



Institute of National Planning

تقرير الحلقة الثانية
سيمنار شباب الباحثين
"الواقع الافتراضي"

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المدرس المساعد بمركز التخطيط الاجتماعي والثقافي

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٢٠١٩/١١/٢٦

عقدت الحلقة الثانية من سيمينار شباب الباحثين ضمن الفاعليات العلمية لمعهد التخطيط القومي للعام الأكاديمي ٢٠٢٠/٢٠١٩ يوم الثلاثاء الموافق ٢٦/١١/٢٠١٩ بمقر المعهد في تمام الساعة العاشرة صباحاً، بحضور عدد من أساتذة معهد التخطيط القومي وأعضاء الهيئة العلمية المعاونة. حيث تناولت المتحدثه وهي الأستاذة/ نورهان أحمد السيد العطار – المدرس المساعد بمركز التخطيط والتنمية الصناعية ، موضوع الواقع الافتراضي كما في العرض التقديمي التالي.

وينقسم هذا التقرير إلى قسمين:

القسم الأول: المحتوى العلمي للحلقة والذي تم استعراضه من خلال المتحدثه.

القسم الثاني: أهم المداخلات والمناقشات

القسم الأول: المحتوى العلمي للحلقة:

Introduction

Humans have always created different worlds. Our ancestors did this through storytelling, writing, or art. When we focus on a story, we use details to help us paint a picture. When was the last time you saw a movie, read a book, or played games? You are basically hearing about a different world—virtual reality takes it a step further and lets you become a part of that world.

Imagine a world with infinite possibilities and exploration. Thanks to virtual reality, we can travel to different parts of the world or create an entirely new one ourselves.

The typical VR headset provides stereoscopic imagery, stereo sound and motion-tracking sensors. The motion-tracking sensory is triggered whenever you move your head and look around with a wide screen with a massive field of view.

Not only are virtual reality headsets being used for gaming but, it is also used for countless types of training courses in the military and medical field. VR is also being used to help treat mental illnesses such as anxiety.

Virtual Reality is still a developing field that is receiving updates every year. Who knows, maybe one day we can enter a low-gravity room with VR headset and pretend we are all astronauts.

New World “Virtual Reality”

“If u tell me, i will listen If u show me, i will see But if u let me experience i will learn” Lao Tse



What is VR?

Historically “Virtual Reality” was used to refer to any virtual environment.

Nowadays it’s used to describe an Experience that includes:

- 360 degree Head Rotation
- 3D “Stereoscopic” Vision

It could also optionally include:

- Head Position Tracking
- Hand or Full-Body Tracking
- 3D “Binaural” Sound



Current Technology:

Phone-based VR

Google Cardboard, Samsung Galaxy Gear, VR Box, Etc.



VR Headsets



Generic Vive Tracker



VR Used In:

Treatment: PARKINSON

Called “Freezes” mostly occur when patients are about to start walking, turning or approach obstacles.

With special trigger imagery, depicting steep trails, steps or similar it is possible to create artificial stimuli that enable the patient to move and specifically walk again.

With a selection of Parkinson patients we are working on a prototype that blends trigger images with the real environment, allowing for sudden freezes to be treated immediately.

Also used in treating people with a fear of heights. 2018 – ongoing



Oxford VR Studies

40 participants were divided into two groups: one should look at information first on a VR headset and then on a desktop, the other did the exact opposite.

The research team noted an improvement in memory performance of 8.8 percent when using VR headsets. 40 percent of the participants in VR did better than the desktop version by at least 10 percent. According to their

own statement, almost all participants preferred virtual reality as a learning platform.

Walmart

“The great thing about VR is its ability to make learning experiential,” said Andy Trainor, Walmart’s senior director of Walmart U.S. Academies. “We’ve seen that VR training boosts confidence and retention while improving test scores 10 to 15 percent.”

KFC - Gamified Employee Training

In an escape game, a game where participants have to solve clues to escape from a room. Kitchen meets haunted house, the motto seems.

KFC founder Colonel Sanders wanted to make sure that employees prepared "the hard way" for "The Hard Way", according to the company. Just as the Colonel invented Fried Chicken 70 years ago.

Virtual Care Room

The virtual nursing home was developed for the Bern Center for Nursing Care and provides the basics of patient observation.



Virtual Surgery

TOYOTA VR

There have also been other deployments of VR in the industry of automation such as showing the dangers of unsafe driving, as demonstrated by Toyota in partnership with Oculus Rift in 2015.

Manufacturing



Pros for VR training

- Reduced Risk Of Accidents
- Cost efficiency
- Training Independent from time & space - no occupancy of a facility
- Engaging Training Sequence through gamification
- Real emotions through Immersion (eg. stress)
- Scenarios that are not possible or too expensive/dangerous in real life
- Measure training with biodata
- Accompany through trainer globally
- Helps with Impressive Visualization – You can be sure about the greatness of virtual reality. It helps in exploring various facts and can even alternate the level of experience. If you wear a VR headset, you can experience the best quality visualizations. Allows Students to Get

Engaged – These days it has become difficult for the teachers to conduct classroom interaction sessions. With the introduction of the Virtual Reality technicality, interaction with the student has become so easy. The students take help of virtual reality to speak about their personal experiences.

- Creating Interest – Virtual Reality has made watching more enjoyable than reading. VR technicality is extremely interesting and engaging. VR technology creates enjoyable experiences. This technology motivates the students to learn and know better in life.
- Improves Educational Value – The doctors take advantage of the VR technology to know about the new traits of medicine. VR technology also works best in fields of editing and content writing. It helps in locating mistakes in contents. There are preferred software arrangements to make fault detections. VR technology also helps with perfect editing options.
- Helps to Overcome Language Barriers – Language barrier is a significant problem in the field of education. In case, if you are not studying in your hometown you need to adopt the dialect of the place where you are considering. With the implementation of Virtual Reality the possible language can be aptly implemented by making use of the suitable software.

Cons of Virtual Reality

- Lacks Flexibility – In the classroom you can act with flexibility. You are open to give suggestions and ask questions. This is not possible with virtual reality. With the virtual reality headset, you can make use of the same program in all the sessions. There is no scope for positive interaction.

- Ineffective Human Connections – Virtual Reality comes with the set of disadvantages. The conventional education system is mainly based on interpersonal connections and the level of individual human communication. The concept of Virtual Reality is different. It is only about you and the software.
- Getting Addicted – Addiction to Virtual Reality is extremely common. The students can get addicted to the virtual world. The section of the population is getting addicted to video games and the rest. In the world of Virtual Reality, one can even get addicted to harmful drugs.

Augmented Reality

Augmented Reality (AR) is a technology or an environment where the additional information generated by a computer is inserted into the user's view of real world scene.

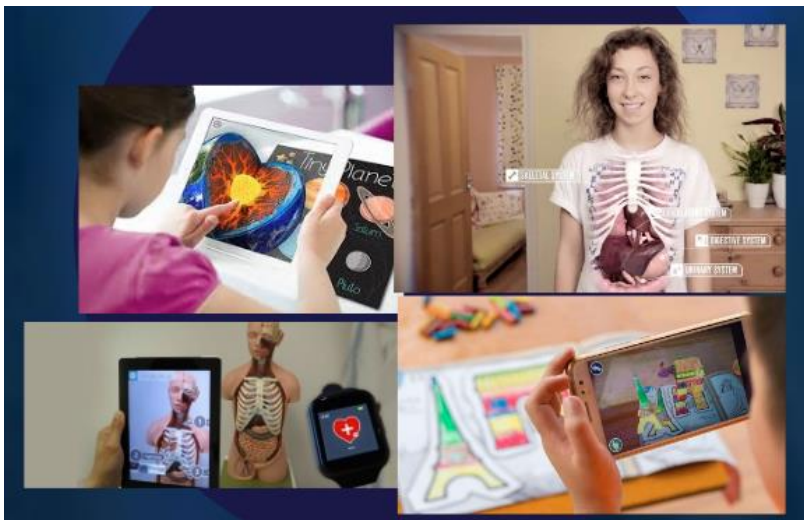


Examples and Show cases

Medical:



Education:



AR Games/Apps

- AR Puzzle Game.
- AR Microscope.
- AR Sowing patient Symptoms.

Best Virtual Reality Application (2019)

Virtual Reality applications offer a vivid encounter. And offers a tangible encounter that can move the person to for all intents and purposes wherever, well 'for all intents and purposes'.

While space has been taken up by costly-cheap headsets and extravagant rigging to appreciate the VR applications experience, it is conceivable to use your smartphones show for a decent VR experience.

All that you need is to get the privilege applications on your cell phones.

Here is the list of the Best Virtual Reality App that will transform your smartphones into a great Virtual Reality experience.

1. Netflix VR

An application that permits Netflix endorsers to watch their preferred shows, films utilizing Google Daydream, Oculus VR gadgets. Netflix happens to be one of the video-based services to actualize VR and which presented 360-degree see in applications that

let users venture into a virtual space to stare at the TV, films or shows utilizing their Gear VR. Inside the application, users can pick between 2 modes-void more and front room involvement.

Video: <https://youtu.be/Sh9n0bZcprk>

2. Youtube VR

Alongside different features, Google is increasing its VR endeavors for recordings with the YouTube VR. Presently experience your preferred channels, recordings, and so forth, in virtual reality, rethinking YouTube as a 3D world.

Users can investigate all recordings from 3D 360 recordings to standard rectangular recordings. Alongside this, the application likewise gives highlights of uncommon sound.

Video: <https://youtu.be/r2XZ5YXi8-l>

3. Google Earth VR

The entirely different Google Earth VR gives users a chance to investigate the world from an absolutely new point of view. With this application, the entire world progresses toward becoming inside your span.

This application can be of incredible use for individuals wherever to investigate our planet in detail.

It likewise comprises of another inquiry work that prompts the VR console that can be controlled by your headset controller.

Video: <https://youtu.be/-anwaxEVO4E>

4. Goggle Expeditions VR

This VR teaching device enables you to lead vivid excursions everywhere throughout the world and get augmented reality encounters in mountains, submerged and at any space that you visit.

An extra element in the application the performance mode gives users a chance to investigate more than 600 unique visits independent from anyone else.

For this experience, clients simply need to download the application, drop telephones to Google Cardboard and after that prepared for the experience.

Video: <https://youtu.be/-DYqlaMWTVg>

5. Fulldive VR

Fulldive VR is kind of an internet-based social media application for virtual reality which hosts 100 percent user-created content that you can watch on your VR headset. Being a social stage, the application enables you to include companions from around the globe and experience their substance.

You can even share VR content that you made on the stage and you can rest guaranteed that it will reach VR fans around the world. Other social highlights incorporate responses, remarks, and sharing, which implies that the VR content that you transfer on the application sure has a solid possibility of becoming famous online. You can considerably find other extraordinary VR applications and diversions on the Fulldive, which is a special reward.

Video: <https://youtu.be/k9QPMD3zvg8>

6. InCell VR

The vast majority of us likely promised to never contact a book about the human cell after enduring secondary school science class. Be that as it may, OK be eager to find out about it again in the event that you could psychologist down to tiny size and investigate a real cell? Even better, OK do it on the off chance that you could race an infection in it?

InCell VR allows you to do only that. When you make the showing, you'll speed through a human cell with a robot collaborator who encourages you to shield it from pernicious infections.

InCell VR is a conventional hustling game and an instructive exercise mixed into one experience. You need to pick up focuses and evade impediments to spare the cell before the infection can devastate it, and you'll adapt little goodies about science en route.

Video: <https://youtu.be/yXoFMNG0PMM>

7. Ocean Rift

The world's first oceanic park that has VR impact and which gives an extreme and clear submerged world view which incorporates sharks, dolphins, ocean snakes, beams, ocean lions and even various kinds of dinosaurs.

The application is essentially partitioned into 12 natural surroundings running from coral reefs, tidal ponds, and so on and even subtleties on ancient oceans. It additionally has 45+ data focuses that given you a chance to become familiar with sea creatures.

Video: <https://youtu.be/Ak7cdTsdlcw>

8. Tilt Brush

An application that gives users a chance to begin their work of art from an entirely different viewpoint more than ever. The fundamental element of the application is that one can paint in 3D space utilizing VR and make your room your canvas.

Your palette is your creative mind. The potential outcomes are huge. Different highlights incorporate unique brushes, natural interface, poly combination and considerably more.

Video: <https://youtu.be/LBJPIgNXUDI>

The Future of Virtual Reality

The Oculus Rift

Purchased by Facebook for \$2 billion, the Oculus Rift created a new type of experience. Ever wanted to go on a tour in the comfort of your living room? Or maybe visit Paris and Tokyo all in one night? The Oculus Rift can help.



How it works

The typical VR headset provides stereoscopic imagery, stereo sound and motion-tracking sensors. The motion-tracking sensory is triggered whenever you move your head and look around. It also came with a wide screen with a massive field of view at 110°.

Not only are virtual reality headsets being used for gaming but, it is also used for countless types of training courses in the military and medical field. VR is also being used to help treat mental illnesses such as anxiety

Lion King



All Become Astronauts

Virtual Reality is still a developing field that is receiving updates every year. Who knows, maybe one day we can enter a low-gravity room with VR headset and pretend we are all astronauts.

Virtual Reality in Egypt

Immersive VR Startup

جريت «Bungee Jumping» قبل كده؟! احساس صعب مش اي حد يقدر يعمله !!
عندك الجرأة انك تخوض التجربة الان بـ Immersive VR؟! ..

مستنينك دلوقتي تقدر تجرب Bungee Jumping واكثر من 100 تجربة ولعبة
مختلفه لجميع الاعمار ممكن تلعبها انت واصحابك , وأكثر من 20 لعبة
Multiplayer ممكن تلعبوهم لحد 8 أشخاص في نفس الوقت سواء Versus ضد
بعض او Co-Op مع بعض. ... See more



Virtual Reality Room “Game”



The Egyptian Council of Ministers

decided to work on a national council for artificial intelligence

مجلس الوزراء المصري قرر عمل مجلس وطني للذكاء الاصطناعي

القسم الثاني: أهم المداخلات والمناقشات

اتسمت مداخلات السادة الحضور بالتنوع بين الأسئلة والاستفسارات اضافة الى بعض التعليقات التطويرية حيث يمكن عرضها بإيجاز في النقاط التالية:

- يمكن للتطبيقات الحديثة في مجال الواقع الافتراضي ان تسهم بشكل ايجابي في دراسة الآثار الاجتماعية والسلوكية والثقافية لمؤثرات مختلفة، بشكل يحتاج لمزيد من البحث وتطوير المنتجات التكنولوجية لخدمة العلوم التنموية.
- هناك مهمة ملحة للمؤسسات العلمية ومنها معهد التخطيط القومي في نشر الوعي وتنمية الفكر الإنساني والتطبيقات المجتمعية لمستحدثات الثورات التكنولوجية ومنها الواقع الافتراضي وإمكانياته.
- الأبعاد الأخلاقية والمحتوى النفسي المصاحب لتطبيقات الواقع الافتراضي يمثل تحدياً كبيراً أمام المجتمعات النامية لأنها تستورد بالكامل من الخارج، إذ لا بد وأن يكون هناك إدارة وإضافة للمحتوى يتناسب مع السياقات الثقافية والخصوصيات الاجتماعية للمجتمعات المختلفة.
- هناك أبعاد فلسفية تحكم نظرتنا للواقع، وما نظن أنه واقعاً مفترضاً، ولا بد من المزيد من استكشاف هذه التفاعلات والتباينات في وجهات النظر والبنى النظرية المختلفة من أجل تنقية وتصويب الإنتاج التكنولوجي المتسارع.
- يمكن لتطبيقات الواقع الافتراضي أن توظف وتستثمر بشكل فوري ومفيد جداً خاصة في مجال التعليم والتدريب.
- تحتاج المكتبة العربية للمزيد من الأبحاث والدراسات المتعلقة بدراسة المخاطر المحتملة للتطبيقات التكنولوجية المستحدثة، خاصة مع النمو والتراكم المتسارع في التطبيقات ذات الأثر النفسي والفكري المباشر على الإنسان وعقله ووجدانه.
- من الضرورة بمكان أن يتم التوعية بأن التطور في مجمله قد يحتوى على مسالب كما يشتمل على منافع كثيرة، إذ أن صناعات السياسات ومتخذي القرار في كافة الأزمان والمجتمعات بحاجة لظهير فكري وعلمي يستطيع إلقاء الضوء وفك الغموض عن المستجدات حتى يمكن اتخاذ القرار الأصوب.

- على المؤسسات الثقافية والإعلامية دور حيوي ولا بد من تطويره نحو المجتمع يتمثل في امدادنا بالمستجدات وقت حدوثها حتى لا تزداد الفجوة بين المجتمعات المتقدمة والنامية.
- لا بد من الاشادة بالقرار الذي اتخذه مجلس الوزراء المصري مؤخراً بشأن إنشاء المجلس الأعلى للذكاء الاصطناعي، حيث يدل على مبادرة جادة للحاق بركب التقدم ومستقبل أفضل لمصر.
- تهيئة المناخ العام للإبداع من شأنه تفجير طاقات المبدعين والشباب في كافة المجالات مما يثرى البيئة الابتكارية في المجتمع المصري، ولا بد أن يكون ذلك جزءاً واضحاً في كافة استراتيجيات التنمية المقبلة، وتفعيل ذلك في شكل سياسات وبرامج ملموسة.
- لا يمكن بحال من الأحوال الخوض في غمار التكنولوجيا والتنمية القائمة على المعرفة في مجتمع يعاني من نسب مرتفعة للأمية القرائية وليس مجرد الأمية التكنولوجية، إذ لا بد من مواجهة هذا الأمر بجدية وحزم.
- هناك فرصة سانحة من خلال لقاءات الشركاء بالمراكز العلمية للمعهد لتفعيل وتحصيل تخصصات ومبادرات جديدة من المجتمع الأكاديمي والتطبيقي والبحثي خارج المعهد.
- إن دولة بحجم مصر مؤهلة بكوادرها وإمكانياتها وتاريخها للمشاركة في إنتاج التكنولوجيا عالمياً وليس الاكتفاء بمجرد استيراد المنتجات التكنولوجية وتطبيقاتها واستخدامها محلياً.