UAE's Labor Market Snapshot | Skills and Educational Mismatch During Industry 4.0

Ghada Goher, Maslin Masrom, Astuty Amrin, Noorlizawati Abd Rahim

Abstract: ***The increased penetration of technology which brings efficiency to businesses globally has caused a shift in the skills that are required by the employees. One of the ways that the economy can reap the benefits of the digital revolution is by ensuring the development of appropriate skills that are mandated by the technological economy. Skills and educational mismatch have been noted to have a negative influence on employee and labour market outcomes. Due to this, several studies that focused on diagnosing the phenomena of skills and educational mismatch have been conducted in some developed countries. Despite the rate of economic growth that the UAE has achieved, far too little scholarly attention has been paid to skills and educational mismatch in the country. Therefore, this study's objective is to measure the extent and nature of skills and educational mismatch from the perception of current workforce in the market. Using quantitative methodology, primary data in the form of surveys was collected from 206 respondents. SPSS was used to analyze the survey data in the form of descriptive statistics and cross tabulations. The results indicated that skills and educational mismatch is prevalent in the UAE across the private and public sector. Moreover, we found evidence suggesting the nature of skills mismatch is skills gap and the type of educational mismatch that is most prevalent in the UAE is horizontal mismatch. The results also indicate that engineers are some of the most affected by both skills and educational mismatch where most of the engineers are not working in engineering jobs compared to business management graduates most of who are working in their field of graduation. This paper contributes by creating new evidence in the area of skills and educational mismatch in the UAE's labour market. It has bridged a gap by examine the state of mismatch in the UAE which can then allow to establish corrective actions to reduce the said mismatch in the country.***

Keywords: Industry 4.0 (i4), Educational Mismatch, Skills Mismatch, Labour Market

I. INTRODUCTION

Due to the rapid technological advancements, the skills requirements are being rapidly updated as well [1]. For instance, Reference [2] has noted that there is an influence of technological change on leadership jobs as well as low-skilled jobs where organizations expect employees with an inherent digital skill. Furthermore, the advanced technology such as Artificial Intelligence (AI) and machine learning has caused an increasing demand for employees that are high in cognitive capacity, problem solving skills, and creativity [1]. It is necessary to reduce skills and educational mismatch because it is evident that they have negative influence on several employee and labour market factors including employee satisfaction, wage effects, high rates of turnover, employee productivity, and occupational choice [3]-[10].

Skills mismatch occurs when there is a difference between the skills that are required by the employer and what the employee possess [11]. Skills mismatch is of three types: skills gap, skills shortages, and skills obsolescence. Skills gap is widely defined in the same manner as skills mismatch as it reflect the difference between what employers need their employees to be able to do, and what those employees can do at work. On the other hand, skills shortage happens, when there is not enough workforce available with the skills that are demanded by the employers [11] and can have a direct impact on the firm performance [3], [12], [13]. Skills obsolescence happens when an individual possesses a skill but that is no longer needed by the job market. This is also referred to as human capital depreciation and can occur due to rapid technological changes [14], [15].

Educational mismatch, also known as qualification mismatch, is of two types: horizontal and vertical. Vertical mismatch is also of two types: over-education/over-qualification and under-education/under-qualification. It reflects the state of misalignment between the level of education/qualification an individual already has and the level of education/qualification that is required for the job [16]. However, horizontal mismatch occurs when there is a difference between education/qualification acquired by an individual and those required for the job. As a result, there is a surplus of educated individuals but there are limited numbers of their occupations in any given field [17].

One of the ways that the economy can gain from the benefits of the digital revolution is by ensuring that the policy facilitates the development of appropriate skills that are mandated by the technological economy [1]. Due to this, several studies that focused on diagnosing the phenomena of skills and educational mismatch have been conducted in some developed countries such as in Europe. For instance, research by Reference [18] was carried out in the United Kingdom (UK) and used secondary data to establish a weak but positive correlation between over-education and skills mismatch. Furthermore, a study by Reference [19] was conducted in the UK and Australia also used secondary data.

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However, there is a prevalent gap in this research area as it did not cover non-European countries in addition to it did not depend on primary data.

In the UAE, the prevalence of a skills gap has become more and more evident over the last few years [20]. Moreover, it was evident that there is paucity in research that has evaluated the skills and educational mismatch in the UAE. It can be speculated that depending on the nature of the skills and educational mismatch, different solutions will be necessary. For instance, skills obsolescence can be resolved with the provision of vocational training to employees facing this issue while horizontal educational mismatch can be resolved by the creation of job opportunities by the country. Given the varied nature of skills and educational mismatch, there is a need to first identify the mismatch types that are prevalent in the UAE labour market. Therefore, the primary objective of this study is to quantify the same in the context of the UAE and identify the nature of the mismatch that is prevalent in their labour market. The conclusion of this research shall allow future researchers and policy makers to propose solutions for mitigating the mismatch in the UAE to facilitate the country economic growth and prosperity.

II. METHODOLOGY

A. Measures

The lack of prior validated self-reported measures led the researchers to develop several questionnaire items as much of the prior research was carried out using secondary data. This method was adopted from Reference [21], one of the few studies that have used self-reported measures. The developed questionnaire divided into three sections: Demographics, Educational Mismatch, and Skills Mismatch. The sections included several direct questions were included such as "Are you working in the field or school that you graduated in?" and "Kindly indicate if you possess the requisite skills or not at the time of your graduation" that were measured using a binary (Yes/No) response.

Before the data collection, face validity of the questionnaire was established. For this purpose, interviews were carried out with two senior professions. One of the participants worked as HR Consultant for a government body and the other participant was the Chief Technical Officer (CTO) at one of the Middle East's leading jobs site helps millions of job seekers and thousands of employers connect. Following the above interviews, the researchers engaged the two participants in a focus group setting and requested them to complete the survey while pointing out any inconsistencies or revisions needed [22]. The ease of answering the questions and understanding the statements was also questioned by the researchers. The ease of answering the questions and understanding the statements was also questioned by the researchers. The participants recorded that the questionnaire was both easy to read and easy to answer. The participants did not have any further concerns with regards to the questionnaire and provided their expert approval towards the usage of the questionnaire to measure the extent and nature of skills and educational mismatch in the UAE.

Targeted respondents were the hired workforce in the UAE's public and the private sector across all economic sectors of the country. The sampling technique utilized was simple random sampling where participants were chosen at random from the workforce of the UAE. The questionnaire was circulated to targeted respondents across the UAE using Survey Monkey. Collected data was analysed using SPSS to compare between different parameters and measures. The results obtained were analysed using descriptive statistics in addition to cross tabulations.

B. Results

The survey link was shared with approximately 1000 potential respondents, out of which only 210 responded bringing the response rate to 21%. Out of these 210 responses, missing values dictated that the cases be eliminated and hence, the data set used for final analysis was 206. A descriptive analysis was carried out to understand the current scenario and trends in the UAE with respect to skills and educational mismatch.

C. Respondents Profile

Out of the 206 respondents, approximately 35% (n=72) were Gulf Cooperation Council (GCC) nationals, 32.5% (n=67) of the respondents were UAE nationals, and 32.5% (n=67) were expatriates from outside the GCC region. Furthermore, the sample was divided into an almost equal distribution of employees working in the public and the private sector. This depicts that the sample consisted of diverse individuals that are representative of the population of the target segment in UAE.

In terms of the economic sector that the respondents worked in, a myriad number of responses were received. The segregation of the economic sector was adopted from the classification used by the Government of the UAE. For instance, 18.9% (n=39) of the respondents worked in the Construction industry while 14.6% (n=30) of the respondents were employed in the Real Estate and Rental and Business Services. Hotels and Restaurants were represented by 13.6% (n=28), Trade and Repair Services were represented by 10.7% (n=22), while Manufacturing and Industry found 9.7% (n=20) representation amongst the respondents. Moreover, 7.3% (n=15) of the respondents were from the Educational Services and Studies sector, 6.3% (n=13) worked in the Banking sector, 5.3% (n=11) of the respondents were employed in the Community and Personal Services and Others, while Transportation Storage, and Communication sector was represented by 4.9% (n=10) of the respondents. Finally, around 4.4% (n=9) respondents worked in the Health and Social Work sector, 1.9% (n=4) respondents worked in the Water & Gas and Aviation industry each and only 0.5% (n=1) of the respondents worked in the Financial Intermediation sector. It can be deduced that the primary economic sectors in the UAE range between construction, real estate, business, and trade.

In terms of gender, the respondents were divided almost evenly with 52.9% (n=109) males and 47.1% (n=97) females. Furthermore, most of the respondents (f=20.9%, n=43, N=206) were in the age group of 36 to 45 years old followed closely by 19.4% (n=40) of the respondents who were 46 to 55 years old.

In addition, 18.9% (n=39) of the respondents were 26 to 35 years old while 18.4% (n=38) of the respondents were 18 to 25 years old. Finally, 17% (n=35) of the respondents were 56 to 63 years old and 5.3% (n=11) of the respondents were 64 years and above. This depicts that in the UAE labour market there is no preference or prejudice toward one gender over the other and workforce age ranges between 26 to 55 years old represents a majority of the current workforce.

III. ANALYSIS

A. Educational Mismatch

The respondents were requested to provide the school in which they graduated and it was noted that the majority of the respondents graduated from the school of engineering (f=45.1%, n=93, N=206). In addition, 32% (n=66) of the respondents graduated from the Business Management school, 9.2% (n=19) of the respondents graduated from the Economics school while 7.8% of the respondents graduated from the school of Social Sciences. Furthermore, 2.4% (n=5) of the respondents graduated from the school of Health and Social Work, 1.9% (n=4) of the respondents graduated from the school of Media and Communication, and 1.5% (n=3) graduated from the school of Humanities. It can be inferred that the primary education profile in the UAE ranges between the school of engineering and the school of business management.

With respect to the graduation major, the most common major was mechanical engineering (f=22.8%, n=47, N=206), followed by general business administration (f=16.5%, n=34, N=206) which was then followed by finance (f=9.2%, n=19, N=206). In addition, electrical engineering (f=8.7%, n=18, N=206) was the fourth most commonly evidenced graduation major.

Using cross tabulations, the researchers compared the school of graduation with the designation that the respondents held at the time of the survey. The results indicate that while the majority of the respondents who studied business management are in business management related jobs, most of the engineers are not working in engineering related jobs. More specifically, at the time of this survey, several engineers are working as call center agents and customer service staff (n=16), sales professionals (n=13), operations, admin, and support staff (n=12), teachers (n=10), learning and development staff (n=3), and business development professionals (n=5). Furthermore, a few respondents who studied in the school of economics were employed as call center agents and customer service staff (n=4) and teacher (n=1). In addition, respondents who studied in the school of media and communication were employed in following areas: sales, operations, admin, and support, call center and customer service, and business development (n=1 each).

At the outset, the above results suggest that there is some degree of educational mismatch that is prevalent in the UAE's labour market. More specifically, the results indicate that Engineering graduates are the most affected by the educational mismatch that is prevalent in the UAE.

With regards to the prevalence of educational mismatch in the public and private sector, it was found that 48.4% (n=78) of the respondents were employed in the public sector while 51.6% (n=83) were employed in the private sector. Therefore, this depicts that educational mismatch prevalence across the public and private sector are almost comparable.

Further analysis using cross tabulation has depicted that the educational mismatch in the UAE is almost comparable amongst the males and the females as around 78% (n=85) of males and 78.4% (n=76) of the females are not working in the field that they graduated in.

Moreover, results showed 20.5% (n=33) are aged between 46 to 55 years old, 19.3% (n=31) are aged 18 to 25 years old, 18.6% (n=30) are aged between 26 to 35 years old, 18% (n=29) are aged 36 to 45 years old and 56 to 63 years old each, and 5.6% (n=9) are 64 years old and above. Finally, it was noted that 82.2% (n=74) of the respondents who possessed a Bachelor's qualification were experiencing educational mismatch along with 78% (n=32) of the respondents who possessed PhD/DBA/Equivalent qualification, 77.8% (n=35) of the respondents who possessed a Master's degree, and 66.7% (n=20) of the respondents with a Diploma. These findings advocate that educational mismatch in the UAE is prevalent amongst all age groups and at different education levels.

In addition to the above, several direct questions were asked to the respondents to further diagnose the current educational mismatch in the UAE. For instance, respondents were asked to state directly if they are working in a job that matches their education gained, if the job they are working in is within their same field or not, and if they perceive that having a university degree for their job is adequate or excessive. These findings advocate that the respondents are experiencing a vertical educational mismatch.

With respect to the extent to which education is a requirement to obtain a job in the UAE, the respondents were asked to state if a university degree was a requirement to obtain the job they are presently working in. The majority of the respondents (f=93.7%, n=193, N=206) noted that a university degree was a requirement for their current job. The remaining respondents (f=6.3%, n=13, N=206) reported that they did not require a university degree to obtain their job. Furthermore, several respondents perceived their university degree to be excessive (f=67.5%, n=139, N=206) while 30.1% (n=62) perceived their university degree to be adequate. However, a small number of respondents stated that their university degree is insufficient (f=2.4%, n=5, N=206) to their current job.

Although the majority of respondents indicated that education was required to obtain their current jobs, the educational mismatch in UAE was evident as, 78.2% (n=161) of the respondents stated that they were not employed in the field or school that they graduated in while the remaining respondents stated that they work in the same field. When asked to outline the reason why they are not working in their field of study, 43.2% (n=89) of the respondents stated that they could not find a job due to the lack of market demand. Around 16% (n=33) of the respondents stated that they did not like to work in the field that they were educated in which depicts a conscious choice to move out of their field of education.

On the other hand, 11.7% (n=24) stated that they did not have the required skills to be able to work in their field of graduation and 5.3% (n=11) stated that they did not have the required knowledge in their respective fields of graduation. A small fraction of respondents (f=3.4%, n=7, N=206) stated other reasons, but failed to provide further details.

Finally, to reach clear understanding of the current nature of educational mismatch in the UAE, the respondents were asked to state if they were employed in the same or different fields and at what level.

Approximately 27.2% (n=56) of the respondents stated that they are employed at a higher level than their education but in a different field. In addition, 26.2% (n=54) of the respondents were employed at a lower level but in different field and at the same level but in different fields each. On the other hand, 7.8% (n=16) of the respondents stated that they are working at a higher level than their own education but within the same field, 7.3% (n=15) of the respondents stated that they have a job at a lower level than their own education, but they are employed within the same field, and finally, 5.3% (n=11) of the respondents are employed at the same level and are working in their same field.

The results of this question further support the finding that there is educational mismatch that is prevalent in the UAE labour market. In addition, the results indicate that the type of educational mismatch that is prevalent in the country is horizontal mismatch. This means that a large proportion of workforce are working in jobs in different fields than their gained educational qualification.

Moving further, around 40.3% (n=83) believed that their field of study was the best or the only possible field of study by far, while 44.2% (n=91) of the respondents disagreed and 15.5% (n=32) of the respondents remained neutral to the statement. In addition, respondents were asked if they thought that some other fields of education would better equip them for their job and around 41.7% (n=86) of the respondents agreed while 40.8% (n=84) of the respondents stated that they disagree.

Around 43.2% (n=89) of the respondents stated that they agreed that another field of study would have been more useful to them while 37.8% (n=78) disagreed with the statement. The remaining respondents remained neutral. In addition, 46.1% (n=95) of the respondents disagreed with the fact that the field of study does not matter very much in the UAE. However, 34.5% (n=71) of the respondents agreed to this statement, and the remaining respondents maintained neutrality. Finally, the respondents were asked if they think that higher educational studies are related to their area of work or not and 42.3% (n=87) agreed while 41.2% (n=85) of the studies disagreed.

The above results outline the fact that most of the respondents are experiencing a vertical educational mismatch and consider that their educational qualification is excessive. This indicates that there is some extent of vertical mismatch that is prevalent in the UAE. However, given the high rate of respondents that are not employed in their field of education because they could not find a job suggests that horizontal mismatch is more prevalent in the UAE.

B. Skills Profile and Mismatch

Having examined the state of educational mismatch in the UAE, the researchers also examined the skills mismatch that might be prevalent in the country. First, the researchers asked the respondents to state if they use the skills they gained during their education in their present employment. The majority of the respondents noted that they do not use the skills they gained during their education (f=69.9%, n=144, N=206) and only 30.1% (n=62) of the respondents noted that they use the skills gained during their education. Following this, the respondents were asked to complete a skills list based on the skills that were requisite of their current job at the time they were hired.

Based on the below Table I, it can be said that field specific theoretical knowledge and field specific knowledge of methods are not prevalent in the UAE's job market. All of the other skills that were considered have found to have some prevalence in the UAE's job market. Following the identification of the skills profile, the respondents were asked if they possessed the requisite skills at the time of this survey. 87.9% (n=181) of the respondents noted that they possessed the requisite skills and the rest noted that they did not. Following which, it was identified how the respondents came to acquire these skills. Almost all of the respondents (f=96.1%, n=198, N=206) outlined that they gained their skills via a course that was funded by their organization. Furthermore, 93.7% (n=193) gained their skills through on the job training, 19.9% (n=41) of the respondents gained their skills through education, and only 17% (n=35) of the respondents gained their skills through a self-funded course. The results indicate that the educational qualification that the respondents achieved did not provide them with the necessary skill set that they needed.

Further analysis revealed that 57.2% (n=95) of males and 42.8% (n=71) of females did not possess the requisite skills following their graduation. In addition, 44% (n=73) of respondents who possessed a Bachelor's degree did not possess the required skills at the time of graduation. Furthermore, 20.5% (n=34) of respondents with a Master's degree, 19.9% (n=33) with a PhD/DBA/Equivalent, and 15.7% (n=26) with a Diploma did not possess the requisite skills following their graduation.

To further anchor this result, the respondents were asked to directly state if they possessed the requisite skills at the time of their graduation or not. A majority of the respondents (f=80.6%, n=166, N=206) did not possess the skills at the time of their graduation.

Table- I: Skills Profile in the UAE's labour market (N=206)

		n	Percentage (%)			n	Percentage (%)
Field specific theoretical knowledge	Not at all	109	52.9%	**Getting personally involved**	Not at all	0	0.0%
	To some extent	50	24.3%		To some extent	53	25.7%
	To a moderate extent	7	3.4%		To a moderate extent	51	24.8%
	To a great extent	20	9.7%		To a great extent	52	25.2%
	To a very high extent	20	9.7%		To a very high extent	50	24.3%
Field specific knowledge of methods	Not at all	108	52.4%	**Loyalty, Integrity**	Not at all	0	0.0%
	To some extent	48	23.3%		To some extent	60	29.1%
	To a moderate extent	10	4.9%		To a moderate extent	49	23.8%
	To a great extent	19	9.2%		To a great extent	58	28.2%
	To a very high extent	21	10.2%		To a very high extent	39	18.9%
Planning, coordinating, and organizing	Not at all	0	0.0%	**Communication Skills**	Not at all	0	0.0%
	To some extent	48	23.3%		To some extent	45	21.8%
	To a moderate extent	53	25.7%		To a moderate extent	53	25.7%
	To a great extent	42	20.4%		To a great extent	56	27.2%
	To a very high extent	63	30.6%		To a very high extent	52	25.2%
Problem-solving ability	Not at all	0	0.0%	**Taking responsibilities**	Not at all	0	0.0%
	To some extent	62	30.1%		To some extent	52	25.2%
	To a moderate extent	43	20.9%		To a moderate extent	58	28.2%
	To a great extent	53	25.7%		To a great extent	45	21.8%
	To a very high extent	48	23.3%		To a very high extent	51	24.8%
Learning abilities	Not at all	0	0.0%	**Digital Capabilities**	Not at all	0	0.0%
	To some extent	55	26.7%		To some extent	55	26.7%
	To a moderate extent	41	19.9%		To a moderate extent	43	20.9%
	To a great extent	52	25.2%		To a great extent	61	29.6%
	To a very high extent	58	28.2%		To a very high extent	47	22.8%
Working under pressure	Not at all	0	0.0%	**Team Player**	Not at all	0	0.0%
	To some extent	50	24.3%		To some extent	50	24.3%
	To a moderate extent	60	29.1%		To a moderate extent	49	23.8%
	To a great extent	52	25.2%		To a great extent	55	26.7%
	To a very high extent	44	21.4%		To a very high extent	52	25.2%
Accuracy, attention to details	Not at all	0	0.0%	**Bi-lingual communication skills**	Not at all	0	0.0%
	To some extent	62	30.1%		To some extent	62	30.1%
	To a moderate extent	51	24.8%		To a moderate extent	52	25.2%
	To a great extent	41	19.9%		To a great extent	53	25.7%
	To a very high extent	52	25.2%		To a very high extent	39	18.9%
Time	Not at all	0	0.0%	**Efficiency**	Not at all	0	0.0%

		n	Percentage (%)			n	Percentage (%)
Management	To some extent	59	28.6%		To some extent	44	21.4%
	To a moderate extent	40	19.4%		To a moderate extent	54	26.2%
	To a great extent	53	25.7%		To a great extent	65	31.6%
	To a very high extent	54	26.2%		To a very high extent	43	20.9%
Fitness for work	Not at all	66	32.0%	**Leadership skills**	Not at all	0	0.0%
	To some extent	72	35.0%		To some extent	50	24.3%
	To a moderate extent	68	33.0%		To a moderate extent	49	23.8%
	To a great extent	0	0.0%		To a great extent	56	27.2%
	To a very high extent	0	0.0%		To a very high extent	51	24.8%
Working Independently	Not at all	0	0.0%	**English communication skills**	Not at all	0	0.0%
	To some extent	50	24.3%		To some extent	53	25.7%
	To a moderate extent	55	26.7%		To a moderate extent	58	28.2%
	To a great extent	54	26.2%		To a great extent	52	25.2%
	To a very high extent	47	22.8%		To a very high extent	43	20.9%
Initiative	Not at all	0	0.0%	**Good negotiation skills**	Not at all	0	0.0%
	To some extent	55	26.7%		To some extent	46	22.3%
	To a moderate extent	61	29.6%		To a moderate extent	54	26.2%
	To a great extent	44	21.4%		To a great extent	54	26.2%
	To a very high extent	46	22.3%		To a very high extent	52	25.2%
Adaptability	Not at all	0	0.0%	**Passion or ability to make a difference**	Not at all	0	0.0%
	To some extent	64	31.1%		To some extent	56	27.2%
	To a moderate extent	50	24.3%		To a moderate extent	42	20.4%
	To a great extent	45	21.8%		To a great extent	59	28.6%
	To a very high extent	47	22.8%		To a very high extent	49	23.8%
Assertiveness, decisiveness, and persistence	Not at all	0	0.0%	**Ability to take on challenges**	Not at all	0	0.0%
	To some extent	61	29.6%		To some extent	46	22.3%
	To a moderate extent	47	22.8%		To a moderate extent	59	28.6%
	To a great extent	49	23.8%		To a great extent	52	25.2%
	To a very high extent	49	23.8%		To a very high extent	49	23.8%
Power of concentration	Not at all	0	0.0%				
	To some extent	44	21.4%				
	To a moderate extent	62	30.1%				
	To a great extent	39	18.9%				
	To a very high extent	61	29.6%				

From the above results, it was evident that the issue of skills mismatch among graduates has occurred in both sectors (public and private), for any gender, and at every age group, which suggests that this is a long standing issue that has not received any prior scholarly attention. The fact that several respondents gained the required skills through the organization's funding elucidates that the educational programs are not providing the skills that the students need to become highly functional employees. This suggests that the most prevalent skills mismatch in the UAE is the skills gap as these results manifest that there is a gap between the demand of the employers and the supply of the employees. The above results have not only highlighted the fact that the majority of the respondents have experienced a skills gap, but also provided a skills profile for the UAE's job market.

IV. DISCUSSION

From the results obtained, it has become evident that skills and educational mismatch exists in the UAE labour market. In the absence of prior research in this area with a focus on the UAE, it can be speculated to be due to several reasons. One of the reasons could be that the educational programs are not able to keep up with the requirements of the new workforce and hence, are not capable of providing the requisite skills and fields that are needed. It can be possible also that the UAE labour market is not creating enough jobs for the educated individuals that they are forced to take up employment elsewhere to avoid unemployment.

Another reason could be the influence of the rapid pace of the technological change that is taking place. In other words, Industry 4.0 has brought a new era of technological change with rapid automation and technology that have substantially changed the manner in which human processes are carried out [23]. The influence of digital transformation is not only seen on the jobs that traditionally required a lower skill level, but also on leadership positions. While technological advancements have brought several benefits, technology also has several negative implications for the economy. Therefore, the skills and educational fields that are needed in the digitally enhanced world are markedly different from what was required prior to the digital revolution [24].

In this light, the Reference [24] has noted that an immediate compensation effect must takes place [25] to ensure that the market readjusts itself to compensate for any loss of jobs. In other words, it can be stated that as the technological change makes some jobs obsolete, the several new jobs are created [26]. According to Reference [27], around 375 million people will need to switch their jobs and the category of occupation by 2030. In addition, the report also noted that digital jobs will bring in close to US$ 2.7 trillion in global GDP by 2025. In addition, a report by the Reference [28] noted that technology is reshaping the skills that are needed for an employee to be employed. The report also noted that across the globe, skills that can be replaced by technology are being replaced and the demand for such skills is reducing while the demand for greater cognitive ability, adaptability, and socio-behavioural skills is on the rise. Therefore, one of the core determinants of skills and educational mismatch is technological change [29], [30].

V. CONTRIBUTION AND LIMITATION

The primary contribution of this research is that it has provided a glimpse into the UAE labour market. Considerable number of the researches in this area of skills and educational mismatch has been conducted using secondary data. This research, however, has used self-reported measures to understand the extent and nature of skills and educational mismatch in the UAE. The secondary contribution of the study is that it has created new evidence in the context of skills and educational mismatch in the UAE, which will allow future researchers and policy makers to take informed steps towards the solutions to mitigate the said mismatch. Developing such solution will allow the country to reduce the negative impact of skills and educational mismatch in the country.

However, one of the limitations is that the study utilized a small sample size due to limited time and resources. Future research can focus in the context of the UAE and carry out similar research with a larger and more representative sample size. Second limitation that can also be covered by future research is to take a closer look at the factors that are causing the said mismatch in the UAE and the potential solutions.

VI. CONCLUSION

In conclusion, the prevalence of skills and educational mismatch during the current Industry 4.0 is suggested to be accelerated in the UAE's labour market. Although there is a demand in the UAE's labour market, the educational system in the UAE is evident to be not sufficiently adjusting and providing the skills and qualifications that graduates need to obtain new jobs or succeed in their current jobs. This further highlight the need to align the skills that graduates have acquired during their formal schooling and those that are required by a particular job. The conclusion indicates, within the context of UAE, that there is absence of the orchestration between different parties involved in the education-to-employment process which is increasing the impact of Industry 4.0 on skills and education mismatch in the country. Moreover, during this digital age, future researchers are advised to consider the use of the advanced technology's potential and develop a framework that can be applied to the country to adjust the levels of mismatch dynamically as changes happen at the supply or the demand side.

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