ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

Graduating Accountancy Students' Digital Competencies on Industry 4.0 Career Preparedness Moderated by: Experiential Learning

[1]Maria Alexandra I. Acuña; [2]Lovely Angel Marie P. Alcantara; [3]Cynthia B. Bansil; [4]Kate F. Dayrit;
[5]Sandra Niña Nicole V. Mallari; [6]Anna Mae S. Padilla
Bachelor of Science in Accountancy — 4th Year
Don Honorio Ventura State University-Main Campus Bacolor, Pampanga, Philippines

Abstract:- Industry 4.0 continues to revolutionize every sector in the industry, including the accounting profession, requiring a new set of technical skills and competencies from aspiring accountants. A gap exists between what the industry requires and what the academe produces. Thus, the research aims to investigate the role of experiential learning on digital competencies and career preparedness, in the context of Industry 4.0, of the graduating accountancy students at Don Honorio Ventura State University (DHVSU). This study employed a correlational research design. The participants are the 115 graduating accountancy students of DHVSU Main and Mexico Campuses. A three-part survey questionnaire was administered through Google Forms. Descriptive statistics, Pearson-r, and multiple regression analysis were used in the analysis of data. The findings indicated a high level of digital competence, career preparedness, and knowledge gained from experiential learning. The variable digital competence significantly corresponded to the students' career preparedness under Industry 4.0. The effect of experiential learning on digital competency and career preparedness was also found to be significant. The findings carry significant implications for key stakeholders, underlining the importance of students acquiring a higher degree of digital competence to effectively navigate the challenges that Industry 4.0 has brought to the accounting profession.

Keywords:- *Fourth Industrial Revolution; Digital Competency; Career Preparedness; Experiential Learning*.

I. INTRODUCTION

In this new-fangled world characterized by technological advancement, getting away from phones, computers, tablets, and other gizmos is hard. For the past decades, the digital revolution has changed and continues to transform our lives and our world (Hoehe & Thibaut, 2020). These technologies are helpful in terms of making people's work better and more facile, as well as in permitting profound alterations in how work is done in organizations (Cascio & Montealegre, 2016).

The digitalization of the economy brought a need for businesses to adapt various digital applications to be able to optimize their businesses properly. In the accounting industry, accounting capabilities are constantly evolving because of digitization, the following are some of the few examples: Data Analytics, Cloud Computing, AI, Blockchain, IoT, and Robotic Process Automation. Likewise, there is a perception that these shifts herald the end of the road taken thus far and the beginning of a brand-new industrial era paradigm, some call it the Fourth Industrial Revolution (4IR) or Industry 4.0 (Schwab, 2016).

According to Ordiz (n,d), Industry 4.0 employs the foundations of past industrial revolutions, with increased integration, digitization, virtualization, technology, and quick reactions to stimuli. Unquestionably, as the world experiences shifts in the industry, new demands keep on arising. From basic computer literacy, Industry 4.0 is now requiring digital competencies as well. Digital competence is a transversal key competence that connects and correlates a whole lot of areas (Kirsti Ala-Mutka, 2011). These competencies cover a wide range of abilities, and information including data analysis, problem-solving, communication, and safety skills.

Furthermore, in today's digitalized accounting environment, proficiency in accounting software extends beyond basic data entry. It encompasses a deep understanding of platforms such as QuickBooks, Xero, Excel, and others that have become integral components of modern accounting practices. The widespread use of technology in the field of accounting questions the level of digital competency that current and future accountants possess. According to Razali et al. (2022), the new breed of accountants will assume greater responsibility due to evolving technologies, shifting away from traditional bookkeeping, and progressing to digitalized ones (Beer & Mulder, 2020). Similarly, Khanh (2018) and Wahyuni (2020) have highlighted a shift in accountants' roles, evolving from traditional bookkeepers to experts in furnishing financial information and data analysis. Furthermore, an estimate states that by 2025, digital competencies that are not dominant at this point will be regarded as crucial to possess in the years to come (Li, 2022). At the same time, Willis (2016) underscores that individuals entering the accounting profession must acquire the necessary skills to utilize technology tools effectively and

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

efficiently.

In this age of technology, concerning the skills, competencies, knowledge, and attitude that one must possess, related to the readiness of an individual for life's reality in Industry 4.0, soft skills like digital competence are becoming more critical for accountants (Marciniak, 2022). As digital competencies serve as a foundation around which career preparedness is built, developing digital competencies is not only desirable but also a necessity for navigating the complex landscape of modern careers in a time where technology affects every aspect of life (OECD, n.d.).

As businesses are continuously innovating and utilizing digital tools for success, individuals who possess digital competencies have a greater ability to contribute significantly to their organizations. The difference in efficiency between those who are digitally competent and those who are not matters, due to the frequency of usage of technology surrounding their work (Cepal, 2022). These individuals are well-prepared for their career paths and they are also drivers for progress and innovation, pushing their organizations toward digital transformation. As stated by Echenique (2015), enhancing and improving digital competency plays an essential role in the development of today's employable graduates.

In the context of work, according to Vien (2021), in many cases, employers will frequently demand more from accounting graduates. To meet the demands of accounting employers and clients, accountants are expected to utilize new technologies and techniques to gain fresh insights, enhance efficiency, and provide added value. To cater to the needs of the market, accountants must possess essential digital skills to effectively and safely utilize modern digital technologies for both professional and personal growth (Pavelko et al., 2021). As stated by Lisa Hackard – an associate professor of accounting at Colorado State University – at the 2021 AAA Annual Meeting, educators should not contribute to the mindset that new graduates will "get their degree and then learn once they get to a firm," but rather that students are expected to "bring their critical thinking and data analytics skills to the workplace." In light of this, Fatin Adilah Razali et al., (2022) highlighted the need for higher education institutions to produce highly skilled accounting graduates who are well-suited and employable for the labor market.

In relation, Tomlinson (2017) asserts that graduates develop their employability skills through hands-on experience. By engaging in immersive, hands-on experiences, students not only apply theoretical knowledge to real-world situations but also cultivate practical skills essential for their professional journey. This approach will enhance problem-solving abilities and critical thinking skills. This exposure to practical challenges will prepare students for the complexities they may face in their future careers (Gittings et al., 2020).

Meanwhile, according to a study conducted by Tomczak, M.T. et al., (2023), in this age and era, it is assumed that young graduates perceive themselves as being highly skilled and digitally competent. However, the reality is that several new graduates possess the requisite technical knowledge but are incapable of applying this effectively in their entry-level positions (Ewing and Ewing, 2017). In this context, experiential learning emerges as a crucial element in preparing accountancy students for their careers.

Accordingly, it is studied that a growing body of literature and studies on digital competency and career preparedness are available, with its critical domains being the subject of substantial independent research (Tınmaz et al., 2022). These analyses have shed light on the value that each component brings to the contemporary workforce (Kowal et al., 2022). However, there is still a perspicuous gap in comprehending the intricate relationship between digital competence and career preparedness in the context of Industry 4.0, notwithstanding the wealth of research in these areas.

With the existence of that gap where the expectations of the employers are not always aligned with what the graduates have acquired in the academe, there arises a need for upskilling in these technologies to compete in the job market as the number of firms embracing cloud-based accounting systems and data analytics is proliferating (Al-Mousa, 2022).

Therefore, to prepare the workforce adequately for the challenges and opportunities presented by Industry 4.0, the researchers focused on exploring the relationship between career preparedness and digital competency and how experiential learning moderated the relationship between the two.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

II. CONCEPTUAL FRAMEWORK

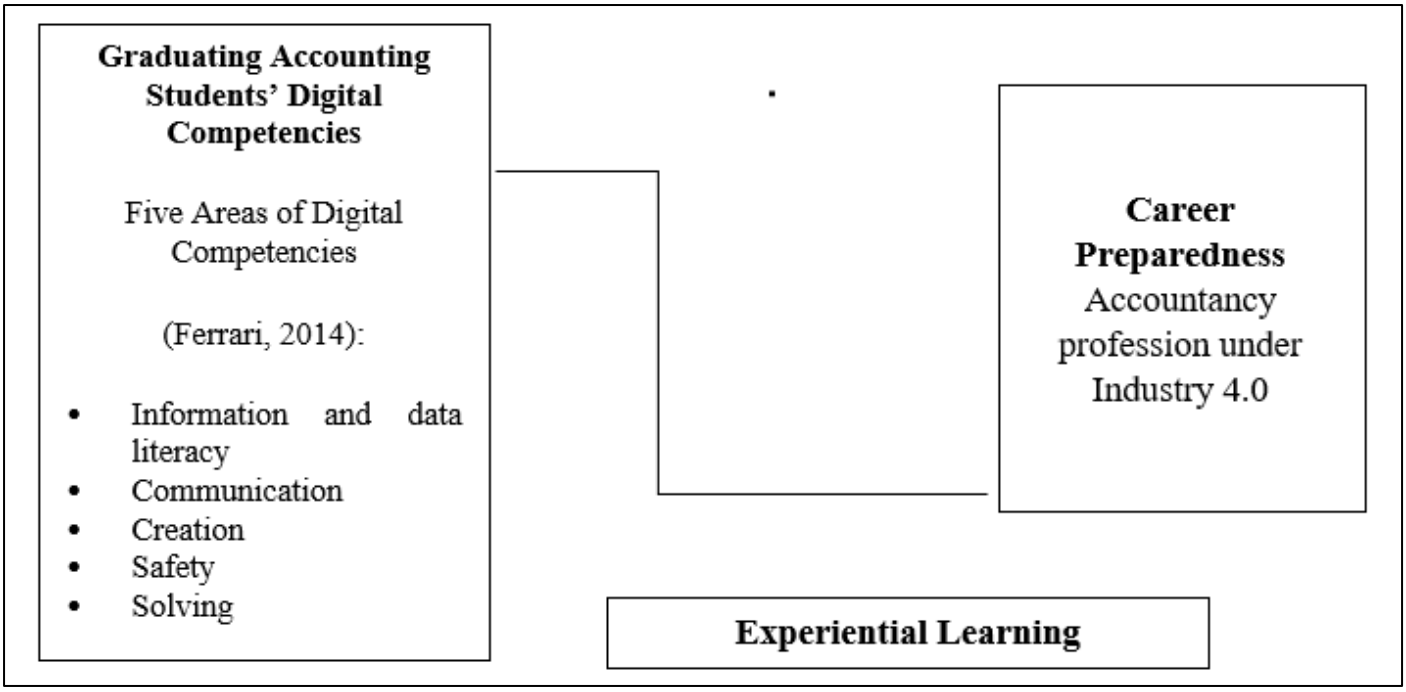

Fig 1: Schematic Diagram of the Study

Of all models of learning, Kolb's Learning Style Instrument, which is based on experiential learning theory, is well-established and widely adopted in business education research (Tan & Laswad, 2015). The present study adopted Experiential Learning theory as the theoretical framework that supported the study. They argue that this form of learning facilitates the connection between course content and real-world opportunities. Consequently, according to Rakow (2019), accounting educators have a fundamental responsibility to equip students with the necessary tools for success in their chosen fields. Accounting education is not just about providing technical knowledge such as the double-entry bookkeeping system, variance analysis, or calculating net present values. Students may begin as passive learners of the curriculum. However, to truly master accounting, students should utilize concepts in addressing practical problems in various situations (Helliar, 2013).

Figure 1 presents a schematic diagram of the study. Frame 1 focuses on the digital competencies of the accountancy students, while Frame 2 examines their career preparedness. Frame 3 explores the experiential learning aspect of the accounting course. The connection between Frame 1 and Frame 2 indicates the potential impact of acquiring digital competencies on career preparedness. Additionally, the perpendicular line connecting Frame 1 and Frame 2 to Frame 3 represented the moderating variables, highlighting how experiential learning can enhance the relationship between digital competencies and the career preparedness of accountancy students.

III. STATEMENT OF THE PROBLEM

➢ *This Study Sought to Answer the Following:*

- How may the graduating accountancy students' level of digital competence be assessed in terms of:

✓ Information and data literacy
✓ Communication
✓ Creation
✓ Safety
✓ Solving

- How may the graduating accountancy students' level of career preparedness be assessed under the necessities of the fourth industrial revolution (Industry 4.0)?
- How may the graduating accountancy students' level of knowledge gained from experiential learning be assessed as the moderating variable of the study?
- Is there a significant relationship between the digital competencies of graduating accountancy students and their career preparedness under the fourth industrial revolution (Industry 4.0)?
- How can experiential learning in the accounting curriculum significantly affect the digital competency and the career preparedness of graduating accountancy students under the fourth industrial revolution (Industry 4.0)?

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

IV. RESEARCH DESIGN

The researchers employed a correlational research design in this study which was a type of quantitative research. According to the research of Devi et al., (2023), correlational research design aims to examine the relationship among variables. It investigates the cause-and-effect of variables without controlling the data, thus, results show the true responses of respondents.

The researchers proposed to use correlational design as it suited the study best to discover the link between graduating accountancy students' digital competence and their career preparedness in Industry 4.0. This design was the most appropriate to utilize, it helped the proponents achieve their research objective which was to investigate the impact of respondents' digital competence to determine their readiness in the accounting profession and how experiential learning plays its role.

The researchers made use of the research design through the Likert scale. A survey questionnaire was prepared, and it was the tool used in collecting the data and information from the respondents. Survey questionnaires were disseminated to the respondents so that the proponents would be able to analyze the results and draw conclusions about the relationship among the variables.

V. RESPONDENTS

Table 1: Frequency Distribution of Respondents

Respondents	Population	Percentage
Accountancy Student A	99	86.09%
Accountancy Student B	16	13.91%
Total	**115**	**100.00%**

The study involved a specific group of participants, namely the accountancy graduating students from Don Honorio Ventura State University's Bacolor and Mexico Pampanga campuses. The participants were carefully selected using the purposive sampling technique, which allowed for a deliberate and thoughtful approach to the sample. Additionally, a total population sampling approach was taken, which ensured that the sample was comprehensive and representative of the entire population. The total number of graduating accountancy students from both campuses was 121, this includes 99 students from Bacolor (Main), 16 students from Mexico, and the 6 researchers. Through the use of the total population, the accuracy and relevance of the results were improved. A study by Etikan, Musa, and Alkassim (2016) suggests that total population sampling is a useful technique in cases where the number of cases being investigated is relatively small. This method involves including the entire population that meets the criteria for the research, and it can be an effective way to ensure comprehensive and representative samples. The researchers chose this sampling method to ensure required data would be obtained.

VI. RESEARCH INSTRUMENTS

The researchers used survey questionnaires to systematically gather a wide range of data in a structured manner. The survey was generated and presented to the respondents through an online platform, Google Forms in particular. The survey questionnaire was divided into three parts, which measured the level of Digital Competency, Career Preparedness, and Experiential Learning, respectively. Responses for the survey were measured by a four-point Likert Scale that denotes "Strongly Agree", "Agree", "Disagree", and "Strongly Disagree" with 4 indicating strong approval and 1 representing significant opposition.

The first part of the survey questionnaire measured the levels of graduating accountancy students' digital competency consisting five categories: Information and Data Literacy, Communication, Creation, Safety, and Solving, which was adapted from Ayça Çebi and İlknur Reisoğlu (2020). The second part of the survey assessed career preparedness which contains items adapted from Quaratul 'Aini Abdullah et al., (2020). This section gauged the respondents' level of preparedness upon entering the accounting profession considering the requisite skills and knowledge in Industry Revolution 4.0 (IR4). The third and last part of the survey evaluated the Experiential Learning of the students, which was incorporated with items adapted from Sarkar et al., (2022). This section aimed to quantify the experiential learning experience of students and correlate it to how their digital competencies have grown in the academe, and how it affects their career preparedness in the field of accounting under the necessities of the fourth industrial revolution. This section acts as the moderating variable of the study, the gathered results from this part aimed to identify the significant relationship among the three parts.

All the instruments gathered and used were from related studies and credible sources. All were validated by three professionals following the college department's processes and requirements to ensure the reliability and understandability of the survey questionnaires.

VII. STATISTICAL TREATMENT OF DATA

- *This study used the Following Formulas and Techniques in analyzing the Data Statistically:*

- *Weighted Mean*

The weighted mean is a statistical metric that weights each data point before computing the mean. These weights represent each observation's relative value or contribution to

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

the overall average. (AL-somiri, 2022). This formula was used to consolidate the values garnered from each variable regarding digital competency, career preparedness, and experiential learning. The formula is as follows:

$$\overline{X} = \frac{\sum X}{N} \quad (1)$$

Where:
$\bar{x}$ = mean of each variable
Σx = total of each score of variables
N = number of respondents

In this study, the following scale was used. The means for these scaled responses were interpreted based on the following response categories:

Table 2: Weighted Mean

Weighted Mean	Point Scale	Descriptive Rating
3.26 – 4.00	4	Strongly Agree
2.51 – 3.25	3	Agree
1.76 – 2.50	2	Disagree
1.00 – 1.75	1	Strongly Disagree

- *Pearson-r*

Pearson Correlation Coefficient r is the most often used metric for determining a linear correlation. It indicates the strength and direction of a link between two variables (Turney, 2022). It assesses how well data points in a scatterplot match a straight line. The value of r ranges from -1 (perfect negative linear relationship) to 1 (perfect positive linear relationship), with 0 indicating no linear relationship. This was used to test hypotheses about the presence of a significant correlation between digital competency and the career preparedness of accountancy students under IR4.0.

$$r = \frac{\sum(x-\bar{x})(y-\bar{y})}{\sqrt{\sum(x-\bar{x})^2 \sum(y-\bar{y})^2}} \quad (2)$$

Where:
r = correlation coefficient
xi = values of x-variable (digital competency)
$\bar{x}$ = mean of the values of the x-variable (digital competency)
yi = values of y-variable (career preparedness)
$\bar{y}$ = mean of the values of the y-variable (career preparedness)

- *Multiple Regression Analysis*

Regression analysis is used to describe connections between variables by fitting a line to observed data. Regression estimates how a dependent variable fluctuates as the independent variables change (Bevans, 2022). In this study, the dependent variables are digital competency and career preparedness, and the independent variable is experiential learning. An interaction term should be included in the regression model to assess whether experiential learning moderates the relationship between digital competency and career preparedness. If the interaction term is significant, it will suggest that the relationship between digital competency and career preparedness is moderated by experiential learning. This means that the effect of digital competency on career preparedness is stronger for individuals with higher levels of experiential learning. Multiple regression can be computed as follows:

$$Y = \beta0 + \beta1 + \beta2 + \beta3 \text{ (digital competency x experiential learning)} + e \quad (3)$$

Where:
Y = dependent variable (career preparedness)
β0 = intercept
β1= independent variable (digital competency)
β2 = experiential learning coefficient
β3 = interaction coefficient (digital competency x experiential learning)
e = error term

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

VIII. RESULTS AND DISCUSSIONS

Table 3. Descriptive Analysis of Respondents' Assessment of the Level of Digital Competence in Terms of Information and Data Literacy.

Table 3: Digital Competence Information and Data Literacy - Weighted Mean

Indicators	M	SD	VD
I am skilled in managing online tools to meet specific accounting demands, such as searching for data, information, or digital materials.	3.22	0.51	Agree
I can accurately evaluate the reliability of accounting data and financial information I access using software and technologies, such as but not limited to MS Office Package, Xero, and QuickBooks.	2.90	0.60	Agree
Grand Mean	**3.06**	**0.55**	**Agree**

Table 3 reveals that the respondents "Agree" that they are skilled in managing online tools to meet specific accounting demands, and they can accurately evaluate the reliability of accounting data and financial information that they access using software and technologies. In general, the respondents have a high level of digital competence in terms of data and information literacy evidenced by a grand mean of 3.06 and standard deviation of 0.55 (GM=3.06, SD=0.55). The data in Table 3 exude a positive result that can be related to the criticalness of being competent, as underscored by Marciniak (2022).

Table 4. Descriptive Analysis of Respondents' Assessment of the Level of Digital Competence in Communication.

Table 4: Digital Competence in Communication - Weighted Mean

Indicators	M	SD	VD
I am proficient in employing an array of various digital technologies including but not limited to Microsoft Teams and Google Workspace in disseminating data and information.	3.04	0.61	Agree
I efficiently use digital technologies such as but not limited to Microsoft Teams, and Google Workspace to engage in collaborative endeavors within virtual environments.	3.10	0.75	Agree
Grand Mean	**3.07**	**0.68**	**Agree**

The data shows that the respondents "Agree" with both statements, revealing that they have a high level of digital competence in terms of communication. This is supported by a grand mean of 3.07 and a standard deviation of 0.68 (GM=3.07, SD=0.68). Effective communication and collaboration are crucial skills for managing client and colleague connections, utilizing digital tools, and improving accounting procedures. This directly correlates with the study of Echenique et al., (2015), stating that enhancing and improving digital competency, in different areas, such as in communication, plays an essential role in the development of employable graduates. Therefore, as the gathered data conveys that the respondents answered in alignment with the expectation of having the competencies required, thus, they acknowledge that they are considerably capacitated to work in the industry.

TABLE 5. Descriptive Analysis of Respondents' Assessment of the Level of Digital Competence in Creation.

Table 5: Digital Competence in Creation - Weighted Mean

Indicators	M	SD	VD
I can create well-structured and coherent content and formats such as financial reports and relevant presentations using digital technologies.	2.99	0.63	Agree
I am competent in creating digital content by adapting pre-existing materials and formats which is essential in communicating financial information.	3.10	0.70	Agree
Grand Mean	**3.05**	**0.66**	**Agree**

Table 5 illustrates the respondents' assessment of the level of digital competence in terms of creation. The respondents present that they "Agree" with both statements with a resulting grand mean of 3.05 and a standard deviation of 0.66 (GM=3.05, SD=0.66). Hence, it was concluded that respondents have a high level of digital competence in terms of creation. This competency is essential in the context of modern accounting, where the integration of digital tools is increasingly prominent. As highlighted by Daniela et al. (2019), most forms and files nowadays are required to be processed digitally, examples of such are tax declaration forms, statistical reports, and many other forms that fall under

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

the responsibility of accountants. Thus, as the result highlighted, in relation with this newly required form of outputs, respondents have the competency to integrate digital technologies in content creation in terms of communicating financial and other accounting information.

TABLE 6. Descriptive Analysis of Respondents' Assessment of the Level of Digital Competence in Safety.

Table 6: Digital Competence in Safety - Weighted Mean

Indicators	M	SD	VD
I possess an understanding of the risks and threats, such as cyber-attacks and breaches, prevalent in online environments.	3.49	0.65	Strongly Agree
I am knowledgeable with the data policies of the digital services that I employ for academic and professional purposes in my capacity as an accounting student.	3.41	0.66	Strongly Agree
Grand Mean	**3.45**	**0.65**	**Strongly Agree**

Table 6 illustrates the respondents' assessment of the level of digital competence in terms of safety, having a grand mean of 3.45 and a standard deviation of 0.65 (GM=3.45, SD=0.65). The data shows that the respondents "Strongly Agree" with both statements indicating that they have a very high level of digital competency in terms of maintaining a safe space in the usage of digital technologies and that they possess the necessary knowledge and competence to deal with risks and threats that they may encounter in utilizing these digital technologies. The result of the study correlates with the statement of Kluzer & Rissola (2015) that accountants must familiarize themselves with privacy laws and security procedures to secure sensitive financial information.

TABLE 7. Descriptive Analysis of Respondents' Assessment of the Level of Digital Competence in Solving.

Table 7: Digital Competence in Solving - Weighted Mean

Indicators	M	SD	VD
I effectively identify the underlying factors contributing to technical problems that arise when using accounting software such as but not limited to Excel and am capable of resolving technical issues I encounter when using digital devices and technologies, particularly in the context of accounting tasks and software.	2.90	0.66	Agree
I possess proficient knowledge in the utilization of digital technologies and software and their different formulas and functions, including but not limited to Excel and its advanced functions, such as Pivot Tables.	2.78	0.64	Agree
Grand Mean	**2.84**	**0.65**	**Agree**

Table 7 illustrates that the respondents "Agree" with both statements revealing that they have a high level of digital competence when dealing with complex problems and technical difficulties. The overall agreement of the respondents is evidenced by a grand mean of 2.84 and a standard deviation of 0.65 (GM=2.84, SD=0.65). In this age of technology, the reliance of businesses on digital tools is high, thus, problem-solving is a vital skill for accountants to have (Kluzer & Rissola, 2015). Similarly, Al-Htaybat et al. (2018) emphasized the importance of problem-solving, critical thinking, analytical ability, decision-making, and proficiency in accounting principles with the demands of Industry 4.0.

TABLE 8. Descriptive Analysis of Respondents' Assessment of the Level of Career Preparedness Under the Necessities of the Fourth Industrial Revolution (Industry 4.0)

Table 8: Level of Career Preparedness Under Industry 4.0 - Weighted Mean

Indicators	M	SD	VD
I understand the challenges and requirements associated with Industrial Revolution 4.0 (IR4) such as data processing and analytics, blockchain, Cloud, and AI, especially within the accounting profession.	2.83	0.74	Agree
With the skills I possess, particularly those useful in utilizing accounting software and technologies (Excel, Xero, QuickBooks, etc.,) for tasks such as data analysis, financial modeling, and reporting, I am ready to enter the accounting profession in the context of IR4.0.	2.68	0.68	Agree
I feel satisfied with my accounting-related ability in accessing features of Industry 4.0 technology.	2.47	0.68	Disagree
The knowledge and skills I gained in school have significantly prepared me to strategically organize and plan my approach, which boosted my confidence in embarking on a career in the accounting profession within the IR4.	2.50	0.69	Disagree
Grand Mean	**2.62**	**0.70**	**Agree**

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

The collected data agreed with the statements, garnering a grand mean of 2.62 and a standard deviation of 0.70 (GM=2.62, SD=0.70). The statement that got the highest mean value (M=2.83, SD=0.74) with a corresponding verbal interpretation of "Agree," is statement 1. On the contrary, the statement that got the lowest mean value (M=2.47, SD=0.68) with a verbal interpretation of "Disagree," is statement 3. These indicate that although the respondents have a grasp of the effects brought about by Industry 4.0, they are not confident enough in terms of their accounting skills to navigate it. This is due to continuous digitization, where graduates are entering the workforce unequipped to tackle the challenges of the industry leaving employers the burden to equip them with the demanded skills of the industry (Irgens 2017).

Overall, it is evident that while the respondents express their satisfaction with their digital competency skills, they harbor concerns regarding their preparedness for the accounting profession in Industry 4.0. This statement is consistent with the findings of Tomczak M.T. et al., (2023), highlighting the perception of graduates as highly skilled individuals, yet facing challenges in applying these skills within the professional arena.

TABLE 9. Descriptive Analysis of Respondents' Assessment of the Level of Knowledge Gained from Experiential Learning as The Moderating Variable.

Table 9: Level of Knowledge from Experiential Learning - Weighted Mean

Indicators	M	SD	VD
The knowledge I gained in the academe is notably pertinent to the accounting profession in the context of IR4.	2.70	0.66	Agree
Through the implementation of Experiential Learning (learning by doing) within an educational setting, I have mastered computer knowledge encompassing but not limited to MS Word, MS Excel, MS PowerPoint, Database Management, and accounting software applications.	2.79	0.67	Agree
I have attained increased confidence in my ability to efficiently use new accounting technologies, software, and techniques such as cloud-based accounting software, data analytics, and the like, after experiential learning within an academic setting.	2.57	0.67	Agree
I am overall satisfied with the knowledge I gained through experiential learning, as it will adequately equip me with the requisite skills and readiness to address the demands inherent in IR4 once I enter the accounting profession	2.49	0.66	Disagree
Grand Mean	**2.63**	**0.67**	**Agree**

The assertion that 'Through the implementation of Experiential Learning (learning by doing) within an educational setting, I have mastered computer knowledge encompassing, but not limited to, MS Word, MS Excel, MS PowerPoint, Database Management, and accounting software application' garnered the highest mean of 2.79 with a standard deviation of 0.67 (M=2.79, SD=0.67), accompanied by a verbal description of "Agree". Conversely, the statement 'I am overall satisfied with the knowledge I gained through experiential learning, as it will adequately equip me with the requisite skills and readiness to address the demands inherent in IR4 once I enter the accounting profession' obtained the lowest mean of 2.49, with a standard deviation of 0.66 (M=2.49, SD=0.66), and a verbal description of "Disagree". This indicates that students are generally less satisfied with their overall learning experience compared to their perceived mastery of computer knowledge, notwithstanding the variation in satisfaction levels across the graduating accountancy students. The disparity between perceived mastery of computer knowledge and overall satisfaction with experiential learning resonates with the challenges highlighted by Aman et al. (2023), indicating that while students may demonstrate proficiency in specific digital competencies, they may still perceive deficiencies in their overall learning experiences.

TABLE 10. Test of Significant Relationship between the Digital Competencies of Graduating Accountancy Students and Their Career Preparedness Under the Fourth Industrial Revolution (Industry 4.0)

Table 10: Pearson Correlation Coefficient r of Digital Competency and Career Preparedness

Correlations

		DigComp	CP
DigComp	Pearson Correlation	1	.632**
	Sig. (2-tailed)		.000
	N	115	115
CP	Pearson Correlation	.632**	1
	Sig. (2-tailed)	.000	
	N	115	115

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

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

Table 10 reveals a p-value of 0.000 and a Pearson product-moment correlation coefficient of 0.632. The obtained p-value, being less than the significance threshold of 0.01, signifies a significant positive relationship between the digital competencies of graduating accountancy students and their level of career preparedness. Consequently, it can be inferred that heightened digital competency corresponds to enhanced career preparedness, as influenced by the fourth industrial revolution. This finding corroborates the study conducted by Echenique (2015), who underscores the essential role that enhancing and improving digital competency plays in fostering graduates' employability. This assertion is further supported by the OECD (n.d.), which emphasizes the critical importance of digital competence as a foundation of career preparedness in today's workforce, highlighting their role in navigating the complex landscape of modern careers. Hence, these empirical findings provide substantive support for the first hypothesis, with the p-value being significant.

TABLE 11. Regression Analysis of the Effect of Experiential Learning on Digital Competency and Career Preparedness.

Table 11: Regression Analysis of Experiential Learning on Digital Competency and Career Preparedness

Dependent Variable/s	Digital Competency	Career Preparedness
R^2	0.281	0.422
Std. Error	0.059	0.068
t	6.645	9.082
p-value	0.000	0.000
Significance	Significant	Significant

Table 11 reveals significant relationships between experiential learning, digital competency, and career preparedness among graduating accountancy students. Experiential learning accounts for 28% of the variance in digital competency (R^2= 0.281). On the other hand, 42% of the variance in career preparedness (R^2= 0.422) can be explained by the predictor variable, experiential learning. Results reveal that both digital competency and career preparedness are predicted by students' experiential learning having computed p-values of 0.000 (p=0) which are less than 0.5 level of significance. This only implies that students' experiential learning in their accounting courses significantly contributes to their digital competency as well as career preparedness. Furthermore, the Beta coefficients provide insight into the strength and direction of these relationships. For digital competency, the Beta coefficient is 0.530 (β = 0.530), indicating a moderate positive relationship with experiential learning. Similarly, for career preparedness, the Beta coefficient is 0.650 (β = 0.650), suggesting a stronger positive relationship with experiential learning. These coefficients highlight the substantial impact that experiential learning has on both digital competency and career preparedness among graduating accountancy students.

This finding relates to the study of Bersin et al. (2017) which states that providing individuals with experiential learning is needed to increase workplace performance. Experiential learning will play a pivotal role in enabling graduating accountancy students to develop digital competencies in the context of Industry 4.0. By applying theoretical knowledge in real-world scenarios, students can acquire practical skills and gain a deeper understanding of digital tools and technologies. This connection between experiential learning and digital competencies allows students to develop the ability to effectively use digital platforms, analyze data, and leverage technology to drive innovation and improve decision-making processes (Stancheva-Todorova, n.d.). In summary, regression analysis shows the relationship between digital competency and career preparedness when it is moderated by experiential learning, having an interaction term of significance. A higher level of experiential learning indicates a strong impact of digital competency on the career preparedness of a student. Thus, the study's results prove that the second hypothesis is true.

IX. CONCLUSIONS

➢ *Based on the Discoveries, the following Conclusions were Drawn:*

- The graduating accountancy students have a high level of digital competence in terms of information and data literacy.
- The graduating accountancy students have a high level of digital competency in terms of communication.
- The graduating accountancy students have a high level of digital competency in terms of creation.
- The graduating accountancy students have a very high level of digital competency in terms of safety.
- The graduating accountancy students have a high level of digital competency in terms of solving.

✓ The graduating accountancy students' assessment of the level of career preparedness under the necessities of Industry 4.0 indicates that they understand the challenges and requirements associated with Industry 4.0, and are ready to enter the accounting profession in the context of IR4. However, they disagreed with some of the statements, indicating that they are less satisfied with their accounting-related ability, and their knowledge and skills gained in school to some degree prepared them to strategically organize and plan their approach which boosted confidence to embark on their accounting career in the IR4.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

- ✓ The graduating accountancy students' assessment of their knowledge gained from experiential learning indicates that the respondents have confidence in their digital competencies. However, despite this confidence, there exists a noteworthy disparity in the overall satisfaction with experiential learning particularly with the career preparedness in the Industry 4.0 landscape.
- ✓ The graduating accountancy students' career preparedness is significantly affected by their level of digital competency. This indicates that students who have a higher degree of digital competence are better prepared for their careers, particularly within the context of the fourth industrial revolution.
- ✓ Student's digital competency and career preparedness are significantly influenced by their hands-on experience in the accounting course i.e. experiential learning. A higher level of experiential learning means a higher degree of digital competency and career preparedness under the fourth industrial revolution (Industry 4.0).

RECOMMENDATIONS

Building on the findings of the study, the following recommendations are given:

➢ *Graduating Accountancy Students' Level of Digital Competence*

- To further enhance understanding and skills in utilizing digital tools for information and data literacy, students – during their academic tenure – should undergo comprehensive education through numerous lectures and seminars in addition, a practical component, such as training should also be incorporated in the academy to develop mastery of specific tools.
- Educational institutions should administer opportunities – like group projects – for students to engage in more extensive use of digital tools for communication, such as Microsoft Teams and Google Workspace, within academic contexts. Furthermore, students should explore other digital tools for communication to broaden the variations of digital tools that they can manage and utilize.
- Students are advised to optimize the use of the internet platforms, including but not limited to YouTube and Google, in researching the present and emerging accounting software functions and usage as early as now, before entering the professional world. Utilization of the platforms mentioned will help them to become aware of the widely used accounting software in the profession. And also, this will hone their level of digital competency in terms of content creation.
- Students are further encouraged to search online resources regarding accounting tools, and advanced functions and learn troubleshooting techniques.

✓ Universities should further encourage their students to utilize online learning platforms such as edX which partners with different institutions that provide various free online courses and career-relevant training programs that help people be future-ready. One of its partners is the Association of Chartered Certified Accountants (ACCA) which offers Massive Open Online Courses (MOOC) ranging from basic and traditional accounting to more advanced ones. Moreover, training courses for data processing and analytics, Blockchain, Cloud, and AI are also offered in the platform in partnership with IBM. With the proper utilization of these learning opportunities, the students will gain valuable knowledge and skills that can help them be more confident and satisfied in embarking on their accounting career journey in Industry 4.0. Additionally, the university can further enhance its collaboration with various companies organizing training sessions and roadshows aimed at providing students with practical insight, networking opportunities, and industry exposure.

✓ Educators should affiliate more practical assessments and coursework rather than solely relying on conceptual discussion and written assessments. This approach can foster confidence in students regarding their ability to navigate the demands of IR4 especially in navigating digital accounting platforms effectively and efficiently. Furthermore, this will contribute to their overall satisfaction with their knowledge and ability upon entering the accounting profession. Emphasizing hands-on and practical learning approaches will be essential in adequately preparing the graduating students to meet the evolving demands of the accounting profession.

✓ Educational institutions integrate into their curriculum activities that could foster students' digital competencies. This can be done by giving priority to courses addressing emerging technologies relevant to the accounting profession. Furthermore, educational institutions may organize seminars focusing on topics like data analysis, software proficiency, and the utilization of accounting software and tools such as QuickBooks and Xero.

✓ Universities must adopt strategies and methods to engage the students in experiential learning approaches. Accounting-related tools, software, applications, and programs (e.g. QuickBooks and Xero) may be prepared to expose the students to the actual practice of the profession and therefore, enhance their digital competency and career preparedness. Moreover, the university may encourage the students to be involved in accounting-related seminars wherein there are also accounting-related activities in which they may participate.

➢ *Future Researchers*

Future researchers conducting studies related to this topic may consider using the present study as a benchmark for advancing their research endeavors by incorporating the following:

- Compare effects across disciplines
- Additional moderating factors
- Supplement quantitative findings with qualitative insights to enhance understanding of the relationship between digital competency, experiential learning, and career preparedness.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

REFERENCES

[1]. Al-Htybat, K., von Alberti-Alhtaybat, L., & Alhatabat, Z. (2018). Educating digital natives for the future: accounting educators' evaluation of the accounting curriculum. *Accounting Education*, *27*(4), 333–357. https://ideas.repec.org/a/taf/accted/v27y2018i4p333-357.html

[2]. Aman, M., Dela Cerna, J., Orpilla, C., & Pascua, C. (2023). *Career readiness of graduating BSA students of De La Salle University - Manila in industry 4.0*. Animo Repository. https://animorepository.dlsu.edu.ph/etdb_acc/47/

[3]. Beer, P., & Mulder, R. H. (2020). The Effects of Technological Developments on Work and Their Implications for Continuous Vocational Education and Training: A Systematic Review. *Frontiers in Psychology*, *11*. https://doi.org/10.3389/fpsyg.2020.00918

[4]. Cascio, W. F., & Montealegre, R. (2016, March 21). How Technology Is Changing Work and Organizations. Annual review of organizational psychology and organizational behavior. Retrieved from https://doi.org/10.1146/annurev-orgpsych-041015-062352

[5]. Devi et al. (2023). Application of Correlational Research Design in Nursing and Medical Research Retrieved from: https://www.researchgate.net/publication/368958213_APPLICATION_OF_CORRELATIONAL_RESEARCH_DESIGN_IN_NURSING_AND_MEDICAL_RESEARCH#:~:text=A%20correlational%20research%20design%20investigates,be%20either%20positive%20or%20negative.

[6]. Echenique, E.G. (2015) 'Digital Competence in the Knowledge Society', MERLOT Journal of Online Learning and Teaching, 11(1), pp. 2.

[7]. Etikan., I., Musa, S.A., & Alkassim, R.S. (2016). Comparison of comvenience sampling and purposive sampling. American Journal of Theoretical and Applied Statistics, 5(1), 1-4. https://doi.org/10.11648/j.atas.20160501.11

[8]. Fatin Adilah Razali et al (2022). The Impact of Industry 4.0 Towards Accounting Profession and Graduate's Career Readiness: A Review of Literature. Malaysian Journal of Social Sciences and Humanities (MJSSH), 7(7), e001624. https://doi.org/10.47405/mjssh.v7i7.1624

[9]. Hasan Tınmaz, Lee, Y.-T., Fanea-Ivanovici, M., & Baber, H. (2022). A systematic review on digital literacy. *Smart Learning Environments*, *9*(1). https://doi.org/10.1186/s40561-022-00204-y

[10]. Helliar, C. (2013). The Global Challenge for Accounting Education. Accounting Education: An International Journal, 22(6), 510-521.

[11]. Hoehe, M. R., & Thibaut, F. (2020, June 30). Going Digital: How Technology Use May Influence Human Brains and Behavior. Dialogues in Clinical Neuroscience. Retrieved from https://doi.org/10.31887/dcns.2020.22.2/mhoehe

[12]. Khanh, L. T. (2018). Impact of industrial revolution 4.0 (Industry 4.0) to the accounting profession in Vietnam. ICFE 2018, 346.

[13]. Kluzer, S.; Rissola, G. Guidelines on the Adoption of DigComp; Telecenter Europe. 2015. Available online: https://all-digital.org/resources/guidelines-adoption-digcomp/ (accessed on 21 September 2023).

[14]. Li, L. (2022). Reskilling and Upskilling the Future-ready Workforce for Industry 4.0 and Beyond. *Information Systems Frontiers*. https://doi.org/10.1007/s10796-022-10308-y

[15]. Marciniak, J. (2022). *Career Preparedness Among Adolescents: A Review of Key Components and Directions for Future Research - Julian Marciniak, Claire S. Johnston, Rebekka S. Steiner, Andreas Hirschi, 2022*. Journal of Career Development.https://journals.sagepub.com/doi/10.1177/0894845320943951#%3A~%3Atext%3DBased%20on%20a%20review%20of%2Cunexpected%20career%20transitions%20and%20changes

[16]. Pavelko, O., Zinkevych, O., & Dermanska, M. (2021). Theoretical approaches to determining the status of a profession accountant and his competences. https://ir.kneu.edu.ua/bitstream/handle/2010/37100/spvuis_25_1221.pdf?sequence=1isAllowed=y

[17]. Quaratul 'Aini ABDULLAH, Norshima Humaidi, & Shahrom, M. (2020, July 2). *Industry revolution 4.0: the readiness of graduates of higher education institutions for fulfilling job...* ResearchGate; Romanian Journal of Information Technology and AutomaticControl.https://www.researchgate.net/publication/342641580_Industry_revolution_40_the_readiness_of_graduates_of_higher_education_institutions_for_fulfilling_job_demands?fbclid=IwAR11TU8gOVE9yQfhryvKcOh0yukp0cMetzUYTUhqvlYasgwYGUqegTisKt0

[18]. Razali F., Mohd Abdullah Jusoh, Abu, L., & Naqiah Awang. (2022, July 28). *The Impact of Industry 4.0 Towards Accounting Profession and Graduate's Career Readiness: A Review of...* ResearchGate; Secholian Publication. https://www.researchgate.net/publication/362362352_The_Impact_of_Industry_40_Towards_Accounting_Profession_and_Graduate's_Career_Readiness_A_Review_of_Literature.

[19]. Sarkar, S., Verma, R., & Singh, S. (2022). Faculty and Students' Perceptions on Experiential Learning Based Anatomy Dissection Hall Sessions for Medical Undergraduates. *Advances in Medical Education and Practice*, *Volume 13*, 543–554. https://doi.org/10.2147/amep.s359140

[20]. Schwab, K., & World Economic Forum. (2016, January 14). *The Fourth Industrial Revolution: what it means and how to respond*. World Economic Forum. https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/IJISRT24MAR1648

[21]. Tan, L. M., & Laswad, F. (2015). Academic Performance in Introductory Accounting: Do Learning Styles Matter? Accounting Education: an international journal, 24(5), 383-402.
[22]. Tomlinson, M. (2017). Forms of graduate capital and their relationship to graduate employability. Education and Training, 59(4), 338–352. https://doi.org/10.1108/ET-05-2016- 0090.
[23]. Vien, C. (2021) *The abilities employers seek from accounting graduates*. Journal of Accountancy.https://www.journalofaccountancy.com /newsletters/extra-credit/abilities-employers-seek-accounting-graduates.html
[24]. Wahyuni, T. (2020). The Role of Information Technology in Supporting Accountant Profession in the Era of Industrial Revolution 4.0. Proceedings of the 3rd International Conference on Vocational Higher Education (ICVHE 2018),
[25]. Willis, V. F. (2016). A model for teaching technology: Using Excel in an accounting information systems course. *Journal of Accounting Education*, *36*(C), 87–99. https://ideas.repec.org/a/eee/joaced/v36y2016icp87-99.html