

Enhancing Digitalised Employability Skills for University Students University of Derna - Libya

Brydan Rashad (1) & Prof. Affes Habib (2)

¹ PHD-Student, UOD, University of Derna, LIBYA,

r.brydan@uod.edu.ly

² PHD- FSEG-Sfax, University of Sfax, TINISIA,

h.affes@yahoo.com

ARTICLE INFORMATION

Original Research Paper

Received:10/01/2026

Accepted:08/02/2026

Published:21/3/2026

Keywords:

Keyword.1: Digital skills enhancement

Keyword.2: digital active training

Keyword.3: Digital higher education enhancement

Keyword.4: Digital skills training barriers

Keyword.5: digital transformation in Libya

JEL Classification

Codes: C93, C23, H26, K34

Abstract :

This paper aims to shed the light on university students' digital employability skills enhancement for better sustainable development and a qualitative research method was adapted with focusing on students' direct observation to gather the required data as a small group sample of 75 management students from the University of Derna were involved to assess their digital employability skills in response to the curriculum update. Moreover, visual analysis showed that some barriers that are delaying students' digital employability skills improvement, so they can't respond to the labor market needs. Hence, the authors recommends policy makers to approve digital training for university students also further studies are needed to find out more about this topic.

Mots clés:

Mot clé.1: Amélioration des compétences numériques

Mot clé.2: entraînement actif numérique

Mot clé.3: Valorisation de l'enseignement supérieur numérique

Mot clé.4: Obstacles à la formation aux compétences numériques

Mot clé.5: transformation numérique en Libye

Codes de classification JEL:

C93, C23, H26, K34

Abstract :

Cet article vise à mettre en lumière l'amélioration des compétences numériques des étudiants universitaires pour un meilleur développement durable et une méthode de recherche qualitative a été adaptée en se concentrant sur l'observation directe des étudiants pour recueillir les données requises car un petit échantillon de 75 étudiants en gestion de l'Université de Derna ont été impliqués pour évaluer leurs compétences en employabilité numérique en réponse à la mise à jour du programme. De plus, l'analyse visuelle a montré certains obstacles qui retardent l'amélioration des étudiants afin qu'ils ne puissent pas répondre aux besoins du marché du travail. Par conséquent, les auteurs recommandent aux décideurs politiques d'approuver la formation numérique et d'autres études sont nécessaires pour en savoir plus sur ce sujet.

Corresponding Author: **Brydan Rashad**

Email: r.brydan@uod.edu.ly

1.The introduction:

In response to the requirements of the digital transformation witnessed by Libyan universities academics and graduates, and the need to employ technology as a means to improve the quality of decisions, activate transparency, accountability and will also lead to designing a balanced scorecard with the perspective of the sustainable development goals as a successful stepping stone for building a technological tool to assess the performance of Libyan public and private higher education institutions. As well as, in the era of digital transformation the Libyan higher education (HE) sector is very important comparing to other service sectors as in most developing countries, as it is responsible for playing an important role in the process of developing university students digital generic and specific employability skills, also it cares more for the human race through its institutions that contribute to the recent revolution of sustainable development. Perhaps one of the most important functions of Libyan HE institutions is to provide the local labour market with what it needs from a worker who is equipped with the required digitised employability skills (DES) based on the learning output of the high qualifications in various disciplines in terms of the quality of their employability skills training courses, to meet the needs and expectations of the Libyan economic market which is rapidly and continuously effected by the technological changes and developments (Ali, 2024).

Additoinally, the job market in Libya and most neighbouring countries are now witnessing major changes that require new technological capabilities and specialties in line with these developments, information & communication technology (ICT) experinece along side with other information technology abilities and competencies to keep up with these challenges and challenges. Hence, This is what made higher education institutions in Libya face many barriers and the most important of which is to provide digital learning and training outputs that meet the market needs and renewable jobs' requirements, as many countries are facing an imbalance between the supply and demand for work vacancies with new technologies, especially in the ranks of Libyan graduates of higher education, due to the large numbers of graduates with the unsuitability of specialties with job requirements in the local labour market, as the essential employability skills gained contributed to this face the lack of digitised skills and this has led to the phenomenon of a wide range of new digital employment competencies.

Furthermore, the Sate of Libya, like some other developing countries in the Arab world, has not sought to encourage the small enterprise sector despite

of the importance of investment and development in digital transformation and artificial intelligence literacy resulting from the average cost of its construction comparing to public sector higher education institutions, and their wide geographical spread making it easier to absorb and operate an important proportion of the workforce, which may contribute to creating a balance between the supply and demand in the Libyan labour market in the context of digital transformation (Burgart, 2016). In Addition, meeting the requirements and expectations of the digitised Libyan labour market have become a cornering issue for accommodating all university graduates and other higher education institutes with guaranteeing them the suitable jobs, moreover, Libyan universities are currently facing many challenges to cope with the rapid digital transformation changes and artificial intelligence (AI) revolution that have occurred in recent decades, ending up with being accountable of providing graduates who are equipped with a wide range of new digital employability skills to directly respond to the Libyan economic fields and labour market expectations, so these new developments have made such a great linkage between fundamental issues making it compulsory for higher education institutes and universities to care more about the role of young people and the development of their surrounding new societal and economic culture in order to provide them with ultra-proactive digitised training and education, with giving them entrepreneurial characteristics that enable, motivate and encourage Libyan higher education students and graduates to entrepreneurial work.

On the other hand, unlike most of Arab universities, European universities especially in the Mediterranean region have paid an early attention to DES and entrepreneurship, with modifying their university study programs and uniquely developed them to introduce entrepreneurship courses for better DES development, however, the systems in most Arab universities and Libya in particular, are still suffering from a clear lack of strategic planning for identify the essential digitised employability skills and entrepreneurship development, the critical factor is because decision makers don't believe that much in digital education and training, as well as, the presence of internal opposition in many Libyan universities against the developing digital transformation among academics and rectorss within all scientific fields (Cazarez 2021). This what made Libyan higher education institutions struggle against a major challenge in terms of their students' digital skills improvement, which is producing a very poor quality graduates with insufficient DES, simply because the modern job requirements in the labour market are disfunctional, and it has become plagued by the phenomenon of unemployment. In order to mitigate the severity of the phenomenon, the Libyan higher education sector has began to link up higher education

institutes with small and medium-sized enterprises for students placement and to guarantee them good job opportunities with digital skills continued development importance resulting from combining theory and practice while studying their university programs, with the ability to absorb and operate an important graduates proportion to create a balance between supply and demand in the Libyan labour market (Chu, 2024).

2. Research Methods, tools and measures:

Due to previous experience, the authors have decided to make this current study so productive to reach the planned results, therefore a qualitative research method was used for being the most suitable data collection tool with this type of studies, especially when collecting detailed information and facts describing the phenomenon of DES, as well as, for gaining the best conclusion and outcomes regarding this study, direct observation and personal meetings were used with 75 Libyan management students and different employers to collect the wanted data and information for accessing a list of extra priority digital skills mostly needed by the Libyan labour market and how to integrate them into related university programs aiming for preparing graduates with high efficiency in the light of the principles of digitised entrepreneurial education for the first time in the university of Derna, in addition, one of the vocal points of this study is to analyse and evaluate the selected DES before adding them to the current curricula and training courses for quality assurance reasons. Hence, the collected data and targeted essential digital employability competencies were also visually analysed with being ranked for importance and performance according to the arithmetic mean from the point of view of a group sample of Libyan academics (Emery, 2019).

3. Study Objectives:

In points the authors managed to define what this study aims to achieve as a roadmap by breaking down the DES into measurable, actionable steps as follows :

- 1- To spot the light on the importance of employability in the context of digital transformation.
- 2- To draw stakeholders' and policy makers' attention towards the necessity of enhancing digital employability skills in the Libyan Higher Education Sector.
- 3- To come up with proposed methods for improving the required DES to better cope with the changes and challenges caused by the digital transformation and artificial intelligence revolution.

4. Study Hypothesis:

The authors produced testable predictions about the relationship between HE and DES improvement to better answer the research questions that guide investigation process and this study hypothesis are:

- 1- The Libyan higher education system and institutions don't recognise virtual teaching, learning and training to prepare graduates with quality essential digital employability skills.
- 2- Libyan Universities don't have clear plan for integrating the DES that are expected by Libyan employers.
- 3- Most Libyan university professors refuse online teaching and training, so their methodologies are not compatible with the digital transformation revolution.

5. Study Importance:

The authors believe that the importance of this study lies on several factors which are:

- 1- Libyan universities students lack knowledge on improving their DES.
- 2- The current curricula of universities programs are not attached to the local labour market environment.
- 3- The current higher education system is focusing more on information memorization, leading generally to low quality learning outcomes.
- 4- Libyan students are struggling to keep pace with the developments of digital transformation in the work place.

6. Study Problems:

The authors are confident that developments of digital economy and the growing technology represented by the digital transformation and artificial intelligence revolution, have emerged some problems including:

- 1- The inability of higher education institutions in Libya to equip students with the wanted digital recruitment skills, which makes them unable to secure good careers.
- 2- The existence of a mismatch between graduates' basic skills for employment and the DES that are required by employers in the local labour market.
- 3 – Lack of coordination between university advisory board members' plans and the labour market expectations, resulting to graduates' weak DES.
- 4- Most of current traditional Libyan university programs are no longer sufficient to prepare students for life-working experience in a changing world driven by a rapid digital transformation revolution.
- 5- There is lack of training programs for university students on practicing DES using simulations and case studies.

7. Study Questions:

Based on the importance of this study, which concerns Libyan higher education institutions, academics and researchers regarding the enhancement of DES, hence, the study questions are:

- 1- Do Libyan policy makers and higher education institutions pay the necessary attention to digital recruitment skills with their inclusion in all disciplines?
- 2- Do Libyan universities provide appropriate DES training courses for all students once they join the selected scientific field?
- 3- Do alumni offices support graduates' to find the suitable jobs with evaluating their DES effectiveness?

8. Study Justification:

This study can be justified by its originality and the rapid changes with the huge demand of digital transformation skilled workers who must be equipped with more up datetechnological abilities and competencies. Therefore, higher education institutions in Libya need to invest more in their students' digital recruitment skills development in order to provide graduates who are able to meet the needs of their employers. Hence, early preparation for these DES opens up excellent jobsopportunities, aswellas, with mastering digital work tools is not only an advantage, it is also critical for graduates who want to succeed in a changing working and very competitive environment. Therefore, the authors have selected this critical topic to improve Libyan university students' DES in the requiredsteady manners (Hsu, 2019).

9. Study Literature Review

It can be said that some previous aspects of technological changes have not been accompanied by a parallel change in the programs and curricula of Libyan universities, which is evident in the failure of these programs and curricula to keep up with regional and global economic and societal changes. Additionally, the failure of these higher education programs to enhance the essential digital employability skills in Libya has affected most students and graduates' working abilities to meet the curren changing labour market needs (Jeno, 2021), Moreover, digital skills in higher education and scientific research are simply those skills that enable Libyan students able to use information and communication technology in training models before joining the labour market including the abilities to use online applications or create, save, upload and send files of all kinds over the internet, or through knowing how to use search engines in a correct and accurate manners, or it could be by the capability to continuous learning through electronic learning and training platforms. Another type of digital recruitment skill is to design

interactive presentations, manage avirtualtrainingsessions. However, for university lecturers DES are not just the knowledge of how to operate a data show projector, tablet or laptop, but it is also the willingness and ability to transform the classic lecturing model to a modern and sophisticated learning and training environment (Tasji, 2023). Furthermore, the gap between digital skills of Libyan university graduates and the requirements of the local labour market has generally affected the Libyan economy orientation and the delayed sustainable development process because of mismatching between the outputs of higher education institutions and the expectations of public or private employers and recruiters. Hence, most employers pointed out many challenges when hiring university graduates, including misconceptions and misunderstanding among Libyan graduates about the job market, their lack of basic language skills, poor digital and professional skills, as well as their high rates of leaving work. Therefore, over the past few years, the Libyan ministry of higher education has recommended to upgrade and reform the current BS and BA programs and interventions or to rebuild them from scratch in an attempt to bridge the gap in essential digital recruitment skills, and push higher education institutions to achieve a better link between the theoretical learning process of a university level and the practical side of training and application. On the other hand, the efforts of the authors reflect their international experience, and the use of the abundance of information approved from interviews and field surveys conducted by professional analytical and visual analysis, so this paper was able to come up with the proposed alternative solutions for the problem of enhancing Libyan university students' DES with focusing on digital skills quality assurance as a central side of the equation (Jeno, 2018).

Furthermore, this study directly helps in developing the quality of higher education in Libya and keep pace with the booming digital transformation, which achieves a qualitative leap in the classification of Libyan universities as it has become necessary to know what the classification of Libyan universities on regional and global levels, because it has important means of assessing the quality of universities in terms of scientific research productivity and DES training levels they offer (Crompton, 2018). In other words, we can identify the best Libyan universities through global rankings that judge the academic and research level of institutions affiliated to the higher education sector, according to objectively determined controls and conditions, and then clarify the results that include the ranking of universities annually, to indicate the extent of development that occurs during their academic career, thus, below is the Quacquarelli Symonds (QS) world university rankings (2025 - 26) as evidenced in table No. (1):

Table (1) QS World University Rankings (2026)

Country	University	Ranking
USA	Massachusetts Institute of Technology	1
United Kingdom	Imperial College London	2
USA	Stanford University	3
United Kingdom	University of Oxford	4
United Kingdom	University of Cambridge	5
Switzerland	ETH Zurich	6
Singapore	National University of Singapore	7
United Kingdom	University College of London (UCL)	8
USA	California Institute of Technology	9
Hong Kong	The University of Hong Kong	10

Table (1) Source: <https://www.topuniversities.com>

Moreover, digital recruitment or employability skills are critical for university students, so this factor has to be taken into consideration by Libyan policy makers to ensure that university graduates can make success in such a competitive labour market, thereby, digital employability skills are not limited to academic abilities as they may include generic competencies to communicate effectively, having teamwork spirit, team building skills, creative solutions to problems, innovation and development, critical thinking the advantage of adaptation to career change, and other recruitment skills that Libyan employers are looking for in new employees.

9.1 The Concept of Digital Employability Skills

There is a wide range of DES concepts; however, the authors have carefully selected the most meaningful concepts as shown below:

1- Digital employability skills (DES) in the era of globalisation are defined as a set of knowledge, experience, competencies and abilities to use digital devices, tools and technologies efficiently and usefully to carry out normal duties in the work environment, enabling a university graduate to manage and share digital content effectively and creatively individually or as a team player, leading to increased accuracy, efficiency, quality and productivity in all activities of public and private sectors, and it is considered one of the fundamentals of digital transformation to build a modern digital knowledge economy in Libya during the 21st century.

2. DES is a set of personal and professional employability qualities and skills that enable Libyan graduates to keep their job positions.
3. DES can also be defined as the capability of universities students to add extra values and become more important to local labour market.

In confirmation of the above, it is worth noting that the World Economic Forum included the topic of the essential digital employability skills as part of the Davos 2021 agenda. Hence, the result was that in order for enterprises to fully benefit from new technologies and digital transformation, universities and training centres must prepare and develop graduates to become a digitally skilled workforce, as well as, related institutions, state departments and companies must invest in human capital through continuous digital training to develop the use of modern technologies within the work environment, simply because in the future economy human talents in the use of modern technology and artificial intelligence will become the most important factors of industrial production (James, 2018).

On the other hand, it has to be mentioned that essential employability skills were known in the western world as basic skills and then they became known as generic skills because they can be used at any labour market, however, nowadays they are currently known as Employability Skills in several countries such as Australia, Canada, Indonesia and Malaysia, but in the USA and the United Kingdom of Great Britain they are still called basic skills, moreover, in Singapore they have a deeper meaning naming them as Critical Enabling Training Skills, hence this concept has many synonyms in studies and most of the previous literature, and recently it has become called the term (skills Soft) as it has been mentioned by previous researchers around the globe, furthermore, some other scholars defined them as (Personal Skills), however, these names and terminologies in their entirety refer to the job advantages and capabilities enjoyed by individuals or university graduates and higher institutes outside the scope of their job specialization, and therefore called the term general or generic skills (McDonagh, 2023)..

9.2 The Importance of DES

Despite of being late, digital employability skills and capabilities are now of great importance in the Libyan higher education sector because they increase employability and distinguish Libyan university graduates among candidates with similar experience, moreover, university graduate with equipped with the required basic skills will reduce the cost of training for employers and various public and private recruitment agencies, thereby, this

will lead to increasing the chances for university students being demanded and will find their places into the labour market. On the other side, basic employment skills and competencies are a strong indicator of the ability of university students and graduates to learn, improve and adapt to digital work place to enhance their overall performance, communication and teamwork techniques from the first day in the new working environment with the possibility to cooperate with any organisational culture and behaviour, which facilitates professional, cultural integration and adherence to quality assurance and safety standards, thus highlighting the basic or essential employability skills that required in most jobs through employers' expectations will spot the light for universities and higher institutes on preparing most graduates with the capabilities and competencies that are required by jobproviders.

9.3 Types of the Required Essential Digital Employability Skills

In the Libyan digital economy, the essential digitised competencies are now becoming obligatory as the job market has expanded beyond traditional employability skill sets to embrace a range of digital skills, these skills are not merely technical in nature; they encompass a broader scope that includes cognitive and interpersonal abilities necessary to navigate the complexities of the digital competitive environment and it's important to categorize the essential digital employability skills into these primary areas: digital Skills transformation, digital information management, digital communication skills, digital collaboration, digital self-management skills, managing online information and data analysis skills with exploring their significance and application in contemporary professional environments as follows:

9.3.1 Digital Skills Transformation

The authors have noticed that Libyan university students lack digital skills transformation and this phenomenon encompasses more than simple proficiency with computers or the internet; it involves sophisticated capabilities such as data analysis, digital communication, cyber security, and the adaptability to learn new digital tools rapidly. Hence, for university students, digital skills have become a strategic imperative, influencing everything from operational efficiency to become successful employee during their recruitment and retention. As technological innovations continue to alter higher education landscapes, students and universities alike are urged to engage in continuous up skilling, re-skilling, and digital literacy empowerment simply stay competitive in challenging working environment.

9.3.2 Digital Information Management Skills

Digital Information management skills for Libyan university students come under a critical discipline that encompasses the processes, technologies, and strategies used to collect, store, organize and disseminate information within organizations. In an era defined by an exponential increase in data generation, effective information management competencies are paramount for decision-making, operational efficiency and sustaining competitive advantage within the labour market. Organizations must cultivate robust frameworks that ensure the integrity, accessibility, and security of information. This involves not only technological advancements but also human factors, emphasizing the need for trained university graduates who can navigate and leverage information systems to better in achieving Lib universities strategic planning.

9.3.3 Digital Communication Skills

To shine in modern jobs, Libyan university students and academics need to have enough knowledge and experience of different digital ways to connect with others virtually. Hence, each channel has its own rules, understanding these rules helps all students and graduates send the right message at the right time in the work place. Moreover, digital communication facilities differ greatly from casual social media chats, as well as, good understanding for key digital communication channels for Libyan university students and graduates especially digital communication platforms are everywhere in business as each one serves a special purpose and Knowing when to use which tool makes new employees more effective as digital communicators. Ultimately, the authors believe that digital communication skills boost more value to any company, alongside with the ability of using email etiquette, virtual meeting platforms and professional tools to show that employees that newly graduates from Libyan higher education institutions are thoughtful with using a clear subject line that tells what the email is about with Keep their messages short and to the point (Wakili, 2023).

9.3.4 Digital Collaboration Skills

The authors believe that digital collaboration employability skills means that Libyan university graduates are able to work with others using technology tools and platforms as it brings people together online, as well as, digital collaboration skills are the set of abilities, tools and behaviours that enable individuals and teams to work together effectively and efficiently, regardless of their geographical location. Hence, such skills have become necessary in the modern world, especially with the spread of hybrid and

remote work no matter where they are located. Moreover, Libyan university students and graduates may think of it as teamwork, but instead of a shared office and workstations, employees will use shared server systems, screens and apps. This big move from old-physical meetings to online interaction, which has changed business for good. Moreover, the modern workplace is increasingly distributed, blurring geographical lines and demanding new ways of working together. Hence, digital collaboration employability skills are not just buzzword; they represent a fundamental shift in how teams achieve goals (Tasji, 2023).

9.3.5 Digital Self-Management Skills

According to previous literature and based on the current and constant online connections necessities, knowing how to handle digital self-management is just as important as any life skill, from sorting through endless notifications to keeping daily-life online presence safe, in other words, digital self-management for Libyan university students is not just a nice-to-have; it is vital for staying productive, feeling good, and growing as a professional employee, also spots the light for them on the main parts of managing their digital life. Furthermore, digital self-management give students skills clear steps to take back control and do well in any online business environment as in today's world throws a lot of digital stuff at most jobs that always asking for clear professional attention and if new employees do not try hard, it is easy to get lost in distractions because of too much information, and feeling tired from too much screen time. Moreover, learning and using digital self-management skills lets new staff members use technology's good parts, helping them avoiding mistakes while using new technologies.

9.3.6 Managing Online Information and Data Analysis Skills

It is vital having a healthy relationship with online news and information to keep university students minds' clear, but it is expected for them to get lost in the endless data cycle also being smart about what they analyse helps find a few trusted data sources to stick with them and meet their employers final goals, also instead of checking and analysing data all the time, they need to pick specific times to catch up with learning to spot data misinformation. Furthermore, much of what new employees see as online business related might just be noise, hence there's an actionable tips based on unsubscribing from email newsletters they don't really read, un-following social media accounts that make them feel overwhelmed (Cazarez, 2021). Moreover, they must prioritize digital downtime and disconnection needs stepping away from screens is vital for their mind to rest and reset. This time off is not wasted; it

is essential for their overall well-being. Moreover, their brains need breaks to work their best. Hence, digital breaks can spark new ideas and help Libyan graduates solve problems and be future leaders, as we as a very good decision makers.

9.3.7 Digital Recruitment skills Adaptability:

Based on the authors' previous academic experience in employability skills enhancement, using fact-checking methods to confirm data and different information needs an employee good attention to notice when something is sponsored content or an advertisement with really understanding that computer programs can sometimes show biased or misleading information without knowing anything about it, so actionable tips have to be followed like:

A. Trying lateral reading and this means opening several tabs to research an unfamiliar source before trusting its content.

B. Adaption to new digital tools and platforms with being able to use new technologies.

C. The world will not stop changing, so university graduates should embrace new tools as a chance to learn and do things better.

D. Approaching new tools with an open mind for being ready to learn and try new things.

E. Sharing what old and new employees learn with others, learning from them also helps everyone enhance their digital employability skills.

9.3.8 Digital and Personal Information Security Management

Previous academic material evident the importance of knowing about the online security threats which can put employees' personal information at a high risk, things like phishing swindles, harmful software called malware and identity theft are common in the digital working daily life. Additionally, new staff members personal data are valuable to others, so understanding this helps them guard it and they should be aware that cybercrime and data breaches happen often, sometimes affecting millions of people (employees and end-users), hence, knowing the risks makes them smarter manage and secure their online data accordingly (Mashabi, 2024).

10. Discussion

10.1 Data Gathering and Direct Observation Results

It has to be said that for the importance of this study, the authors decided to rely on a more realistic and credible data gathering method, namely direct observation to collect the required developments from the selected small group sample regarding DES enhancement in the context of digital transformation, thus, essential employability skills that were previously mentioned to find out how well 75 management students from mastered the digital employability skilled and the results were accurate by using the visual analysis supported with Likert Scale tool and the final results have been authentically recorded and statistically calculated as evident in Table (2):

Table 2: Direct Observation Results in (%) Scale

(1 = Irrelevant, 2 = Weak, 3 = Average, 4 = Important, 5 = Very important)

No	DES	(1)	(2)	(3)	(4)	(5)	Total
1	Digital Collaboration Skills	(0)	2%	3%	7%	88%	100%
2	Digital Info Management Skills	(0)	4%	6%	7%	83%	100%
3	Digital Communication Skills	(0)	3%	6%	4%	87%	100%
4	Digital Skills Transactions	(0)	3%	7%	15%	75%	100%
5	Digital Self-Management Skills	(0)	3%	4%	7%	86%	100%
6	Tracking Personal Digital Skills	(0)	14%	9%	11%	66%	100%
7	Managing Online Analysis Skills	(0)	1%	3%	10%	86%	100%
8	Digital Personal Info Security	(0)	8%	12%	26%	54%	100%

Source of Table 2: Authors' Statistical Analysis

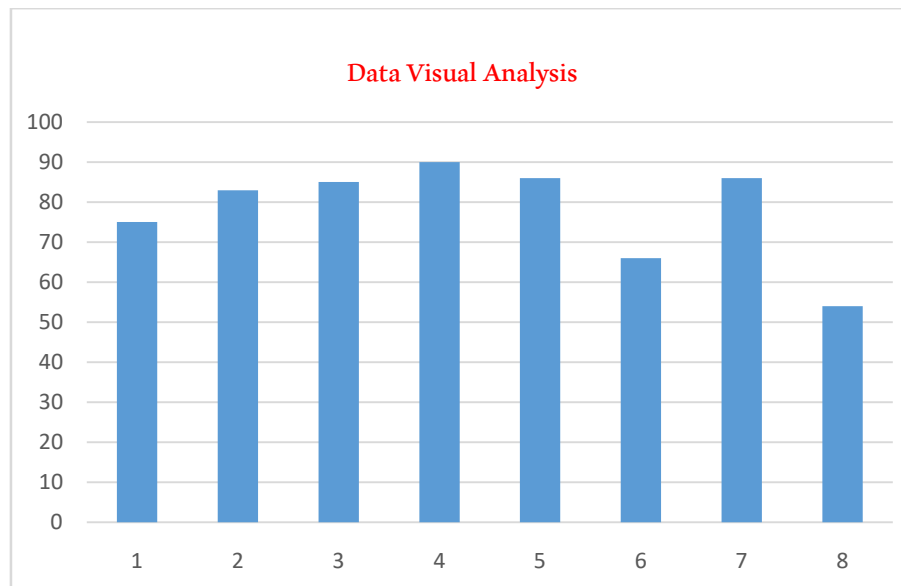
10.2 Data Visual Analysis

Based on the data collection method, the authors have designed cluster (1) to reflect the development of eight essential digital employability skills that were subject to assessment according to their importance and achievement among a group sample of 75 management students at the University of Derna with clarifying the percentage of their ability to practice the targeted digital competencies after systematic training sessions in mixed groups format following that with assigning the tasks results that that have shown the extent of their mastery of the required digital recruitment skills, taking

into consideration their skills transformation abilities for experience exchange with other students (Tabuenca, 2015).

On the other hand, as part of the uniquely designed training courses, the selected group sample had to undertake certain tasks about sharing information with working individually, in pairs and in groups for analysing the collected data through tables, clusters and graphs, as well as, the final results of maintaining or mastering the required skills according to the previous table figures were as follows:

Cluster 1: Study Results Visual Analysis



Source of Cluster 1: Authors' Statistical Analysis

11. Study Conclusion

The researchers concluded that Libyan university students are in dire need for being equipped with the required digital employment skills to secure decent jobs after graduation, thus, after consulting employers, academics and professionals the visual analyses clearly showed the five most required DES which are; *digital information management skills, digital communication skills, managing online information and data analysis skills, digital self-management skills and digital skills transformation*. On the other hand, it was discovered that one of the most important factors for not

acquiring digital recruitment skills is the poor IT infrastructure at most Libyan universities resulting students' bad knowledge on how to use online platforms, systems and applications. Moreover, lack of English language skills is a vital challenge too especially for human science students.

Furthermore, direct observation over the study group sample, proving low digital security attention among Libyan university students that causes real threats to data protection. Additionally, students are not giving DES the necessary workload and efforts to professionally apply online employability skills in the midst of the growing digital transformation revolution and the remarkable emergence of the use and development of artificial intelligence.

12. Authors' Recommendations

12.1 The authors strongly recommend policy makers in the Libyan Ministry of higher education and university presidents to support and approve flipped learning and training, especially after the Corona Pandemic and the Daniel Flooding Disaster in the city of Dera.

12.2 Libyan Universities must adapt modern methods of acquiring digital literacy and training for gaining the required digital recruitment skills to join the labour market, both in the public or private business sectors.

12.3 The authors advise Libyan academics and researchers at all Libyan universities to be good digital lecturers by developing their digital teaching and training skills in all scientific disciplines supporting that with training university students transfer their digital skills to their class mates.

12.4 Libyan university students must utilize different digital learning methods, and proactively build a strong professional online presence.

12.5 Constant learning and adaptability are crucial given the rapid pace of technological change.

References:

1. Ali, R. (2024). Students Challenges in Learning Speaking Using E-Portfolio. (pp: 79-83).
2. Burgart, T. & Krämer, A. (2016). Measures to understand and control customer relationship and loyalty, (pp: 42-48).
3. Burgartz T. (eds), (2019) Managing in a VUCA World, (pp: 99-114).
4. Cazarez R. (2021). Soft skills and Online Higher Education, (pp: 31-36).
5. Christ, W.G. (Ed.). (2016). Media Education Assessment Handbook (1st ed.), (pp: 62-64).
6. Chu, S. K. W. (2021). 21st century skills development through inquiry-based learning from theory to practice, (pp: 110-113).
7. Emery, L. (2019). Insight into instructional coaching. Kansas, (pp: 26-28).
8. Hsu, K. H. (2019). Reexamining the impact of selfdetermination theory on learning outcomes, (pp: 32-35).
9. Jenö, L. M. (2018). A prospective investigation of students' academic achievement and dropout in higher education, (pp: 41-43).
10. Crompton, H., & Burke, D. (2018). The use of mobile learning in higher education: A systematic review. Computers & Education, (pp: 43-46).
11. James, E. A. (2018). Action Learning for Higher Ed Technology: Learning What Supports Graduate Students., (pp: 27-28).
12. Wasim, J. (2014). Web- based learning innovations. International Journal of Computer Science and Information Technologies, (pp: 36-38).
13. Larsen, A. G., & Følstad, A. (2024). The impact of chatbots on public service provision, (pp: 15-19).
14. Mashabi, S. (2024). 2,2 Juta Lulusan SMK Tidak Lanjut (pp: 51-53).
15. McDonagh, B. (2023). Learning histories, participatory methods and creative engagement, (pp: 36-38).
16. Mukhsinah, A. F. (2020). The Use Of E-Portfolio Assessment to Improve Students' Writing Ability. Retain, (pp: 25-27).
17. Tabuenca, B. (2015). The role of mobile learning analytics in self-regulated learning. Computers and Education, (pp: 15-18).
18. Tasji, L. F., & Turani, A. A. (2023). E-Portfolio Effectiveness in Seeking IT Jobs, (pp: 35-39).
19. Wakili, B. A. (2023). Development and Validation of E-Portfolio for Enhancing Employability Skills, (pp: 61-65).