver	Secondary Education (Grade 12)	Secondary Education (Grade 12) or Apprenticeship	0 – 2 Years	Some years are required	Not required	Not required
Painter	Secondary Education (Grade 12)	Secondary Education (Grade 12) or Apprenticeship	0 – 2 Years	Some years are required	Not required	Not required
Assistant	Secondary Education (Grade 12) / Post-secondary non-higher	Secondary Education (Grade 12) and a diploma	0 -2 Years	1 Year	Not required	Not required

	level qualification					

Table 1 "Analysis Educational Requirements, Job Experience, and Management Experience" by data given by Teixeira Duarte and Go Construct STEM

The most differences can be found in jobs Contract Director, Civil Engineer, Production Administrative Technician, Bricklayer, Stonemason, Plan Mechanic, and Electrician. All are aiming towards T.D. having higher expectancies for their employees, therefore demanding a more professional background, especially in terms of education. While GCS almost never requires a master's degree, T.D. holds that as a requirement for several jobs. *Management Experience* is the criterion that has the most considerable overlaps. It can be assumed that's because only specific types of jobs need a management background, which doesn't differ depending on the country but instead on the job itself. To sum that section up, it can be claimed that T.D. holds higher expectations towards its employees when it comes to previous working experience as well as their educational background. Those findings are especially noticeable in the job roles stated above. However, when it comes to management experience, the two sources don't differ significantly. Hence, T.D. allocates potential employees to the same standard as GCS concerning management experience.

Furthermore, the last section of the Job Family model, called "Criteria for Differentiation," which is sectioned into three parts: *Know How*, *complexity,* and *autonomy*. The data shows differences between the two sources. While the data of T.D. covers every aspect of those three parts, GCS only gives clear input about the part *Know How*. Again, this indicates higher expectations for their employees on the part of T.D. since it is described in detail and shows the employee must cover a specific degree of job complexity and autonomy to perform the respected job properly. GCS doesn't show that degree of detail or requirement. Admittedly, T.D. often gives the same requirement standards in that section for multiple jobs if they are in the same organizational group. This can be witnessed in the organizational group "intermediate Management": looking closer at every function employing an intermediate Manager, it becomes clear that all of them have the same prerequisite for the differentiation criteria. To stick with the example of intermediate management, every organizational group requires "*Holds sufficient knowledge in technical, scientific or specialized fields based on an understanding of underlying facts, principles and theoretical concepts.*" in terms of Know-How or *"Solves current problems by selecting, interpreting, adapting and applying available information by applying technical or scientific principles."* about Complexity. The shaded

rows of the table are the jobs with the biggest differences regarding criteria for differentiation.

	Criteria for Differentiation					
	Know-How		Complexity		Autonomy	
	T.D.	GCS	T.D.	CGS	T.D.	CGS
Contract Director	'Possesses in-depth, highly specialized knowledge with a deep understanding of sophisticated principles, concepts, and practices gained through extensive development in a specific field. Solid understanding of a complex discipline and/or awareness of multiple disciplines, as well as broad business knowledge, enabling activity development and problem-solving, and leadership of heterogeneous organizational areas.	As a contracts manager, you'll be responsible for overseeing important legal documents relating to construction projects and ensuring that any issues which arise are resolved as quickly and effectively as possible.	Deals with new, unreferenced situations that require the development of new concepts and/or solutions. Demonstrates the ability to solve complex problems with little or no precedent. Ensures the design and implementation of organizational policies within organizational areas of high heterogeneity, size, and/or impact.	N.A.	Acts with high autonomy within a defined area and makes supportive decisions specific to his area. Responsible for the achievement of annual results, presenting high latitude in determining objectives and approaches to critical activities, as well as direct control over the resources used.	N.A.
Construction Director	Holds sufficient knowledge in technical, scientific, or specialized fields based on an understanding of underlying facts, principles, and	Overseeing the logistical requirements of a project // Delegating work to senior colleagues and their teams // Meeting regularly with clients, third parties, and managers to report on progress // Setting	Solves current problems by selecting, interpreting, adapting, and applying available information by applying technical or scientific principles.	N.A.	It acts under general supervision but manages its daily activity within the framework of established goals and guidelines in contexts of varying Complexity.	N.A.:

	theoretical concepts.	targets, objectives, and responsibilities for all supervised staff// Regularly review timings, budget, labor, risk, and project plans to ensure work stays on track// Reporting to clients and board members on project progress // Supplying financial records // Recommending policy and procedure improvements // Monitoring performance against agreed criteria // Ensuring contractual obligations are fulfilled // Ensuring the delivery of high-quality work within contract timescales // Dealing with contract disputes and mitigating the impact of any issues // Working in an office and on a construction site.				23
Geo-Technician	Holds sufficient knowledge in technical, scientific, or specialized fields based on the understanding of underlying facts, principles, and theoretical concepts.	A geotechnical engineer has an important job role in analyzing soil, rock, groundwater, and other earth materials prior to major construction projects. This analysis can help determine what materials must be used in the structure's foundation or overall design or whether the project needs additional measures to ensure it is safe.	Solves current problems by selecting, interpreting, adapting, and applying available information by applying technical or scientific principles.	N.A.	Acts under general supervision but manages daily activity within the framework of established goals and guidelines in contexts of varying Complexity.	N.A.

Civil Engineer	Holds technical expertise in work methods, techniques, and processes that require solid theoretical knowledge.	Civil engineers often specialize in one area, such as transportation (roads, airports, railways), environmental (flood barriers, turbines), geotechnical (mining and earthworks), maritime (ports and sea defenses), or structural (dams, pipelines, offshore platforms).	Performs tasks that are specific in nature, purpose, and content, with limited knowledge of peripheral events or circumstances.	N.A.	Performs standardized activities under direct supervision, with some level of autonomy, receiving instructions/guidance on the work to be performed.	N.A.
Team Leader	Holds specialized technical knowledge of facts, concepts, principles, and procedures specific to a given area of study or work, which requires sound theoretical knowledge and experience.	As a construction team leader, you will be responsible for the work carried out by your team. Duties may include planning workloads and delegating tasks to your colleagues. You may also be required to carry out practical tasks alongside your team day-to-day.	Performs activities that are very specific and similar to object and content, requiring standard solutions identified from among a set of alternatives that can be applied.	N.A.	Performs activities related to a variety of well-defined procedures, acting autonomously, with regular supervision of the results achieved.	N.A.
Document Controller	Holds specialized technical knowledge of work methods, techniques, and processes, which require sound theoretical knowledge.	As a document controller, you will be responsible for maintaining accurate records of company documentation. You could be sorting electronic or hard copies of project documentation and producing reports based on this.	Performs specific tasks as to their nature, purpose, and content, with limited knowledge of peripheral events or circumstances.	N.A.	Performs standardized activities under direct supervision, with some level of autonomy, receiving instructions/guidance on the work to be performed.	N.A.
Production Administrative Technician	Holds sound knowledge of standardized work methods, principles, processes, and procedures, requiring the use of general facts and information	As an administrator, you will be responsible for helping the smooth running of the business by ensuring filing and documentation is kept up to date. Duties may include using	Performs tasks with some specificity and solves current problems, the solution to which is obtained by discriminating choice among known alternatives and applying rules	N.A.	Performs tasks with regular direct supervision/guidance in structured contexts, with limited autonomy in solving common and routine problems.	N.A.

	and/or tools of moderate Complexity.	specialist computer software and understanding the requirements of the business you are working in. You could also be required to be customer-facing via e-mail, phone, or greeting visitors.	and/or with readily available assistance.			
Carpenter	Holds basic general knowledge necessary to perform simple tasks using a restricted and basic range of skills and/or use of simple equipment and materials.	As a carpenter, you will be involved in the design, cutting, and building of furniture using different types of wood. You could be working on-site, in clients' homes, or in a workshop.	Performs tasks and solves simple, everyday problems within standardized, detailed practices and instructions and/or with the availability of examples and/or immediate assistance.	N.A.	Performs tasks under daily supervision, in stable and structured contexts, with standardized routines and work methods, and with a limited level of autonomy and responsibility.	N.A.
Formworker	Holds basic general knowledge necessary to perform simple tasks using a restricted and basic range of skills and/or use of simple equipment and materials.	As a formworker, you'll be responsible for using casts to form concrete slabs, support beams, and walls to support the building process during construction.	Performs tasks and solves simple, current problems within standardized, detailed practices and instructions and/or with the availability of examples and/or immediate assistance.	N.A.	Performs tasks under daily supervision, in stable and structured contexts, with standardized routines and work methods, and with a limited level of autonomy and responsibility.	N.A.
Scaffolder	Holds basic general knowledge necessary to perform simple tasks using a restricted and basic range of skills and/or use of simple equipment and materials.	Scaffolders are vital to the construction industry, as so many construction crews require access via scaffolds, rigs, guard rails, and planks to carry out construction or restoration work.	Performs tasks and solves simple, everyday problems within standardized, detailed practices and instructions and/or with the availability of examples and/or immediate assistance.	N.A.	Performs tasks under daily supervision, in stable and structured contexts, with standardized routines and work methods, and with a limited level of autonomy and responsibility.	N.A.
Bricklayer	Holds basic general knowledge necessary to	As a bricklayer, you will be responsible for one of the most important elements of	Performs tasks and solves simple, everyday problems within standardized,	N.A.:	Performs tasks under daily supervision, in stable and structured contexts, with standardized routines and	N.A.

	perform simple tasks using a restricted and basic range of skills and/or use of simple equipment and materials.	construction within the housing industry. Duties include laying bricks, measuring out areas, and repairing or maintaining existing structures.	detailed practices and instructions and/or with the availability of examples and/or immediate assistance.		work methods, and with a limited level of autonomy and responsibility.	
Stonemason	Holds basic general knowledge necessary to perform simple tasks using a restricted and basic range of skills and/or use of simple equipment and materials.	A stonemason is responsible for helping to repair or maintain structures, such as churches or houses. This can include cutting or carving a variety of types of stone, and you will usually have to ensure you preserve the look and feel of the building.	Performs tasks and solves simple, everyday problems within standardized, detailed practices and instructions and/or with the availability of examples and/or immediate assistance.	N.A.	Performs tasks under daily supervision, in stable and structured contexts, with standardized routines and work methods, and with a limited level of autonomy and responsibility.	N.A.
Plant Mechanic	Holds basic general knowledge necessary to perform simple tasks using a restricted and basic range of skills, and/or use of simple equipment and materials.	As a plant mechanic, you will be responsible for inspecting machinery and ensuring that they are safe for use by repairing or maintaining them, often using specialist equipment.	Performs tasks and solves simple, everyday problems within standardized, detailed practices and instructions and/or with the availability of examples and/or immediate assistance.	N.A.	Performs tasks under daily supervision, in stable and structured contexts, with standardized routines and work methods, and with a limited level of autonomy and responsibility.	N.A.
Plumber	Holds basic general knowledge necessary to perform simple tasks using a restricted and basic range of skills and/or use of simple equipment and materials.	As a plumber, you will be responsible for ensuring the movement of water or drainage in a property is functioning correctly. This could involve installing new systems or repairing issues on existing pipes or systems.	Performs tasks and solves simple, everyday problems within standardized, detailed practices and instructions and/or with the availability of examples and/or immediate assistance.	N.A.	Performs tasks under daily supervision, in stable and structured contexts, with standardized routines and work methods, and with a limited level of autonomy and responsibility.	N.A.
Welder	Holds basic general knowledge necessary to perform simple	Knowledge of engineering, science, and technology Design skills and knowledge	Performs tasks and solves simple, everyday problems within standardized, detailed practices	N.A.	Performs tasks under daily supervision, in stable and structured contexts, with standardized routines and work methods, and with a	N.A.

	tasks using a restricted and basic range of skills and/or use of simple equipment and materials.	Knowledge of math Thinking and reasoning skills Excellent communication abilities	and instructions and/or with the availability of examples and/or immediate assistance.		limited level of autonomy and responsibility.	
Land drilling operative	Holds basic general knowledge necessary to perform simple tasks using a restricted and basic range of skills and/or use of simple equipment and materials.	As a land drilling operative, you will be responsible for investigating the ground on a variety of different construction sites before drilling holes into it to create gas wells or tunnels.	Performs tasks and solves simple, everyday problems within standardized, detailed practices and instructions and/or with the availability of examples and/or immediate assistance.	N.A.	Performs tasks under daily supervision, in stable, structured contexts, with standardized routines and work methods, and with limited level of autonomy and responsibility.	N.A.
Cementmaker	Holds basic general knowledge necessary to perform simple tasks using a restricted and basic range of skills and/or use of simple equipment and materials.	A concrete finisher is responsible for ensuring that poured concrete is laid and finished to the highest standard.	Performs tasks and solves simple, everyday problems within standardized, detailed practices and instructions and/or with the availability of examples and/or immediate assistance.	N.A.	Performs tasks under daily supervision, in stable, structured contexts, with standardized routines and work methods, and with limited level of autonomy and responsibility.	N.A.
Electrician	Holds basic general knowledge necessary to perform simple tasks using a restricted and basic range of skills and/or use of simple equipment and materials.	As an electrician, you will be responsible for ensuring the safety of electrical equipment. This could involve fixing problems that are reported or installing new systems, such as lighting and heating within new structures.	Performs tasks and solves simple, everyday problems within standardized, detailed practices and instructions and/or with the availability of examples and/or immediate assistance.	N.A.	Performs tasks under daily supervision, in stable and structured contexts, with standardized routines and work methods, and with limited level of autonomy and responsibility.	N.A.
Crane Driver	Holds basic general knowledge necessary to perform simple tasks, using a restricted and	As a crane operator, you will be responsible for the safe operation, control, and maintenance of cranes.	Performs tasks and solves simple and current problems within standardized and detailed practices and instructions and/or	N.A.	Develops tasks under daily supervision, in stable and structured contexts, with routines and standardized work methods, and with limited autonomy and responsibility.	N.A.

	basic range of skills and/or use of simple equipment and materials.		with the availability of examples and/or immediate assistance.			
Painter	Holds basic general knowledge necessary to perform simple tasks, using a restricted and basic range of skills and/or use of simple equipment and materials.	As a painter and decorator, you will be responsible for a variety of different tasks - such as applying paints and stains to new rooms, furniture, or equipment, or you could be assisting with other projects.	Performs tasks and solves simple and current problems within standardized and detailed practices and instructions and/or with the availability of examples and/or immediate assistance.	N.A.	Develops tasks under daily supervision, in stable and structured contexts, with routines and standardized work methods, and with limited autonomy and responsibility.	N.A.
Assistant	Holds basic general knowledge necessary to perform simple tasks, using a restricted and basic range of skills and/or use of simple equipment and materials.	A construction assistant works with his/her superiors to oversee the daily management, supervision, coordination, and successful completion of building construction and renovation projects.	Performs tasks and solves simple and current problems within standardized and detailed practices and instructions and/or with the availability of examples and/or immediate assistance.	N.A.	Develops tasks under daily supervision, in stable and structured contexts, with routines and standardized work methods, and with limited autonomy and responsibility.	N.A.

Table 2 "Analysis of Criteria for Differentiation" by data given by Teixeira Duarte and Go Construct STEM

Reading through the input provided above, it becomes clear that the requirements and expectations from T.D. are standardized and not tailored to the specific job role. This makes it difficult to directly compare the job roles between the two sources because, as previously said, GCS gives a very tailored overview of the Know-How. The biggest differences, as far as it's possible to tell, can be found in the Jobs Contract Director, Construction Director, Geo-Technician, Production Administrative Technician, Formworker, Bricklayer, Stonemason, Plant Mechanic, Plumber, and finally, Electrician. Due to the degree of detail in the input provided, the reader gets a better understanding of the necessary skills from the GCS source. For example, Construction Director: GCS provides a detailed and long list of skills that a Construction Director needs to bring. However, the list of skills from T.D. is not close to being as comprehensive. T.D. needs to elaborate on and enhance the skill requirements for that job. Thus, T.D.'s construction directors should also be skilled in e.g., *Overseeing the logistical requirements of a project* as the construction directors of GCS are to be able to

fully compete. However, this doesn't imply that GCS has higher expectations. Only that they find it more important to list the Know-How very detailed, this may be because GCS is a source for the public. The input provided by T.D. is only seen by internal employees who are very familiar with the duties of construction workers.

Nonetheless, T.D. provides detail on the autonomy and complexity of each job role. GCS doesn't provide any information on those two criteria. This information lack runs through the entire data content.

The last section of data to interpret is the hard and soft skills required to maintain the job. T.D., as well as CGS, give the same input, which makes it easier to compare. The skills are divided into *critical technical skills, cross-cutting technical skills,* and *behavioral skills*, which are skills that are directly associated with the job (critical technical skills), competencies that are not directly linked to the job but still necessary (cross-cutting technical skills) and lastly social competencies (behavioral skills). The table below shows the skills required by both sources.

	Critical Technical Skills		Cross-Cutting Technical Skills		Behavioral Skills	
	T.D.	GCS	T.D.	GCS	T.D.	GCS
Contract Director	Negotiation	Discussing, drafting, reviewing, and negotiating	People Management; Budget Management; Project Management	Budget Skills People Skills	Strategic Vision; Business Knowledge	Business Management Skills, verbal communication
Construction Director	Construction Management and Planning; Production and Engineering Process; Project Design Reading and Interpretation; Construction Processes	Construction Management; Building Management	Project Management; Planning and Organization; Internal Standards and Procedures	Engineering science and technology; Planning and Time management; Logistical Knowledge	Guidance for Optimization; Agility	Leadership skills; Organizational skills; Communication Skills
Geo-Technician	Construction Management and Planning; Production and engineering process; Reading and interpretation of design drawing;	Mathematics; Science and geological; Knowledge Sketching skills; Technical Knowledge; Analytical Knowledge	Project Management; Planning and Organization; Internal rules and procedures	Project Management and Planning; Social Skills (e.g., maintaining relationships)	Optimization orientation; Agility	Optimization Orientation

	Construction processes					
Civil Engineer	Reading and Interpretation of Project Design; Construction Processes; Materials and Equipment; Marking/Cutting/Painting Techniques; Handling and Identification of Tools	Reading and Interpretation of Project Design; Construction Processes; Materials and Equipment; Marking/Cutting/Painting Techniques; Handling and Identification of Tools	Planning and Organization; Standards and Internal Procedures	Planning and Organization; Standards and Internal Procedures	Customer Focus; Guidance for Action	Good communication skills; Customer focused
Team Leader	Reading and Interpretation of Project Design; Construction Processes; Materials and Equipment; Marking/Cutting/Painting Techniques	Construction process knowledge, Project understanding, Budget management	Planning and Organization; Standards and Internal Procedures	Team Management; Time and Efficiency Management	Customer Focus; Guidance for action	Communication Skills; Team working skills; Leadership skills; Problem-solving skills
Document Controller	Reading and interpretation of project design; Construction processes; Materials and Equipment; Marking/Cutting/Painting Techniques; Handling and identification of tools	Controlling and Project Knowledge; Office / Administrative Management; Project Knowledge; Internal Process Knowledge	Planning and Organization; Internal standards and procedures	Customer Focus; Technical Skills; Drive and Hands-on Mentality	Customer Focus Guidance for Action	Communication Skills
Production Administrative Technician	Reading and interpretation of project design; Construction processes; Materials and Equipment; Marking/Cutting/Painting Techniques; Handling and	Office Management Preparing, Organizing, and storing information in paper and digital form; Administrative tasks; Client relationships	Internal rules and procedures; Document and Information Management	Internal rules and procedure management	Collaboration; Effective Communication	Customer Focused; Communication skills

	identification of tools					
Carpenter	Construction processes; Materials and Equipment; Marking/Cutting/Painting Techniques; Handling and identification of tools	Construction processes; Building processes; Design skills and knowledge (cutting/painting); Knowledge of different materials	Internal standards and procedures	Computer and I.T. knowledge; Company knowledge	Collaboration Effective communication	Communication Customer focused
Formworker	Construction Processes; Materials and Equipment; Marking/Cutting/Painting Techniques; Handling and Identification of Tools	Construction and building knowledge Materials and Equipment	Internal standards and procedures	Internal and external procedures	Collaboration Effective communication	Customer-focused; Communication skills; Problem-solving mentality
Scaffolder	Construction Processes; Materials and Equipment; Marking/Cutting/Painting Techniques	Technical drawings and plans knowledge; Construction knowledge	Internal standards and procedures	Physical fitness; Good written skills, Hand-eye coordination, internal processes	Collaboration Effective communication	Communication skills; Collaboration
Bricklayer	Construction processes; Materials and Equipment; Marking/Cutting/Painting Techniques; Handling and identification of tools	Building and construction knowledge; Basic Machinery knowledge, Material and equipment knowledge; Handling tools efficiently	Internal standards and procedures	Internal procedures	Collaboration Effective communication	Communication Skills Teamwork
Stonemason	Construction processes; Materials and Equipment; Marking/ Cutting/ Painting Techniques; Handling and identification of tools	Construction Knowledge; Material and Equipment knowledge; Tool knowledge and skills	Internal standards and procedures	Internal standards and procedures	Collaboration Effective communication	Creative thinking and problem-solving mentality; Teamwork Mentality; Communication skills

Plant Mechanic	Construction processes; Materials and Equipment; Marking /Cutting /Painting Techniques; Handling and identification of tools	Construction process Design skills and knowledge; Handling and identification of tools	Internal standards and procedures	Engineering; Science, math, and Technology knowledge; Internal standards and procedures	Collaboration Effective communication	Communication skills; Teamwork orientated; Eye for detail
Plumber	Construction processes; Materials and Equipment; Marking /Cutting /Painting; Techniques Handling and identification of tools	Material and Equipment knowledge Construction processes Handling of tools and materials	Internal standards and procedures	Internal Processes	Collaboration Effective communication	Customer Focused; Communication skills; Teamwork mentality
Welder	Construction processes; Materials and Equipment; Marking/ Cutting/ Painting; Techniques Handling and identification of tools	Engineering science and technology knowledge; Construction Knowledge	Internal standards and procedures	Math knowledge; Internal process knowledge	Collaboration Effective communication	Thinking and reasoning skills; Excellent communication knowledge; Mentor knowledge and capabilities
Land drilling operative	Construction Processes; Materials and Equipment; Marking /Cutting/Painting; Techniques Handling and Identification of Tools	Construction processes; Material and equipment knowledge	Internal rules and procedures	Numeracy and I.T. abilities; Internal processes	Collaboration; Effective communication	Pressure resistance; Communication Processes; Team working abilities
Cement maker	Construction Processes; Materials and Equipment; Marking /Cutting/Painting; Techniques Handling and Identification of Tools	Construction processes; Technical Drawings and plans interpretation; Concrete Knowledge;	Internal rules and procedures	Internal processes and procedures; Good physical health	Collaboration; Effective communication	Collaboration; Communication skills

		Tool and machinery knowledge				
Electrician	Construction processes; Materials and Equipment; Marking /Cutting/Painting Techniques; Handling and identification of tools	Engineering science and technology knowledge; Design skills and knowledge; Construction processes; Electrician systems and equipment; Handling of tools and equipment	Internal standards and procedures	Internal Processes; Mathematical and analytical knowledge	Collaboration Effective communication	Customer focused; Good communication skills
Crane Driver	Construction processes; Materials and Equipment; Marking/ Cutting/Painting Techniques; Handling and identification of tools	Construction Knowledge; Spatial awareness; Machinery and tool knowledge	Internal standards and procedures	Internal Processes	Collaboration; Effective communication	Good communication skills, Teamwork abilities; Patience
Painter	Construction processes; Materials and Equipment; Marking /Cutting/Painting Techniques; Handling and identification of tools	Computer and hand-held device knowledge; Tools and equipment knowledge; Painting/Cutting and brush skills	Internal standards and procedures	Internal processes; Safety measures and standards	Collaboration; Effective communication	Communication skills; Customer orientation
Assistant	Construction processes; Materials and Equipment; Marking/ Cutting/Painting Techniques; Handling and identification of tools	Construction processes	Internal standards and procedures	Computer competency; Internal processes	Collaboration Effective communication	Organizational skills; Communication skills; Leadership skills; Negotiation skills

Table 3 "Analysis of Critical Technical Skills, Cross-Cutting Technical Skills, and Behavioral Skills" by data provided by Teixeira Duarte and Go Construct STEM

Light grey shaded: T.D. has higher skill requirements; dark grey shaded: GCS has higher skill requirements; Without shading: equivalent requirements.

This is perhaps the most interesting section of the framework since it concerns the worker's initial skills he must bring to the job. From the table, you can tell that for most jobs, the requirements are either the same or T.D. holds higher expectations towards their workers. This is especially noticeable in Jobs Construction Director, Geo-Technician, Document Controller, Production Administrative Technician, Formwoker, Bricklayer, Plumber, Welder, Land drilling operative, and Assistant. For those jobs, T.D. has a longer list of skill requirements rather than more difficult ones. That is most likely because the jobs initially are the same. The two countries find different skill sets appropriate. Construction Director is a great example of that case. Critical technical skills expected from T.D. include *construction management and planning, production and engineering process, project design reading and interpretation, and construction processes*. On the other hand, GCS only displays construction and *building management* as critical technical skills.

Equal requirements apply to jobs Civil Engineer, Carpenter, Scaffolder, Stonemason, Plant Mechanic, Cementmaker, Crane Driver, and Painter. However, for some job roles, T.D. doesn't have the same standards as GCS. For those cases, GCS lists more skills than T.D. does. Those cases will be closer analyzed in the next section.

4.1.3 Third-Step Findings

The three tables above show the content that was gathered throughout the study. From that data, multiple indications can be formulated. Only the jobs with the biggest differences will be analyzed for the final and most detailed analysis. For this, all sections will be considered: educational requirements, work and management experience, criteria for differentiation, and the required skill set. However, only the job roles in which T.D. lacks expectations will be closely looked at to paint a clearer picture of which sections T.D. needs improvement. Hence, only the last section (skill set) will at the end be analyzed, because that is the section in which T.D. Has fewer requirements for some jobs. As gathered from the input displayed in the third table, there are two job roles in which T.D. falls behind GCS. Those are (1) Contract Director and (18) Electrician.

	Critical Technical Skills		Cross-Cutting Technical Skills		Behavioral Skills	
	T.D.	GCS	T.D.	GCS	T.D.	GCS
Contract Director	Negotiation	Discussing, drafting,	People Management; Budget Management;	Budget Skills People Skills	Strategic Vision;	Business Management

		reviewing, and negotiating	Project Management		Business Knowledge	Skills, verbal communication
Electrician	Construction processes; Materials and Equipment; Marking /Cutting/Painting Techniques; Handling and identification of tools	Engineering science and technology knowledge; Design skills and knowledge; Construction processes; Electrician systems and equipment; Handling of tools and equipment	Internal standards and procedures	Internal Processes; Mathematical and analytical knowledge	Collaboration; Effective communication	Customer focused; Good communication skills

Table 4 "Analysis Critical Technical Skills, Cross-Cutting Technical Skills, Behavioral Skills in which Teixeira Duarte requires fewer Skills" by data provided by Teixeira Duarte and Go Construct STEM

The two jobs listed above are where T.D. lacks skills compared to GCS. Therefore, those are the job roles where they must advance to match the same level the U.K. has. Having a closer look at each job role individually, the following can be concluded:

- Contract Director
    - Critical technical skills: while T.D. only lists *Negotiation,* GCS lists *Discussing, drafting, reviewing, and negotiating* as necessary skills.
    - Cross-cutting technical skills: T.D. demands *People Management, Budget Management,* and *Project Management* as competencies. GCS demands fewer abilities for this skill set, namely only *Budget* and *People Skills*.
    - Behavioral skills: T.D. lists *Strategic vision* and *Business Knowledge*. GCS demands *Business Management Skills* and *verbal communication* from its employees.

- Electrician:
    - Critical technical skills: while T.D. lists *Construction processes, Materials and Equipment, Marking /Cutting/Painting Techniques, Handling* and *identification of tools,* GCS lists *Engineering science and technology knowledge, Design skills and knowledge, Construction processes, Electrician systems and equipment,* and lastly *Handling of tools and equipment* as necessary skills.

- Cross-cutting technical skills: T.D. demands *Internal standards and procedures* as competency. For this skill set, GCS demands some abilities, namely *Internal processes, Mathematical and analytical knowledge.*
- Behavioral skills: T.D. lists *collaboration* and *effective communication*. GCS demands *Customer focused, effective communication* from its employees.

Consequently, those two jobs are the ones that T.D. would have to make some improvement suggestions. This way, the company can be compared to the competition. This could be done with training or workshops in the respective fields in which they would need improvement. They could also have a weekly mentoring session with one superior worker explaining the necessary skills to less superior co-workers. This would be less time-consuming and pricey.

4.2 Internal Communication strategy

The second aim of this study is to give a few recommendations on communicating the insights found. The goal is to effectively communicate to the employees that potential changes might arise and the overall findings that were analyzed. The target for the announcement will be the entire personnel, so everyone can understand the organizational performance and feel like part of the business. T.D. will have to communicate two different messages. First, they perform extremely well concerning employee qualifications, skills, and requirements. The second message only addresses the employees from the job roles that need further skill improvement. That message must exclusively be sent to the appropriate workers. As previously researched, several techniques can be used to communicate effectively with employees for a company the size of T.D. A channel that quickly reaches every employee without personally approaching everyone in need. This would take too long and would not be efficient (Smith & Mounter, 2005). That's why the study recommends T.D. publish the news via its intranet. As stated in the literature review, the intranet is a tool to support business operations and is accessible to personnel within an organization, and is used to rearrange people in the organization. Using their intranet, they can spread the researched content and individually approach those that need to be adjusted. From prior talks with T.D., it is confirmed that the employees of T.D. read the company's intranet, so it is assured that the staff reads the announcement.

The message sent to everyone can be a standardized informational post, letting them know how they are performing in comparison to the U.K. This message must be carefully worded as being too enthusiastic ("*T.D.s' employees are in comparison to those in the U.K. way more*

qualified") can lead to worker demanding a pay raise or other additional benefits. The message's wording should be positive and motivating ("*Our employees are all highly skilled and competing well with European standards*") but still humble. It can be formulated generically rather than specifically going into the detailed skill requirements of each job role. This communication encourages the workers to continue their great work and show appreciation. They need to show support and that they are promoting the progression of their employees. This gives employees a feeling of thankfulness from the management and perhaps makes them perform better. It is suggested to make this a one-time message. However, if standards shift and another evaluation seems necessary, those findings should be communicated again.

In the case of the Contract Directors and Electricians, they need to personally approach them and communicate their need for skill improvement. This should be done in a personal way to give the employee a comforting feeling. T.D. is communicating changes in the way of working and how the employee has probably worked for decades. This needs a delicate approach, so the employee doesn't develop a bad feeling or a feeling of contentment toward T.D. The suggestion would be to first approach the affected employees digitally (e.g., by e-mail or their internal instant messaging tool 'Bitrix') to communicate to them that changes are currently being taken into consideration. T.D. must give the employee a positive feeling and not make them feel as if they did something incorrectly or that more drastic measures (e.g., loss of employment) might be considered. This delivers a feeling of working *together* towards a common goal.

Additionally, the company must approach the employee with an already existing plan to address the skill deficit. This gives the employee a better understanding of the reason behind the seemingly imminent problem (Ricks, 2020). After the initial approach, a more personal and intimate meeting should be set up. In this Face-To-Face get-together, the company can illustrate a deeper insight into the actions that will be implemented (*e.g., off-site training, on-site training, mentoring sessions, etc.)*. The company and employee can work together on an individual and well-tailored plan (Bela, Smirnovb, & Wait, 2006).

4.3 Limitation and future research

Limitations can be formed for the data provided by T.D. and the secondary data gathered from the online platform www.goconstruct.org.

Undoubtedly, the input provided by the company T.D. gives comprehensive information about their working structure and the different job roles they employ. However, several aspects limit thorough research. Firstly, the study can't form individual skill requirements due to the standardized wording. This is also underlined by the fact that they list the same, e.g., skills for different job roles. Secondly, the provided data is originally phrased in Portuguese. This can lead to errors in the translation because the study was conducted in English.

The data gathered from GCS also brings several limitations. Firstly, not all jobs provided by T.D. can be found on the online platform. Hence, not all jobs were able to be compared. Secondly, the extent of the data found on GCS is different from that of T.D. The study was unable to e.g., gather data in terms of the complexity or autonomy of each job role from GCS. Thirdly, the GCS is generally not formulated in the structure of the JFM, also missing the different job levels and grades. They had to be structured that way to compare them effectively. That can lead to errors in comparison.

Future research can collect more data about personalized skill requirements for T.D. workers and analyze the missing job roles that haven't been analyzed from GCS.

5. Recommendation and Conclusion

5.1 Recommendations

The findings above suggest a few recommendations for T.D.

- **Individualize each job role** so a more guided approach can be formed for workers. Also, give them clearer indications of the demands placed on them.

- **Expand certain requirements** in the form of a more comprehensive skill set for the Contract Director and Electrician job roles, so those roles can compete with European standards.

- **Keep educational and experience requirements as well as the criteria for differentiation.** In those two sections, T.D. brings expectations higher than the competition in the U.K. They don't have to improve on any level. If anything, they could lower their standards.

- **Communicate efficiently and appropriately.** A tool such as an intranet can be used when communicating a general message. That is a way a high number of people can be easily reached. This can be standardized and doesn't need a personal and individual address. However, when approaching a smaller number of people with potential changes that must be made, it's necessary to personally address them.

5.2. Conclusion

At the beginning of this study, two research questions were formulated, examined, and aimed to be answered throughout this study.

- **RQ1:** *Based on the Benchmark of the "Job Family Model"- how big is the gap between Teixeira Duarte employees' profiles compared to the profile of construction workers in the U.K.?*
- **RQ2:** *What is the most effective internal communication strategy for Teixeira Duarte to properly announce changes and challenges?*

5.2.1 The gap between Teixeira Duarte and the UK

Overall, it's obvious that there is no performance gap between T.D. and the standards held against U.K. construction workers. After all, T.D. is expecting more from its employees than the content from GCS entails the U.K. is expecting from its workers. This being said, if there is a performance gap, it would have the be filled by the U.K. rather than T.D.

Only two jobs have fewer skill requirements on T.D.s' side that would have to be improved. Although educational requirements, work, management experience, and criteria for differentiation are higher staked from the T.D. side. Thus, equaling the lack of skill requirements. Nonetheless, to exceed the competition and perform excellence, T.D. would have to improve the roles of "Contract Director" and "Electricians". This can be done by performing on- as well as off-site training.

5.2.2 Intranet as a way to effectively communicate company-wide

To effectively communicate the findings above, it's being suggested to use the intranet and a more personal approach for those job roles that need individual consultation. Using the intranet T.D. saves a lot of time, and it's relatively certain all necessary workers will read the message. Regarding a more personal approach for the jobs in question (Contract Director, Electrician), it's advised and proven more successful to use a more personal and individual approach. This can be done by using instant messaging and individual face-to-face consultations.

Bibliography

Shen, Y. C. (2019). Human Resource Management Framework Construction under Competency Model . *International Journal of Learning and Teaching*, 252-256.

Baker, M. (2020, Feburary 23). *pesync.com*. Retrieved from https://www.pesync.com/what-is-job-family-modeling.html

Reilly, P. (2004). Job Families: an integrated approach to reward and development? *IES Research Networks*, 1.

The Korn Ferry Institute. (2016). *Korn Ferry's Four Dimensional Executive Assessment.* Los Angeles: Technical brief.

Gangani, N., McLean, G. N., & Braden, R. A. (2006). A Competency-Based Human Resource Development Strategy. *PIQ, Volume 19 Issue 1*, 127-139.

CAMPION, M. A., FINK, A. A., RUGGEBERG, B. J., CARR, L., PHILLIPS, G. M., & ODMAN, R. B. (2011). DOING COMPETENCIES WELL: BEST PRACTICES IN COMPETENCY MODELING. *PERSONNEL PSYCHOLOGY*.

Bosse, N. (2015). Die Job-Family-Cluster-Organisation - eine prozess- und kompetenzorientierte Unternehmensstruktur. Lüneburg, Schleswig Holstein.

Fischer, N., Heusser, P. D., & Kleb, R. K. (2014). *Integrierte Betrachtung von Job Families, Job Gradings & Fach-/Expertenkarrieren.* Hamburg: Baumgartner & Partner.

Lawrence, P. (N/A). *Employing the job family model for staff career development*. Retrieved from Global Payroll association (GPA): https://globalpayrollassociation.com/blogs/latest-news/employing-the-job-family-model-for-staff-career-development

Stegãroiu, I., & Talal, M. (2014). The Importance of Developing Internal Communication Strategy. *Valahian Journal of Economic Studies*, 63 - 70.

Quirke, B. (2008). *Making the connections - using internal Communication to turn strategy into action.* New York: Gower Publishing.

Hopkins, A. E. (2015). *A Framework for Internal Corporate Communications.* Retrieved from Inquiries Journal: http://www.inquiriesjournal.com/articles/1177/a-framework-for-internal-corporate-communications

Karanges, E., Johnston, K., Beatson, A., & Lings, I. (2015). *The influence of internal communication on employee engagement: A pilot study.* Brisbane: Elsevier.

Sluss, D., Klimchak, M., & Holmes, J. (2008). Perceived organizational support as a mediator between relational exchange and organizational identification. *Journal of Vocational Behavior*, 457 - 464.

Men, R., & Bowen, S. (2017). *Excellence in internal communication management.* New York: Business Expert Press.

Verčič, A. T., & Špoljarić, A. (2020). Managing internal communication: How the choice of channels affects internal communication satisfaction. *Elsevier*.

McKinsey Global Institute. (2012). *The social economy: Unlocking value and productivity through social technologies.* McKinsey & Company.

Verčič, T., & Vokić, P. (2017). Engaging employees through internal communication. *Rublich Relations Review*, 885-893.

Clampitt, P., & Downs, C. (1993). Employee perceptions of the relationship between communication and productivity: A field study. *Journal of Business Communication*, 5-29.

Grant, K., & Valier, K. (2022, July 20). *Internal communications: Benefits, best practices, and tools.* Retrieved from Factorial HR: https://factorialhr.com/blog/internal-communications/#benefits-of-effective-internal-communication

Teixeira Duarte. (2021). *Teixeira Duarte Group - A portuguese Group founded in an engineering Company* . Retrieved from Teixeira Duarte: https://www.teixeiraduarte.pt/en/group/

Baumgartner & Partner. (2014). *Integrierte Betrachtung von Job Families, Job Gradings & Fach-/Expertenkarriere.* Zurich : Baumgartner & Partner.

Men, L. R. (2014). Strategic Internal Communication: Transformational Leadership, Communication Channels, and Employee Satisfaction. *Management Communication Quarterly*, 264-284.

Wood, J. (2006). Establishing Internal Communication Channels that Work. *Journal of Higher Education Policy and Management*, 135-149.

Beirne, M., & Cromack, C. (2009). Managing creative coalition's: reflections on the social side of services innovation. *European Management Journal, V. 27 No. 2*, 83-89.

Ewing, M. E., Men, L. R., & O'Neil, J. (2019). Usind Social media to engage Employees: Insights from internal communication managers. *Internal Journal of Strategic Communication*, 110-132.

Techslang. (2022, 04 27). *Techslang.com*. Retrieved from What is an Intranet?: https://www.techslang.com/definition/what-is-an-intranet/

Deloitte. (2014). *The digital workplace: Think, share, do Transform your employee experience.* Zaventem: Deloitte Belgium.

Lipiainen, H. S., Karjaluoto, H. E., & Nevalainen, M. (2013). Digital channels in the internal communication of a multinational corporation. *School of Business and Economics*, 275-285.

Binyamin, O. (2021, November 17). *How clear and open communication can lead to happier employees*. Retrieved from MondayBlog: https://monday.com/blog/project-management/how-clear-and-open-communication-can-lead-to-happier-employees/

Beheshti, N. (2019, January 16). *10 Timely Statistics About The Connection Between Employee Engagement And Wellness*. Retrieved from Forbes.com: https://www.forbes.com/sites/nazbeheshti/2019/01/16/10-timely-statistics-about-the-connection-between-employee-engagement-and-wellness/?sh=721d87122a03

Jouany, V. (n.d.). *Internal Communications: the Shift Toward Two-Way Relationships*. Retrieved from Haiilo.com: https://haiilo.com/blog/internal-communications-the-shift-toward-two-way-relationships/

Shen, Y. C. (2019). Human Resource Management Framework Construction under Competency Model. *International Journal of Learning and Teaching*, 252-256.

Shen, Y. C. (2019). Human Resource Management Framework Construction under Competency Model. *International Journal of Learning and Teaching*, 252-256.

Cao, C., & Zhang, Z. (2022). Machine Learning-Assisted Competency Modeling for Human Resource Management Jobs. *Mobile Information System*.

Campion, M. A., Fink, A. A., Ruggeberg, B. J., Carr, L., & Phillips, G. M. (2011). Doing competencies well: best practices in competency modeling. *Personnel Psychology*, 225-262.

Dubois, D. (1993). *Competency-Based Performance Improvement: A Strategy for Organizational Change.* Human Resource Development Pr.

Burnard, P. (1995). Interpreting text: an alternative to some current forms of textual analysis in qualitative research. *Social Science in Health*, 236-245.

Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *Elsevier*, 8-14.

Krippendorff, K. (2004). *Content analysis: an introduction to its methodology.* Thousand Oaks: Sage Publications Inc.

Krippendorff, K. (2019). *Content Analysis: An introduction to its Methodology.* Thousand Oaks: SAGE Publications, Inc.

Population Health Methods. (2022, June 07). *www.publichealth.columbia.edu*. Retrieved from Content Analysis: https://www.publichealth.columbia.edu/research/population-health-methods/content-analysis

Goldbach, I. R. (2015). Comparative Analysis of the organizational structures in some EU countries. *International Conference "Risk in Contemporary Economy"*, 177 - 186.

Brydges, R. (2013). What counts as validity evidence? Examples and prevalence in a systematic review of simulation- based assessment. *ACADEMIA - accelerating the world's research*, 41 - 51.

Kasser, J., Hitchins, D., Frank, M., & Zhao, Y. Y. (2012). A framework for benchmarking competency assessment models. *Systems Engineering*, 29 - 44.

Gibson, A. (2018, July 16). *Agileworkforceplanning.com*. Retrieved from What are Job Families?: http://agileworkforceplanning.com/what-are-job-families/

Shen, Y. C. (2019). Human Resource Management Framework Construction under Competency Model. *International Journal of Learning and Teaching*, 252 - 256.

Chouhan, V. S., & Srivastava, S. (2014). Understanding Competencies and Competency Modeling ― A Literature Survey. *IOSR Journal of Business and Management* , 14-22.

Bryman, A., & Bell, E. (2012). *Social Research Methods, 4th Edition.* Oxford: Oxford University Press.

Azarian, R. (2011). Potentials and Limitations of Comparative Method in Social Science. *International Journal of Humanities and Social Science*, 113-123.

Tilly, C. (1984). *Big Structures, Large Processes, Huge Comparisons.* Russell Sage Foundation.

Fredrickson, G. M. (2000). *The Comparative Imagination: On the history of racism, nationalism, and social movements.* Univ of California Press.

Benedictine University. (2022, August 19). *Public Health Research Guide: Primary & Secondary Data Definitions*. Retrieved from www.researchguides.ben.edu: https://researchguides.ben.edu/c.php?g=282050&p=4036581

Go Construct STEM Ambassador. (2022). *www.goconstruct.org*. Retrieved from What is a Go Construct STEM Ambassador?: https://www.goconstruct.org/get-started-in-construction/go-construct-stem-ambassadors/

Verčič, T. (2019). Internal communication with a global perspective. *The global public relations handbook theory, research, and practice*.

Verčič, T. (2019). Internal communication with a global perspective. *The global public relations handbook theory, research, and practice*.

Ragin, C. C. (1987). *The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies.* Berkeley: University of California Press. Retrieved from The Comparative Method: Moving Beyond Qualitative and Quantitative Strategies: https://classroom.synonym.com/write-comparative-masters-thesis-essay-3645.html

Martini, A., Corso, M., & Pellegrini, L. (2009). An empirical roadmap for intranet evolution. *International Journal of Information Management*, 295-308.

Smith, L., & Mounter, P. (2005). *Effective Internal Communication.* Kogan Page Publishers.

Ricks, A. F. (2020, June 16). *How to communicate organizational change: 4 Steps*. Retrieved from Harvard Business School Online: https://online.hbs.edu/blog/post/how-to-communicate-organizational-change

Bela, R., Smirnovb, V., & Wait, A. (2006). Managing change: Communication, managerial style and change in organizations. *Economic Modelling*, 1 - 12.

Shen, Y. C. (2019). Human Resource Management Framework Construction under Competency Model. *International Journal of Learning and Teaching*, 252-256.

Shen, Y. C. (2019). Human Resource Management Framework Construction under Competency Model. *International Journal of Learning and Teaching*, 252-256.

List of Abbreviations

T.D. – Teixeira Duarte

JFM – Job family Model

GCS – GoConstruct STEM

U.K. – United Kingdom

e.g. – Example given

HR – Human Resource

i.e. – Id est