The Using of the Metaverse in the Field of Education and Training in Police Colleges

استخدام الميتافيرس في مجال التعليم والتدريب في كليات الشرطة

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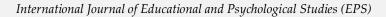## استخدام الميتافيرس في مجال التعليم والتدريب في كليات الشرطة

Abstract:

Objectives: The study addresses the possibility of using Metaverse technology in the fields of education and training in police colleges. The Metaverse has been highlighted as the future of education and training.

Methods: The study adopted a dual approach that entailed reviewing 13 studies and conducting a survey to collect qualitative data on metaverse use.

Results: The results and analysis of the study showed that there is a high desire to use the metaverse, and that the current education and training programs in police institutions need to be developed to keep pace with the current technological reality. The metaverse can also be applied in police institutions in a way that enhances police education, sports training, military training, professional applications, and management. Data and records.

Conclusions: The study recommends adopting the metaverse in police institutions, conducting a comprehensive assessment of metaverse risks, and rigorous training for teachers in police institutions.

Keywords: Metaverse; police institutions; education and training.

الملخص:

الأهداف: تتناول الدراسة موضوع إمكانية استخدام تقنية Metaverse في مجالات التعليم والتدريب في كليات الشرطة. لقد تم تسليط الضوء على Metaverse باعتباره مستقبل التعليم والتدريب.

المنهجية: اعتمدت الدراسة منهجًا ثنائيًا استلزم مراجعة 13 دراسة وإجراء مسح لجمع البيانات النوعية حول استخدام Metaverse.

النتائج: أظهرت نتائج وتحليل الدراسة أن هناك رغبة عالية في استخدام الميتافيرس، وأن برامج التعليم والتدريب الحالية في مؤسسات الشرطة بحاجة لتطوير لتواكب الواقع التكنولوجي الراهن، كما يمكن تطبيق الميتافيرس في المؤسسات الشرطية بما يعزز ذلك من التعليم الشرطي، والتدريب الرياضي، والتدريب العسكري، والتطبيقات المهنية، وإدارة البيانات والسجلات.

الخلاصة: توصي الدراسة باعتماد Metaverse في مؤسسات الشرطة، وإجراء تقييم شامل لمخاطر Metaverse، والتدريب الصارم للمعلمين في المؤسسات الشرطية.

الكلمات المفتاحية: الميتافيرس؛ المؤسسات الشرطية؛ التعليم والتدريب.

1   Introduction

In this rapidly advancing technological world, education remains one of the most important forms of social capital. Therefore, it is no wonder that various educational systems are continually being honed to provide optimal learning experiences. One of the technology-based frameworks that are quickly gaining traction in the educational field is the metaverse. Researchers postulate that this system enables educators to model the best practices of teaching and design more immersive learning styles. This implies that the web-based framework not only enhances better learning experiences for students, but also fosters educator preparedness. In its most basic form, the metaverse is a creative, virtual reality platform that facilitates a three-dimensional mode of interactivity. The implication is that users get an embodied VR (virtual reality) experience. In the educational realm, this system provides highly interactive and in-depth learning experiences.

Given the broad range of benefits, the metaverse can be applied in police-learning institutions to enhance optimal educational outcomes. Essentially, this learning framework can be used to generate realistic experiences in various areas of police training. For instance, such educational scenarios as the research and investigation of criminals, legal and traffic courses, communication skills, and internal security operations can be seamlessly modeled using the metaverse for maximal results. Other concepts like military training, sports training, and police professional applications can also be enhanced by the technology. As a result, students would be able to harness the interactive nature of the learning framework to optimally develop their skills. Importantly, this technology is still being finessed, meaning that there may be areas of weakness or inefficiency. Given the security and privacy concerns surrounding some applications of the metaverse, the technology is largely used in high schools. Nonetheless, the metaverse is a revolutionary approach to learning that can vastly improve police education.

1.1   Background of the Metaverse

Before becoming the fully immersive mode of internet experience that it is today, the metaverse underwent several developmental stages that propelled it into being one of the most sought-after technological experiences. Marr (2022) contends that the initial concept of the metaverse was borne by Sir Charles Wheatstone in 1838 after he discovered the binocular vision concept. This discovery led to the creation of the first 3D image. Subsequently, stereoscopes were developed, fostering the creation of the modern virtual reality technology. In 1956, the first virtual reality machine was created by Morton Heiling (Wartella, 2022). This machine simulated an experience of riding a motorbike through Brooklyn via the combination of 3D video, audio, smell, and a vibrating seat for maximum viewer immersion. Developments into the technology continued and in 1982, the term metaverse was developed by Neil Stevenson, who wrote about the emerging technology .

The continuous advancements in technology and commerce facilitated the development of the metaverse, with various entrepreneurs participating in the purchase of virtual reality products. After the global expansion of Extended Reality in 2014, companies like IKEA, Apple, and Facebook integrated the technology into their products and services, facilitating the mainstream reach of the technological system (Wartella, 2022). Given the successful integration of virtual reality into social activities and economics, the need to introduce the technology in educational fields emerged. The whole essence was to facilitate the creation of realistic scenarios that can help learners to fully immerse themselves and develop every practical skill. With success being realized in high school settings, stakeholders in education deemed it necessary to attempt its introduction in other spheres of education.

1.2   Problem of the study

All over the world, police education and training has been riddled with a variety of challenges. Currently, police education and training in the UAE has been impacted by curriculum-based, occupational, and legal challenges. More specifically, the country faces delivery and curriculum challenges, legal protection challenges, lack of training, and issues stemming from recruitment, occupational socialization, and the delivery of informal lessons. Under delivery and curriculum challenges, there is an imbalance in the sense that police skills are not combined with knowledge development. Therefore, the training and education process of recruits creates police officers who have spent most of their time perfecting the theoretical use of firearms without the necessary knowledge that can be applied in realistic situations.

Moreover, the evolvement of crime means that police training requires approaches that allow officers to immerse themselves into actual crime situations. The occupational challenge where new recruits are bombarded with information bits of information about policing also limits the effective acquisition of educational concepts. Fundamentally, new recruits often carry assumptions about police work and police behavior, which may compromise their ability to effectively learn and develop as professional officers. Finally, the issue of legal protection illuminates such matters as lawsuits and liabilities, which are important during interactions between police officers and civilians. The absence of a learning platform that simulates real-life occurrences and events has denied police recruits the opportunity to practically develop their skills through reality-based learning. As a result of this problem, it is of utmost necessity that the metaverse is introduced to cover the existing gaps.

This research presents a number of questions that need to be answered: Firstly, what is the importance of the Metaverse in regards to modern education and training in the police field? Secondly, does the metaverse as a new-coming technology enhance the quality of education and training in police institutions?

1.3 Importance of the Study

In every community, policing is a critical component for harmonious coexistence. Societies that have broken policing systems often struggle with human rights abuses, sustained conflicts, heightened levels of crime, and social and economic disintegration. Arguably, a broken policing system stems from ineffective police education and training. In the US, for instance, discourses abound about the role of police and the numerous injustices surrounding police activities. Additionally, the lack of police knowhow in handling specific criminal activities reinforces the notion that police training might currently be inadequate. A perfect exemplification of this assertion is the school shooting at Uvalde, Texas, where the mass shooter was able to kill scores of children before the police could intervene. In the UAE, policing is crippled by the challenge of tackling corrupt-based crimes due to the fact that the police force is not sufficiently equipped to handle this problem. Therefore, interventions are needed to help overcome this issue.

Moreover, police officers in the UAE face the challenge of highly advanced crimes and criminal networks. Notably, one of the most difficult challenges facing the UAE police is the increase in sophistication by criminals. Given the technological advancement, criminals are becoming more difficult to stop. As criminal syndicates improve their operations, police training and education remains stagnant. Therefore, society is exposed to crime-based activities that occur even without the knowledge of police officers. These factors imply that it is critical to revamp the education and training processes of police officers to ensure that law is maintained and communities are protected from the burgeoning crime syndicates. One of the most effective ways to ensure achievement of this objective is to introduce advanced technology-based frameworks of education and training in police institutions.

As aforementioned, police training in the UAE is hampered by a variety of challenges. Therefore, the importance of this study is to provide insights and approaches into how the training and education of police officers can be improved to enable more effective policing. By synthesizing the application of the metaverse in the creation of scenarios that can enhance comprehensive skill development, the study will provide information on how to improve police training and education. Besides, Davies and Al Sharefeen (2022) note that the emergence of the COVID – 19 Pandemic necessitated the development of technology-based platforms of education and training for police officers to ensure that they can cope with the changing operational landscape. This study offers an in-depth analysis of how the metaverse can be used to mitigate COVID – 19 – related challenges to education. Additionally, the study will contribute to the body of knowledge about the applicability of this technology in learning institutions beyond high schools. Finally, the study fosters the provision of knowledge about the use of the metaverse in record management; where extensive bits of information about various cadets can be safely stored and retrieved whenever needed.

1.4 Objectives of the study

This research paper is driven by three main objectives that are aimed at facilitating the synthesis of information about the metaverse and its applicability in policing institutions. The objectives are:
- To establish the applicability of the metaverse in enhancing educational activities for police college.
- To assess the role of the metaverse in improving sports and military training within police college.
- To determine the influential role of the metaverse in enhancing practical applications and after graduation path system.

The abovementioned objectives will be the guiding principles for the study. The paper will be developed through the combination of various research outcomes from previous studies as well as data that will be collected during the research process. Principally, the study is concerned with discussing the applicability of the metaverse in improving police training and education.

2   Study Methodology

The study will adopt both primary and secondary research methodologies to collect information on education and training in policing institutions and the applicability of the metaverse. The secondary research approach will involve the comprehensive and in-depth review of existing literature on this technological concept as well as the current educational and training designs in policing institutions. Essentially, this approach will facilitate the collection of information on the strengths and weaknesses of the metaverse as well as the beneficial opportunities that it can generate. Notably, secondary research is important to any research project because it facilitates the formulation of appropriate research designs, the testing of hypotheses, and the answering of research questions that lack primary data. It will also give insight into how other educational institutions are using the framework. Besides, the review of literature will allow for an analysis of the current education and training programs within policing institutions in the UAE. This will facilitate an understanding of the existing gaps as well as the areas that require the most urgent attention.

The primary research approach will entail the conduction of surveys in the Abu Dhabi Police College, the Federal Police School in Sharjah, and the Ministry of Interior. The study will target a cumulative sample size of 165 participants from the three institutions. For feasibility purposes, the surveys will be conducted virtually, with questionnaires being distributed online to collect information. The questionnaires will focus on four major areas: the level of police preparedness after training, degrees of satisfaction with the current education and training program, the willingness to adopt the metaverse, and information continuity. The collected information will facilitate an understanding of the institutions' readiness to adopt the metaverse for educational purposes. Besides, it will allow an easier needs analysis assessment, given that the gaps within the institutions will be arranged chronologically.

Importantly, the retrieved data will be qualitative. This data will be in the form of case studies on other educational institutions that have begun using the metaverse. Additionally, the data will offer information on the gaps that need to be covered, the level of success, and degree of satisfaction in the current educational systems and programs. Analysis of the qualitative data will be done systematically. Primarily, the researcher will review and organize the collected data. This will be followed by the creation of initial codes that will be used to generate themes. The themes will then be presented in relation to the applicability and the use of the metaverse in fostering education and training in policing institutions.

3   Literature Review

Given the excitement created by the metaverse, numerous scholars have conducted studies on the phenomenon. More specifically, research has been done to establish the feasibility of applying the metaverse in education. Whereas various ideas and hypotheses have been formulated, it remains to be seen whether the technology can be a mainstay in this field. Interestingly, there is a limited number of research studies on the application of the metaverse for educational purposes in policing institutions. According to Kristjánsson (2022), the education of police officers requires a focus on the meta-virtue of practicality and wisdom, known as phronesis. The researcher holds that police education and training requires an equal exposure to practical scenarios and knowledge/ wisdom. This facilitates the creation of a sturdy police force that is rich in experience and knowledge.

Notably, the argument about police training and education being rooted in practicality and wisdom is derived from Aristotle. Kristjánsson (2022) derives his argument from this mythology, which holds that optimal functionality requires the fusion of the two concepts. Analytically, this postulation can be facilitated by the metaverse, given that it advocates for the virtual creation of realistic scenarios that can be used by police learners to advance such concepts as crime investigation, internal security operation, and legal practice. Besides, the development of sports and military skills can be measured by the metaverse, given that it can analyze the fitness levels of officers and also simulate realistic classes for train weapons and special police training. Therefore, the

reviewed study promotes the idea that the metaverse can be effectively used in the education and training of police officers.

3.1 Stakeholder Opinions and Observations

Importantly, various studies have focused on assessing the opinions of stakeholders in the education realm in regard to the implementation of the metaverse. One of the most deterministic groups of stakeholders is students, who are expected to benefit immensely from the introduction of the technology. Talan and Kalinkara (2022) performed qualitative and quantitative studies on second-year students majoring in computer engineering. From the results of the study, it was established that the students had never learned using the metaverse framework, but were keen on using it in a number of disciplines. Additionally, Talan and Kalinkara (2022) posit that the students harbored the belief that the technology could significantly improve their learning experiences through the instigation of realistic virtual scenarios. The students observed that the metaverse environment makes learning more enjoyable, which increases their motivation to learn. Besides, the fact that the technology allows for high levels of interactivity and increased levels of student immersion meant that learners were able to conceptualize the course content more easily.

An equally interesting observation by the students was that the metaverse has numerous pedagogical advantages that can be used within the classroom. However, it was notable that some of the uses of the technology were so far out of reach and could not be seamlessly integrated into the classroom. Furthermore, the learners highlighted a few drawbacks of the learning framework. One of these is that the technology disconnects them from real life, making it difficult to focus (Talan & Kalinkara, 2022). Moreover, the simulation of virtual realities violates classroom discipline, due to heightened levels of distraction. As a result, it counteracts the desired outcomes of the learning process. Overall, the research established that the metaverse offers several advantages, but should be effectively moderated to ensure that learners get the best out of it.

Similarly, other researchers hold the notion that the emergence of extended reality (including brain computer interfaces, augmented reality, and virtual reality) necessitate the adoption of the metaverse in learning institutions. According to Contreras et al. (2022), the creation of a metaverse environment within learning institutions will revolutionize the entire concept of education, given that leaners will be able to readily interact with the educational concepts before them. As a result, a hands-on approach to learning will be developed, making it easier for learners to visualize concept and enhance their creativity and problem-solving skills. Of note is the assertion that the successful integration of the metaverse within learning environments, educational research, entertainment, and tele-education suggests that this technological framework can be introduced in any field of learning (Contreras et al., 2022). The implication is that in policing institutions, the metaverse can be introduced to great effect.

It is important to note that one of the key advantages of using the metaverse in education is the swift processing of data. Contreras et al. (2022) posit that the use of volumetric videos will facilitate quicker generation of content, which will be central to heightening the experiences of learners. Given that police learning and training relies heavily on data and content generation, it can be argued that the application of the metaverse in policing institution will be of immense benefit. Additionally, the extensive fusion of modern technological developments will ensure that police recruits achieve the highest level of education and training.

3.2 Application Possibilities of the Metaverse

The metaverse has proven to be an effective tool for facilitating optimal learner interactivity and immersion. Given that its application in the educational field is relatively limited, multitudes of researchers have delved into an analysis of the possibilities that can emerge from the introduction of this platform in various educational settings. Kye et al. (2021) posit that the presence of the numerous types of the metaverse imply that the possibilities in the educational field are limitless. For instance, in the medical field, Kye et al. (2021) note that augmented reality can be used to design t-shirts that allow medical students to view the internal organs of a human body. Besides, the researchers suggest that metaverse offers a space for extended social communications and a higher degree of creativity and freedom. As a result, art students can massively benefit from the introduction of this technology. However, Kye et al. (2021) also acknowledge the risk of privacy infringement that comes these connections. It would be dependent upon institutions that adopt this framework to ensure that the privacies of learners and educators are protected.

Given the possibility of applying this technology in numerous fields, it follows that its ingenuity can be effectively used in policing institutions to develop innovative ways of tackling crime. Not only is the technology useful in simulating virtual realities, it can also be used to enhance crime detection through the development of aesthetics that make it easier for police officers and cadets to detect crime. The fact that this idea is a possibility within the metaverse environment suggests that the process of fighting crime can be massively improved through an innovative approach to educating police officers.

Additionally, the metaverse framework provides the possibility of uninhibited customization of content. According to Erturk and Reynolds (2020), the metaverse allows for increased creativity with minimal risk, increased interaction, and extended content customization. These factors can be instrumental in enhancing education and training in the sense that the various strengths of learners can be easily captured and promoted by this technological framework. Erturk and Reynolds (2020) reaffirm the observation that the institution of the metaverse in learning institutions allows learners to improve their engagement with one another as well as with the educator, leading to increased focus levels and the motivation to succeed. Besides, the flexibility of the technology makes it easy to use in a variety of educational settings. Therefore, the technology can be effectively customized and applied in policing institutions.

In police education and training institutions, skill development in such areas as weapons classes, firing range shooting, special police training, and other aspects of military training is critical. Based on the current approaches of police education and training, there is a high degree of failure to train by police recruits. This stems from the fact that the training institutions have limited resources to facilitate effective training of the police recruits. Furthermore, the use of physical training approaches limits the interactivity of the officers, which is central to optimal skill development. Therefore, the introduction of the metaverse offers the possibility of overcoming this challenge and enabling police recruits to maximize their learning activities and experiences. As explained by Erturk and Reynolds (2020), this technological environment equips learners with skills on how to survive emergency occurrences and such eventualities as isolation. For police trainees, this would be a beneficial learning framework.

Despite the promising capabilities of the metaverse, it is important to consider the fact that regulation of the technological framework is necessary. Wu and Gao (2022) argue that due to the endless possibilities of the metaverse, it is necessary for its implementation to assume a multi-agent approach. Essentially, this would be a collaborative strategy that involves the optimization of resource allocation at various levels (mostly the enterprise level), creation of safety awareness for individuals, and high-level design by the government. The presupposition is that the adoption of these measures would ensure that the adoption of the technology in educational fields is regulated to ensure that stakeholders are sufficiently protected.

Additionally, it would ensure that possibilities of misuse and mismanagement of the technology by using other people is limited. The inclusion of legal parameters in this proposal would also serve to strengthen the safety parameters behind its adoption. For policing institutions looking to adopt the framework, this adoption procedure is helpful. Essentially, the possibility of the technology being misused to exploit others is real. Therefore, having the abovementioned parameters, as well as formal involvement by the government, would ensure that the police institutions are effectively protected. Overall, the regulatory measures are necessary due to the fact that the technology is still in its initial or infancy stages, hence, a keen observation of its development by a regulatory body is necessary.

4 Research Plan

- The first part of this research covers the introduction of the research. It offers an overview of the metaverse and its various applications, more so in the educational field, including the policing institutions. The chapter sheds light into how the technological framework can be used to enhance police education, their sports and military training, their professional application, and the activities surrounding their graduation. Further, a highlight of the UAE Strategy for AI and the UAE Centennial 2071 is provided. The section also covers the statement and description of the problem. This is followed by a discussion of the importance of the study, which offers insight into how the research will contribute to the existing body of knowledge on the metaverse as well as the overall field of policing education. The chapter concludes by listing and discussing the objectives of the study. The list of objectives are the guiding principles of the research.

- The second part discusses the methodology of the study. Essentially, a discussion of data collection methods and the approaches to data analysis is provided in this chapter.
- The third part of the research project covers a literature review of previous studies on the subject of discussion. In this case, various studies on the metaverse are analyzed, with specific focus being placed on studies that have assessed the application of the metaverse in educational settings. The chapter offers a summary of the reviewed studies and then provides an analysis of the findings in relation to the application of this technological framework in policing institutions. This review and analysis facilitate the formulation of usable themes that are used for analysis.

4.1   Analysis and Inferences

As aforementioned, data for analysis was obtained from existing research studies as well as the survey (sample is attached). Essentially, the information facilitates the creation of codes that allow the generation of four major themes related to the metaverse: the level of cadet preparedness after current training programs, the degree of satisfaction with the current training programs, willingness to adopt the metaverse, and the applicability of the metaverse in police institutions and other aspects in relation to the UAE Strategy for AI and UAE Centennial 2071 plan.

5   The Level of Cadet Preparedness After Current Training Programs

Based on the above research into the current education and training programs, it is evident that the level of preparedness is below the expected or desired parameters for effective tackling of emerging challenges. Essentially, modern society is underpinned by sophisticated technologies that are not only being used by governments all over the world, but also by advanced criminals. Given that the UAE wants to use the AI strategy to advance and achieve the pillars of the Centennial 2071 plan, the current education and training programs in police institutions are technically inadequate. The reviewed research highlights challenges that the UAE police faces in dealing with the new wave of criminals simply because they are not as prepared as they should be. The implication is that their level of preparedness is below the level that would facilitate the creation of a future-focused government, which is one of the pillars of the UAE Centennial 2071.

Responses from cadets suggest that they feel the current education and training programs can be improved if the UAE is to become the best country in the world. Given that the current level of preparedness is low, it follows that the metaverse is sorely needed to propel policing institutions and other government institutions to the level that is required for the UAE Centennial 2071 plan. The introduction of this technological education framework will improve the preparedness of the police trainees and cadets by offering an interactive training program that will not only sharpen and bolster training skills, but also offer excellent education as per the futuristic plan. Besides, the use of the metaverse, which weaves into the AI strategy, will ensure that cadets are equipped with technological knowhow and the necessary skills for optimal government performance.

6   Satisfaction with the Current Training Programs

The review of existing research indicates that the stakeholders in the policing institutions are not satisfied with the current training and education programs. As aforementioned, the UAE Centennial 2071 plan aims at making UAE the best country in the world. For this to happen, the country has to have the most advanced educational programs – as per one of the pillars of the futuristic plan. However, the country's police training institutions are still using older education and training programs. These programs do not fully equip the trainees. As noted in the review of existing studies, the UAE police exhibited their dissatisfaction with their training programs during the UAE SWAT challenge. During this challenge, the police have to compete in scenarios that are modeled on real-life field situations. The police have often expressed their abilities to cheat death simply because their training programs are not good enough. This implies that they are not satisfied with the current training programs. Therefore, the metaverse has to be introduced to bolster the educational outcomes.

7   Willingness to Adopt the Metaverse

Based on the reviewed studies as well as the responses from survey respondents, the metaverse is a new technological concept that is yet to be exhaustively understood. Researchers are still collecting information and conducting tests to establish the actual components of this technological framework. Besides, the applicability of the metaverse is yet to be fully established, given that research shows that it poses security risks and may have challenges for learners and educators who are keen on using it. However, reviewed studies as well as respondents of the survey note that they are willing to adopt the metaverse in their educational programs due to the benefits it provides.

Essentially, the cadets are keen on advancing their education and training to be able to cope with the challenges of the future. Given that the metaverse inculcates various technological elements, including virtual reality and artificial intelligence, cadets are fully willing to adopt it in their learning programs. This willingness highlights two things: the UAE strategy for AI and the UAE Centennial 2071 plan are working; and that the current education and training programs are inadequate. Overall, this willingness to adopt the technology, despite the challenges it poses, implies that the police trainees are keen on moving into the future.

8   Applicability of the Metaverse in Police Training Institutions

This is perhaps the most critical area when it comes to introducing the metaverse in police education and training institutions. Based on the reviewed studies and responses from the survey, it is apparent that the virtual nature of the metaverse allows it to be applied in five main areas of police education and training, as summarized in the table below:

No.	Parameter	Summarized Description
1	Education	Course books will be taken, then programmed to introduce the scenarios in them into this technology so that the students can simulate the reality set forth in the theoretical books. This will enhance learner interactivity.
2	Sports Training	The cadets body mass will be placed in a system that will tracks their strengths and weaknesses during their performance in the physical fitness test, and to help them develop their body muscles and enhance their fitness levels they will be able to see the realistic and actual training paradigms and routines which were formulated in the metaverse.
3	Military Training	The framework creates realistic classes that would be used to develop cadets' military skills. These areas include weapons classes, firing range shooting, special police training, and overall military training like tactical positioning. The metaverse will create real scenarios that allow cadets to train effectively into learning about the policy of using force.
4	Practical Applications	In order for the students to comprehend the actual situation, the training on the metaverse will be conducted in the police college for a period of three weeks to replicate what is happening in the real police stations then they will head there to continue their work for the remaining period of time.
5	Data and Record Management	A system that links a student's prior strengths and weaknesses with academic performance and training outcomes after analyzing and recording their data from competency and ability tests as well as comprehensive tests for all courses from the first semester until the end of the sixth semester in order to determine the best career path for them after graduation.

Based on the information from existing studies and survey responses, it is evident that the metaverse can be extensively applied in police training institutions. These application areas include education, sports training, military training, police professional applications, and data and record management. On the education front, cadets will be able to improve their skills by coming into contact with the theoretical crimes they solved and attempting to solve them practically; for example, disturbing crimes are the main focus of our country because they are seen as a big deal, so future generations of officers should be aware of and be able to handle those crimes with ease because they do not occur frequently in our country. And in the sports sector, the cadet's body

mass will be placed in the system, the cadet's strengths and weaknesses will be tracked, and realistic and actual training paradigms and routines will be formulated in the metaverse to help them develop their body muscles and enhance their fitness levels. Thirdly, for military training, realistic classes will be created that will be used to develop cadets' military skills. These areas of development include weapons classes, firing range shooting, special police training, and overall military training like tactical positioning. The metaverse will create real-world scenarios that allow cadets to train effectively by learning about the policy of using force and knowing when to use their weapon or rely on their combat skills. , Fourth, in order for the cadets to comprehend the actual way of working, a new method of training will be introduced by conducting a three-week period of classes on the metaverse in the police college to show the cadets what the real work will be like and what machines and systems they will be using, as well as what they should do when confronted with a crime or a violation of the law. Finally, the data and recording system, which is a system that analyzes and records the data of each student from the competency and ability tests and comprehensive tests for the courses they will be taking in the foundation semester, will link the strengths and weaknesses he had with the results he achieved at the end of the sixth semester in overall and formulate an equation that will sum and calculate all of the marks and grades, results, and skills to get a final result that will show the best path of career the cadet should take after graduation, and this will reduce the time and cost for the Ministry of Interior to distribute every graduate to a certain department for 18 months and then assign them to the departments later on. Consequently, cadets will be adeptly prepared for future challenges. Besides, the policing institutions will be ready to propel the country into the future. As described above, the most important feature of the metaverse is that it facilitates the creation of realistic scenarios that can be used to enhance overall education and training and will help reduce the time and costs by determining the best career path for graduate cadets. Given that this technological framework uses various advanced modes of technology (forms of artificial intelligence like virtual reality and augmented reality, brain computer interfaces, and various forms of data analytics), it is highly conceivable that it can be successfully used to achieve desirable results in the abovementioned areas. Overall, the application of this framework will foster the UAE Centennial 2071 plan by satisfying the pillars of a future-focused government and provision of excellent education.

9   Results

- Supports the vision of UAE centennial 2071, as well as achieve the goals of the UAE AI strategy 2031.
- Helps determine the paths of officers after graduation to different departments.
- Contribution to identifying the strengths and weaknesses of the new cadets in the Police College.
- Supporting graduate officers in developing their police skills in policing and thwarting disturbing crimes committed in the country.

9.1 Recommendations:

Based on the above discussions, this paper proposes a number of recommendations:

- The Metaverse should be adopted in policing institutions.
- The Metaverse environment will allow police trainees to optimize their skill development in many different areas.
- The adoption of the metaverse technology will facilitate the achievement of the UAE Strategy for artificial intelligence as well as the UAE Centennial 2071 plan.
- Police learning institutions can benefit massively from this technology due to the fact that a big part of police training and education is practical-based.
- Rigorous training of educators to ensure that they are well versed in components and usability of the metaverse
- Overall, the metaverse will contribute massively to the development of policing and the United Arab Emirates as a country.
- thwarting disturbing crimes committed in the country.

10   Summary and Conclusion

Due to the technology's ongoing development and potential security challenges, it is essential to emphasize risk assessment and analysis in the context of the metaverse's application in policing. Another key aspect is the

thorough training of educators to ensure their proficiency in utilizing the metaverse, which is particularly important given the current lack of preparedness among educators. This lack of readiness may hinder the effective use of the metaverse for educating and training cadets. These recommendations are pertinent in light of the metaverse's evolving state and the ongoing research in this technological framework.

In conclusion, the preceding discussion underscores the metaverse as a burgeoning technological innovation in the field of education. Its ability to create realistic scenarios through virtual reality holds significant promise for enhancing educational outcomes. Police training institutions, in particular, stand to benefit greatly from this technology, given the practical nature of police training and education. However, it's crucial to acknowledge that the metaverse carries certain risks, stemming from its developmental stage, unclear applications, and susceptibility to privacy breaches. These challenges warrant careful consideration when contemplating its adoption in educational settings. Implementing the metaverse should involve a systematic approach, comprehensive risk assessment, and rigorous educator training to ensure effective integration into cadet instruction. Ultimately, the metaverse has the potential to make a substantial contribution to the advancement of policing and the broader goals of the UAE.

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